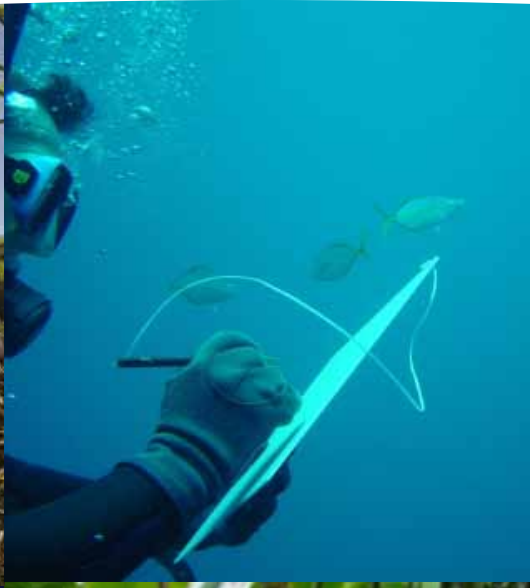




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Growth Factors in the Outermost Regions



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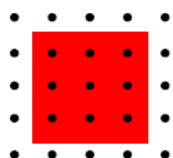
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Growth Factors in the Outermost Regions

**Final Report
Vol. II**

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ISMERI EUROPA

In cooperation with



March 2011

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The views of this study are those of the authors and do not necessarily reflect the policies of the European Commission.

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The study team would like to thank all those individuals who have contributed their time and ideas to the successful completion of this important study. The usual disclaimer applies and possible remaining errors are the sole responsibility of the study team.

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1. Introduction: background and objectives of the study

The study of “Growth factors in the outermost regions” was launched by DG REGIO at the end of 2009 to identify opportunities for economic growth in these remote territories of the European Union.

The background of the study is given by a series of Communications (COM 2008, 2007, 2004) of the European Commission aimed at raising the issue of boosting growth opportunities in the Outermost Regions (ORs). In October 2009, just before the call for this study was published, a Memorandum was signed presenting the position and priorities of the ORs in the next programming period. In particular, an agenda of events to take place in 2010 and 2011 was drawn up, leading to the presentation of a new strategy for the period 2014-2020.

Important events concerning the ORs took place in the first half of 2010. The commitment to contribute to the establishment of objectives and priorities within the framework of the Europe 2020 Strategy and for the post-2013 period (jointly agreed on in October 2009), led to the signature of a further memorandum¹ of Spain, France, Portugal and the Outermost Regions, in Las Palmas de Gran Canaria on the 7th of May 2010. This Memorandum states:

« Ce modèle de développement économique implique que la stratégie se fonde sur le principe de réalité et permette une application appropriée du principe d'égalité des chances, en garantissant un équilibre entre les atouts et les handicaps. Au-delà de la nécessité de miser sur des secteurs stratégiques d'avenir, il y a lieu de maintenir en parallèle, des mesures de compensation qui permettent de maintenir les secteurs primaires et traditionnels, l'industrie locale et les services. Enfin, la définition d'une telle stratégie doit être basée sur un partenariat dynamique et continu. »

Furthermore, on the 27th-28th of May a high-level conference took place in Brussels with EU Commissioners Michel Barnier and Johannes Hahn. The two-day forum, hosted by the Spanish EU Presidency, was the first of its kind and delegates from as far as the South American continent and the Indian Ocean came to present their demands to the EU. During the conference, the political leaders from the ORs demanded tailor-made strategies and exemptions from a number of key EU policies.

The present study has been developed in parallel to the evolution of this dynamic background. Its main objectives are the following:

- Deepening the understanding of the process of economic development in the ORs; this entails:
 - o Setting up a general analytical framework (quantitative and qualitative analysis);

¹ A Renewed Vision of the European Strategy for the Outermost Regions, May 2010.

- Analysing drivers of growth over the past ten years, the role of traditional and new sectors;
- Analysing vulnerabilities and opportunities;
- Identifying strategies to:
 - Improve competitiveness, job opportunities and living standards;
 - Reduce dependence on traditional sectors in favour of new activities;
- Proposing a number of flagship projects as concrete actions to achieve the above goals.

As stated in the Terms of Reference, the project is structured around three main parts:

- Part I: analysis of recent socio-economic trends and drivers.
 - A synthetic literature review on the determinants of growth for small economies taking into account the particular situation of the outermost regions such as extreme distance from the main European markets.
 - A summary of the problems and the current challenges faced by the outermost regions in terms of main socio-economic trends as well as future challenges in relation to the impact of globalisation, demographic and environmental change.
 - A statistical and qualitative analysis of the determinants of growth in the outermost regions over the past ten years recognising the role played by the traditional, predominant sectors such as agriculture, fisheries or tourism. This part of the study should also identify areas where the ORs have comparative advantage taking into account the challenges and assets identified by the Commission in its Communications on the outermost regions in September 2007 and October 2008. Developing a methodology for this analysis applicable to all of the outermost regions is part of the task.
 - A set of summary tables, setting out for the ORs thematic indicators that seek to capture the essence of each region while presenting possible commonalities in the development processes of all regions.
- Part II: regional analysis of the seven² Outermost Regions (field research).
 - General description of the socio-economic situation.
 - Complementary qualitative analysis. Certain aspects of the socio-economic situation of the outermost regions may not readily lend themselves to quantitative analysis (for example, institutional aspects) while being very important in explaining economic performance and prospects.
 - Main factors underlying each region's economic performance. SWOT analysis (major strengths, weaknesses, opportunities and threats) of each region; vulnerable sectors/high potential sectors.

² When the study started the Outermost Regions were seven: Guadeloupe, Guiana, Réunion, Martinique, The Canary Islands, The Azores and Madeira.

- Part III: concrete proposals of flagship projects.
 - o Based on the analysis of existing experience with flagship projects (successes and failures) and on Part II of this study, strategic proposals are developed for the regions concerned. Flagship projects tend to possess one or more of the following characteristics: durable contribution to regional development, high visibility, innovative nature and high added-value, encourage spin-offs etc.
 - o Finally, the study indicates how flagship projects could be expected to help the outermost regions along a path to sustainable development with higher living standards.

The present Volume II of the Final Report is structured as follows.

Chapter 2 describes the methodology, chapter 3 presents the results of the regional analysis of the seven outermost regions and chapter 4 outlines concrete proposals of flagship projects.

Even though the final report should be considered as the result of a collective work carried out by the study team under the direction of Enrico Wolleb, in more detail, Volume I was primarily drafted by Ismeri Europa, while Volume II was drafted as follows: Guadeloupe by Ismeri Europa, other ORs by ITD-Eu (Michel Lacave, Mireille Allemand, Matthieu Lacave, Maximiano Martins).

2. Methodology

The methodology used has been described in the Methodological Initial Report. Chapter 3 and 4 are the result of both desk and field research.

Desk research has used extensively:

- Regional policy documents: economic strategy and schemes; innovation and RTDI strategies; strategies and action plans concerning environment; employment – including programming documents such as ERDF and EARDF Operational Programmes, or *Contrats de Plan Etat-Région* in the French ORs
- European Commission communications and ORs memoranda and official declarations
- Literature on the ORs economic fabric and economic trends
- Statistical data from EUROSTAT, national and regional sources with a focus on 4 main themes: demography and migratory trends; economic conditions, competitiveness and well being; accessibility, transport and integration; climate change and energy

Field research has relied on interviews with an average of more than 30 interviews and about 12 to 15 organisations and institutions per region (from about 15 interviews in the Azores to more than 60 in Réunion). In some cases, as in Réunion, workshops were organised with categories of interviewees (business community). There were four main categories of interviewees: policy-makers, statistical offices, business organisations, academics and research community. The interview guidelines addressed three main issues: regional economic performance; main economic sectors on which it is possible to build higher economic performance; key policies and institutional measures taken or to be taken for addressing challenges and constraints; flagship projects in the perspective of both the current programming period and the post-2013 period;

It can be said that the interviews brought in general highly interesting outputs to the analysis and interviewees proved very available and collaborative.

The analysis carried out for each region has been divided into three sections.

The first section is dedicated to the general description of the socio-economic conditions and relies for a large part on desk research; however, it has benefited also from field research which helped to clarify and/or to develop some aspects of the analysis, in particular specific and emerging sectors (see above: part 2 of the interview guidelines); field research also allowed for collecting documents and data that had not been used previously. The description of the socio-economic conditions covers the four main fields indicated above with respect to the processing of statistical data. However, these fields have been distributed in 8 paragraphs: GDP and GDP per capita; employment/unemployment; economic structure; human resources; research, technological development and innovation (RTDI); connectivity and the opening of the economy; environment, energy and climate change; focus on specific and emerging sectors.

The second section is dedicated to a more qualitative analysis relying mostly on field research and leading to the presentation of key issues, among which the impact of the present crisis is of course an important element.

The third section summarises the results of the analysis through a presentation of the main constraints and challenges, a SWOT analysis, and an identification of the vulnerable and high potential sectors. The identification of these sectors is all the more important as it is related to the issue of flagship projects addressed in Chapter 4. The list of flagship projects heavily depends on the field research work, and therefore it is not an exhaustive list. Other projects could have been identified by regional stakeholders (e.g. astrophysics sector in Canarias; agro-food sector in Azores...).

The criteria for identifying vulnerable and high potential sectors are related to the analysis carried out on specific and emerging sectors. Vulnerability refers to criteria such as competitiveness, regulations, environment, and in some cases administrative issues. High potential refers to criteria such as: competitiveness again, potential market (internal and exports), available resources (natural and human), policy orientations.

Two key points must be emphasised with respect to the division between vulnerable and high potential sectors:

- It may not coincide – and in a lot of cases it does not – with the division between ‘traditional’ and ‘innovative’ sectors (e.g.: agro-food)
- Some sectors may be at the same time vulnerable and have high potential provided that they are re-oriented or re-organised (e.g.: tourism, construction)

As a consequence, we tried to be very careful when addressing this issue.

3. Regional analysis of seven outermost regions

3.1. Guadeloupe

3.1.1. General description of the socio-economic conditions

There are a number of main features of Guadeloupe relevant for socio-economic analysis, for developing strategic considerations and for setting-up public policies:

- ✓ It is a French Region with a regional council in charge of economic development, land planning, road infrastructures, education infrastructures (high schools), management of cultural, scientific and technological policies; the regional capital is Pointe à Pitre.
- ✓ It is a small island in the Caribbean region affected by natural hazards (volcano, seism, hurricane), counting 404,000 inhabitants, having a strong population density (260 inh./km²), namely in the urban area of Pointe-à-Pitre
- ✓ A rich nature and landscape but a challenging topography and volcano activity that have three main consequences: the scarcity of land, the concentration of the population in Pointe-à-Pitre (causing traffic congestion), and the higher costs for building infrastructures).
- ✓ A fast growth of the income per capita during the last 15 years, jumping from 46% to 76% of the EU regional average income per head. This resulted from the significant improvements of social protection and standards imposed by the government and the self sustaining growth of the internal market due to public investment and household consumption.
- ✓ A relatively high GDP compared and a high standard of living with respect to the regional Caribbean context, reflecting the catching-up trend of the region with the French and EU average, nevertheless affected by a strong and structural unemployment rate which makes fragile the social cohesion and social inclusion.
- ✓ An economic structure characterized by a pervasive service sector, mostly public administration, welfare, education and health on the one hand, and tourism and related services on the other.
- ✓ The tourism sector is on a declining trend over the last decade suffering from a lack of diversification of the tourism products, ageing hotel infrastructures and stronger competition with neighbouring countries.
- ✓ There are few manufacturing activities, except the construction sector which has cyclically led regional growth in conjunction with large public and private investment programs, mainly in infrastructures and tourism.
- ✓ The weight of the public administration sector in the economy and the weight of the public transfer coming from the mainland constitute a powerful instrument for maintaining the social cohesion and the quality and level of life in the region, but has also negative impacts on the regional economy.
- ✓ The emerging sectors, biodiversity, energy, new materials, etc., linked to research have generated so far only little impact on employment and added value, though they can potentially develop into high added value activities and consequently have a leverage effect on innovation in the other sectors.

- ✓ The qualification of the human resources is improving, reflected by the higher number of students and the growing share of active population aged of 25-34 years with a diploma. However, education and training remain a key challenge and a necessary condition for a significant improvement in the performance of the economy and for its diversification towards higher added value productions and services.

The general features of Guadeloupe are close (with nuances and differences) to the other outermost regions: a small economy with a low critical mass for key activities (industry is very weak; the innovative sector of new technologies / renewable energies is emerging).

The internal debate on development and transportation follows the same guidelines as those emerged in the European forums, in the context of the “Strategy Europe 2020”. A growth process, intelligent, sustainable and integrator, leading to an economy more focused on knowledge and innovation, more ‘green’ and more open to the world, is an objective leading people in government and political forces as in business or in the university.

However beyond these statements and the wishes there is a situation with little ‘room for manoeuvre’, due to difficulties and resistances to change the structural features of the regional economy. In addition short terms policies need to be introduced and structural transformation facilitated through a balanced policy mix.

3.1.1.1. GDP and GDP per capita

In the last 15 years Guadeloupe has experienced a fast growth of p.c. income, at a rate (3%) which only few EU regions experienced in the same period. This growth allowed the region to jump from 46% to 76% of the EU regional average income per head, despite the significantly high population increase. The catching up speed accelerates in the nineties as a result of significant improvements of social protection and standards imposed by the government. (4.8% of pc GDP from 1993), from 12500 to 17300 euro in 7 years. This performance can be mostly imputed to a self-sustaining growth of the internal market due to public investment and above all buoyant household consumption. The external account, on the other hand, gives a structurally negative contribution to GDP growth since exports cover only 8% of the total imports of goods. The regional economy, and in particular, household consumption, is therefore heavily subsidized by a flow of external transfers. In 2006 the total final utilization of resources of the region was more than double of the GDP. (source: INSEE “*Balance resources emplois en Guadeloupe*”). The regional economy benefits from substantial transfers from the other EU regions and particularly from France due to the severe underdevelopment problems which characterize Guadeloupe’s economy and society; however, these transfers have only triggered the development of an autarchic local economy, which goes little beyond the traditional agricultural productions of bananas and sugar cane and a large service sector, which cannot sustain alone the process of catching up in the years to come. More recently (in 2009), as a result of the global crisis and of a further opening of the EU economy, these main factors of regional growth have been questioned and the regional growth has slowed down to just over 2%, sustained by public consumption and by a slowing down of household consumption. In perspective, the budgetary consequences of the global crisis for central governments have threatened the pursuit of a development

path which does not generate the seeds of its own internal growth and constantly relies on external transfers. The limitations of the viability of transfer driven growth however emerged at the end of 2008 before and independently of the crisis impact, which in the course of 2009 was felt to be a consequence of the social impact of high unemployment and growing internal income disparities.

3.1.1.2. Employment / unemployment

In 2009 the active population of Guadeloupe amounts to 162,479 of which 124,262 employed. Unemployment has been the most severe problem of the region even during the decades of fast growth, and that despite the fact that employment growth in the region was manifold higher than in metropolitan France. The employment rate has grown by 4 points since 2000. Unemployment rates currently approximate 23.5% (2009), having risen as a result of a social crisis at the end of 2008; 38,200 people are currently jobless. Male unemployment is 6 points lower (20,3) than female (26,4).

Some features of unemployment in Guadeloupe make it the main source of many social problems and most of all of inequality and poverty among the social groups involved.

The first worrying aspect is that unemployment particularly hits young people (46.7%) and young women, while it remains more moderate for male adults. Since 2008 youth unemployment has increased by 7 points. This unemployment feature is structural and shows that the labour market is stagnant and filters the entry of young people in relation to their skills and education. In fact, 6 out of 10 young people without diplomas are jobless compared to 14% of the people with "BAC + 2" (*Baccalauréat*) and only 7.9% of those with "BAC + 4". Moreover this dynamics has accelerated during the crisis.

Activity rates are almost 8 points lower than in metropolitan France, while more than 20,000 people are inactive because they feel discouraged about their job finding possibilities; this concerns those people potentially employable which do not apply to the employment pole office.

A third worrying feature which derives from this structure of unemployment is the fact that the unemployed remain so for more than 4 years, there is no turnover in the available jobs and that creates a dualistic labour market in which the employed remain in employment and only a tiny share of the unemployed find a job in the current year.

These unsatisfactory results of the labour market were only slightly less severe during the growth phases and must be considered and attacked as a structural phenomenon to be eradicated in the growth patterns of the regions. In other words, the long term growth pattern of the region has not been able to absorb the fast growing supply of manpower and needs to be reconsidered in the light of its worsening performance, irrespective of the actual growth rate of the region.

This is due to the high productivity levels made necessary by the high labour costs of the economy, which have given rise to very low GDP-elasticity of labour demand, which some analysts attribute to the rigidity of the salaries coupled with an insufficient level of education and training of the workforce which remains without employment.

In other words, at the current levels of labour costs the economy cannot absorb unskilled workers, who are unable to guarantee the necessary productivity levels.

3.1.1.3. Economic structure

The structure of the Guadeloupe economy is characterized by a pervasive service sector mostly public administration, welfare, education and health on the one hand, and tourism and related services and a small share of business services on the other. Tourism itself remains an important sector in perspective of the future regional development which is however, conditional to a profound structural reorganization of its products and of its hotel infrastructures. Education and research are a relevant share of public employment which can potentially be more involved in the economy and generate spill-over on the production and employment side. Agriculture and fisheries, though in the past the bulk of the economy, nowadays, have lost their relevance (approx less than 2%) in value added terms, while in employment terms they still absorb a non insignificant share of the most vulnerable workforce (7%). The BTP sector has cyclically led regional growth in conjunction with large public and private investment programs, mainly in infrastructure and tourism. This sector has played the role of employment stabilizer for public investments and compensated employment demand with a countercyclical impact; however, it suffers under the cyclical changes due to the opening of large construction sites. The sector could absorb large quantities of manpower to invest in reorganizing, upgrading and renovating, given the poor condition of the housing stock and of public buildings and of the main transport infrastructure. The emerging sectors, biodiversity, energy, new materials etc. linked to research at the present time generate a negligible impact on employment and value added, though they can potentially develop into high value added activities and consequently exercise a leverage effect on innovation for the other sectors.

Distribution of employment per branch

The structure of employment per branch is dominated by services (84%) of which public and non market services absorb about 41%. Stagnancy between sector shares is a striking feature of the long term structural trend of employment and is a clear sign of lacking competition on the internal market and of a closed economy supported by employment protection policies through subsidies and other forms of compensation from abroad.

The structure also shows slow changes in industry and advanced services which in the last decade and a half have maintained their share of employment, with only short term cyclical variations. Looking at share values of employment by branch, a much lower employment level of the industrial and business services sectors in relation to metropolitan France emerges. The overall picture of the dynamics of the employment structure shows that the lack of competitive signals prevents sectors from adapting and generating a transformation process of production to respond to wider economic changes in the EU and in the global economy.

Sector contribution to gross regional value added does not coincide with the employment share levels nor show the same constancy over time. In 10 years there has been a significant decline in marketable services including transport, tourism and

related activities (5 points), and a smaller increase in business services including banking. The other sectors show short term cyclical variations around a constant trend, with the exception of a declining industry share of approx. 3 points between the late nineties and 2007. Agriculture and fishery show a slow but constant declining trend from slightly less than 4% in the early nineties to around 2.5% of recent years (2008).

Typology of enterprises

In 2008 Guadeloupe had 36,577 enterprises mostly in services and trade (70%), building and construction enterprises (15%) are significantly higher than those in industry (9%) The industrial sector in Guadeloupe is recent and produces slightly more than 5% of the regional production while it employs around 6.7% of the workforce. Its fast growth in the last 2 decades was partially due to a tax exemption law. There are 5 main manufacturing sectors: agro-industry, editing and printing, mechanical equipment, paper and wood and household appliances. Productions are mainly concentrated on intermediate goods and agro-food which according to INSEE produce slightly less than 60% of the total regional industrial productions at 85% of the investments (2006).

Individual and micro-enterprises are the main feature of the structural profile of firm's size; 36% of the firms have 1 or 2 employees, while 27% 3 to 5 employees; on the whole 80% of the firms have fewer than 10 employees. Although the firm creation rate appears very dynamic especially in recent years, it is more a form of self-employment in periods of low demand for dependent full time workers rather than a sign of sector dynamism. The trend of private investments, which is flat and mostly linked to the stock building cycle, shows the weakness of private sector accumulation as a main feature of a development model based on private and public consumption.

3.1.1.4. Human Resources

Demography

The population in Guadeloupe reached 404,000 people in 2009 and the population density increased to over 260 hab. per KM.

In Guadeloupe the evolution of the population structure has been going through a phase of transition since the early eighties due to a dramatic fall in the fertility rate and an increasing number of elderly people; at the moment these trends coexist in a scenario in which the decreasing fertility rate still remains significantly higher than in metropolitan France. In 2030 (INSEE intermediate scenario without the northern islands) the Guadeloupe population will increase to 550,000 people, approx. 100,000 more than in 2009. In this scenario old people (over 60) will increase from 17 to 25%. The increase in population density on a small and mountainous island can in perspective become a negative factor, due to the pressure on natural resources and land which may endanger the environmental sustainability of the growth process, and increase congestion costs in a context of still insufficient development.

Migration

In the last 10 years Guadeloupe has recorded a negative 0.4% migration of the population, the highest rate among the DOMs. Net migration is increasingly negative (10% higher in the last 5 years (1999-2009)). Outmigration contributes to the slowing down of the population increase in particular among young adults. By the same token in-migration of retired people accelerates the increase of the old age population and partly compensates young adult outmigration. Migratory movements contribute to weaken the economic potential of the island since outmigration concentrates on the young adult population which, once qualified, remains abroad. In recent years (2001-2006) one out of four (9000) left for metropolitan France and only a minority returned after finishing their studies. The difficulty in entering the labour market and the limited demand of the economy for qualified profiles are only a part of the motivation for remaining abroad. The migration balance is compensated by the net positive migration of people over 40, white collars and retired. The negative net migration is the result of a non negligible flow both entering and leaving the region, the in-migration of high professional profiles (cadres) somewhat compensates for the insufficient supply of these profiles on the island. As a result of these changes in all its age group components, population growth in the region has a significantly lower trend than in the other DOMs.

Evolution of active population

The active population is increasing as a result of the composition per age group which generates an increase in the working age population mitigated by young adult migration and by a large number of discouraged inactive people who do not even apply for jobs, but are willing to work. In 2009 the active population amounted to 61.5% lower compared to the previous 2 years, while the number of unemployed and the inactive willing to work reached 58,500 (source INSEE 2009).

In 2009 activity rates were 4 points higher for men (63.7%) than for women (59.6%); they remained 10 points lower on average than in metropolitan France. Their composition per age group shows that participation concentrates on the 25-49 age group, while it is very low for the 15-24 group (20%), for both men and women, almost half of the rate of metropolitan France

Education and training – Qualification of human resources

Education and training are considered a fundamental factor of development in the region given the regional strategy of development based on the knowledge society and innovation. As the diagnostic of the ESF operational programmes stands, there is a global lack of qualification of the human resource making harder the access to the labour market. The job seekers with a weak qualification level have difficulties to integrate the labour market. The long length unemployment (superior to one year) regards 50% of the job seekers; 36% of the job seekers have no qualification. Therefore, the matching between the jobs' demand and supply is getting harder due to the low level of qualification of the job seekers.

. Despite the relevant public investments and the increase in the number of students and of their success rate, the overall performance of the system is far from

satisfactory. In 2005 only 33% of the 25-34 age group left the educational system with a diploma. In addition only 22% of those leaving the system had a higher (*supérieur*) diploma. Most actors consider this policy not only a focal element of the development strategy of the island but also the necessary condition for a significant improvement in the performance of the economy and for its diversification towards higher value added productions. Education investments are, however, at a medium to long term return and efforts need to be intensified to align the region to the EU 2020 strategy.

Looking at the system performance it must be highlighted that despite increasing attendance of first and secondary degree courses, high schools and BTS and BTSA, the results are still insufficient and significantly lower than in metropolitan France, though improving; in 2008 the difference in the ratio of pass marks for the different kinds of secondary diplomas varied between 10 and 20 points. The success rate is higher for the BAC, the difference with metropolitan France shrinks to 4 points, than for the technical education diplomas where it is around 58%, the same BEP and BTS student results are 20 points lower than in metropolitan France. In higher education student numbers have registered increases over time, though a significant share of native students emigrates to follow their studies in metropolitan France but the question as to where, beside the public sector, they can find adequate jobs remains unanswered.

Finally, the process “education - training - labour market” is characterised by the persistence of the early livings from the educational system and an insufficient articulation between the school and the labour market.

3.1.1.5. Research, Technological Development and Innovation (RTDI)

Basic research activities constitute a main instrument for carrying out a strategy of transformation from the present development pattern heavily based on the use of resources to a higher value added one based on knowledge. The region has a relevant core of research activities which are underutilized with respect to the aim of technological innovation transfer, both in the public and private sectors. In addition to the research potential there is a lack of intermediary structures from incubators to other institutions dealing with technology transfer. A development pole (“*Pôle de compétitivité*”) has recently been set up with the support of a similar pole in metropolitan France, and is trying to develop some technology fields connected with the Guadeloupe potential in energy and tropical building materials and techniques, currently gathering 33 firms³. The present weakness of the manufacturing sector firms coupled with the absence of knowledge based firms is a limiting factor to RTDI development despite the potential of the research activities going on in various strategic sectors on the island. The general impression is that the necessary conditions to transform RTDI into an engine for the development of the emerging sectors have not yet been met.

However, within the framework of the structural funds operational programmes 2007-2013, the local authorities put a stronger emphasis on the support to innovation through the definition of the regional innovation strategy. Based on a large regional

³ See the regional innovation diagnostic on

http://www.guadeloupe.pref.gouv.fr/sections/les_actions_de_l_eta/stategie_regionale_d

consensus, this policy document, adopted end of 2009, aims at four objectives: to consolidate, develop and share a common innovation culture; to detect, to make emerge and to support the innovation projects of the enterprise: to better link the higher education and research system with innovation; and to open the regional innovation system and strengthen its attractiveness. The innovation strategy is now in its implementation stage. For 2011, it is planned to establish the regional innovation network, to establish a regional aid scheme supporting and accompanying innovation projects within firms (with support of consultants) and to provide assistance to local researchers in developing innovation projects and EU funded projects (with the 7th framework programme on research and development).

3.1.1.6. Connectivity and opening of the economy

Accessibility and transport, telecommunications

The problems of accessibility from abroad, the high density of the population mainly concentrated on the coastal area and the high import level in relation to GDP make the transport system crucial for Guadeloupe's present and future development. Improved efficiency reflected in lower service prices and easier, more diversified internal communication links is a crucial factor for the island's future level of competitiveness and for the people's well being, as it will have an impact on the extra cost of imports which are imposed on the final consumer and on input prices for firms.

The accessibility problems of Guadeloupe are due to its remoteness and generate costs to the economic system evaluated by the INSEE around 10% to 15% of the goods in question. Furthermore, the actual freight flow arrangements are mainly linked with the EU and based on agricultural exports, the monopolistic position of some agents in the transport and maintenance chain impose a pattern of flows of imports and a cost which penalizes the consumers and reduces their living standards. Basically the region is obliged to import from the ports where its banana exports go so that the ships are full in both directions. Besides these structural factors a number of infrastructure and services are however of good quality and improving the accessibility from abroad and the internal transport system within the main island and the rest of the archipelagos. The transport sector produces 3.4% of the regional product and in 2008 employed 4.2% of the workforce, around 5,000 workers (INSEE). In 2008 the sector has more than 2,000 enterprises mostly in goods transport and in urban transport, respectively 900 and 700. In recent years maintenance and deposit enterprises and goods transports have become fast growing segments. The size of these firms is mostly very small, 70% without employees and 19 between 1 and 9.

The port system in Guadeloupe is based on 5 marinas and 12 multipurpose ports. They assure an increasing number of services and their improvement could provide a precious source of service exports as well as contribute to the region's competitiveness by lowering the extra-cost for imported and exported goods.

The autonomous port of Guadeloupe (Port de Jarry) specialized in freight transport and servicing is increasingly raising its capacity to deal with the import increases (2/5 of the traffic with the Caribbean). Similarly passenger traffic is also increasing though more slowly than freights. 95% of the total traffic goes through the Jarry port. In the

other main ports of Pointe à Pitre and Marie-Galante, passenger traffic, mainly cruises, are constantly and rapidly increasing.

The airport international Pôle Caraïbes which is the first in the DOM in terms of passengers has suffered from the dramatic fall of the tourist traffic since 2000, and now is approaching 2 million passengers. Its performance is tightly connected with the development of the tourist sector.

Internal transport is concentrated in the coastal area and suffers from the increasing local traffic on undersized road infrastructure. This is partly due to the concentration of the productive establishments as well as non-existent and low efficiency of the public transport, which has boosted private car transport in recent years. This transport weakness is a major obstacle to a sustainable and environment-aware strategy and is high on the regional agenda.

For what regards information and communication infrastructures, the regional Council initiated and strongly supported the implementation of the marine broadband cable in 2006 (from Porto Rico), which contributed to a significant decrease of the telecommunication costs, even though they remain higher than in Metropole. In addition, the ERDF operational programme 2007-2013 is supporting the development of ICT infrastructures and e-services in the public sector.

Trade balance, foreign direct investment and regional integration

Trade balance is one of the most relevant weaknesses of the system and endangers its viability. Exports are a little portion of imports and rely on heavily subsidized goods in agriculture and the agro-food industry (50%), on refined oil and a few more industrial items. On the other hand most intermediate and final goods for investment or intermediate and final consumption are imported including energy, means of transport and a substantial share of agro-industrial products utilized in the region (75% in 2008 according to INSEE Op. cit.). The main clients for export are metropolitan France, Guiana and Martinique, the export market of the Antilles region (excl. Guiana and Martinique) is minimal (4%). The regional economy, due to various factors, lack of competitiveness to export in the global markets as well as in the EU internal market to which it belongs. The main reason is the lack of specialization and of goods and services at a competitive price which is the end result of the self-referential subsidized growth model, which has at its origin the extra costs of the remoteness and the market size limitations for exploiting returns to scale for industrial productions. The self-feeding nature of this sequence of built-in structural factors to the regional growth model is responsible for the deceiving trade scenario both for goods and services as well as for FDI. The lack of a competitive context, in the economy and in the social organization, discourages external investors including the tourist sector which should suffer least from the mentioned limitations and does not allow the regional economy out of this deadlock and develop competitive specializations less influenced by the remoteness of the island or by the closer markets of Latin America and the USA.

3.1.1.7. Environment, energy and climate change

The region is characterized by a variety of climates due to the influence of the mountainous reliefs and the Atlantic and Caribbean Sea influence on the coast. This has generated a rich and diversified vegetation and biodiversity, which should be preserved by a sustainable use and conservation of the natural resources. The main dangers are constituted by the anthropoid pressure of the growing population mainly concentrated on the coast, a dispersed and scarcely organized functional organization of space and in particular of the residence function, due to the lack of city planning and to the pressure of tourism and holiday housing on coastal and agricultural land use. The protected areas need to be increased, the residual unused coastal areas need to be preserved, the tourist products need to be modified offering more environment-aware activities and targeting clients to 'exploit' the naturalistic and cultural dimensions of the island. In addition, the town planning organization and building rules need to rationalize the use of land, organize urban functions, preserve the land from chaotic building, renovate the areas in decay and the existing stock of old houses. In other words, environmental protection means reorganizing the urban functions drastically as a necessary condition for creating new competitive activities, and improving the tourist services. Urgent intervention in the old quarters of the cities to update earthquake building standards is also required. These interventions in the BTP sector could have a strong impact on the overall competitiveness of the spatial system as well as provide a relevant demand for labour with relatively lower import content than the other sectors. Environmental problems arise from a still incomplete water and waste collecting and treatment systems. Other main environmental problems are water use and waste disposal. Both areas of environmental services suffer from obsolete infrastructure, planning and operational weaknesses of the urban and local authorities, to such an extent that EU directives and standards for water quality and for waste collection and disposal are far from being fulfilled. 97% of waste goes to the dump without selection or treatment. Local authorities need to organize cooperative interventions and to find the necessary resources for the infrastructural investments even though the structural funds were allocated in the past programming period.

Energy

Energy use in the region is based on fossil fuels, though renewable energies, solar, geo-thermal, wind etc. could be developed on a large scale and help reduce the risks of fossil fuel supply. The island is greatly at risk of uncertain supply deliveries, as was the case in the past. This generated sharp price rises. Renewable energies however cover 14% of the total production, mainly geothermic and photovoltaic. The region has a non negligible core of researchers in UAG and GREER and *Pôle Synergile* on renewable energies but no significant spinoff which could seriously cut the regions dependence on fossil fuels has emerged yet. Various projects for the development of geothermic plants (there is one operating in Bouillante) have not found unanimous agreements among the stakeholders interviewed and they are also linked to agreements with nearby islands. Furthermore, the comments of the stakeholders in the field are that companies and institutes investing in research in the field of renewable energies, follow up with application and commercial development in metropolitan France.

3.1.1.8. Focus on specific and emerging products and sectors

Agriculture, forestry, animal-stock fishery and agro-food industry

The main pillar of regional strategy is the consolidation and modernization of agriculture based on the greater differentiation of the production and its transformation on the island by the agro-food industry. In other words, agriculture needs to remain a reservoir of employment as well as an instrument to maintain the landscape, preserve biodiversity and fight the extreme events arising from climate change. Agriculture is at present a fragile sector since its main productions are uncompetitive in the global market and even with the production subsidies granted by POSEI are on a declining trend. On the other hand, there is a competitive pressure on the SAU, mainly in the coastal area, due to the simultaneous pressure of tourism and housing which raise the opportunity cost of agricultural use and may prevent other productions from finding the necessary land surface to achieve the critical mass to make it competitive.

Agricultural transformations in the region can also be based on alternative utilization of the current banana and sugar cane productions which require the diversification and innovation of the agro-food industry to transform those primary products into innovated products like, banana flower or biomass, or animal stock food etc. Most stakeholders consider it necessary to maintain the subsidies allowed by the POSEI, however, these subsidies do not freeze the present situation but need to induce the necessary changes more efficiently than in the past.

The future role of agriculture is closely tied to the development of an agro-food industry to channel productions into the food chain production for the internal market and increase the value added of local productions, reducing simultaneously the external dependence on food. The agro-food industry plays a pivotal role in the regional strategy of transformation since, beside the consolidation of agriculture, it can give rise to import substitution and reduce the demand leakages due to an enormous trade deficit in which the agro-food product is the highest import item (30%) of the trade balance and a major source of deficit, since the export/import ratio is 15%. Other niche products in the area of forestry can be developed by exploiting the biodiversity of the local vegetation in the pharmaceutical and cosmetic and chemical industry. Their development is however based on more innovation and research based activities and more integration and cooperation among sectors and between research and entrepreneurs. At present these seem to be the main missing links between the strategy and its accomplishment. One reason for the missing link is the weakness of the manufacturing sector in developing in the right direction as well as the still undeveloped link between the many public research groups operating in this area and the current and potential entrepreneurs. The gap between them is wide and stakeholders have no clear answers at present. Another area is the exploitation of biodiversity for developing products based on the active principles of some plants in the cosmetic industry as well as in the pharmaceutical industry.

Manufacturing sector development and import substitution.

Undersized manufacture with respect to regional consumption is the main reason for trade deficit. The regional strategy considers the development of an endogenous

industry as a fundamental pillar to absorb unemployment and make the region self-sufficient with respect to a number of consumption goods primarily in agro-food. The strategy of competitive manufacturing needs to clarify the conditions which will make products and markets competitive and in which entrepreneurs need to invest. In this respect, the first and main strategic choice for the future development pattern will depend on the choice between import substitution and export oriented productions. The strategic analysis and the documents do not take a clear position on this issue though most stakeholders argued that the manufacturing sector should concentrate on import substitution, as it is extremely difficult for the handicaps, due to the remoteness and costly transport services as well as for the internal market size to generate scale economies, to develop an export industry. Other stakeholders consider it necessary to open the internal productions to global competition and develop the know how to participate in the global arena. The alternative requires a choice that is crucial for the regional economy and determines two different patterns of specialization.

The lack of market and export oriented products in manufacturing and services which would stem from the choice of import substitution pattern, may generate an obstacle to the development of competitive goods and consequently the necessary outlets on the global market and for internal production. This could discourage private investments and foreign direct investment which need a competitive context in which to locate and find the necessary supply. This choice may become the weakest point of the strategy and may send ambiguous signals to the markets and its actors: an ambiguity which the stakeholders do not yet know how to get out of. In fact, the import substitution strategy does not need to focus on specialization and on establishing a competitive value chain on a few niche products which can overcome the logistic and other limitations and their impact on costs and may hinder the necessary social and economic changes in people and behaviour of firms. On the other hand, the import substitution strategy may seem easier to pursue but in fact implies the development of a vast array of consumer goods with a possibly high import content, requiring know how and skills, costly investments and entrepreneurial spirit to compete on the local market with global manufacturing value chains.

Tourism and other services

Tourism is a pillar for the future growth of the region both for the foreign currency receipts, the direct and indirect employment that is generated in its value chain from local agro-food productions to services, transport and commercial activities. Tourism activities are the third sector for employment creation, it currently employs 11.5% of the workforce (9,000 workers) and guarantees a non negligible flow of foreign currency.

Tourist development has in the past played an important function in the regional economy both for employment and value added; in recent years it has suffered from a severe competitiveness crisis due to the obsolescence of the products and the poor quality of the services; consequently it is declining and important investors have left or are reluctant to invest to reverse these trends. Most stakeholders give tourism an essential role in the future regional development, but agree on this analysis which requires good planning to correct the image, renew the products and also change touristic targets and markets in the light of growing competition on conventional products from the other islands of the region. Tourism development strategy,

therefore, is a pillar of the strategy if it can manage to renew itself drastically. Most stakeholders agreed that tourism must diversify in the direction of small family hotels and B&Bs, more environmentally friendly locations and types of services provided. Tourists need to get closer to the local culture and nature, develop sustainable and environmentally friendly activities in the countryside and in the natural parks to exploit the natural beauties of the island, and not simply offer the sun and beach product to mass tourism.

The development of tourism in this direction requires a drawing closer to the local communities, to train and diffuse a hospitality culture which at the moment does not exist to any significant extent. On the other hand a relevant flow of private investments to renew houses and the environment may have a significant impact on the employment of the building sector and on the development of appropriate building materials and techniques which are business areas in which the region is investing. Business services constitute a small share of the sector and the regional strategy is encouraging their development through subsidies to consulting and the development of ICT facilities in firms from which all sectors from public to tourism could benefit greatly.

Innovation and research based activities

The regions' research and innovation potential would be enviable to many EU intermediate and strong regions as the number and quality of the centres and of researchers is high; they cover areas from biotech applied to forestry, agriculture, animal stock and aquaculture to tropical medicine, from the chemistry of materials to renewable energies, from environmental sciences to geology and volcanology.

Most if not all the research potential is public and suffers from a certain dispersion in size, mission and focus, and most of all the research centres are scarcely integrated among themselves. The result of this isolation is that each team is insufficient to create critical mass in specific technological areas and to produce spin-offs or spillovers on the business side; in fact the activities are concentrated on basic and applied research and not on development.

RTDI investments of firms are virtually nonexistent, their professional personnel profile is basic and therefore not in the condition to guide the RTDI system, by expressing a demand for innovation and then exploiting its potential. Furthermore, the innovation they need is much more straightforward and basic than what the ongoing applied research can provide. The region considers the pole Synergile nothing more than a challenge going in the direction of integrating the two spheres of technology in which public and private demand on the island may rise substantially. It gathers more than 30 small firms.

In this context, of which the region and most stakeholders are by and large aware, the RTDI and innovation actors should work towards integrating and focusing the systematic application of their research on new products and activities. On the business side any policy of this kind needs to be supported by medium or large firms or research based firms which could act as a go-between between the research and the SMEs to bridge the wide cultural and skill gap which currently prevents their cooperation. The regional strategy beside focussing on precise and well defined fields where it has comparative advantages, needs to take a strong initiative towards

the integration of research teams, and then try to fill the gap and focus research projects on development and prototyping activities.

The regional strategy of development of RTDI, based on a clear diagnosis and inventory of the potential, goes a long way towards focussing on these objectives but the impression from the field research is that this policy field still lacks the necessary clear leadership to take the necessary initiative which would have a profound impact on the operation methods and agendas of the concerned institutions.

3.1.2. Qualitative analysis – Key issues resulting from field research

The field research consisted in approx. 30 interviews with the main stakeholders of the public sector, national and regional, operational agencies, utilities, private entrepreneurs and entrepreneurial associations, University and development poles (List in annex).

The objective of the field analysis was to collect direct information on the main issues of regional development, analysis of present social and economic problems, factors of development as well as obstacles; the stakeholders strategies in the field to counteract the present situation and the worsening of the economic trends which had allowed a fast though insufficient regional growth. The interviews mainly dealt with development strategy and the process of transformation and the main lines of action to follow to make the strategy concrete. The following part of the text focuses on social and sector policy choices as well as on the regional internal market organization necessary to sustain future regional competitiveness; these mainly concern external trade strategy and incentive policy.

Overall strategy for the future

In the region there is a wide consensus on the need for economic and social change as well as on the broad economic strategy to follow. No actor thinks that marginal adjustments or cosmetic changes can do the job. No major differences emerge among the stakeholders, though the stress on the various elements of the strategy differs depending on the actors involved.

Individual and social well being are at the centre of regional development policy, deeply influencing the type and direction of economic development in the direction of social and environmental sustainability, and profoundly question the present growth patterns. In Guadeloupe the regional stakeholders realize that the emerging sectors need to spring from the endogenous potential and from research and new and innovative solutions applied to existing sectors and exploiting endogenous resources in agriculture and forestry: applications to environment biotechnology and marine ecosystem; agro-food industry on tropical environment, health service, renewable energy development; new forms of sustainable tourism; the application of new technologies to the production of local goods and services. This strategy is coherent with EU 2020 guidelines for endogenous sustainable and competitive development based on research and innovation but it is highly demanding and requires

fundamental changes in the economy and society. The process of change has many interconnected dimensions.

The awareness of Guadeloupe society and economy of the need for radical changes in the direction of a more competitive and market oriented economy and their acknowledgement that the oversized weight of the public sector cannot continue to grow as a response to the crisis are central to the strategic debate of the regional stakeholders. Their strategic vision is that regional development needs to be based on a balanced integration of different sectors in which each contributes to the regional income, rather than following a specialized pattern with one sector acting as leading factor for development. The strategy aims at sustainable development both by lowering dependence on fossil fuels for energy use and by changing the consumption and investment patterns by developing more knowledge intensive manufacturing and services and guiding the tourist supply towards more environment-friendly products.

Social and equity aspects

The preoccupation of the social consequences of the present development features, on the young and the unemployed, arising from a distorted growth and distribution pattern is the dominant feature of the stakeholders analysis of the present situation. On the social side, the main problems identified by the stakeholders are unemployment, integration of job seekers into the labour market, and insufficient education and training of the workforce and in particular for young job seekers, but also the lack of a competitive pricing system, oligopolistic power of a restricted group of people operating in the vital knots of the distribution chain, and the different exposure to the economic swings of social groups. These factors emerge as a main source of income inequalities and as a serious obstacle to the transformation of the economy towards a more balanced distribution of economic opportunities. Gender inequalities and the difficult access to jobs and income of the young is an additional source of social problems. These two main groups of penalizing factors partly due to the deep rooted history of the island's economy and society and partly to the recent economic development patterns, are at the centre of most stakeholders' perception of the present situation.

Inequality has been a major feature of the regional economy since income distribution is affected by the different market power of workers in protected and non protected sectors of the economy and by a fundamental lack of competition in the internal market. As a consequence, income p.c. growth is not itself a relief from growing inequality in income, both, because of its limited impact on employment and because the benefits are concentrated in protected social groups which exercise their oligopolistic market power on determining the prices of goods and services. 10% of the wealthier families earn 5.6 times the income of the poorest families; in metropolitan France the ratio is 3.3 times. In fact, relevant salary disparities within socio-professional groups are such that the first quartile of employed workers gets 44% of the salary of the last quartile. Public employment salaries are significantly higher than in metropolitan France and 36,000 people are employed by the public sector, (INSEE "*Tableaux économiques Guadeloupe 2009-2010*"). Disparities arise also between male and female salaries for all professional groups and for both sexes within the white collar salaries.

On the other hand, the welfare system goes a long way towards alleviating disparities, as approximately 32,000 workers have the right to the RMI, minimum salary income and approximately 10,000 more workers are supported with different insertion aid schemes (2008). Looking at the disposable income components, Guadeloupe families are subject to tax and social contribution rates that are substantially lower than in metropolitan France, only partly compensated by lower transfers in kind. Only ¼ of the families pay taxes as a consequence of their income level beyond a given threshold.

Inequalities and poverty increased rapidly according to INSEE data from the year 2000 to 2006 (by 4%) and despite the substantial degree of protection that the national welfare system grants. The families under the poverty line (60% of the median income and approx. 6000 euro) widen the gap and increase in number. The group just above the poverty line is also drawing nearer to it. Poverty especially hits unemployed and young people without diplomas; employment therefore is the main determinant of poverty in Guadeloupe.

Education and training

Human resources are at the centre of the development strategy to increase the well being and quality of life of the population and alleviate the inequality and poverty discrimination arising from the present growth patterns. In this respect education and training which the public authorities have already significantly invested in, need to be made more efficient to strengthen their impact to foster the development of new emerging sectors. That's why the ESF operational programme 2007-2013 focus the intervention on three objectives: the increasing participation to education; the integration and return to employment of the less favoured people and the fight against exclusion⁴ ; the lifelong learning (especially through the support to the vocational training) and the development of a business and innovation culture especially among the youngest.

The lack of education and skills to develop the so called emerging sectors and productions is a constraint that needs to be overcome. Most stakeholders highlighted that the pre-condition for the new development objectives is to invest in education and training in the emerging sectors; in fact, at the present moment even if high knowledge intensive productions were to develop in fields like renewable energy, biodiversity, new materials for building in tropical areas, the labour market would not be able to furnish the appropriate supply of technical skills for manufacturing or maintenance. The same applies to business services; even the development of new forms of tourism and often the improvement of the products are hampered by the lack of skills and training of the workers and job seekers. As a result of this analysis many stakeholders believe that some of the new emerging research and innovation areas will in the end benefit mainly workers from abroad or simply will not be able to be developed on an industrial scale for the benefit of the regions.

⁴ For instance, the ESF is supporting the activities of the RSMA (Military Regiment) that provides training programs for young people excluded from the labor market and with no or a low qualification level. This is one of the successful measures of the ESF program (Annual Report on ESF 2009).

The development strategy has been defined by the regional authorities with a large partnership in the official documents in the SRDE and in OP 2007-2013. The emerging sectors and productions, in the stakeholders' analysis, should spring from the old sector products in agriculture, manufacturing, tourism combined with research and development activities. This combination may generate through innovation new research based products and services. This mix of endogenous resources combined with innovation, in the regional strategy, should give rise to a new pattern of development, competitive and extroverted. The following part of the text will focus on the old sectors and on the conditions which allow the new specializations to emerge. In this analysis two crucial issues concerning the regional market development strategy for manufacturing will be discussed: import substitution as opposed to global competition for the local productions, and the use of subsidies and protection policies.

Infrastructure and spatial organization

Stakeholders agree that infrastructures are still needed in the light of the strategy of transformation and sustainable development that they are pursuing. They need to reorganize and upgrade a fragile regional space densely utilized in a rather chaotic and uncontrolled manner. Everyone is aware that the environment of the island cannot sustain these growth patterns and the way it impacts on the land and the natural resources.

The main intervention areas are internal transports, spatial organization with specific focus on the reorganization of the urban functions and urban renewal, utilities and environmental services for water, waste, renewable energy etc.

These investments are considered a priority in many respects and a necessary condition for a sustainable development from the environmental and social equity perspective.

Internal transport suffers from congestion and from the lack of common transport and of alternative modes to move people and goods from train to sea; movement of people relies on private cars and the existing roads are insufficient considering the increasing number of vehicles in the last decade or so. The regional authority is promoting a plan to revise common transports drastically.

A second area of intervention is territorial organization since the operating planning instruments were unable to work properly in face of the strong pressure towards the urban centres and the coast. This has resulted in the mushrooming of new quarters with no infrastructure and services; the historical centres need to be renewed and revitalized, housing is spreading into the countryside and occupying valuable agricultural land and the productive activities are too concentrated. The lack of spatial organization creates inefficiencies and congestion costs, it is a menace to a fragile environment and does not provide the space for developing new firms and, most of all, generates inequalities among social groups arising from the difficulties to access decent housing and local services.

In the area of environmental services, water and waste disposal there are huge problems concerning the upgrading of the services at urban level and the appropriate institutional agreements for operating and financing the services are far from established. The weakness of the territorial authorities and their lack of financial means have been put forward to explain those long dated problems. This appears a

typical effect of the transformation from a rural to an urban society which many EU regions experienced decades ago.

In conclusion, according to all the stakeholders this area of intervention is a priority and influences the success of the strategy in all the other sectors of activity.

The market regulation and the incentive policy

The alternative between a competitive market regulation and a system of subsidies and protection of the internal market aiming at regulating the impact of the handicaps of the region, both the geographical and those induced by past policies, is a central issue for any regional policy making strategy, and in particular for weak regions.

Regional policies for those catching up regions usually adopt a policy mix by protecting crucial local sectors for endogenous development for a limited span of time and progressively exposing those which need to grow or are able to compete to market competition, especially in the light of the small size of the local market. The specificities of an island market, remote from the supplying markets are such that this two stage policy has been hard to carry out given some additional penalizing factors which make more difficult the opening of the market more difficult. The lack of a competitive context in both the goods and services and the labour market, however, has a cost in terms of development potential, efficiency which is paid by the consumer in terms of higher prices, lower quality and uneven distribution among social groups. At the same time the whole community pays the cost for inefficiencies due to the closure of the regional system to external investments which need a competitive context to locate and grow.

The lack of market signals to the entrepreneurs deprive the economy of the essential guidelines for market, technological and specialization choices and freezes the economy in an artificially closed boundary dominated by public subsidy allocation in which groups can easily exercise their distorting power.

These issues arose during the field research and the development strategy needs to be clear on this issue, namely how and to what extent to protect sensitive sectors and how and to what extent to open the economy to competition to select producers according to their competitiveness. The regional authorities consider keeping the subsidies on traditional agricultural production sensitive for employment and for environmental reasons necessary. At the same time these subsidies, indeed received by most regions in EU far richer than Guadeloupe, should not prevent innovation and transformation in the agro-food market; this is the most worrying risk of the protection. Policies of protection need to be fine-tuned and must be based on an exit strategy.

By the same token, the manufacturing sector investments are subsidized through an array of tax subsidies and other benefits that compensate for the extra costs of transport and other handicaps. The regional authorities and the other stakeholders consider these protection measures necessary even if they understand their insufficient impact on competitiveness. These subsidies were not conducive for the growth of the sector and competitiveness for export markets, nor could the region's manufacturing sectors develop a specialization and competitive advantages in some products and services.

It must be kept in mind that In a closed economy, the costs and benefits of the subsidies fall on the taxpayers and the consumers of the region unless they are kept as profits in the firm's balance; in the case of Guadeloupe the costs fall on the national taxpayer and in this case the subsidy becomes a transfer to the regional economy and in particular to the firms benefiting from it which has an opportunity cost as the same financial flow could go to the consumers or to other producers in the economy.

The road map towards greater competitiveness is part of the regional strategy priority starting from the agro-food industry which can find a captive market on the island as well as some of the intermediate inputs, with consequent multiplier effects on regional growth.

In conclusion the region's policy strategy is based on a policy mix which should create the conditions for greater competitiveness and an opening towards the foreign markets of the region in a short period of time.

3.1.3. Summary of results

3.1.3.1. Main constraints and challenges:

Main constraints:

- Lack of competitiveness with respect to the region
- Insufficient level of competition (transportation, telecommunications)
- High population density
- Some EU regulations and policies

Main challenges:

- Shifting from a growth model that relies mainly on final consumption to a model based more on investment (including investment in knowledge)
- Addressing the issue of a predictable diminution of public funding, national and EU
- Developing regional '*insertion*' through export of high added value services
- Addressing issues related to demographic growth: energy, waste, pollution, use of land
- Addressing future needs of an ageing population
- Exporting high added value services in particular to the region
- Up grading the human resources skills, especially of the youngest

3.1.3.2. SWOT analysis

Economic conditions	Strengths	Weaknesses
	<ul style="list-style-type: none"> • High potential • Unused human resources potential • Strong public sector. • Higher level of public services in relation to the neighbouring countries • Potential to export services 	<ul style="list-style-type: none"> • Lack of skilled people for potentially emerging sectors • Low competitiveness of export sectors. • Lack of market oriented entrepreneurial culture. • Insufficient critical mass in many sectors, • Low private investments in general and in innovation.
	Opportunities	Threats
	<ul style="list-style-type: none"> • Increase internal market demand for local product • Concentrate niche products for export. • Reform internal market position of crucial actors. • Investments in infrastructure to upgrade competitiveness and employment creation 	<ul style="list-style-type: none"> • Higher competitiveness of neighbouring countries in crucial sectors • Rising social inequalities. • Rising out-migration of educated young people. • Downward trend of budgetary perspectives. • Increasing dependence on outside transfers.
Connectivity: transport, accessibility, regional integration	Strengths	Weaknesses
	<ul style="list-style-type: none"> • Satisfactory infrastructure in relation to neighbouring countries. • Growing economic performance of the transport sector main firms 	<ul style="list-style-type: none"> • Lack of internal public transports. • Excess use of private cars among the internal transport modes.
	Opportunities	Threats
	<ul style="list-style-type: none"> • Complete the supply of transport infrastructure. • Reorganize and rationalize space planning and the functional use of space. • Increasing coasting for internal transports. • Increase potential for transport service export. • Potential development of transshipment business activities in the region. 	<ul style="list-style-type: none"> • Increased cost of transports and related services. • Lack of control for oligopolistic segments of the chain. • Loss of tourist market worsens the investment perspectives of the sector.

Environment, climate change and energy	Strengths	Weaknesses
	<ul style="list-style-type: none"> • Increasing weight of renewable energies • Good research potential of environmental and climate change issues. 	<ul style="list-style-type: none"> • Fragile environment. • Heavily exploited coastal resources of marine environment. • Exposure to extreme events from earthquakes to volcanic eruptions to hurricanes. • Insufficient standards of housing stock to withstand extreme events. • Higher exposure to fossil fuel delivery blockages.
	Opportunities	Threats
	<ul style="list-style-type: none"> • Investments in these fields as drivers for innovation and of research based activities. • Increase export potential in these areas. • Increase and focus research in these fields. • Increase education and training in these fields. 	<ul style="list-style-type: none"> • Increase vulnerability • Insufficient adaptive and mitigating policies. • Insufficient investment in upgrading building standards.

3.1.3.3. Vulnerable and high potential sectors

With the exception of the protected sectors of the public administration and of personal services, most sectors are vulnerable, despite that most of them have an unexploited potential. The condition for their exploitation is connected to major social and economic changes, which have been treated in the previous analysis. The agricultural sector with its traditional production is highly vulnerable to the external competition of low salary countries. Its protection (POSEI) over the last years has not prevented the decline in production and exports and despite the positive effect on farmers income and on the local food industry it does not stimulate a product mix transformation to differentiate supply. The sector is also vulnerable because there are insufficient technical skills to assure the transition towards other products which could support a differentiation of the production to increase the regional supply of fresh products which at the moment are imported. The potential of the agro-food sector involving agriculture and livestock productions to exploit requires profound transformations involving the product mix, the production process, manpower skills and market organization, and local consumer attitudes; conditions that at the moment are not being met. In fact, those transformations depend on the application of research findings of alternative use of local products to industrialize new products and use new processes, as well as also creating new brands of local food products.

The other relevant sector showing a serious decline trend and loss of competitiveness is the tourist sector which suffers from a lack qualified products, low

quality of services, obsolescence of the physical infrastructures, and of its main products. According to the analysis of the local stakeholders, the tourist sector needs to undergo a profound change, starting with the market segments, its target clients, products, and subjects involved. All these changes are aimed at a re-positioning of the island in the Caribbean tourist market in a more competitive position in new segments of the market in which at present there is no offer in the region. The decline of tourism involves those segments of the service sector, which has the tourist industry as its main client.

The re-positioning of the Guadeloupe tourist offer requires significant private investments, which at the moment are discouraged by the perspective of the future development of the tourist demand for Guadeloupe and the sharp decline in the turnover of the largest tourist groups some of which have left the region.

The traditional sectors, as we argued previously, are at the same time the sectors which at the moment have more potential in the endogenous development which the region is aiming to pursue. If it can carry out the necessary changes, the tourist sector can increase its direct and indirect employment in small family-run host facilities and in complementary services to enlarge the range of services offered to clients.

A second potential field is connected with the biodiversity of the island and the exploitation of its plants. In particular, those connected with the use of natural plants in the cosmetic and pharmaceutical industry, with a small number of SMEs in the early stage which are trying to develop new products for the export market. Construction and building materials for tropical climates is another sector in which a number of firms is carrying out RTDI for new products

A third sector is energy. The potential of new technologies and products connected to renewable energies are yet to be proved by the ongoing RTDI activities carried out by the "*Pôle de compétitivité*". Their future development into new production opportunities in the region give rise to mixed feelings in the stakeholders operating in the sector; for some the island does not have the size to develop any eventual findings on an industrial scale, while others appear more optimistic. On the whole, nothing concrete has yet been shown by the firms and the research centres focusing on this aspect, except for the geothermal plant of Bouillante.

3.2. Guiana

3.2.1. General description of the socio-economic conditions

There are a number of main features of Guiana relevant for socio-economic analysis, for developing strategic considerations and for setting-up public policies:

- ✓ It is a French territory located in the South American continent just above the equator, with a long border with Brazil and Surinam, a large region (83,800 km²), 93% of which are covered by Amazonian rain forest, causing problem in terms of internal accessibility.
- ✓ The territory is divided in 22 local authorities which have competences in particular in the fields of housing and urban planning, waste and water management, and economic development.
- ✓ A rich nature and landscape, but challenging environmental issues, are an asset (for tourism and for biodiversity).
- ✓ Guiana presents a small concentration of population (221,500 inhabitants as of 2009) but a dynamic demographic growth (+4% per year in average during the last decade), mainly concentrated on the coast line (Cayenne, the capital city, Kourou and Saint Laurent du Maroni), with a very low density (2,6 inh/km²).
- ✓ A relatively high GDP per capita compared to the neighbouring countries nevertheless affected by a high unemployment rate which exposes the region to social risks (average 30% in 2009) and by illegal migrations from neighbouring countries difficult to control and to fight against.
- ✓ The domestic market is a very small market, but expanding due to the high demographic growth. At present, it offers limited opportunities for transformation of local products.
- ✓ An economic structure dominated by the public administration sector (including education, health and social services) like the other French outermost regions, and the secondary sector with the presence of the spatial centre of Kourou.
- ✓ Except the aerospace sector, there are few and limited manufacturing activities (in terms of size and number of enterprises): construction, emerging wood sector, agro-food
- ✓ Despite of the richness of the primary resource, the primary sector is rather weak and still remains underexploited (including the mining sector)
- ✓ A strong deficit of the trade balance showing the high level of dependency from the mainland but also the lack of legal trade relationships with the neighbouring countries (Suriname and Brazil). The signature of the Economic Partnership Agreement (EPA) between EU and CARICOM countries, and the building of the bridge at the Brazilian-Guianese border on the Oyapock River (operational in 2011) offer new opportunities of doing business (export, import and investment) and enlarge the small domestic market for the Guianese companies, despite the fear of the socio-economic actors.
- ✓ The economic fabric is weak lagging in competitiveness, with high production costs, and fragile enterprises (capital structure, difficult access to credit and small labour resources)

- ✓ Nevertheless the spatial centre of Kourou presents opportunities for the services sector which is increasing significantly, as well as niches for technological development.
- ✓ Human resources are in general insufficiently qualified for addressing new challenges and developing new activities; the level of education remains low.

The general characterization is to some extent close to that of the other outermost regions: a small economy with a low critical mass for key activities. However, Guiana remains very specific in terms of demographic trends and migration, in terms of geographic positioning on the South American continent with borders with Suriname and Brazil offering opportunities of trade. The presence of the spatial centre is also a very specific asset, it has been the motor of the growth during the seventies and eighties and continues to be a factor of stabilization of the regional economy.

Otherwise, the debate is on the same line as the one in the European forums, in particular in the context of the “Strategy Europe 2020”. A growth process, intelligent, sustainable and integrator, leading to an economy more focused on knowledge and innovation, more ‘green’ and more open to the world, is an objective leading people in government and political forces as in business or in the university. The point is however that beyond statements and the wishes there is a concrete situation with narrow ‘room for manoeuvre’ due to the structural determinants.

The fact that there is a consensus on the diagnostic and the nature of the short term and structural components of the crisis is already a sound basis to prepare the future. Some work on forecasting and assessment on economy, sustainability and society has been done in the recent years in Guiana, in particular concerning trade (EU/CARICOM)⁵.

3.2.1.1. GDP and GDP per capita

GDP in constant EUR grew continuously over the period 1993-2007 (i.e. a growth of 102% in value, 2,97 billion € in 2007). The annual growth rate of the regional economy was particularly rapid in comparison with other French Regions, including French outermost regions: an average growth of 3.9% per year over the period. Household and public sector consumption were the main engine of growth, due to an increase in household disposable income supported by a relevant flow of social benefits and due to sustained infrastructure investments. In addition, the aerospace sector has a relevant impact on economic growth (around 16% of the GDP)⁶.

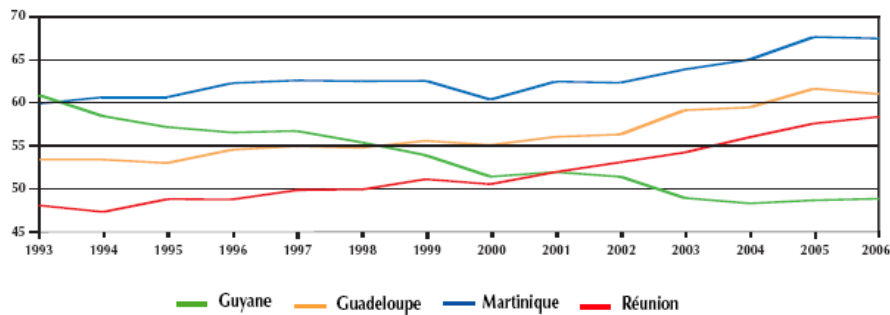
GDP per capita grew from 12,009 € in 2001 to 14,100 € in 2007 (+30%). While the GDP per capita of the other DOMs were catching up with the French mainland, the growth of French Guiana GDP per capita was absorbed by a fast population growth,; its GDP per capita was 62% of the French average in 1993, it falls to 47% in 2007.

⁵ Study carried out by ITD-Eu in 2010 for the *Agence française de développement* (AFD) on trade opportunities for French Guianese SMEs in the Caribbean Countries, Brazil, Surinam and Guyana.

⁶ Guiana, un développement sous contrainte, CEROM, AFD, IEDOM, INSEE, 2007, page 10.

Évolution des PIB par habitant des Dom

Unité : indice, base 100 = France métropolitaine



Sources : Insee - Comptes économiques ; Cerom - Comptes économiques rapides 2006

Figure – Guiana, un développement sous contrainte, CEROM, AFD, IEDOM, INSEE, 2007

3.2.1.2. Employment / unemployment

The increase of jobs has been sustained since 1993, with an increase of 57% in salary workers.

However, demographic growth has negative impact on the labour market:

- The increase in the active population is faster than the number of jobs created each year. While the active population has grown, the activity rate decreased over 2002-2008 (50.9% in 2008) as did the employment rate (42.1% in 2008) with a greater imbalance between male (51%) and female (33%).
- Despite the fast economic growth, the unemployment rate remains high over the period 1998 (21.4%) – 2008 (21.8%)⁷, especially among women (29%), young people (33%), and people with low education. The unemployment rate of people without diplomas is ten times higher than people with diplomas (BAC+2, i.e. two years after bachelor degree). In addition, the long term unemployment rate is as high as 48% of the unemployed.

In addition to the demography, as in the other French Outermost Regions, GDP/employment is not very elastic: growth does not generate a significant number of jobs, it relies on strong productivity gains while labour supply is abundant; the increase in labour costs (resulting from the French social policy) has made productivity gains necessary. Unemployment is, consequently, one of the major challenges that Guiana is facing.

⁷ It slightly decreases during the second quarter of 2009, establishing itself at 20.5% - "L'enquête emploi en Guiana deuxième trimestre 2009 », INSEE Guiana, février 2010

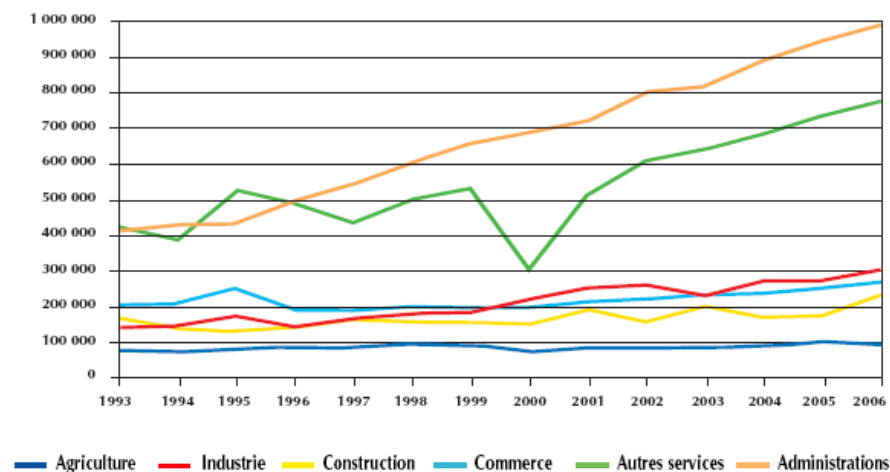
3.2.1.3. Economic structure

The structure of the regional economy has changed dramatically between 1993 and 2006.

Distribution of added value per branch

La valeur ajoutée du tertiaire s'envole Évolution de la valeur ajoutée sectorielle entre 1993 et 2006

Unité : milliers d'euros



Sources : Insee - Comptes économiques - Cerom - Comptes rapides 2006

Source: Guiana, un développement sous contrainte, CEROM, AFD, IEDOM, INSEE, 2007

The tertiary sector represents 76%, the secondary and the primary sectors represent respectively 20% and 4% of the total added value produced. French Guiana presents some specificities

- With regard to the French regions, the weight of the public administration sector (administration, education, health and social services), the construction sector and the agriculture sector is higher than in the French region
- With regard to the other French outermost regions, the weight of the industrial sector is higher, essentially due to the aerospace sector.

The value added trends per branch between 1993 and 2006 reflects the growing weight of the service sector and the diversification of the economy⁸:

- The public administration sector including education, health and social sector consolidated its strong position (+7% of annual growth), however in the meantime the share of other services – business and personal- increased (+10.9% and +7.5%)
- The share of traditional sectors (agriculture, construction, trade) decreased
- The industrial sector maintained its position and the value added share of the agro-industry sector increased (even if its position is limited at 1.7% of the total value). The aerospace industry benefits from investments (Soyuz).

⁸ Guiana, un développement sous contrainte, CEROM, AFD, IEDOM, INSEE, 2007.

Distribution of employment per branch

Consistent with the evolution of the added value per branch, the evolution of the distribution of employment per branch followed more or less the same profile. Three quarter of the salaried jobs are in the service sector, mainly in the public administration and education, health and social sectors. In this latter, employment grew to 94% over the period 1993-2006 as a result of the strong demographic growth that required a catching up investment policy in basic education and health infrastructures. Growth of employment in other services – business and personal – is also important (63% and +55%). There was also a growth of the construction sector and other manufacturing industries (including energies). The share of industry in terms of employment reflects the strong position of the aerospace sector, but also the exploitation of natural resources such as gold mining and forest wood.

Typology of enterprises

98% of enterprises have fewer than 10 employees, of which 68% have no employees. Only 2% of the enterprises have more than 20 employees.

Since 1993, Guiana has had a dynamic rate of creation of new businesses, mainly in commerce, businesses services and construction. The number of enterprises grew 28% between 1993 and 2006.

Creators are mainly unemployed people and beneficiaries of the minimal income (RMI).

3.2.1.4. Human Resources

Demography

Demographic growth dynamic is the major feature of French Guiana and impacts strongly on its economic performance.

27,000 inhabitants in 1950, 221,500 inhabitants in 2008, over the period 1999-2008, the annual average growth rate of the total population was 3.9%. Demographic growth is mainly due to a high birth rate throughout the period. Consequently, the share of young people (under 20) is very high and has been increasing since 1999 (44.9% of the total population in 2007). Therefore, French Guiana is not in a demographic transition phase (as are other French outermost regions). INSEE (National Statistics Office) foresees 425,000 inhabitants in 2030.

These results in a continuous and growing demand for basic services: education and social services but also urban services, with a greater urban density in the coastal territory. It also puts great pressure on the labour market to absorb new job seekers. In the meantime, the demographic growth has a positive impact on economic performance by enlarging the internal market and strengthening the demand for products and services.

Migrations

Figures on migration show the importance of immigration in French Guiana. 29% of the population in 2005 was immigrant⁹. Immigrants mainly come from Haïti, Suriname and Brazil. Immigration raises several issues: illegal work; distortion of competition in sector such as mining, construction and personal services; and social cohesion, with increasing disparities (25% of the population is living under the poverty level¹⁰) and difficulties in integrating this new population without diplomas, and who for a large part do not speak French.

Education and training – Qualification of human resources

The number of young people attending school is growing at the same rate as the population, resulting in growing demands for education infrastructures, both in the coastal and forest area).

Generally speaking, the qualifications of human resources are challenging, especially with regard to young people. Whereas in other French regions, the level of qualification of young people (25-34 age group) is on the whole higher than the older people, the number of young Guianese without diplomas is equal to the 35-64 age group.

However, positive points are:

- The growing success rate in the final school leaving examination (*baccalauréat*)
- The growing number of students attending post-secondary classes (1,200 students in 2006, + 150 per year)
- The diversification of the training offer at University

Two points remain critical issues:

- Illiteracy, namely among immigrants
- Access to education infrastructures in the forest area

3.2.1.5. Research, Technological Development and Innovation (RTDI)

The RTDI sector remains modest in French Guiana. Since the beginning of 2000, the number of researchers in the public sector has not really evolved, around 100-120 researchers and professors. The number of PhD studies is also stable. However, the activity of the Guianese Aerospace Centre (*Centre Spatial Guyaneis – CSG*) generates an important influx of researchers from abroad. On the private side, only very few small firms have RTDI activities (tele-technologies, biodiversity exploitation, wood sector). The main industrial company in the mining or the aerospace sector implement RTDI activities abroad, not in Guiana.

The main fields of research are: tele-technologies (satellite applications), biotech health applied in tropical areas, valorisation of natural resources, renewable energies, and materials.

⁹ Guiana Annual Report 2008, IEDOM, 2009

¹⁰ Guiana, un développement sous contrainte, CEROM, AFD, IEDOM, INSEE, 2007, page 12 et s.

Apart from the University, there are some major French public research organisations in Guiana (CIRAD, IRD, IFREMER, INRA, CNRS...). Guiana Technopole is the only innovation-support and technology transfer organisation with the aim of developing effective relations between research and business. It manages the regional incubator (academic incubator), the business incubator (CEEI) and the relationship with the poles of competitiveness. The Guianese Tropical Health pole has been recognised by the Government as a branch of the Lyon Biopôle (*Pôle de compétitivité*). Guiana Technopole has also a partnership agreement with Aerospace Valley for developing joint RTDI collaborative projects, and has close contacts with other poles in France (cosmetology and agro-food sectors).

Main RTDI issues in French Guiana regard:

- The development of a highly skilled workforce
- The strengthening of the relationship between public research and the private sector
- The access to knowledge and technologies that implies building strong partnerships with centres of competences from abroad

3.2.1.6. Connectivity and opening of the economy

Accessibility and transport, telecommunications

In terms of accessibility, French Guiana is challenging several issues.

The maritime freight transportation costs are higher than the other French outermost regions (+30 to 50% higher)¹¹, a result of the low volume of exportation, the inadequacy of port infrastructures (e.g. “*transbordement*” operations are needed in Trinidad & Tobago because the port of Degrad des Cannes is not sufficiently deep), the time needed for landing operations, the labour costs and the limited competition between operators.

The access to the internal areas is difficult because of the clear separation between the coastal and the forest area. Access to the forest area is only by air or river. It increases the cost of access to the primary resources (wood, plants and fruits, gold, etc.), the transport to the final clients, but also the delivery of basic public services in this area. The alternative modes of transport (e.g. combination of river-road-air transports) are not developed. In addition, with the demographic growth, road traffic is expected to grow causing traffic congestion, whereas urban public transport has not been well developed.

Regarding telecommunications, French Guiana is linked to the external world by only one cable, AMERICAS II. It does not provide a back-up for ensuring the security of the data transmission; data transmission capacity (in volume) is also limited. In addition, the Guianese physical geography makes the access to Internet in the forest area difficult and costly. Only 63% of the population is connected to high speed Internet.

In general, insufficient or restricted competition is a major problem.

¹¹ Guiana Annual Report 2008, IEDOM 2009, page 52

Trade balance, foreign direct investment and regional integration

External trade on goods shows a structural deficit over the period 2000-2008. The cover rate of imports by exports is 9.5% in 2008; the commercial deficit 950 M€. The costs of production in French Guiana, well above those of the region, plus EU regulations and transportation costs, clearly hamper the competitiveness of local products.

In addition, statistics and trends on commercial trade largely depend on the aerospace sector; imports of goods and services related to it apparently represent 65% of the total imports and 87% of the total exports¹². Including the aerospace sector, the cover rate should grow between 65 and 80%, depending on the years.

The French Agency for Development (AFD) recently entrusted the realisation of a study on a better trade integration of Guiana in its regional environment ("*Etude sur les enjeux de l'intégration économique régionale pour les PME/PMI de la Guyane*"). This study lists trade opportunities and proposes specific actions aimed at catching these opportunities¹³.

Structure of imports

Importations en valeur	en millions d'€		
	2007	2008	Var. 08/07
Agriculture, sylviculture, pêche	9,8	10,2	3,6%
Produits des industries agricoles et alimentaires	158,9	162,0	1,9%
Biens de consommation	140,5	150,1	6,8%
<i>Biens d'équipements du foyer</i>	48,9	55,9	14,2%
Automobile	134,2	160,9	19,9%
Biens d'équipement	187,0	260,8	39,5%
Biens intermédiaires	151,7	184,7	21,8%
Combustibles et carburants	113,9	122,3	7,4%
Produits divers	0,6	0,5	-27,9%
TOTAL	896,6	1 051,4	17,3%

Source : Douanes

Source - Guiana Annual Report 2008, IEDOM, 2009 (excl. space sector)

The growth of the import of equipment and intermediary goods, respectively +39.5% and +21.8%, reflects the dynamic of investments of the private sector over 2007-2008. Foodstuffs from the agro-food industry remain the third import goods in volume.

¹² Guiana, un développement sous contrainte, CEROM, AFD, IEDOM, INSEE, 2007, page 21s.

¹³ The study has been carried out by ITD-Eu and the final report will be available by the end of July.

Structure of exports (IEDOM)

Exportations en valeur	en millions d'€		
	2007	2008	Var. 08/07
Agriculture, sylviculture, pêche	0,9	0,8	-18,9%
Produits des industries agricoles et alimentaires	16,9	15,9	-6,0%
<i>dont crevettes</i>	11,9	7,4	-38,4%
<i>dont poissons</i>	3,4	6,3	84,3%
<i>dont riz</i>	2,0	2,5	27,5%
Biens de consommation	2,4	1,3	-46,2%
Automobile	21,2	23,5	10,6%
Biens d'équipement	20,5	14,6	-28,5%
Biens intermédiaires	54,8	43,9	-20,0%
<i>dont Or</i>	50,4	35,7	-29,1%
Combustibles et carburants	0,3	0,0	ns
Produits divers	0,0	0,0	ns
TOTAL	117,1	99,9	-14,7%

Source : Douanes

Source - Guiana Annual Report 2008, IEDOM, 2009 (hors spatial)

The above figure shows the declining export trend in French Guiana (-14.7% in 2008). Two traditionally “export-oriented sector” are particularly declining:

- The gold mining sector
- Shrimps. However the decline of this sector is balanced by an increase in fish and rice export.

France and the French Antilles remain the main trading partner (imports/exports). Although the share exports to France is declining to the benefit of European Countries (+8% of growth).

French Guiana is poorly integrated into the regional market (Caribbean and Latin American). The main regional partners are the French Antilles and Trinidad for the imports of oil. Exports towards Brazil and Suriname are marginal.

However, the border with Brazil and Suriname, the opening in 2010 of the bridge on Oyapock River (Brazil), and the implementation of an Economic Partnership Agreement with CARIFORUM have given rise to new opportunities for developing trade in the area. Even if the potential of export of goods is quite limited, except for niche products with high added value and for specific services, there is some potential for establishing new circuits of distribution and import of basic goods from neighbouring countries.

3.2.1.7. Environment, energy and climate change

Strong demographic growth with resulting growth of the GDP per capita, have a serious impact on: the use of land, pollution, industrial and household waste, and, of course, energy consumption.

Demographic growth continuously increases the production of waste, whereas the infrastructures are not sufficient or well adapted to needs and environmental

regulations. In addition, the greater urban pressure in Cayenne has an impact on water treatment and water pollution.

The production of renewable energies has been unable to follow the huge growth of consumption during the last years. More than 80% of the consumed energy depends on oil.

The main renewable energies today are:

- Hydro-electricity with the development of a large plant in Petit Saut and a small unit better suited to the geography of the region
- Solar energy (photovoltaic) that addresses the need of the population in the forest area, but which is still insufficiently developed (projects are ongoing).
- A third promising source is biomass energy from the exploitation of forests and the valorisation of wood industry waste (one production plant has been set-up in Kourou, 3 new projects are under way).

3.2.1.8. Focus on specific sectors and emerging sectors

The ERDF Operational Programme 2007-2013 made a distinction between mature sectors and high potential sectors. It must be stressed that all sectors, included those which are generally considered as 'traditional' can be innovative and have an important potential.

Traditional sectors:

Space sector

The aerospace sector has been the motor of growth during the seventies and eighties generating a large amount of public and private investments. In the long term, the growth of the Guianese GDP is closely linked to the space sector. For example, the growth of GDP in 2006 is directly linked to the investments generated by hosting Soyuz at the CSG.

At present, the sector represents around 4,000 jobs (direct and indirect) and 16% of GDP. Despite its position as a structuring sector, its weight in the regional economic fabric has been declining since the beginning of 2000, reflecting the economic diversification of the region, and the growing share of the service sector. A main issue at stake remains the capacity of the aerospace sector to generate endogenous growth through the development of enterprises and new sectors using aerospace technologies.

Agriculture, breeding – Agro-food industries

Agricultural and breeding represent around 4,500 jobs, but their share in the added value is slightly declining. The sector is divided in 2 blocks: extensive agriculture, mainly on the coastal area (rice and sugar cane); and a predominantly small agriculture with small units focused on local demands (fruits & vegetables, animal breeding).

The development of the sector is facing several issues

- The sector is not structured and organised by branch which hampers product diversification, the prospection of new markets and the establishment of a transformation unit
- The access to land is problematic, as 90% of the land is owned by the State
- The lack of a transformation unit
- The production costs remain high and are not competitive with regards to the Brazilian or Surinamian products

However, agriculture, breeding and agro-industries are identified as a high potential sector. There is a consensus on the objective of food auto-sufficiency in order to address the growing demands of the population. There is also a consensus on developing agro-industries to limit imports. In addition, as the French Antilles are facing a scarcity of agricultural lands, French Guiana could be a new production

location for the French Antilles agro-industries, which are entering the Guianese market.

Construction (BTP¹⁴)

The sector represents 7% of the added value and around 2,400 jobs. This is one of the main drivers of the local economy, in large part due to public sector demand for basic infrastructures (dependency). In 2008, the sector grew (due to some “*grands chantiers*”). The mid-term perspective of the sector is quite good based on the continuous demographic growth and the growing demands for housing (in particular social), education infrastructures and urban services (water and waste treatment).

Forest and wood sector

This small traditional sector in French Guiana competes at international level with Brazil which has lower production costs. The whole sector (from forest exploitation to second transformation) represents more than 200 enterprises for 870 jobs. Wood production grew from 50,000 m³ to 80,000 m³ in 2009.

At present the sector is highly dependent on the local construction sector: 80% of the production is for the local market, mainly the construction sector. In addition, the wood transformation industry is quite weak: a limited number of enterprises; mainly small businesses; unqualified workforce; lack of competitiveness.

However there is a consensus on developing the wood sector. Strong efforts are made on structuring the sector (“labellisation” of a wood industrial cluster), development of the eco-certification of the Guianese forest and woods, diversification of exploitable types of wood for the local construction sector, development of niche products. It is essential that the sector keep its central position in the local construction sector (competition with Brazilian wood) and develop higher added value products for exports.

Fisheries

Fisheries is also a small traditional sector and quite recent (since the 70s), representing around 700 jobs (fishermen and fisheries industry). The sector is based on 3 products: shrimp, vivaneau and white fish. The two first products are export-oriented, but shrimp exports have dramatically fallen in the period 1998-2008. There is no second-transformation industry. The sector is facing some major difficulties: an ageing fishing fleet, inadequate port infrastructures, lack of qualified workforce, lack of restructuring of the sector, higher labour costs (with regards to Venezuela, Suriname or Brazil).

Gold

Gold and shrimps are traditionally the first or second export products. The sector is composed of multinational corporations (Iamgold, Golden Star Minière), a small

¹⁴ *Bâtiment et Travaux Publics.*

network of SMEs and individuals. It represents 423 declared jobs¹⁵, however the “illegal” sector is much bigger.

Gold production dramatically decreased over the 2000-2006 period (-24%). After the adoption of new regulations on environmental protection and preservation, and the withdrawal of the project Camp Caïman (opening of a new gold mine by the multinational corporation Cambior) in 2008, the sector is at present in a transition phase. Support is actively provided to SMEs and individuals to integrate new environmental regulations and new techniques of gold treatment.

Emerging sectors:

Valorisation of natural resources and biodiversity

In French Guiana the valorisation of biodiversity is considered a key objective for boosting the economic growth of the region. This objective is the fourth axis of the regional innovation strategy (December 2009).

However, this is not at present an economic sector in itself. The “sector” relies mainly on Guiana Technopole and the public research organisations (IRD, CIRAD, CNRS, and University) that develop research programmes dealing with the identification and analysis of the chemical characteristics of plants with potentially interesting applications in the biotech, pharmaceuticals and cosmetology sectors. Therefore, the economic potential of the biodiversity valorisation depends on the capacity of the local actors to attract foreign investors (companies in biotech, pharmaceuticals, cosmetology sectors), to foster the access of the investors to the natural resources (through providing knowledge and research infrastructures) and to protect (through IPR) the local resources to generate revenue in French Guiana.

Tourism

Tourism is not a traditional sector as it is in Guiana. It represents only 2% of the added value, with 130,000 tourists in 2007. Business tourism and “tourisme affinitaire” (tourists visiting parents or friends) is predominant. However, the recent studies carried out by Atout France (French tourism promotion agency) reviews its weight in the economic fabric: between 7% and 15% of the GDP with 3,600 jobs. In addition, the sector is growing registering a higher number of tourists in 2008 than in the previous years.

The sector is still underexploited. The “tourism product” is not well suited to the demands of the clients, marketing is not sufficient, hosting infrastructures are insufficient (it would need 1,800 beds).

Renewable energies

The renewable energy and energy efficiency management sector is quite a new sector. The sector benefits from the presence of large companies (subsidiaries of large companies) such as Poweo, Endel, Voltalia, EDF, etc. A number of projects are

¹⁵ Guiana Annual Report 2008, IEDOM, 2009

in progress regarding wind energy (wind farm on the coast), solar energy and biomass, with potentially creation of new jobs and important private investments. However, the development of the sector will depend on the public sector (prioritisation of the projects) and the qualification of the workforce.

Tele-technologies – satellite applications (telemedicine and teledetection)

As for the valorisation of biodiversity, this is not a sector in itself. The “sector” is public-research oriented. The number of jobs and enterprises is rather limited. However, the development of such technologies and economic applications is the third axis of the regional innovation strategy (December 2009).

It covers two fields of applications:

- Teledetection, with the development of the technological platform SEAS (Satellite Surveillance of Amazonian Environment) and the commercialization of observation services using the SEAS platform. Actually, a company, Nevantropic, is commercializing its services
- Telemedicine with the development of application services.

3.2.2. Qualitative analysis – Key issues resulting from field research

The expert who visited French Guiana had meetings with 39 people representing 19 institutions, organisations and administrations. The most recent official documents (related in particular to strategy orientations), data and literature were collected during the mission.

Overall strategy for the future

As the other French outermost regions, the French Guiana economic model relies heavily on the public sector (investments and public transfers) and on the construction sector which depends on the first sector.

However, for the local actors, French Guiana differs from other outermost regions in two key aspects:

- the presence of the aerospace sector, even if its share in the GDP is declining;
- the “extraordinary” situation of the region (“*un territoire hors norme*”) whose main features are: its size, its geographic positioning (European territory in Latin America with terrestrial borders), its demography

Several factors and key issues underlying the economic performance are highlighted by the different actors and documents under review.

Demographic growth is seen both as a positive motor of growth and as a challenge. It offers a clear perspective of enlarging the internal market, boosting the demand for products and services, benefiting the whole economic sectors allowing the companies (in the production sector) to generate an economy of scales. In addition, the demographic growth will give rise to a growing demand for basic infrastructures in education, social, housing, energy, etc. sectors. However, it also puts great pressure on the labour market, with a large part of the population (the youngest) which does

not contribute to the economic growth. Finally, it puts great pressure on local public funding, whereas the municipality and the regional council has few tax revenues (insofar as the land is mainly owned by the State). Illegal immigration is adding to the pressure and raises a very serious challenge for the future.

A second major issue concerns the lack of qualification of the active population. Enterprises and public administrations lack competences in management and in project engineering. This makes it more difficult to boost the innovation process within companies and establish stronger links with public research sector. In addition, even if the University has developed a larger offer of training, Guianese students are often obliged to study abroad. The capacity of the region to attract Guianese students from abroad is problematic.

Local actors consider the remoteness factor a main cause for the higher transportation costs (both passenger and freight), namely maritime transport. However, internal accessibility is also a major concern. It hampers easy access to the primary resources (forest, agriculture products, fish, gold, plant biodiversity). It impacts the social cohesion of the territory, particularly the continuity of the public services in the forest area (electricity, water, water treatment, waste management, social care, education services...) and makes the delivery of this type of services more costly.

The perception of regional development shared by the local actors interviewed relies on the following points.

- French Guiana is still in a catching-up phase. The strong demographic growth implies maintaining high investments in basic infrastructures (education, social housing, urban infrastructures), over the whole region to maintain territorial and social cohesion.
- The region has to base its economic development on its local assets, i.e. its natural resources (forest, agriculture, fisheries, biodiversity, mining), with the objective of supporting the endogenous development in all sectors by stimulating local productions (addressing the growing internal demand for goods) and relying more on transfer from public research, while considering as central the objective of environmental sustainability.
- For that purpose, one of the main strategic objectives must be to structure and organise the economic sectors from production to transformation in order to develop competences, disseminate innovation processes and diversify economic production for a higher added value niche market.

However, it must also be stressed that some projects that encourage this global vision still need to be confirmed by the new Regional Council (e.g. projects regarding biodiversity or the gold sector).

The weaknesses of the economic fabric

Another obstacle highlighted by local actors is the lack of an articulated structure of the main economic sectors (ERDF and EARDF operational programmes). The economic fabric is overwhelmingly made up of very small businesses (auto-entrepreneurs), without competences and financial capabilities for their development. The size makes access to bank credit and to public grants difficult, even if financing tools exist in the region (investment fund, guarantee fund, grant pre-financing fund, honour credit at 0%). In addition, the smallness of the market and the limited number

of enterprises in the same sector hamper the development of strong cooperation between enterprises. However, new initiatives are promising and could serve as a replicable model for other sectors: the “labellisation” by the French DATAR of the “*Maison de la Forêt et des Bois de Guiana*” as a “*grappe d’entreprises*” (industrial cluster) demonstrate that professional people are interested in organizing themselves, with the support of the public sector, to diversify their production and develop new products both for the internal market and for exports. An initiative in the gold mining sector, “*Pole Technique Minier*” at the Chamber of Commerce, supports SMEs in integrating environment rules and developing new techniques of gold exploration and treatment.

Regional integration

In comparison to the French Antilles, the issue of regional integration is less questioned by the private sector, in other words there is no consensus of the private sector against it. Reasons lie certainly in the presence of terrestrial borders with Suriname and Brazil. In addition, the INTERREG cross border programme with Brazil and Suriname generated a number of cooperation projects in the field of culture, research, education. The Chamber of Commerce has a permanent representative in Suriname to support regional economic exchanges; the University has partnership agreements with Brazilian universities of the Amazonian States; contacts are being established with *Guiana*. There is a growing awareness of the need to explore ways of doing business in the regional area and of the opportunities to become an EU platform for the redistribution of goods to the neighbouring countries.

However, it is clear that the French Guiana potential for exporting goods is limited due to its remote position, costs of transportation and production costs (compared to Brazil and Suriname for example). There are also legal barriers to importing products, and reciprocal knowledge on the both side needs improvement.

Potential for boosting regional trade means the development of new distribution circuits for basic products from the regional area to be transformed by Guianese SMEs; the exportation of high added value services (energy and environment services, tele-technologies services, valorisation of biodiversity) and technical products for niche markets (e.g. agro-food).

Regulations

Local actors constantly complain of being submitted to EU and national regulations and policies that are unsuited to the context (demography, internal accessibility etc.) and hamper the development of some sectors (e.g.: fisheries, wood sector): inadequacy of regulations regarding water and waste management for municipalities located in the forest area, inadequacy of the European Fishing Fund, exclusion of the wood sector from the POSEI programme, and inadequacy of earmarking.

3.2.3. Summary of results

3.2.3.1. Main constraints and challenges

Main constraints:

- Strong demographic growth
- Lack of competitiveness with respect to the region (namely Brazil and Suriname)
- Insufficient competition (transportation, telecommunications)
- Internal accessibility for delivering basic services, but also for accessing primary resources
- Some EU regulations and policies

Main challenges:

- Addressing the demographic challenge (double the population in 2030) resulting in a growing demand for basic services and infrastructures: education, social, housing, urban services, but also energy
- Creating more jobs to prevent a dramatic increase in unemployment and to prevent the increase of social disparities
- Increasing the level of qualification of the workforce, namely the young people
- Structuring of the main sectors, especially sectors exploiting primary resources (agriculture, breeding, fisheries, gold, forest, biodiversity), to generate an economy of scales and support innovation processes within companies
- Developing regional integration, through export of high added value services and niche products, but also through the establishment of new distribution circuits of basic goods from the neighbouring countries
- Addressing the issue of a predictable decrease in public funding, national and EU

3.2.3.2. SWOT analysis

Economic conditions	Strengths	Weaknesses
	<ul style="list-style-type: none"> • Demographic growth (enlargement of the local market) • Growing diversification of the regional economy less dependent on the aerospace sector 	<ul style="list-style-type: none"> • Growth relying mainly on final consumption (households) • Growing dependency on the public sector and public transfers • Lack of competitiveness due to higher production costs with regard to the regional area • Atomization of the entrepreneurial sector and lack of structuring of the main productive sectors • Low level of innovation capacity within

		companies
	Opportunities	Threats
	<ul style="list-style-type: none"> Natural resources still under-exploited with Potential for valorising the biodiversity and developing higher added value products and services (wood sector, teletechnologies, energy sector...) A replicable model (Maison de la Forêt et des Bois de Guiana) for structuring economic sectors Structuring of the knowledge and scientific offer and development of regional cooperation with Brazil on RTDI 	<ul style="list-style-type: none"> Increasing disparities with France in terms of GDP per capita Financial capacities of local and regional authorities Low innovation culture among companies

Demography and migration	Strengths	Weaknesses
	<ul style="list-style-type: none"> Strong demographic growth Young population 	<ul style="list-style-type: none"> Lack of qualification of the active population Insufficient creation of jobs with regard to the demographic growth High rate of unemployment (young) Importance of the «illegal» sector
	Opportunities	Threats
	<ul style="list-style-type: none"> Enlargement of the local market Development of the training offer and higher education infrastructures 	<ul style="list-style-type: none"> Absorption capacity of the youngest by the labour market Increasing social disparities, partly linked (but not exclusively) to strong migration

Connectivity: transport, accessibility, regional integration	Strengths	Weaknesses
	<ul style="list-style-type: none"> European region in Latin America with terrestrial borders Awareness raising on the necessity to support regional integration 	<ul style="list-style-type: none"> Remoteness Transportation costs Internal accessibility Internet access covering the whole region
	Opportunities	Threats
	<ul style="list-style-type: none"> A cross-border operational programme INTERREG IVA supporting cooperation projects with Suriname and Brazil Potential for establishing a new 	<ul style="list-style-type: none"> Impact of EPA (asymmetric opening of the tariff barriers) Capacity of Guianese companies to be more competitive (productivity + innovation) on the local market with

	distribution circuit for basic products that can be processed and transformed in French Guiana	regards to stronger competition (from French Antilles and basic products from Brazil and Suriname) <ul style="list-style-type: none"> • Lack of back-up (Internet access)
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Environment, climate change and energy	Strengths	Weaknesses
	<ul style="list-style-type: none"> • Guianese biodiversity • High level of environment protection 	<ul style="list-style-type: none"> • High energy dependency on oil without clear policy target in terms of energy mix • Lack of water treatment capacity in urban areas
	Opportunities	Threats
	<ul style="list-style-type: none"> • Potential for economic valorisation of biodiversity including in the tourism sector • Potential for developing renewable energies, namely biomass and hydro-electric, with some perspective of exporting the know-how to neighbouring countries 	<ul style="list-style-type: none"> • Increasing production of household waste • Pollution of fresh water

3.2.3.3. Identification of vulnerable/high potential sectors

Vulnerable sectors

- **Construction (BTP):**

The sector is highly dependent on public investments and the continuity of the public policies and investments. The financial capacities of local and regional authorities also have an impact on it. However, the local needs for basic infrastructures will in the medium term support the development of the sector and the creation of jobs. This implies the integration of new environmental constraints (environmental quality, energy efficient management), the development of a qualified workforce and the limitation of imports, by using local resources (e.g. local wood); potential synergies with other sectors such as energy, wood and tourism.

- **Fisheries:**

Fisheries are highly vulnerable. The production of mainly export oriented products is declining; the port infrastructures and production tools (fleet) are ageing; the sector is not well organised as it relies on very small units. With a low qualified workforce and bad working conditions, the sector does not really attract young Guianese. In addition, European regulations on fisheries (quotas, modernisation of the fleet) do not address the local needs. The investments needed to boost the

fisheries sector and make it competitive in the regional area seem higher than the benefits in terms of added value and jobs generated by its development.

- **Gold:**

The gold sector is obviously an international market. Here is a Guianese paradox: whereas the gold price on the international market has never been so high, the Guianese production is declining. New environmental regulations, the decision of the President of the French Republic to stop the large project of Camp Caïman, and the restriction of the number of authorisations imply the restructuring of the local sector, as the sector requires more financing capacities and competences (new techniques of exploration and exploitation) in order to comply with environmental regulations.

However, the gold resource remains important, multinational corporations are still interested in investing, it offers a good potential for creating new jobs. The development of the sector depends on a strong political desire and on a consensus among the population.

- **Space sector:**

The Guianese aerospace sector, like the gold sector, is highly dependent on the international market (launch of satellites), but also on external decision headquarters. The overall opinion among local actors is that the aerospace sector will not develop strongly in the coming years.

High potential sectors:

- **Agriculture and agro-food industries:**

In spite of a declining share in added value and difficulties that have already been pinpointed (access to land, lack of structuring, competition from French Antilles on agro-food stuffs), agriculture maintains an important potential: demographic growth; growing local demand for local agro-food products; under use of local resources; objective of food auto-sufficiency; development of production for the French Antilles market.

- **Wood sector:**

The wood sector is seriously challenging the competition from Brazil (production costs are 7 times lower). However, the sector is experiencing a promising dynamic phase with an increase in production, the structuring of the sector (*Maison de la Forêt et des Bois*, “industrial” cluster) and the definition of a new strategy of differentiation based on three pillars:

- i) eco-certification of the forestry exploitation and woods (preservation of the environment, greater quality and traceability, productivity gains...);
- ii) addressing local market needs, namely the construction sector (diversification of the types of wood, diversification of production);
- iii) development of niche market products with higher added value for export (e.g. technical products).

- **High added value services:**

High added value services rely on expertise, know-how, education and training, and RTDI that are available in French Guiana, but also on partnerships between local actors and external centres of knowledge and foreign investors.

It involves mainly three sectors:

- The economic valorisation of biodiversity (which includes the production of local plants). The development of the sector depends on the capacity of the local scientific base to “market” its knowledge of Guianese biodiversity, and on the local actors to attract foreign investors (pharmaceutics, biotech health, cosmetology, agro-food companies) to exploit biodiversity and generate revenues in the region.
- The renewable energy and environment sector has a great development potential by addressing local demand and exporting local know-how (e.g. biomass) in the regional area.
- The tele-technologies and tele-medicine “sector”. The development of the services applications of the SEAS platform by the company Nevantropic may have some interesting business opportunities in the regional area (for environmental observation or security application: fighting against illegal migrants, fighting drug trafficking, etc.)

In addition, the tourism sector is still under-exploited. Regional assets, such as the biodiversity of the Amazonian forest, are insufficiently promoted to attract tourists. Great efforts are need to be made to better define and position the Guianese tourism product, market it and develop tourism infrastructures (namely hotels).

3.3. Réunion

3.3.1. General description of the socio-economic conditions

There are a number of main features of Réunion relevant for socio-economic analysis, for developing strategic considerations and for setting-up public policies:

- ✓ It is an isolated island, in the Indian Ocean, not located on the main maritime roads passing through the Mozambique canal. Distance to the EU mainland is the largest of all ORs. The closest islands are Maurice and Madagascar.
- ✓ It is a French Region with an enlarged status of autonomy compared to the French mainland regions with competences in the field of economic development. Beside the Regional Council, the island has a *Conseil general* mainly in charge of infrastructure and social issues, one “Communauté de Communes” and four “Communautés d’agglomération” (grouping of local authorities) which have competences in the field of housing and urban policies, waste and water management, economic development. The French State administration is present with the *Préfecture de Région*.
- ✓ Réunion presents a significant concentration of population (802,000 inhabitants as of January 2008) which can be relevant for economic efficiency, with a strong density (over 300 inh/km²).
- ✓ The domestic market is not a small one *per se*: in addition to the 400,000 visitors / year, it offers possibilities for regional products
- ✓ A rich nature and landscape but a challenging topography and volcano activity (which is an asset for tourism) causing impacts on costs for infrastructures and for certain activities (e.g.: agriculture).
- ✓ A high GDP compared to the environmental context and a high standard of living, nevertheless affected by a high unemployment rate which exposes the region to social risks.
- ✓ An important contribution of the construction sector to GDP and employment (16% of jobs) representing a threat in a period of crisis as from 2008.
- ✓ Few manufacturing activities, except in the agro-food sector.
- ✓ The services sector is increasing significantly (64% of jobs) but has a high proportion of public activities, regional and local administrations; social activities; para-public agencies. The public sector plays a key role in maintaining communities in the mountainous and rural part of the island.
- ✓ The tourism sector is facing a difficult situation due to several factors: the sanitary crisis (chikungunya, 2004-2005) and the world crisis in particular, but also structural factors such as remoteness from Europe and lack of competitiveness with respect to Mauritius and the Seychelles Islands.
- ✓ Human resources are in general sufficiently qualified for addressing new challenges and developing new activities; the level of education has improved; the University plays a crucial role.
- ✓ High vulnerability to natural disasters, first of all of volcanic and seismologic sources, and also hurricanes.

The general characterization is close (with nuances and differences) to that of the other French outermost regions to the exception of the relatively high living standard.

Réunion is a small economy with a low critical mass for key activities. Innovative activities are emerging in particular in the agro-food and energy sectors.

The debate is on the same line as the one in the European forums, in particular in the context of the “Strategy Europe 2020”. A growth process intelligent, sustainable and integrator leading to an economy more focused on knowledge and innovation, more ‘green’ and more open to the world, is an objective leading people in government and political forces as in business or in the university. The point is however that beyond statements and the wishes there is a concrete situation with narrow ‘room for manoeuvre’ due to the structural determinants.

The fact that there is a large consensus on the diagnostic and the nature of the short term and structural components of the crisis is already a sound basis to prepare the future. Some work on forecasting and assessment on economy, sustainability and society has been done on recent years in Réunion, in particular with the strategy proposed in *Réunion Ile Verte*, a policy blueprint prepared by the think tank *Réunion économique*, which expresses the views of the business community and major stakeholders. Consensus among the leading actors which share a common vision is a key factor in Réunion.

3.3.1.1. GDP and GDP per capita

GDP in constant EUR grew from 8,6 billion in 2000 to 11,89 billion in 2007 (+38%) with acceleration at the end of the period. The annual growth rate of the regional economy was particularly rapid in comparison with the other French Outermost Regions: + 4.4% during the 10-year period 1997-2007. Household final consumption was the main engine of growth, resulting from a distribution of disposable income favourable to households due to social benefits.

GDP per capita grew from 12,070 € in 2000 to 17,326 € in 2007 (+44%). While there was a catching up move with the French mainland GDP per capita, the growth of Réunion GDP per capita was hampered by strong demographic growth.

It must be noted that, since the end of 2008, the regional economy has been suffering from a crisis, resulting more from troubles in the building sector than from the world financial crisis. This has led to a halt in economic growth.

3.3.1.2. Employment / unemployment

The rate of net job creation has been high: more than 25,000 jobs were created between 1999 and 2004 (82% in the tertiary sector). As a consequence, the unemployment rate decreased from 29.7% in 2001 to 24.5% in 2008, the latter rate remaining slightly higher than the average of the French Outermost Regions.

However, during the period 2001-2008, the average employment rate was only 41.7% (35% for female). Unemployment among the young is very high (49.1% in 2007) and more than 50% of the labour force without education are unemployed.

Job creation is not sufficient to absorb all the job seekers that arrive on the labour market each year.

In addition, the rate of job creation has decelerated since mid-2000 and the recent crisis has resulted in a significant increase of the unemployment rate, c. 28-29% at the beginning of 2010).

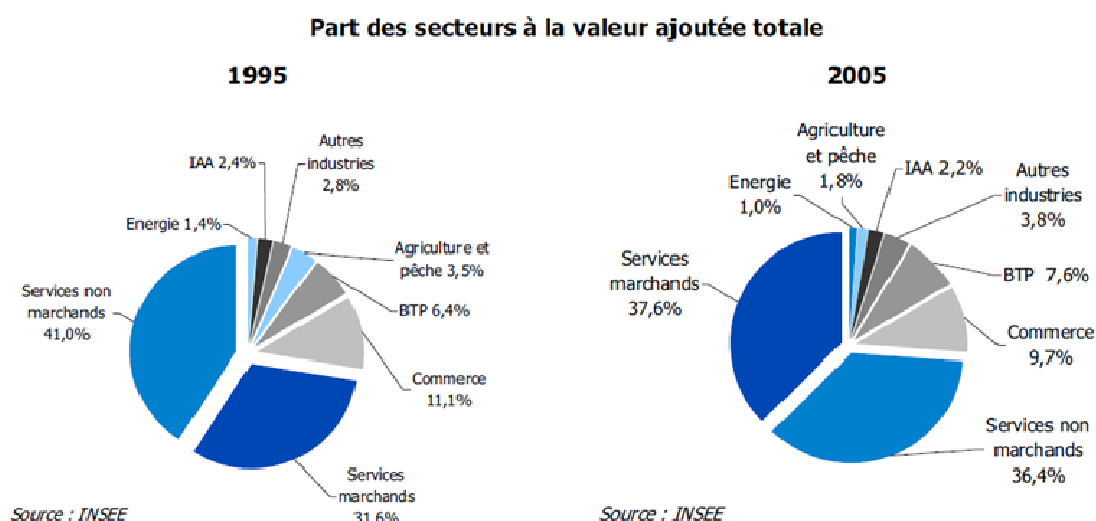
As in the other French Outermost Regions, there is a low elasticity GDP/employment: growth does not generate an important number of jobs, it relies on strong productivity gains while labour supply is abundant; the increase in labour costs (resulting from the French social policy) has led businesses to prefer productivity gains.

Unemployment is certainly one of the major challenges that Réunion is facing.

3.3.1.3. Economic structure

The structure of the regional economy changed radically between 1995 and 2005.

Distribution of added value per branch



The share of public administration and defence, and the share of agriculture, forestry and fishing decreased, while the share of services and of financial intermediation and real estate increased.

In 1995, the share of services already amounted to almost three quarter of the total added value. Within the service sector, the public sector (administration, education, health and social services) was predominant with 41% of the total added value; it decreased significantly in 2005 (36.4%). The share of other services – business and personal – has increased at an annual rate of 8.2%.

The construction sector and other manufacturing industries (except agro-food) were as dynamic: their share in total added value increased respectively at an annual rate of 8.1% and 9.7%. The share of the agro-food industry grew at a slower pace (+5.4%) while the share of agriculture and fisheries declined slightly (-0.4%).

Distribution of employment per branch

From 2000 to 2006, the share of agriculture and fisheries in employment declined significantly; the share of manufacturing declined modestly. Within the tertiary sector, the growth of the share of public administration and commerce decelerated. However, the weight of the public sector remains important with more than 60% of total employment in services.

The share of the construction sector registered strong growth and a significant growth in the share of business services. However, the construction sector has lost more than 7,000 jobs since the end of 2008.

Typology of enterprises

95% of enterprises have less than 10 employees. In 2006, 20 enterprises had more than 300 employees and concentrated 10% of employees in the private sector (services and commerce mainly, construction and manufacturing).

Since 1995, Réunion has had the highest rate of creation of new businesses in France, mainly in commerce, services and construction. However, the survival rate of new businesses is also the lowest in France. Creators are mainly unemployed people (about 45%) and beneficiaries of the minimal income (RMI).

3.3.1.4. Human Resources

Demography

The annual growth rate of the total population was 1.5% during the period 2000-2008, higher than in the other French Outermost Regions. The population of Réunion is today slightly over 800,000. During the period 1999-2008, density increased from 282 to 314 inh./km².

The birth rate tends to decline (from 20.2‰ in 1999 to 18.1‰ in 2008); however, the demographic transition is not completed and according to a scenario elaborated by INSEE, the population will be 1 million by 2030.

The share of the young population (under 20) has started to decline while the shares of the 40-59 and over 60 age group are now growing; the child dependency ratio is now under 25% while the old age dependency ratio (> 65 years) is growing. This results in a recent but growing demand for personal services and old age social housing (*établissements medico-sociaux*).

Migrations

During the period 1998-2006, the migratory balance changed from positive to negative. However, the latest available data show that from 2007 to now, the balance is close to 0.

Evolution of active population

The annual growth rate of the active population was 1.7% during the period 1998-2008, higher than that of the total population. The share of the active female population is growing, but it remains lower than in mainland France.

Education and training – Qualification of human resources

The number of young people attending school (in the broadest sense, i.e. including university and higher education institutions) increased by 10% in 10 years (2005-06 / 1995-96).

Positive points are the growth of the number of students attending post-secondary classes and the diversification of curricula toward professional and technological studies. However, the share of young people leaving the educational system without a diploma is twice that of mainland France (14.1% in the mid-2000's vs 7.5%). Moreover, illiteracy remains a serious problem.

3.3.1.5. Research, Technological Development and Innovation (RTDI)

There has been a strong development of the regional RTDI system from the mid-1990's. The number of researchers in the public sector increased from about 180 in 1993 to more than 480 in 2006. Research is overwhelmingly public, as in all the outermost regions. The private sector employs only 30 to 40 researchers (mainly in the sugar industry research centre "erCane"). The total number of people employed in RTDI activities amounted to 900 in 2006.

The main fields of research are: agricultural research, nutrition, biodiversity and environment; health and medicine (with a cyclotron); marine sciences. Energy and ICT are present, but less developed.

Beside the University, there are some major French public research organisations in Réunion (CIRAD, IRD, IFREMER, BRGM, INSERM...). There is a number of innovation-support and technology transfer organisations aiming at developing effective relations between research and business. Réunion is the only French Outermost Region to have a fully-fledged *Pôle de compétitivité* (an innovation-driven cluster), QUALITROPIC (agro-food, nutrition, environment). Another cluster, TEMERGIE, was created in 2007 in the field of energy.

There is thus a relatively strong scientific base in Réunion, with labs and researchers well integrated in international scientific networks, and in the Indian Ocean region. However, their participation in FP7 remains weak, except through the national public research organisations. This is not specific to Réunion, and is caused by the lack of critical size of research groups which make their participation difficult, beside the weakness of private research, which is a limiting factor to the participation of innovative businesses.

A benchmarking study relying on the regional innovation strategies carried out in the French outermost regions in 2009 and the similar exercises carried out in the other outermost regions would surely help to exchange on the role of research & innovation as a growth factor.

3.3.1.6. Connectivity and opening of the economy

Accessibility and transport, telecommunications

Réunion is the Outermost Region which is the most remote from Europe.

Port Réunion is a port qualified as of national interest. In 2008, 36.1% of the traffic was with Europe, 34% with Asia and 24% with the Indian Ocean Region.

The number of air passengers grew by 5%, while freight grew by 147% between 2004 and 2008. Air passenger traffic with Mauritius has been growing faster than the average in the last past years.

Road traffic is hampered by the density of individual cars. The completion of the expressway "Route des Tamarins" had positive effects, but the question of a system of public mass transportation (tram or other) remains open.

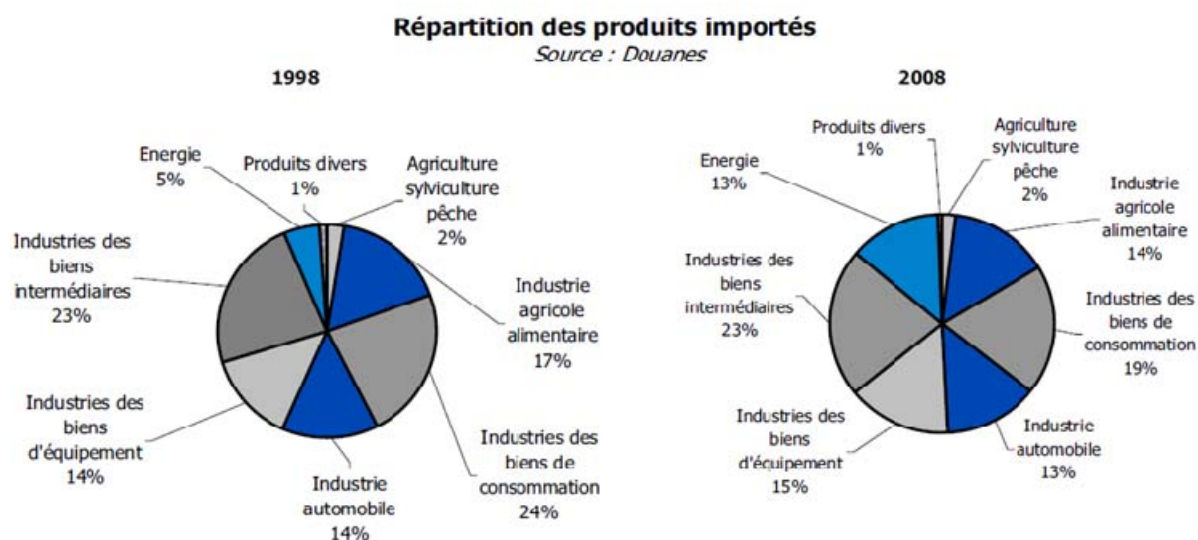
Regarding telecommunications, Réunion has been linked to the external world by the cable SAFE (South Africa Far East) since 2002. Another cable, LION, (Lower Indian Ocean Network) provides a loop linking Réunion, Madagascar and Mauritius; however, it does not provide a real back-up and there are some problems related to restricted competition. The laying of a new cable allowing for a real back-up is also an open issue.

In general, insufficient or restricted competition is another major problem.

Trade balance, foreign direct investment and regional integration

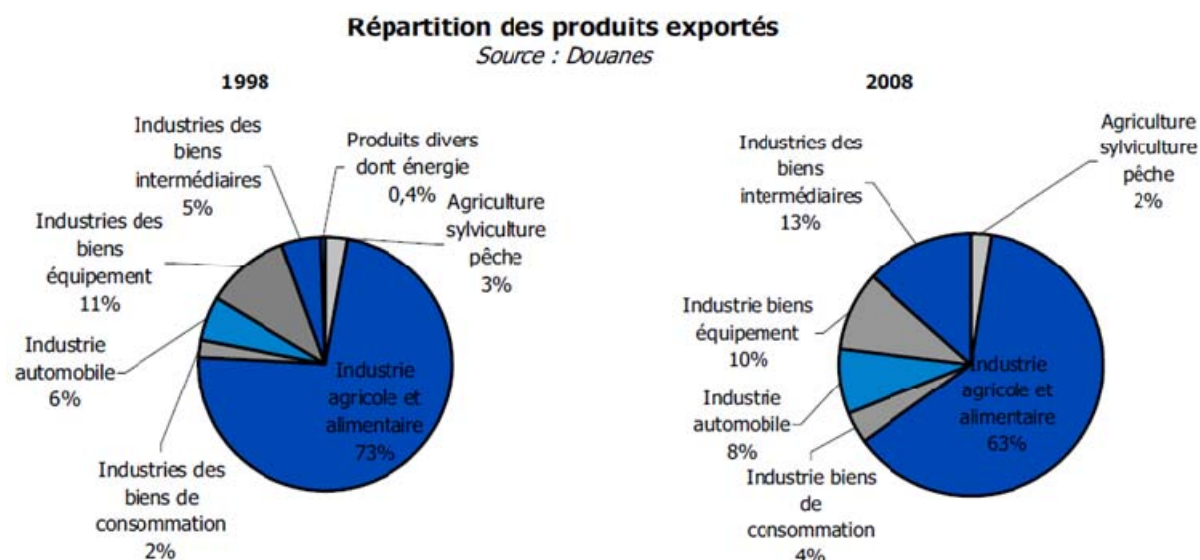
External trade shows a structural deficit, which increased between 2003 and 2008. The cover rate of imports by exports declined from 7.5% in 2003 to slightly less than 6% in 2008 (IEDOM). The costs of production in Réunion, well above those of the region, plus EU regulations, clearly make local products less competitive.

Structure of imports (IEDOM)



The share of foodstuffs from the agro-food industry and of consumer goods declined significantly, in part as a result of import substitution. The most important and dramatic change regards the increase of the share of energy.

Structure of exports (IEDOM)



Products of agro-transformation industries have the largest share (due in particular to exports of sugar), but this share declined during the period 1998-2008 (due mainly to sugar again). Exports of intermediary goods have more than doubled their share (chemicals, metal, metallic goods).

While mainland France remains the main trading partner, its share as well as that of EU countries among countries exporting to Réunion slightly declined between 2004 and 2008; during the same period, the shares of Singapore, China, and to a minor extent South Africa, increased. With regard to the clients of Réunion, the share of mainland France declined, but the share of the other EU countries increased as did those of Madagascar, Japan and India.

Trade with Indian Ocean region strongly grew between 1999 and 2008 (imports: +7.6% per year; exports: +9.3% per year), which reflects a positive move toward regional integration; however, the fact that Mayotte (a French island) is the second trading partner of Réunion limits the impact of this move.

3.3.1.7. Environment, energy and climate change

Strong demographic growth and high density, coupled with growth of the GDP per capita, have a serious impact on: the use of land, pollution (water, air pollution because of car traffic), industrial and household waste, and of course energy consumption.

The production of renewable energies was not able to follow the huge growth of consumption during the years 2000-2008. The main renewable energies today are:

hydro-electricity and *bagasse* (a by-product of sugar cane) – *bagasse* being generally used together with coal in energy plants. There has been a strong development of solar (photovoltaic) energy for water heaters during the past few years, but it is now coming to an end.

Experimentation on renewable sea-based energies (SWAC/OTEC, tidal power) is starting, but will probably remain costly for the next 10 years at least.

The price of electrical energy is regulated.

3.3.1.8. Focus on specific sectors and emerging sectors

The ERDF Operational Programme 2007-2013 made a distinction between ‘traditional’ and ‘emerging’ sectors, and listed tourism and fisheries among the latter. It must be stressed that all sectors, including those generally considered as ‘traditional’ can be innovative and have an important potential.

Agriculture – Agro-food industries:

Agricultural production (added value estimated at 350 M€) is divided in 3 blocks of roughly the same importance: sugar, fruit & vegetables, animal production. Sugar is mainly exported and its price has increased on the world markets. The local production of fruit & vegetables covers about 75% of the local consumption, and animal production roughly 50%.

Agricultural production and the agro-food industry have diversified in the last 10 years and better address the local demand. They employ about 40,000 people today.

From mid-2000 the agricultural sector has suffered from the increase in the cost of imports, but globally it is doing rather well.

There is a consensus on the objective of food auto-sufficiency.

Construction (BTP¹⁶):

The sector is one of the main drivers of the local economy, in large part because of public sector demand for roads, public buildings, and social housing. It employed 12,000 people in 1998 and 24,000 in 2008. It has been affected by a deep crisis since the end of 2008 mainly due to a ‘discontinuity’ in public policies (national and local) and lost more than 7,000 jobs.

There is a consensus on the necessity of setting up a ‘new model’ for the sector based on housing (in particular social) and innovation (materials, energy efficiency, better urban planning...).

Tourism:

Tourism is stagnant, the relative success at the beginning of the 1990’s (construction of hotels) was followed by the crisis of *chikungunya* in 2006. The market is dominated by French tourists and by “*tourisme affinitaire*” (tourists visiting parents or friends).

¹⁶ *Bâtiment et Travaux Publics.*

The average number of nights spent per head during the period 2005-2008 was 0.1 (average in the French Outermost Regions: 0.4); the average number of beds per head was 1 during the period 1998-2009 (against 2.4 on the average in the French Outermost Regions).

Fisheries:

Fishing, mainly deep-sea fishing, has been stimulated since 2000 by the exploitation of the French EEZ with large resources, in spite of CFP regulations which are considered as generally unsuited to the local context.

In 2007 Fisheries represented 1,100 direct and indirect jobs and 0.45% of the local GDP, but 15% of exports. Deep-sea fishing provides by far the greater turnover of the sector. Coastal fishing is not really competitive. “*Pêche palangrière*” is fragile but has an important potential.

Aquaculture is developing and strongly related to research.

Environment – Green Tech:

The environment sector in its broadest meaning (including the public sector) employed more than 6,000 people in 2005 with two main branches: operational services and utilities. Apart from the public sector, it is dominated by companies with more than 100 employees.

Since 2005, “new” activities, i.e. renewable energies, energy efficiency, water treatment and waste recycling have been developing, but there are no available statistical data.

ICT:

There are about 450 businesses in the sector; they employ 5,650 people and their total turnover amounts to c. 1.5 billion € (it has tripled in 5 years). There is a sectoral business organisation, ARTIC, which has projects of data centres, but considers a second cable providing an effective back-up essential.

The internal market is important and there are capacities for exporting services to the Indian Ocean region.

Services:

As already stated, the services sector is the largest employer in Réunion. There is an important potential for personal services: to old age because the population has started ageing; to young children because of a lack of nurseries).

Business services (including ICT services: see above) have developed rapidly in the last past years, which is as a matter of principle a positive signal of ‘sophistication’ and development of the local economic fabric.

The **contribution of RTDI** to agriculture and the agro-food industry has become important in the last 10 years for providing expertise and supporting innovation. It has started playing the same role in fisheries and aquaculture, and in the environment and green tech sector.

3.3.2. Qualitative analysis – Key issues resulting from field research

The expert who visited Réunion had meetings with 64 people representing 36 institutions, organisations and administrations. The most recent official documents (related in particular to strategy orientations), data (INSEE, DTEFP¹⁷, IEDOM) and literature were collected during the mission.

Overall strategy for the future

There is globally a **strong and explicit consensus among local actors on strategic objectives**, recently strengthened through two strategic documents: “*Réunion Ile Verte*” (2009) and the Regional Innovation Strategy (2009-10)¹⁸. The only really conflictual issue regards the use of land (agriculture and natural parks vs urbanisation and industrial/commercial use).

“*La Réunion Ile Verte*” comes out from a local think tank piloted by business, “*La Réunion économique*”¹⁹, and focuses on 4 sectors considered as having a high potential (and on their interfacing): agro-nutrition and marine resources; environment, energy and sustainable development; ICT; sustainable tourism.

The Regional Innovation Strategy details objectives and instruments aimed at supporting innovation both internally and as a platform for developing partnerships in the Indian Ocean Region.

These two documents provide a key complement to the former strategic and programming documents (ERDF OP, *Contrat de Projet Etat-Région*, PR2D, GERRI, etc.).

Local actors classically insist on the **necessity of retaining protections** (e.g.: *octroi de mer*, POSEI²⁰) **and a specific tax framework**, while complaining of being submitted to EU regulations that are unsuited to the context and hamper the development of some sector (e.g.: fisheries). Concerning manufacturing industries in particular, the EPA safeguard clause is not considered as credible by the business community.

The world financial crisis has had only so far a limited impact on the local economy. However, there has been from the end of 2008 a **deep crisis in the construction sector** linked to the ‘discontinuity’ of public policies: national public policies because of changes in tax benefits; local because of the electoral cycles. Moreover, the works of Route des Tamarins were completed and no new large works were started. The sector lost more than 7,000 jobs (on a total of 24,000) with an impact on commerce and distribution (cars in particular). The situation of the labour market is accordingly considered as ‘explosive’, as unemployment is soaring.

A theoretical as well as practical question remains open: it is generally agreed that import substitution has been a driver of growth until 2003, and that from 2003 it was

¹⁷ Direction du Travail, de l’Emploi et de la Formation professionnelle.

¹⁸ The document was finalised in February 2010.

¹⁹ www.reunion-economique.org

²⁰ See the conclusions of the study “*Evaluation des mesures mises en œuvre en faveur des régions ultrapériphériques (POSEI) et des petites îles de la mer Egée dans le cadre de la politique agricole commune* »

the construction sector. INSEE economists are planning **a study in order to know if import substitution has continued to play a significant role after 2003.**

There is a global awareness of the need for radical changes in the direction of a more competitive and market-oriented economy and that the oversized weight of the public sector cannot continue to grow as a response to the crisis. The strategic vision is that regional development needs to be based on a balanced integration of different sectors in which each contributes to the regional income, rather than following a specialized pattern with one sector acting as leading factor for development. The strategy aims at sustainable development both by lowering dependence on fossil fuels for energy use and by changing the consumption and investment patterns by developing more knowledge intensive manufacturing and services, and being a laboratory for renewable energies experimenting and testing processes and plants.

The sectoral approach

There is no predominant sector in the local economic fabric, and this makes Réunion very different from the Canary Islands or Madeira where the economic fabric is dominated by the couple “Tourism+Construction”. This is why local actors insist on having projects in various sectors and interfacing.

At the same time, **the distinction between traditional sectors and sectors with high potential is fallacious**. Innovation widely contributes to agriculture and agro-food (RTDI and *Pôle de compétitivité* QUALITROPIC) and to the construction sector (energy efficiency, “tropicalization” of construction materials, etc.).

The development of tourism is a priority of the new Regional Council and its President. However, there is not so far a well-agreed and established strategy (even less an action plan), apart from lip service paid to sustainable tourism. There are surely at least ‘niche’ markets to develop.

Regional ‘integration’

Playing a key role in the region (Western Indian Ocean) is both an ambition and a challenge in terms of trade, communications, RTDI and services.

While regional ‘integration’ is a mantra (a number of local actors question the word ‘integration’ and prefer *‘insertion’*²¹ which seems more realistic), it is clear that **Réunion potential for exporting goods is limited** due to remoteness and costs of transportation), and for what regards exports to the Indian Ocean Region, by a lack of competitiveness (production costs).

On the opposite, expertise, know-how, education and training, and RTDI provide robust opportunities for boosting a number of sectors (internally), developing non-profit cooperation and partnerships with the Indian Ocean region and exporting high added-value services to it. In particular, within the perspective of the EPA, Réunion has a comparative advantage in this field.

Three ‘blocks’ have to be taken into consideration:

²¹ See the French version of the Memorandum 7 May 2010.

- Agro-nutrition (including marine resources) / Biodiversity-environment with: a real critical mass in research (including the private sector); already existing co-operations in the region; some export of knowledge;
- Health with: a less important critical mass in research, but education and training; co-operation in the humanitarian field;
- Energy / environment with less research, but an important potential for experimentation (renewable energies).

ICT can be added to the list. There are education and training resources, and a growing number of SMEs able to offer services.

However, a strategy of regional 'integration' or 'insertion' requires some bold moves concerning the mobilisation of resources (there are already some positive examples concerning exporting expertise to South Africa).

3.3.3. Summary of results

3.3.3.1. Main constraints and challenges

Main constraints:

- Extreme remoteness
- Lack of competitiveness with respect to the region (Indian Ocean)
- Insufficient competition (transportation, telecommunications)
- High population density
- Some EU regulations and policies
- Insufficient dimension for economies of scale
- Vulnerability to natural disasters

Main challenges:

- Creating more jobs to prevent a dramatic increase in unemployment
- Shifting from a growth model relying mainly on final consumption to a model more based on investment (including investment in knowledge)
- Addressing the issue of a predictable diminution of public funding, national and EU
- Developing regional ‘*insertion*’ through export of high added value services
- Addressing issues related to demographic growth (1 million inhabitants in 2030): energy, waste, pollution, use of land
- Addressing future needs of an ageing population
- Strengthening and enlarging market opportunities with neighbouring countries, mainly through exporting high added value services in particular to the Indian Ocean region

3.3.3.2. SWOT analysis

Economic conditions	Strengths	Weaknesses
	<ul style="list-style-type: none"> • Demographic growth (local market) • Economic growth (until 2008) 	<ul style="list-style-type: none"> • Growth relying mainly of final consumption (households) • Growing dependency upon the construction sector • High costs: lack of competitiveness • Difficulties in the tourism sector

	Opportunities	Threats
	<ul style="list-style-type: none"> • Strong innovation potential and opportunities for exporting high added value services (agro-nutrition/environment, health, renewable energies, ICT) 	<ul style="list-style-type: none"> • Insufficient effort in favour of housing, in particular social: risks of social trouble, negative impact on the construction sector • Weakness of economic cooperation in the region

Connectivity: transport, accessibility, regional integration	Strengths	Weaknesses
	<ul style="list-style-type: none"> • Regional integration in progress 	<ul style="list-style-type: none"> • Extreme remoteness • Cost of transportation with an impact on all activities, and in particular tourism • Cost of telecommunications (Internet – and poor quality)
	Opportunities	Threats
	<ul style="list-style-type: none"> • Cable: ensure an effective back-up through a link to EASSY in Madagascar and ensure fair competition for lower prices • Develop regional integration through both non-profit cooperation and export of high added value services (expertise, knowledge, education and training) 	<ul style="list-style-type: none"> • Port Réunion becoming a 3rd level port • Scattering airport investments on 2 airports • Impact of EPA • Internal transportation (heavy road traffic, absence of a mass transportation system)

Environment, climate change and energy	Strengths	Weaknesses
	<ul style="list-style-type: none"> • Political decision of attaining energy autonomy 	<ul style="list-style-type: none"> • High demographic density with impact on environment • Energy dependency
	Opportunities	Threats
	<ul style="list-style-type: none"> • Excellent position for experimenting energy mix in small islands, and sea-based renewable energies 	<ul style="list-style-type: none"> • Problems raised by household and industrial waste • Pollution of fresh water • Conflicts on the use of land

Demography and migration	Strengths	Weaknesses
	<ul style="list-style-type: none"> • Toward the end of the demographic transition • No problem related to immigration so far 	<ul style="list-style-type: none"> • Insufficient creation of jobs • Analphabetism remains a problem
	Opportunities	Threats
	<ul style="list-style-type: none"> • Development of training programmes effectively adapted to needs 	<ul style="list-style-type: none"> • Ageing population

3.3.3.3. Identification of vulnerable/high potential sectors

Vulnerable sectors

- **Construction (BTP):**

The business model of the sector has to be renewed and made more sustainable, also in environmental terms.

The stakes are very high in terms of jobs.

- **Manufacturing industries:**

They are globally vulnerable because of high production costs. The lack of competitiveness affects both the local market and the external markets.

It is necessary to be aware of the role that an import substitution model can play in the coming years (after having been successful until 2003 and maybe later) and to assess if there are opportunities of 'active perfecting' (putting added value on goods imported from countries with low labour costs).

High potential sectors

- **Agriculture and agro-food industries:**

In spite of a declining share in total employment and added value, agriculture maintains an important potential: objective of food auto-sufficiency; demographic growth; sugar cane (situation of the sugar market; contribution to energy production; commercialization of knowledge and new varieties).

- **Marine resources (fisheries and aquaculture):**

The potential is mainly related to the French EEZ (2,8 million km²) and the abundant resources. Aquaculture relies for an important part on RTDI. There is a project of *Pôle Recherche Mer* which aims at coordinating research organizations and research labs and should contribute to developing the sector, including in fields such as cosmetics.

However, local actors insist on the fact that EU regulations CFP are unsuited to a context where resources remain abundant.

- **High added value services:**

High added value services rely on expertise, know-how, education and training, and RTDI that are available in Réunion. They provide innovation to the regional economic fabric and have a high potential in terms of exports to the Indian Ocean region. The export potential should be 'accompanied' by and would benefit from the further development of non-profit co-operations and partnerships.

Telecommunications remains a major bottleneck. A back-up cable is a key investment.

High added value services concern primarily: agro-nutrition-environment; health; energy; ICT.

3.4. Martinique

3.4.1. General description of the socio-economic conditions

There are a number of main features of La Martinique relevant for socio-economic analysis, for developing strategic considerations and for setting-up public policies:

- ✓ It is a French Region with a regional council in charge of economic development, land planning, road infrastructures, education infrastructures (high schools), management of cultural, scientific and technological policies; the regional capital is Fort de France.
- ✓ It is a small island in the Caribbean region affected by natural hazards (volcano, seism, hurricane), counting 400,000 inhabitants, with a strong population density (353 inh./km²), especially in the urban areas of the Centre and South.
- ✓ A rich nature and landscape but a challenging topography and volcano activity (which is an asset for tourism) that have three main consequences: the scarcity of the land (causing conflict of use), the concentration of the population in the Centre and Southern parts of the Island (causing traffic congestion), and the higher costs for building infrastructure and for developing certain types of activities (e.g. agriculture).
- ✓ The domestic market is rather small (400,000 inhabitants), but the tourism sector attracts each year from 600,000 to 1,000,000 visitors offering opportunities for the regional products and services.
- ✓ A relatively high GDP and high standard of living with respect to the regional context, reflecting the catching-up trend of the region with the French and EU average, nevertheless affected by a strong and structural unemployment rate which makes fragile the social cohesion and social inclusion.
- ✓ The economic growth is mainly relying on the internal consumption of the domestic market rather than on investment.
- ✓ An economic structure overwhelmingly focused on the service sector (82% of the regional added value), including the public administration and non-profit sector, and the traditional retail sector, boosted by the tourism industry which is a driving sector in the regional economy.
- ✓ The tourism sector is declining over the period 1998-2008; it is affected by several challenging issues: labour costs, ageing infrastructures and equipments, lack of diversification of the product, and stronger competition with other Caribbean Islands.
- ✓ There are few manufacturing activities, except the construction sector, and a dynamic agro-food industry already export-oriented (France, Guiana, and Europe mainly), not only positioned on traditional products (such as sugar and rum) but also on products with higher added value.
- ✓ The weight of the public administration sector in the economy and the weight of public financial transfer coming from the mainland constitute a powerful instrument for maintaining the social cohesion and the quality of life in the region, but has also negative impacts on the regional economy.
- ✓ Human resources are in general sufficiently qualified for addressing new challenges and developing new activities; the level of education has considerably improved. Around 30% of the active population aged of 25-34

years are graduates, vs. only 7% of the active population aged of 60 years and more.

- ✓ Unemployment has remained the most severe problem of the even during the decades of fast growth.

The general features of Martinique are close (with nuances and differences) to the other outermost regions: a small economy with a weak critical mass, but with a dynamic internal market, a dynamic agro-food industry and emerging higher added value sectors (personal services, environment related services, etc.).

The debate is on the same line as the one in the European forums, in particular in the context of the "Strategy Europe 2020". A growth process, intelligent, sustainable and integrator, leading to an economy more focused on knowledge and innovation, more 'green' and more open to the world, is an objective leading people in government and political forces as in business or in the university. The point is however that beyond statements and the wishes there is a concrete situation with narrow 'room for manoeuvre' due to the structural determinants.

The fact that there is a large consensus on the diagnostic and the nature of the short term and structural components of the crisis is already a sound basis to prepare the future. Some work on forecasting and assessment on economy, sustainability and society has been done on recent years in Martinique (see the different development plans since 2002).

3.4.1.1. GDP and GDP per capita

Over the period 1995-2005, the GDP continuously grew an average of 4.8% per year, more than Guadeloupe and Guiana. GDP per capita grew from 15,787 € in 2002 to 18,138 € in 2005 and 19,521 in 2007. It reflects the catching up trend with the French mainland GDP per capita and the EU average (75.6% of the European GDP). However, after a period of dynamic growth, growth has slowed down since 2007 (+0.9% between 2006 and 2007). Compared to the regional area, the Martinique GDP per capita is higher, just behind the Dutch Antilles.

3.4.1.2. Employment / unemployment

The total occupied working population remained stable between 2001 and 2008. From 2008 there is a slightly decreasing trend (51.3% in 2005, 50.9% in 2008) due to different factors: the general crisis, the ageing of the population, the prolongation of the academic cycles etc. In the meanwhile, the occupied female working population has increased by 2%, even if this rate of employment is decreasing. Among the young people the occupational rate is very low (8.2% among the 15-25 age group), the unemployment rate is very high (in particular among the 25-30 age group).

Martinique had 36,425 unemployed in the ILO in 2008, representing a 5.7% rise in one year. The 22.4% unemployment rate increased by 1.2% compared to 2007, far above the national French average and the EU 27 average. The rise was reinforced by the social crisis which affected Martinique during winter 2009. 54% of the unemployed are long term unemployed (versus 49% in 2007); the most affected age brackets are young non graduates, and women.

3.4.1.3. Economic structure

The structure of the regional economy changed radically between 1995 and 2005.

Distribution of added value per branch

Martinique has a “modern economy” model with a strong services sector, which weights high in the regional added value (82.9%). This importance is related to the weight of the public sector within the regional economy, and constitutes an element of differentiation compared to the small independent states, and an element of stabilization of the economy.

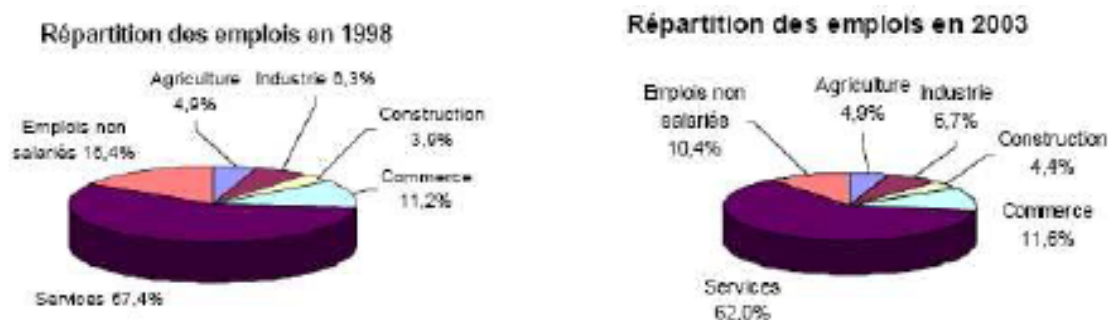
The following figure (IEDOM, 2008) of the added value evolution of the different sectors demonstrates the stability of the regional economy in Martinique regarding traditional sectors (such as the building sector and trade sector).

Années	Valeur ajoutée totale	Agriculture	I.A.A	Industrie*	Energie	Construction	Services marchands	Services administrés
Niveau annuel en milliards d'euros courants								
2007 ^e	7,5	0,3	0,1	0,3	0,2	0,5	3,8	2,4
Part dans la Valeur ajoutée, en %								
2006 ^e	100	2,4	1,8	3,8	2,5	6,9	50,9	31,7
2005	100	2,5	1,8	3,8	2,5	6,6	50,5	32,5
2004	100	2,7	2,0	3,8	2,3	6,2	50,5	32,6
2003	100	3,5	1,8	3,8	1,6	7,6	48,5	33,1
2002	100	3,7	1,8	3,9	1,7	6,1	49,7	33,1
2001	100	3,5	1,9	3,8	1,8	6,8	50,1	32,2
2000	100	3,9	1,9	3,8	1,9	6,0	49,5	33,0
1999	100	3,8	1,9	3,7	3,1	6,2	48,9	32,3
1998	100	4,2	2,0	3,6	3,0	6,4	50,3	30,5
1997	100	4,2	2,1	3,8	2,7	6,4	50,8	30,1

* Le poste industrie regroupe: industrie des biens de consommation; industrie des biens d'équipement, industrie des produits minéraux, autres industries des biens intermédiaires
e : estimation issus des comptes rapides

Distribution of employment per branch

From 1998 to 2003, employment in the agricultural and industrial sectors decreased, to the benefit of service sector (68.6% versus 73.6% of the salaried employment within the period). In 2008, the share of the service sector is 81.7%, proportionately much higher than in continental France (around 72%). The employment in the public sector explains the increase of the tertiary sector



Source : Evaluation Finale du Document Unique de Programmation (DOCUP) Objectif 1 2000-2006

Typology of enterprises

The economic fabric is mostly composed by SMEs with fewer than 10 employees (81.4% of the companies). In 2005, 11 enterprises had more than 50 employees, of a total number of 28,830 companies. The importance of the public sector and the

tertiary sector have been underlined above. For many years La Martinique has had one of the highest rates of new business creation in France (12.5%), and as a consequence the region has duplicated the number of its enterprises in five years (46,000 in 2009). However, the survival rate of new businesses is also one of the lowest in France, as only 8% survives after five years. Creators are mainly unemployed people and beneficiaries of minimal income (RMI).

3.4.1.4. Human Resources

Demography

The total population amounted to 397,732 inhabitants in 2006 and 402,000 in 2008. The annual growth rate was 0.6% during the period 1999 - 2008²², higher than in continental French regions, and higher than in EU 27 average. The density is 353inh./km² which is the highest in the outermost French regions (3 times more than the EU average).

The birth rate is declining (-7.8% from 1999 to 2007). Globally the share of the young population has started to decline while the shares of the 40-59 age group and the over 60 age group are now growing (17% versus 20% in continental France); the child dependency ratio is now under 25% while the old age dependency ratio (> 65 years) is growing. Half of the inhabitants are over 40 compared to less than a third in 1990. Life expectancy is above the EU average.

Migrations

The migratory balance is negative and shows the low attractiveness of the region. The lack of attractiveness and the weak demographic dynamics give rise to uncertainties in the capacity to renew the human resources and the economic fabric.

Evolution of active population

The annual growth rate of the active population was stable but has recently been declining (51.3% in 2005, 50.9% in 2008). The proportion between the active and inactive population is 1.04:1.);

The share of the female active population has grown in the last five years but is slowing down. The share of part time jobs is dramatically declining.

Education and training – Qualification of human resources

The qualification of the human resource has made significant progress since the last 10 years. In 2000 half of the occupied active population was non graduates; today around a third of the 25-34 age group are graduates with at least a secondary degree, and the number of students attending post-secondary classes has steadily grown from 2001 to 2007²³. However, 38% of the population is still non graduates and the share of young people leaving the educational system without a diploma is twice that of mainland France. Illiteracy still remains a problem.

Therefore, if education and training made strong progress, it still remains a challenge for the region in the extent to which a strong link is established between the level of education and qualification and the ability to find a job on the regional labour market. In addition, another challenge regards the capacity of the region to retain the high qualified people, especially the young students that are leaving (at master level) the region for studying in the mainland France and don't come back in the region once achieved their studies.

²² Cf. source principale: http://www.iedom.fr/doc/RA2008_Martinique.pdf

²³ The number of master graduates grew up from 60 in 2001 to 130 in 2007.

3.4.1.5. Research, Technological Development and Innovation (RTDI)

The investments in research and development represent only 0.28% of the regional GDP for the period 2007-2013 much less than the previous 0.52% at the end of the '90s, and lower than the EU and French average. The investments rely almost exclusively on the public sector.

The RTDI sector in Martinique is indeed largely public-driven. The public research organisations established in Martinique represent around 230 researchers belonging to different research institutions:

National public research organisations	INRA, CEMAGREF, IRD, BRGM, CIRAD, INSERM, IFREMER
Higher Education Institutions	University Antilles-Guiana
Hospital Research	University Hospital of Fort de France (CHU)
Other organisations dealing with some research activities	National Agency for Forest (ONF) Regional Natural Park of Martinique (PNRM) Regional Observatory on Health (OR)

More recently, some efforts have been made by the research stakeholders (public research organisations, regional council, and state administration) to organise the research around coherent and thematic poles of competences, mainly on the followings topics:

- The agro food and agro environment pole (PRAM) is the most important in terms of scientific resources and relationships with the productive sector (it involves INRA and CIRAD research teams mainly)
- Human and social sciences
- Risk and sustainable development, as an emerging pole
- Health on tropical diseases, and on cardiology(CHU)
- Halieutic with the IFREMER institute, which is a leading actor both with an association for the aqua farming development in Martinique

Despite the relatively strong scientific base in Martinique, the relationships with the private sector remain weak. There is no figure on the private investments in RTDI and the number of “private” researchers, but they are for sure very low. The structure of the enterprises (very small enterprises, with a lack of financial capacity) impacts on their capacity to establish links with the public sector and to innovate. However the region hosts three interface organisations in charge of supporting the enterprises and building long term relationship with the public research sector:

- The ITEC, the innovation and enterprise department of the Metropolitan Area of the Centre of Martinique (CACEM), that manages a business incubator (Chrysalia)
- The Technical Centre on Cane and Sugar (CTICS) that makes the interface between producers and research organisations on the “filière canne-sucre-rhum”

- The Regional Agro-Food Pole of Martinique (PARM) that offers a portfolio of services (technical assistance, consultancy services...) and a technological platform (testing, prototyping, etc.) to the agro-food sector.

These interface organisations contribute to establish a dynamic trend in the agro-food sector, consistently with the research efforts in that field.

3.4.1.6. Connectivity and opening of the economy

Accessibility and transport, telecommunications

Air Traffic provides flights to Europe, mainly France²⁴; nevertheless as the terminal airport is Orly and the national company AIRFRANCE has its hub at Roissy, this does not simplify European connections..

Maritime traffic is limited, the number of passengers decreased (-6%) in 2008, freight has grown (+1.6%).

Road traffic is a serious problem, hampered by the density of personal cars, confronted by the lack of collective public transport means. However, the project of TCSP (tramway), supported by the Structural Funds (2000-2006 and 2007-2013), in the Metropolitan Area of Fort de France should improve the situation.

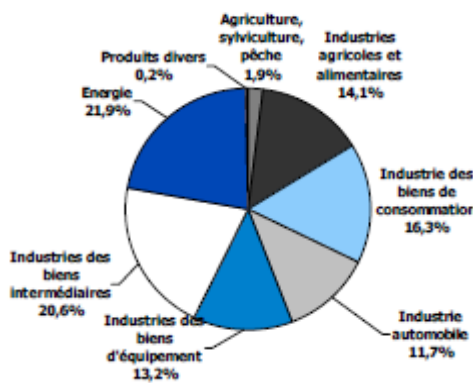
Trade balance, foreign direct investment and regional integration

External trade shows a structural deficit, which increased between 2003 and 2008. The cover rate of imports by exports declined (IEDOM). The cost of production of La Martinique are well above the neighbouring countries of CARICOM hampering the competitiveness of local products, in particular those from agriculture and agro transformation. Imports increased by 10% in 2008, and the degree of the external dependency is around 33% of the GDP (in 2005).

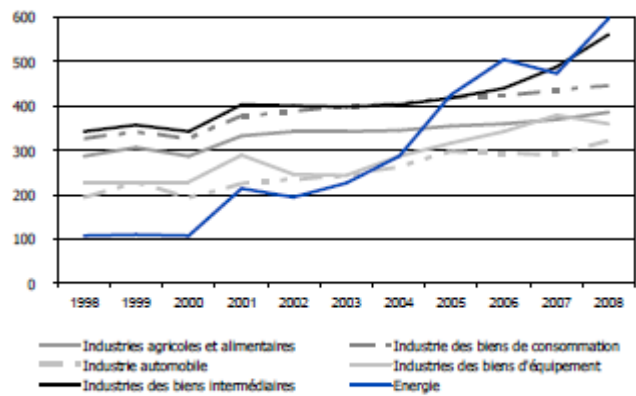
Energy products come first as shown in figure. While mainland France remains the main trading partner, Guadeloupe and Guiana are second, followed by EU countries. The regional market is not dynamic; trade is very weak with the other small states within the Caribbean area which reflects a slow move towards the regional integration, in spite of the signature and implementation of the Economic Partnership Agreement between the EU and CARICOM.

²⁴ Three companies operate flights from metropolitan France to Martinique (as for Guadeloupe) : AirFrance, the national company ; Air Caraïbe (the regional company based in Guadeloupe); and Corsair (a charter company operating flights during the tourism period). Air Antilles Express operates flights between Martinique-Guadeloupe-Guyane and other Caribbean Islands.

Structure des importations en 2008

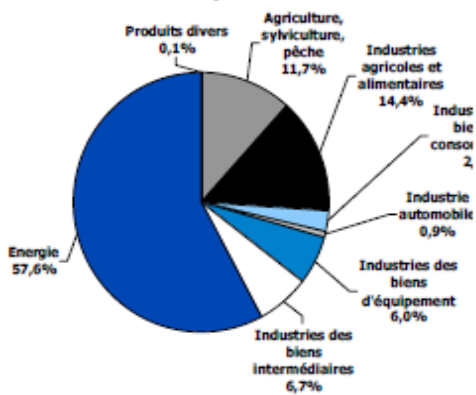


Evolution des principaux postes d'importations (M€)

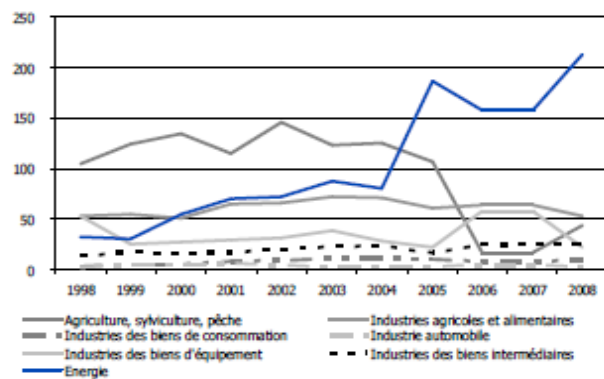


Source : Direction nationale du commerce extérieur

Structure des exportations en 2008



Evolution des principaux postes d'exportations (M€)



Source : Direction nationale du commerce extérieur

Energy appears in the figure as an export for the entire French Indies market, as there is SARA refinery in Martinique.

3.4.1.7. Environment, energy and climate change

Benefiting from a rich biodiversity, the environment is challenging several issues, due to the demographic growth in the last two decades, the high density of the population coupled with the growth of the GDP per capital:

- Water management both in urban area (inefficiency of the water treatment infrastructures) and agricultural areas (pollution by fertilizing – chlordécone)
- Waste management for recycling wastes (saturation of the existing units, lack of awareness raising on recycling issue)
- Soil management due to pollution (chlordécone) and conflict of use (scarcity of land)
- Car pollution due to traffic congestion and lack of efficient public transport
- High energy dependency on oil (97%). Efforts have been made since 2004 to experiment renewable energies: wind and photovoltaic mainly. There are different kinds of incentives for using solar or other renewable energy, fiscal in the case of households (tax credit, for instance), subventions, grants, etc. As results some 22,000 water heaters (solar) were fitted between 2006 and 2008. However these types of technology raise questions about consumption of land

(wind and photovoltaic) and inter-connexion issues related to the electricity network (solar). New opportunities from marine energies are expected.

3.4.1.8. Focus on specific sectors and emerging sectors

The ERDF Operational Programme 2007-2013 made a distinction between 'traditional' and 'emerging' sectors, and listed tourism and fisheries among the emerging sectors. It must be stressed that all sectors, included those which are generally considered as 'traditional' can be innovative and have an important potential.

Agriculture – Agro-food industries:

The added value of agricultural production has decreased but not dramatically. It is focused on three main products:

- Banana production represents 50% of the agricultural production. The sector is well structured with two main associations of producers (Banamart and Banalliance) and the newly established Banana Technical Institute. The size of the exploitations, the number of operators, and the cultivated superficies are decreasing (-2.2% per year during the last three years). An effort is made to overcome this decline ("Plan banane durable") by providing support for the improvement of the agricultural techniques, for dealing with phyto-sanitary and pollution (chlordécone) issues, and certification (bio-agriculture).
- Sugar cane is the second largest production and two thirds of it is used for *rum* production. There are 3,900 employees within the cane-sugar-*rum* *filère*.
- The local production of fruit & vegetables covers 2,800 ha for local consumption and is increasing.

The agro-food industry is the first industrial sector (with the exception of the energy sector) representing 24% of the industrial enterprises (with around 50 agro-food enterprises transforming local products). It started from traditional products (*rum*, juice, marmalade), but has now diversified towards more added value products, addressing local demands. The sector remains dynamic, and is the main export-oriented productive sector (after oil products).

Tourism

Tourism remains a driving sector in the regional economy, but is in decline, after some years of stagnation. The number of tourists decreased from 1 million in 1998 to 0.6 million in 2008²⁵. The economic and social crisis (February 2009) has had a strong impact on the sector, e.g. the cruising activity declined from 30% in 2009, the occupation rate of hotels is 47.5% in 2009 versus 54.6% in 2008. The sector is challenging several issues: labour costs, strong competition with neighbouring small islands offering the same (even if not better) products at lower prices, ageing infrastructures (hotels and resorts), marketing (still only French tourists), lack of cooperation between the different actors.

²⁵ IDEOM, Annual Report 2009.

Fisheries and ship sector

Fisheries are a small sector: 1,000 small ships, 8,000 tons of fish (2009), mainly in the coastal zone. The production does not address the local demand for fresh fish (16,000 tons). Importations come mainly from Brazil, and French Guiana (vivaneau). The sea-food processing sector is not developed. Only one small industrial unit has been just set-up in Le Marin.

Like the fisheries, the ship building and maintenance sector is very small (a dozen enterprises), but the shipping sector has been boosted in the last decade by tax subsidies.

Environment services and Green Tech:

As already stressed water and waste management are a hot issue in Martinique. The sector is not structured, but will certainly growth due to local demands for water management and waste recycling facilities. In addition, this is a sector with a potential for exportation of the local know-how and engineering in the regional area and Latin America. For instance, the enterprise Montplaisir has won several contracts for managing and recycling hospital waste in Jamaica and Ecuador.

ICT:

The sector is being structured around a professional association (OPEN-IT). However ICT services are not well diffused in the business sector (only 30% of the enterprises have an Internet website), namely in the tourism sector. Collaboration with public research labs and enterprises are episodic.

Personal services:

As already stated, the services sector is the largest employer in Martinique. There is a potential for developing and structuring the personal services sector: health services, personal services for elderly people, developing hosting infrastructures for elderly people, etc. Martinique can rely on important resources and strong competences in the health sector with the CHU (university hospital), INSERM research labs, and the epidemiology centre of tropical diseases (CIC). In addition, the health management system is currently under reorganisation through the creation of a single university hospital centre including three sites (Pierre-Zobda-Quitman, Mangot-Vulcin, and Trinité) for improving and increasing the quality and security of the care system.

Construction:

The sector was one of the main drivers of the economy, on the one hand because of public sector demand for basic infrastructures and on the other because of the tax regulation on investments (tax credit, i.e. the so called *défiscalisation*) that benefited namely the tourism sector. There is a consensus on the necessity of setting up a 'new model' for the sector based on housing (in particular social) and innovation (materials, energy efficiency, better urban planning).

The ***contribution of RTDI*** to agriculture and the agro-food industry has become important in the last 10 years for providing expertise and supporting innovation, namely through the support provided by the regional agro-food pole of Martinique (PARM). In the marine sector, contacts are established with the Pole of Competitiveness "*Mer Bretagne*", to identify projects of common interest specifically

related to Martinique's needs (energy, deep sea water pollution, fishing, aqua farming, shipping, etc.).

3.4.2. Qualitative analysis – Key issues resulting from field research

The expert who visited Martinique met with 34 people representing 20 institutions, organisations and administrations. The most recent official documents (related in particular to strategy orientations), data and literature were collected during the mission.

Overall evaluation of the future

There is globally a strong and explicit consensus among local actors on the **impact of the double crisis** - the world financial crisis in 2008 and the local social crisis in February 2009 - on the current economic stagnation of Martinique:

- Increasing number of job seekers, namely amongst the youngest people, with a risk to social cohesion
- Negative business climate hampering investments (e.g. in construction), combined with the political uncertainty due to regional election, and delays in the implementation of decrees on the new law on French overseas regions (LODEOM)
- Enterprises are more focused on the reconstitution of their financial capacities, rather than on developing innovation processes, developing internal qualification and new markets
- Decreasing household consumption whereas that has been a motor of growth for the last 15 years.

Local actors classically insist also on structural factors that hamper growth: the small size of the market that fosters the development of oligopolies (pressure on higher prices); the lack of a scale economy; and the dependency on a small range of strategic imported products. In addition, local actors express some fears with regard to the discussion at the European level about the reform of the tax "Octroi de Mer", considered by the local authorities as a factor of economic growth and endogenous development.

The vision provided by the local actors of the **issues at stake and challenges** facing Martinique largely depends on a sectoral approach of the local actors. The issues at stake differ from one sector to another. **However, a clear consensus emerges on several major issues.**

Unemployment

The high unemployment rate is the major issue (namely for the youngest population) that must guide policy-makers in the selection of priority sectors for the development of the Island. That implies **privileging the sectors intensive in terms of job creations** (such as tourism, personal services) and **supporting the diversification of the economy**, namely through the strengthening of the agro-food sector that has a spill-over effect on the agricultural production sector.

Land use

A second major issue regards the **management of the use of the (scarce) land**. Different needs potentially conflict - needs for agricultural production, needs for the

tourism sector, urban needs (infrastructures development), needs for the industrial sector and private sector (business premises), needs for ensuring the transportation of people and goods – such a conflicting situation has a negative impact on the production costs:

- Land is scarce and costly for agricultural development
- Enterprises demand business premises at lower costs and with good quality and services
- Internal accessibility is hampered by traffic congestion
- Development of renewable energies such as wind and solar energies are hampered
- Etc.

Entrepreneurial fabric

The **organisation and structuring of the main economic sectors** is also a challenge. SMEs and very small businesses are largely predominant, without real financial capacities (access to finance is difficult) and competences in management and project engineering. Business cooperation is rather poor. The limited number of enterprises in the different sectors exacerbates competition. The atomization of the entrepreneurial fabric and the lack of organization by sector (except banana and sugar cane) make the dissemination of innovation processes, the transfer of know-how, the development of competences and lifelong learning programmes, the business-research cooperation more difficult, but also reduce the gains than can be potentially realized through the mutualisation of equipment in strategic sectors such as freight transport.

Environment

Environmental issues are a major concern in Martinique. It concerns particularly the pollution of agricultural land due to the use of chlordécone (insecticide) by the banana sector; but also the pollution of water (e.g. coastal water that have an impact on the coastal fisheries) and the lack of water treatment capacities. Regarding waste management in Martinique, the equipment is of good quality, but they do not address increasing waste production and the needs for recycling this waste.

Less consensual issues

In addition, there are fewer consensuses on two other issues:

- If **innovation** is relatively high on the policy agenda and is perceived by the policy makers²⁶ as a key tool for improving the competitiveness of local products, the dissemination of an innovation culture among the private sector remains low. Except maybe in the agro-food sector, there is still the **need to convince businesses to develop innovation processes**. The lack of business cooperation, business-research cooperation and the lack of organization and structuring of the sectors is a major concern. The agro-food sector is offering promising perspective with the development of the research pole (PRAM) and the tech-transfer pole (PARM) that potentially meet the conditions of developing an innovative cluster on agro-food.
- The potential of the **regional integration** of Martinique is **questioned by the private sector**. EPA is clearly perceived as a threat by the agriculture and

²⁶ However, the new Regional Council should confirm this orientation.

industry sector. As regards the exchange of goods, the export potential is perceived as rather limited (except on the Guadeloupean and Guianese markets) due to costs of transportation (inter-island transport is not well developed); a lack of competitiveness (production costs); the lack of solvability and the small size of the Caribbean market. The exchange of services, expertise, know-how, education and training, and RTDI provide opportunities with regional partners, but there is at present no clear strategic focus on an export strategy.

In conclusion, if there is at present no detailed vision on which major projects could structure future economic growth, the vision for regional development shared by the local actors interviewed relies on the following points:

- Tourism is a key sector for boosting the economic growth in the coming years, even if the sector is going through a crisis at present. Tourism strategy must be based on local assets (natural resources, biodiversity...) and has a spill-over effect on other key sectors of the economy: construction, agro-food, commerce and services
- The primary sector (agriculture, fisheries, breeding) is still a high potential sector for ensuring auto-sufficiency and consolidating and strengthening the agro-food industries, the larger industrial sector in Martinique, already export-oriented on a few products (banana, rum, juice, yoghurt, etc.). This involves making a great effort in the reorganisation and restructuring of the sector, quality improvement and innovation development.
- The restructuring of the productive fabric must be transversal and a necessary condition to develop the competitiveness of the productive and service sectors. The Martinique Association of the Industrial Production (AMPI) is contributing to the structuring of the industrial sector and to the promotion of the "Local Industrial Product".

3.4.3. Summary of results

3.4.3.1. Main constraints and challenges

Main constraints:

- Distance from the EU continent (transportation costs)
- Lack of competitiveness within the Caribbean area
- Insufficient level of competition (transportation, telecommunications)
- High population density
- Some EU regulations and policies
- High vulnerability to natural disasters

Main challenges:

- Creating more jobs to prevent a dramatic increase in unemployment and training the workforce for addressing the needs of the emerging sectors

- Strengthening the innovation system and promoting demonstrative innovative projects
- Addressing the future needs of an ageing population
- Restructuring of the main economic sectors
- Developing regional integration through a strategic policy for exporting added value services to the Caribbean region
- Addressing the issue of a predictable decrease in public funding, national and EU
- Addressing issues related to energy dependency, management of waste, pollution, use of land
- Strengthening the regional attractiveness favouring the return of high qualified people

3.4.3.2. SWOT analysis

Economic conditions	Strengths	Weaknesses
	<ul style="list-style-type: none"> • Economic growth (until 2008) • Enterprise creation dynamics • good level of qualification of the workforce • Scientific and technological base in the agro-food sector 	<ul style="list-style-type: none"> • Growth relying mainly on final consumption (households) and dependency upon the public sector • High production costs: lack of competitiveness • Lack of restructuring of the main economic sector • Structural unemployment • Low survival rate of new businesses
	Opportunities	Threats
	<ul style="list-style-type: none"> • Innovation potential and opportunities for exporting added value services and know-how (agro-transformation, health, renewable energies, ICT) • Strong dynamics in enterprise creation 	<ul style="list-style-type: none"> • Crisis of the tourism sector • Weakness of economic cooperation in the regional area • Conflict in land use

Connectivity: transport, accessibility, regional integration	Strengths	Weaknesses
	<ul style="list-style-type: none"> • Good accessibility from EU, but not diversified • Internet connection (submarine cables) 	<ul style="list-style-type: none"> • Cost of transportation • Lack of organisation of freight transports • Accessibility from neighbouring Countries
	Opportunities	Threats
	<ul style="list-style-type: none"> • Potential for exporting services (environment, business services) and know-how in the agro-food sector 	<ul style="list-style-type: none"> • Internal transportation (road traffic congestion) • Willingness of business sector to do business with the regional area

Environment, climate change and energy	Strengths	Weaknesses
	<ul style="list-style-type: none"> • Biodiversity and protected areas • Good equipment for waste management • Potential for renewable energy power plants 	<ul style="list-style-type: none"> • Energy dependency • Pollution of water and soil (chlordécone) • Saturation of waste management infrastructure and lack of good water treatment infrastructures
	Opportunities	Threats
	<ul style="list-style-type: none"> • Experimenting energy mix: marine energy, solar and wind energy • Geographical positioning of 	<ul style="list-style-type: none"> • Problems raised by household and industrial waste (saturation of equipment)

	Martinique has an interest for the European research on the climate change and risk prevention	<ul style="list-style-type: none"> • Difficulties in changing people's attitude towards waste recycling • Conflicts on land use
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Demography and migration	Strengths	Weaknesses
	<ul style="list-style-type: none"> • A still young population with good qualifications • Low migration pressure 	<ul style="list-style-type: none"> • Ageing population • Insufficient creation of jobs (unemployment of young) • Poverty and young people leaving educational system
	Opportunities	Threats
	<ul style="list-style-type: none"> • Potential for developing personal services (labour intensive) 	<ul style="list-style-type: none"> • Lack of attractiveness • Disorganised urban planning

3.4.3.3. Identification of vulnerable/high potential sectors

Vulnerable sectors

- **Construction (BTP):**

The construction sector is clearly a vulnerable sector. Representing 6.8% of the regional GDP in 2007, the sector at present is experiencing some difficulties after two years of decreasing activity. The construction of household has decreased (-24% of the sale of cement in 2009) and some planned public works have been delayed (e.g. tramway). In addition, the social crisis (February 2009) and the regional election hampered investments. On a medium term perspective, if the demand for household remains strong (taking into account the need for social housing), the region has however caught up with the mainland as far as basic infrastructures are concerned. In addition local and regional budgets are limited, and EU funds are expected to be lower (due to the catching-up move).

- **Tourism:**

The business model is obsolete. Martinique's tourist product is of average quality with luxury prices. It is too expensive for European tourists compared with Cuba or the Dominican Republic. The marketing is concentrated on the French market. ICT and internet support are not sufficiently used; niche products are not developed; facilities must be renewed; but financial capacity is lagging and investors are not keen on investing due social uncertainties. However, the sector remains a fundamental component of the regional economy because of its spill over effect on the construction, transport, agro-food and services sectors and because it is labour intensive for the young people. The tourism sector urgently needs to be more professional and well trained, in order to diversify the portfolio of products and to update the equipments and infrastructures to European standards.

High potential sectors

- **Agriculture and agro-food industries:**

Agriculture, in spite of a declining share in total employment and added value, maintains an important potential for achieving food auto-sufficiency. In addition, research organisations (PRAM) are working on the diversification of species (increasing their added value), quality improvement, and environmental friendly production processes. A future cluster is emerging supported by a research capacity (PRAM) and by the technology transfer offer (PARM). Diversification towards added value products and opportunities of new markets are realistic. However, the sector is challenging the lack of restructuring (except for Banana and Cane), the weak internal management capacity of firms for innovative projects, but also the scarcity of the agricultural land for ensuring the supply of agricultural products to the agro-food industries.

- **Marine sector (fisheries, sea-food industry, ship building and maintenance, pleasure boating):**

Martinique has major assets that need to be further investigated to be turned into concrete economic development projects: a rich marine biodiversity offering potential valorisation and exploitation (blue biotechnology), an important marine resource still underexploited, an existing potential in RTDI including research on marine energy, a geographic positioning offering potential collaborations with neighbouring Countries in the areas of energies, research, and marine biodiversity protection.

In spite of its small size, the marine sector has some potential due to synergies with other economic sectors (e.g. tourism), boosting and supporting innovation processes in the sector.

As already stressed, the local production does not address the local demand for fresh fish (16,000 tons), resources are abundant, and the sector is offering new markets for developing sea-food products (e.g. the call for proposals launched by PARM on readymade cooked products includes the production and commercialization of sea-food products). In addition, aquaculture may also provide opportunities for developing fisheries production in coastal areas.

Regarding ship building and repair in the nautical (water sport) sector, the Caribbean market of ship sales is quite dynamic. In the fisheries sector, the shipping fleet needs to be modernized to respect security regulations and to allow to fish further from the port (to avoid some polluted coastal areas). Some innovative projects on shipbuilding are in progress (new types of boats, adaptation to tropical climate, new materials and paints, etc.).

- **Added value services**

Two areas of high potential services are of particular interest and address local demand and have an export potential:

- Personal services targeting elderly people based on providing health services and personalised services and development of hosting infrastructures for elderly people. The sector is however challenging several issues: the business model of the sector depends still largely on public funding; the solvability of the beneficiaries, the financial difficulties of the local public authorities, the

professionalization and training of the workforce (a master in management of health administrations has just been set-up at the University).

Related to the health sector, there is a promising initiative and cooperation in the field of tropical diseases with the setting-up of the diseases division of the University Hospital in close collaboration with St. Lucia, Dominica Island and Barbados.

- Environment related services such as services in water and waste management. Strong competences and know-how already exist on these issues in Martinique and address local needs. There is also a real potential for export in the regional area.

In addition, as a result of the extensive survey carried out within the NETBIOME project (ERA-Net Scheme funded by the DG Research involving all the outermost regions), three collaborative research priorities have been defined in the biodiversity field:

- evaluation and valuation of biodiversity underpinning the sustainable agricultural and fisheries practices and other resource uses and values
- research actions to enhance spatial planning and coastal zone management for the purposes of biodiversity management, including specific attention to global change adaptation
- proposals to characterize biodiversity - from gene to ecosystem and landscape - and the drivers of its evolution for enhancing the local capacity and policy decision-making

3.5. The Canary Islands

3.5.1. General description of the socio-economic conditions

There are a number of main features of the Canary Islands relevant for socio-economic analysis, for developing strategic considerations and for setting-up public policies:

- ✓ It is an archipelago constituted by seven major islands, six minor islands and some very small islands some of them inhabited, with a significant dispersion in distances (from east to west of the archipelago), which poses questions of cohesion (a main issue for regional politics and governance) but also of economic efficiency (cohesion and efficiency can be in contradiction leading to difficult political choices).
- ✓ It is an autonomous region with a strengthened autonomy status;
- ✓ The archipelago has two capitals: Santa Cruz de Tenerife and Las Palmas de Gran Canarias with a duplication of the regional government administration;
- ✓ The Canary Islands present a significant concentration of population (over 2 million inhabitants) which can be relevant for economic efficiency – the major island (Tenerife) represents 45% of total population) - and a high density (average of the archipelago: 272 inh/km²).
- ✓ Distance from Southern Spain is 1,000 Km and only 115 km from Morocco).
- ✓ The domestic market is not a small one *per se*: in addition to the 10 million visitors / year, it offers possibilities for economies of scale.
- ✓ A rich nature and landscape but a challenging topography in some islands of the archipelago (which is an asset for tourism) causing impacts on costs for infrastructures and for certain activities (e.g.: agriculture).
- ✓ A strong degree of economic dependence (on tourism and related services) and accordingly a high exposure to external risks (evolutions and structural change determined out of the Region).
- ✓ A predominant contribution of tourism and construction to GDP and employment representing a threat in a crisis period as from 2008
- ✓ Few manufacturing activities, except the agro-food and tobacco industries, and oil refineries.
- ✓ A construction sector based on public works (infrastructures such as ports, airports and highways) – due to external financial transfers from EU and national budget – and private investments in housing/hotels/building stimulated by the touristic demand
- ✓ The services sector is increasing significantly (75% of the employment) but has a high proportion of public activities (regional administrations in Tenerife and Gran Canaria, and local administrations; social services; para-public agencies).
- ✓ The tourism sector is facing a very difficult situation due to several factors: the global crisis, the economic model which is focused on seaside resorts and poorly diversified.
- ✓ Human resources are in general not sufficiently qualified – insufficiently for addressing new challenges and developing new activities, even if the level of education has improved.

- ✓ High vulnerability to natural disasters, first of all of volcanic and seismologic sources, but also as a result of the interplay of social and natural conditions (e.g.: the 2007 big fires burning in Tenerife)

The general characterization is close (with nuances and differences) to that of the other outermost regions, and in particular Madeira and the Azores, to the exception of the market dimension: a low critical mass for major activities, but opportunities in a large neighbouring market in African countries for exports of services, as well for potential synergies in emerging activities intensive in knowledge and human resources (education for instance); a potential in some innovative niches.

Founding a sound basis for a sustainable development on the long term remains a crucial challenge in the Canary Islands, for policy-makers, the civil society, academics, entrepreneurs and economic actors of the Region.

The debate is on the same line as the one in the European forums, in particular in the context of the “Strategy Europe 2020”. A growth process intelligent, sustainable and integrator leading to an economy more focused on knowledge and innovation, more ‘green’ and more open to the world, is an objective leading people in government and political forces as in business or in the university. The point is however that beyond statements and the wishes there is a concrete situation with narrow ‘room for manoeuvre’ due to the structural determinants.

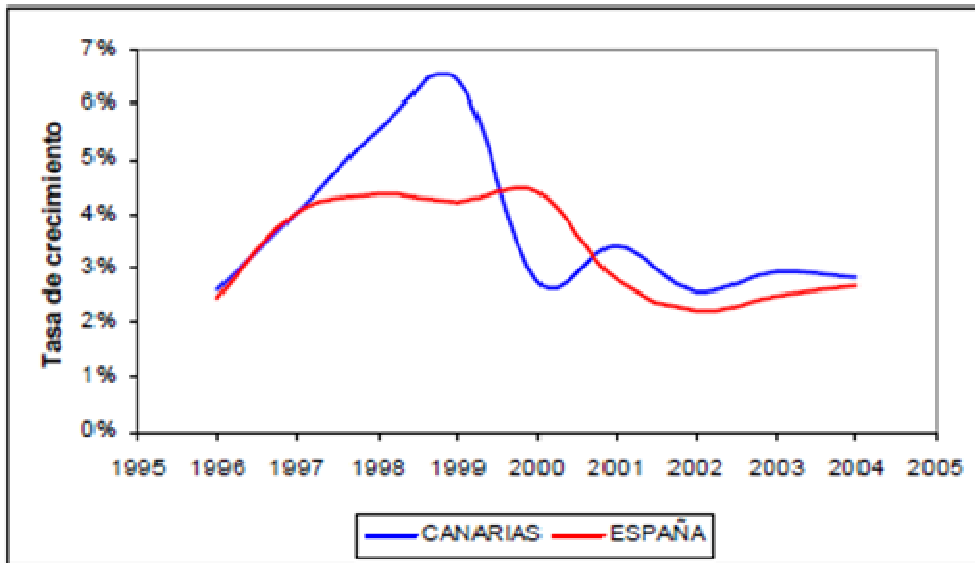
The fact that there is a large consensus on the diagnostic and the nature of the short term and structural components of the crisis is already a sound basis to prepare the future. Some work on forecasting and assessment on economy, sustainability and society has been done on recent years in the Canary Islands (see the different development plans since 2002)²⁷.

3.5.1.1. GDP and GDP per capita

The Canary GDP grew strongly during the 1990’s (in particular at the end of the decade), and later stabilised with an annual rate of growth comparable to that of mainland Spain.

²⁷ Plan de dinamización; Plan de transporte, Plan de energía; Libro Blanco para la innovación; Plan de I+D; etc.

Gráfico 1. Tasa de crecimiento del PIB a precios constantes. Base 1995.



Fuente: Elaboración propia a partir de datos de Contabilidad Regional de España. INE.

GDP per capita is the highest among the Outermost Regions with 21,105 € in 2008 (+17% between 2004 and 2008). However, the Canary economy has been deeply affected by the crisis since 2008 and GDP per capita sank to under 20,000 € in 2009 (*Vice Consejería de Economía y Hacienda*).

In the last 10 years the net disposable income of households has on average been 10% lower than that of mainland Spain, but well above that of the French Outermost Regions.

3.5.1.2. Employment / unemployment

En %		2004	2005	2006	2007	2008	2009*
Activité	Canarias	58.89	59.38	61.02	61.04	60.93	62.14
	Espana	56.37	57.35	58.33	58.92	58.80	
Emploi	Canarias	51.85	52.42	53.90	54.67	50.36	45.86
	Espana	50.18	52.10	53.36	54.05	53.02	
Chômage	Canarias	11.96	11.73	11.68	11.44	17.34	26.18
	Espana	10.97	9.16	8.51	8.26	11.33	

Source: ISTAC, *Les Canaries en chiffres, 2008 (estimate 2009)*

Unemployment declined throughout the 1995-2007 period while the percentage of active population in the total population increased. In 2005, unemployment affected only 9.3% of the 25-65 years old (against approximately one third in the French ORs).

Due to the crisis, there has been a dramatic increase in unemployment since 2008. Unemployment is now estimated at 28-29%. The acceleration of the growth of the unemployment rate (higher than the Spanish average) is particularly striking among the young and the women. The unemployment of the young is 45% in 2008 (Spanish average: 38%).

Long-term unemployment which had declined between 2003-2006 is now growing again. The long-term unemployment rate was 9% in the third trimester 2009, the highest in Spain, and the share of long-term unemployed in the total unemployed amounted to almost 35%.

The sectors which are most affected by unemployment are services (+ 29.36% between 2004 and 2008), in particular tourism, and the construction sector (+ 57.8% between 2004 and 2008).

3.5.1.3. Economic structure

Distribution of added value per branch

Tabla 20. Distribución del VAB pb por ramas de actividad (precios corrientes)

	2000	2001	2002	2003	2004	2005
Agricultura	2.05%	1.93%	1.77%	1.57%	1.50%	1.45%
Energía	1.97%	1.96%	2.01%	2.02%	1.83%	1.85%
Industria	5.46%	5.25%	5.13%	5.04%	4.83%	4.74%
Construcción	9.06%	9.72%	10.50%	10.53%	11.17%	11.67%
Servicios	81.46%	81.14%	80.58%	80.84%	80.67%	80.28%
VAB no agrario	97.95%	98.07%	98.23%	98.43%	98.50%	98.55%

Fuente: Contabilidad Regional de España Base 1995 (INE).

The share of agriculture has strongly declined and is accompanied by a diminution of the cultivated areas. The share of industry has slightly decreased. The share of public administration and defence has declined.

Services in the private sector, in the broadest meaning – including financial intermediation, real estate, wholesale and retail trade, repair of vehicles and goods, hotels and restaurants, transports and communication – have maintained their share in total employment.

Construction has enlarged its share until 2007.

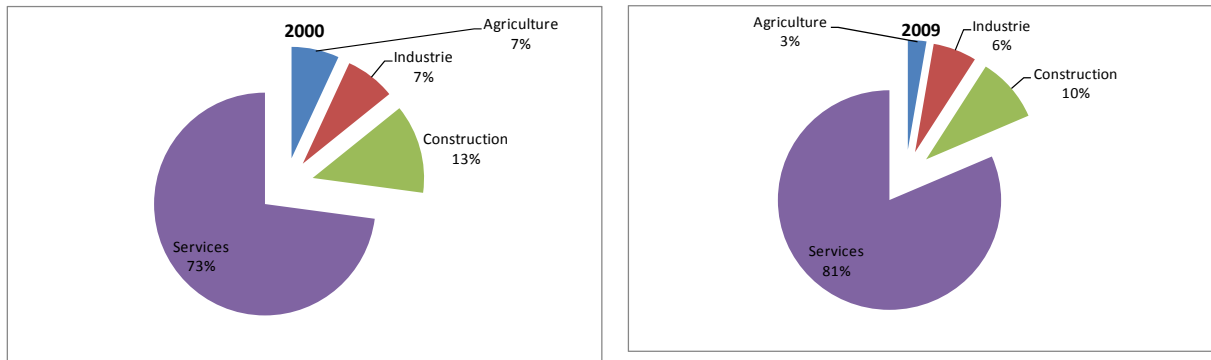
The driving force is constituted by “Tourism+Construction” which includes financial intermediation and real estate (the share of this sub-sector increased at the same pace as construction).

Distribution of employment per branch

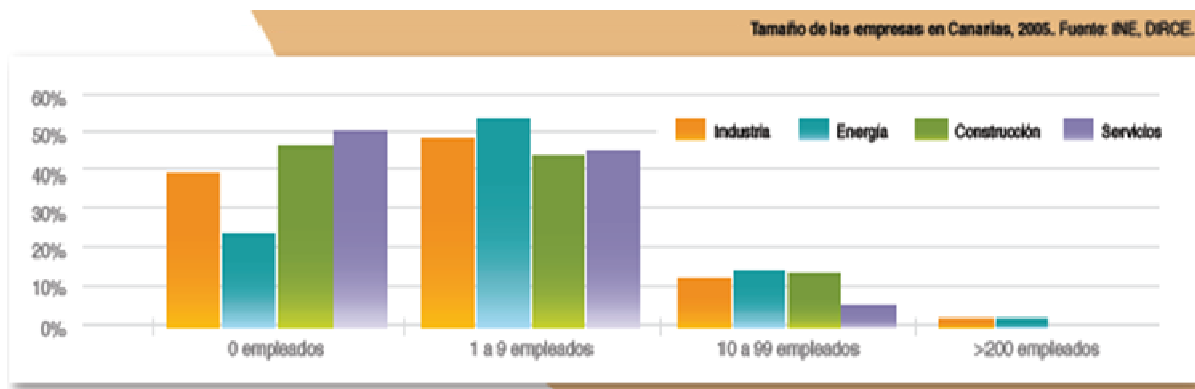
The tertiary sector, already dominant in 2000, further increased its share in employment during the period 2000-2009. It now represents more than 80% of the jobs. The share of construction has declined from 13 to 10% due to the crisis.

The total shares of the services and construction sector amount to about 90% of the jobs, reconfirming the domination of “Tourism+Construction” in the regional economic fabric.

The shares of agriculture and manufacturing industries have declined, strongly for agriculture (from 7% to 3%).



Typology of enterprises



Source: Taille des entreprises aux Canaries, 2005 (Plan Canario de I+D 2007-2010)

The Canary economy is dominated by SMEs and even micro-enterprises: 88.5% employ less than 5 people and 48.6% have no employees at all (however, the figures do not differ greatly from those of mainland Spain). These enterprises are fragile since they have very few qualified human resources and financial resources (capital and assets). A majority of enterprises are in the services sector, especially services related to tourism (hotels, restaurants, etc.).

The most important manufacturing companies are in the tobacco sector (because of tax privileges).

Only 1.4% of the enterprises were exporting goods or services in the mid-2000's.

3.5.1.4. Human Resources

Demography

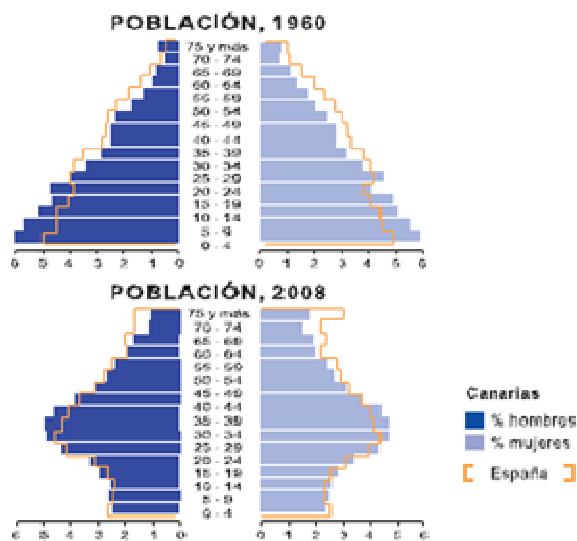
With almost 2,1 million inhabitants in 2009, the Canary Islands have a population density of 265,2 inh/km² (222 in 1996). The annual growth rate of the total population was 2.3% during the period 1997-2008.

Life expectancy is well over the EU-27 average and significantly increased between 2002 and 2008.

The population is concentrated on the two capital islands (Gran Canaria and Tenerife) and in their major cities, causing problems in particular with respect to water supply and waste treatment.

The demographic indicators (INE-ISTAC) show a low birth rate, and that people marry later.

ESTRUCTURA DE LA POBLACIÓN



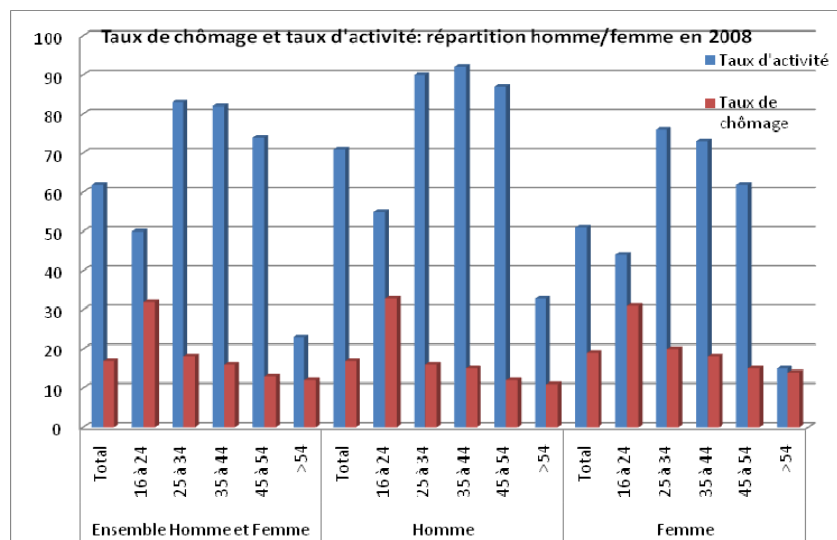
The child dependency ratio declined rapidly while the old age dependency ratio increased during the period 1997-2008. The total dependency ratio – 29,6 in 2008 – remains well below those of mainland Spain and EU 27.

Migrations

As the birth rate is low, the growth of total population is to a large part due to immigration. Migrants represent around 10% of the resident population, with mainly active people attracted by the economic growth (until 2007).

There are more and more migrants of African origin: today they represent more than 20% of officially listed migrants. At the same time, the Canary Islands are confronted by illegal immigration from Africa.

Evolution of active population



The 2008 ISTAC survey of the active population shows:

- For both male and female, the lowest rate of activity is amongst the senior population (over 54) and young people.
- The unemployment of women is higher than that of men in all age groups
- The activity rate increased from 59% in 2004 to 62% in 2009 and remains higher than in mainland Spain.

Education and training – Qualification of human resources

The Canary Islands had the lowest level of education in Spain until the 1980's. Education attainment made significant progress between 2000 and 2008. The percentage of active population with secondary education increased by 19.3% during the period (with a higher percentage for the female than for the male population). Concerning higher (tertiary) education, progress is rather spectacular with an increase of 41.1% in HEI other than universities and 28.8% in universities.

The period 2000-08 can be considered a period of catching up with mainland Spain and EU levels, benefitting the female population in particular.

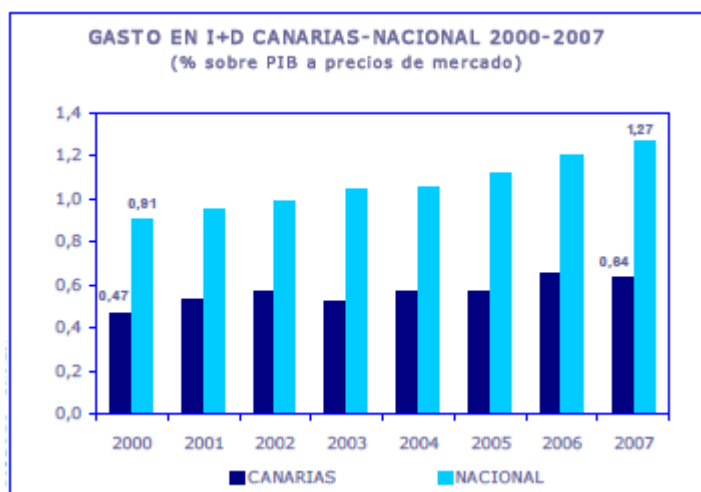
3.5.1.5. Research, Technological Development and Innovation (RTDI)

The research base is provided by the two universities of Las Palmas and La Laguna and scientific institutions such as the Astrophysical Institute (IAC), the Technological Institute for Renewable Energies (ITER), the Institute of Marine Sciences (ICCM), the Foundation for Health Research (FUNCIS), the Institute of Agricultural Research (ICIA).

The Canary innovation system relies on a number of ‘intermediary’ organisations: the Agency for Research, Innovation and the Information Society (ACIISI), the Development Society of Santa Cruz de Tenerife (SOFITESA), the centre of RTDI and innovation (I+D+i) and the network RedCIDE managed by the Canary Technological Institute (ITC). The ITC is the implementation body of ACIISI).

The ‘intermediary’ organisations have been probably too many with respect to the lack of a real critical mass in research and the limited business RTDI capacities. Moreover, they seem too have been insufficiently effective and efficient.

The percentage of RTDI expenses in the GDP was very low in 2000 and increased



by 36% between 2000 and 2007, from 0.47% to 0.64% (regional sources indicate 0.8% this figure includes expenses dedicated to universities). Public RTDI expenses are 50% lower than in mainland Spain. There is room for catching up. The *Plan Canario de I+D 2007-2010*, established in 2006, presents the state of the art of RTDI, and indicates how to reach the objective of 1.5% of RTDI expenses / GDP.

Source: Condederación Canaria de Empresarios, Gobierno Canario: Informe anual de la economía canaria, 2008

Human resources dedicated to RTDI remain modest: their share in the active population is twice lower than in mainland Spain. The total number of researchers represented 0.34% of the active population and the number researchers in the private sector was 8 times less than in mainland Spain.

Till the *Plan Canario de I+D*, there was no global vision concerning a RTDI strategy in the region. While the Plan is not a panacea, it is a first step towards a strategy if it is implemented. The other aspect regards the lack of coordination between the different innovation-support organisations²⁸, an issue which could be addressed through an enlarged role of ITC.

However, the fundamental issue remains that of the regional “economic model”: is innovation (in the broadest meaning) to take the lead on “tourism + construction”? There is surely today a real and shared awareness of this issue among the policy-makers and the business community, as could be seen with the interviews carried out.

²⁸ Underlined in the 2006 OECD Report « Supporting the contribution of higher education institutions to regional development, Canary Islands, OECD (www.oecd.org/dataoecd/25/26/36791509.pdf): “irrational allocation of resources”.

3.5.1.6. Connectivity and opening of the economy

Accessibility and transport, telecommunications

The Region is investing about 12% of its GDP in transport infrastructures, for at least 2 reasons: the importance of tourism from Europe, and double insularity (archipelago). However, the geographical conditions (relief) and the lack of available land due to the high population density make investment in transport particularly expensive.

The number of 'inter-island' air traffic passengers remained stable between 2002 and 2009 (2,4 million. Main connections are with Madrid and England. Air passenger (11.8%), and of air freight traffic (-21.5%) declined in 2008 and 2009. There are a large number of charter flights to EU cities.

There are a few flights to African neighbouring countries and no charter flights. They should be developed in the perspective of more regional integration and more exchanges with these countries (*Plan de Gran Vecindad*).

Maritime freight traffic increased significantly between 2000 and 2003 (+21.5%); it then continued to grow in Las Palmas and stabilised in Tenerife until 2007. The crisis led to a diminution for freight (-6.5% in 2008; -17.9% in 2009) and passengers (-3%).

Road traffic is more and more congested with 1,6 million vehicles in 2007.

The first available ICT data go back to 2004: 97% of the businesses had computers, and 69.2% of them used the internet regularly. In 2007, 91% of businesses had e-mail access and 14% an intranet. In 2004, 45.4% of the households benefited from a wide band connection – the objective was 56% by 2010.

Trade balance, foreign direct investment and regional integration

The trade balance is in large and structural deficit. The average cover rate (exports/imports) was 21.1% for the period 2000-2005 and 20.6% for the period 2006-2008. The cover rate with Spain is low: 16.12% in 2006 and 14.83% in 2008. It was significantly higher with all other countries and has improved: 28.87% in 2006 and 38.11% in 2008. There was a strong diminution of imports in 2008 and 2009, and of exports in 2009.

The main products exchanged are foodstuffs and energy products. Foodstuffs amounted to 23% of imports and 32.3% of exports on the average during the period 2000-05; and energy products respectively 30% and 32%.

A majority of imported goods comes from Spain. In 2005, 18% of imported goods came from non-European countries. Exports are mainly directed to EU countries, Spain first of all (61%) followed by the UK, the Netherlands and Morocco. Trade with African countries, in particular the closest, is growing. In 2008, it amounted to 12.14% of imports (Cameroun and Congo for oil) and 9.12% of exports.

Foreign direct investment has been decreasing since 2006.

3.5.1.7. Environment, energy and climate change

Tourism and urbanisation as well as the growth of GDP have a serious impact on water resources, the use of land and biodiversity. The pressure exerted by tourism and housing is particularly strong in the coastal areas. In 2000, 58% of the available water resources were used for agriculture, in 2008 this sank to less than 50% due to the impact of tourism and urbanisation. Solutions are: waste water treatment and desalination of sea water.

Cultivated land diminished by 31% between 2003 and 2008.

Energy dependency upon energy products is high. It is important to stress the continued growth of energy consumption with an annual growth rate of about 3% (80% of final consumption concentrated in Gran Canaria and Tenerife). The transportation sector, vital for the Canary Islands, absorbs about a quarter of the energy resources.

The production of renewable energies amounted to 7% in 2006 and 8.2% in 2008. Wind energy is the major sector of renewable energies (92% in 2008), but it is not a 'guaranteed' source, since the winds are seasonal and not sufficiently stable²⁹ (the wind energy has to be combined with thermic plants). The use of solar (photovoltaic) energy is strongly linked to public incentives.

3.5.1.8. Focus on specific sectors and emerging sectors

The regional economic fabric is dominated by the association of tourism and construction. It is becoming increasingly 'tertiarised', with a continued diminution in percentage of the active population and added value in agriculture. The tertiary sector is itself dominated by tourism and all tourism-related activities. Construction was a strong driving force in the past decade. Globally, the regional economic fabric accentuates to some extent the Spanish mainland 'model'.

Tourism

This is the key sector of the regional economy. It is however highly sensitive to variations in external conditions and to the economic situation across European countries (North-western countries in particular).

The average number of overnight stays per head during the period 1996-2008 was 74.7, more than 7 times the average for Spain (10.5), and the average number of beds per head was 25.7 during the period 1996-2007 (three times that of Spain).

The most rapid growth took place in the first half of the 1990s. Since 2002, the sector has entered a phase of deceleration that has turned into a real crisis since 2008.

²⁹ PECAN (*Plan energetico Canario*), 2004

TURISTAS EXTRANJEROS ENTRADOS EN CANARIAS, 2004-2008.										
	VALORES ABSOLUTOS					VARIACIONES INTERANUALES				
	2004	2005	2006	2007	2008	04-05	05-06	06-07	07-08	04-08
Gran Canaria	2.769.898	2.708.140	2.753.696	2.714.473	2.685.267	-2,23	1,68	-1,42	-1,08	-3,06
Lanzarote	1.770.176	1.688.223	1.682.716	1.618.335	1.587.237	-4,63	-0,33	-3,83	-1,92	-10,33
Fuerteventura	1.314.017	1.317.765	1.422.630	1.472.177	1.457.315	0,29	7,96	3,48	-1,01	10,91
LAS PALMAS	5.854.091	5.714.128	5.859.042	5.804.985	5.729.819	-2,39	2,54	-0,92	-1,29	-2,12
Tenerife	3.457.070	3.442.787	3.559.669	3.410.733	3.362.808	-0,41	3,39	-4,18	-1,41	-2,73
La Palma	116.104	120.048	111.328	110.398	123.958	3,40	-7,26	-0,84	12,28	6,76
S/C DE TENERIFE	3.573.174	3.562.835	3.670.997	3.521.131	3.486.766	-0,29	3,04	-4,08	-0,98	-2,42
TOTAL CANARIAS	9.427.265	9.276.963	9.530.039	9.326.116	9.216.585	-1,59	2,73	-2,14	-1,17	-2,23

Fuente: AENA.
Elaboración: Confederación Canaria de Empresarios

Source: Confederación de Empresarios, Gobierno Canario, Informe anual del economía canaria, 2008

Tourists are hosted in hotels and in private rental buildings. Private renting (which amounts to 40% of the total hosting capacity in Gran Canaria) is in crisis (-6% since 2005) because of old and poor quality rental buildings. The labour force employed in hotels and residences increased by 18.6% between 2004 and 2008, but only by 0.68% between 2007 and 2008.

The Canary tourist model has to adapt to new types of demand in order to stay competitive: quality, rehabilitation of buildings dedicated to tourism, new types of products, new target groups of clients, e-booking, availability of internet services.

Construction

The construction sector developed fast in the last 10 years. Together with tourism, it was the driving engine of economic growth in the Canary Islands until the recent crisis.

In spite of an important presence of the major Spanish construction companies on the regional market, local companies managed to acquire a significant share.

Agriculture

While the weight of agriculture has declined significantly, as already stated, the sector is considered by most local actors a part of the regional 'identity', in particular, the banana crop. It also plays a role in the protection of the environment. The sector is exporting (29% of total exports in 2007³⁰) – mainly tomatoes, decorative plants, flowers and vegetables.

The two main cultures are banana and tomato. They are followed by horticultural products (fruit, vegetables and flowers). Banana and tomato are the 'emblematic' cultures of the Canary Islands; their annual production has been declining, but they contribute to exports. The POSEICAN is supporting the different agricultural productions. Agriculture is also supported by the regional government.

Breeding is affected by an increase in the price of intermediate inputs.

³⁰ ASOCAN, 2008.

There is an effort on quality and “labellisation” of local varieties and products. Some agricultural research is conducted by ICIA.

Fisheries and aquaculture

Fisheries only represent about 0.8% of the total added value and slightly less than 0.4% of jobs; fishermen are ageing (≥ 50). The production of aquaculture is progressively substituting the fisheries production. It increased by 59% between 2003 and 2008 and amounts to c. 28% of the Spanish production.

Manufacturing industries

The development of manufacturing industries has been hampered for decades by remoteness, lack of water and energy resources, insufficient available land for industrial use, etc. The share of manufacturing industries in the GDP was never over 10%. They mainly produce for the regional market.

The main sectors in the manufacturing industries are agro-food, tobacco and oil refineries.

The tobacco production is relatively modest but it is essentially exported; part of the tobacco leaves are imported. The tobacco industry employs directly 2,000 people. It has suffered first from the entry of Spain in the EU, and suffers now from globalisation. There are two challenges: improving quality, taxation (sales to tourists);

Main emerging sectors or niches

A new sector is emerging: the biotech/pharmaceutical cluster BIOTIFARM, founded by the private sector and supported by the *Cabildo de Tenerife*; it should be funded by ACIISI and has as partners the university of La Laguna and the science parks of Gran Canaria and Tenerife, and various businesses; one of its objectives is to acquire S&T equipment for the testing of new products based on biodiversity.

In spite of the crisis, the Special Economic Zone (*Zona Especial Canarias*) is maintaining the same rate of projects of new activities (diminution in the rate of creation of new businesses), in particular in the field of aquaculture, and in services (audiovisual).

ACIISI also supports, together with the universities and the *Instituto Tecnológico de Canarias* (ITC), projects in the fields of renewable energies, environment, water technologies, ICT, robotics, with opportunities of exporting knowledge to neighbouring countries while favouring the creation of technology-based Canarian businesses.

In the field of water technologies, the region is rather advanced for what regards desalination of sea water. Various technologies have been tested during the last past 30 years (the first plants were in Lanzarote and Las Palmas and there are now about 40 plants). This allows for exporting know how and technologies, especially in Africa.

Marine or sea-related activities are developing in particular with the project of an oceanic test platform targeted at deep sea RTDI (*Plataforma Oceánica de Canarias*)

managed by the Institute of Marine Sciences, for prospection and exploitation of sea resources³¹.

Finally, ACIISI has a global cluster programme which funds clusters through public tenders: 18 clusters are currently being funded (see list below) representing 12 sectors considered of strategic interest for the Canary Islands).

Cluster	Sector
Ingenierías de Canarias	Ingeniería
Marítimo de Canarias	Marítimo
Turismo de Canarias	Turismo
Bike	Turismo (OCIO)
RICAM	EE.RR. Medio Ambiente y Agua
Construcción Sostenible en Canarias	Construcción
Transporte y Logística	Transporte y Logística
Tecnologías de la Información, Innovación y Comunicación de Canarias	TIC
Canarias Excelencia Tecnológica	TIC
Cluster Insignia Empresarial de servicios TIC	TIC
Bioteología de Canarias	Bioteología
Bioteología e Industria Farmacéutica de Canarias (BIOTIFARM)	Bioteología
Aloe Vera, Biodiversidad y Plantas Medicinales, CABIOMED	Bioteología
Salud Innovación	Salud
Telemedicina de Canarias	Salud
Audiovisual de Canarias	Audiovisual
Conocimiento en Gestión de Organizaciones (ClusterGO)	Conocimiento
Subsector Vitivinícola en Canarias	Agroalimentario

3.5.2. Qualitative analysis – Key issues resulting from field research

Two experts visited the Canary Islands. They had meetings with 18 people (9 on Gran Canaria, 9 on Tenerife) representing 15 administrations or organizations (9 on Gran Canaria, 6 on Tenerife). They benefited from the support of Spanish experts with a local office³². Three interview were realised later by the Spanish experts³³, in particular with the vice-president of the Region in charge of European affairs. The most recent official documents (concerning in particular strategic orientations), data and literature were collected during the mission. The *Confederación Canaria de*

³¹ www.plocan.eu

³² Experts of the Spanish consultancy Información y Desarrollo.

³³ ITER, Astrophysics Institute, the Vice-President of the regional government in charge of European Affairs.

Empresarios provided the experts with its latest *Informe anual de la Economía Canaria* (2008). ITC very usefully commented the existing *Plan Canario de I+D+i*³⁴.

It also provided them with the *Propuestas empresariales a la reformulación del régimen económico y fiscal*.

Overall strategy for the future

In the region there is a wide consensus on the need for economic and social change as well as on the broad economic strategy to follow. No major differences emerge among the stakeholders, though the emphasis on the various elements of the strategy differs depending on the actors involved.

Social issues with the increase of the unemployment rate (ageing, migrants, unemployment), environmental issues using new technologies to solve energetic problems, opening up to cooperation with African countries, diversification of the tourism model through niche markets, development through endogenous RTDI capacities, are the main challenges to address and the main opportunities to follow.

Emerging sectors are supported by regional policies, based on local/regional resources such as applications of biotechnologies and marine ecosystems (deep sea research), astrophysics (with the international observatory), agro-food transformation, renewable energies (wind, marine, geothermic, etc.), use of NTIC (health sector). This strategy is coherent with EU 2020 guidelines for endogenous sustainable and competitive development based on research and innovation, but it is highly demanding and requires fundamental changes in the economy and society. The process of change has many interconnected dimensions.

The Canary Islands stakeholders share a strategic vision of the Canary region as an interface between Europe and African countries, helping such countries to enter the international market, using the ports (renewed or new ports in projects) of the two main islands. In such a strategy, the Canary Islands could be a strong mentor in educational issues, mainly for the improvement of the qualification of African human resources, and in some technologies – renewable energies, photovoltaic for instance). On the other hand, the Canary Islands are strengthening their policies aimed at improving the quality of the basic infrastructures (roads, ports, ICT and broadband networks), the competitiveness of the productive sector, lowering the dependency on fossil fuels for energy use, changing the consumption and economic pattern (mainly in the tourism sector). The cluster policy seems promising, provided that it is more selective and focused, and that it really establishes a strong relationship with research.

Unemployment

The main concern of the people, organizations and institutions is the current level of **unemployment**, which reached 26-27%, in a regional economy in which labour productivity and the qualification of the work force are low. The increasing unemployment rate of the young and the fact that they are leaving the school system early are particularly disturbing and a key issue for the future.

³⁴ We can also mention: *Informe sobre líneas de financiación para acciones de Gran Vecindad* (Confederación provincial de Empresarios de Tenerife)

Tourism and construction

Tourism, coupled with construction, overwhelmingly dominates the regional economic fabric. The present crisis strongly affects both sectors: the number of tourists is diminishing, and a number of projected investments have been halted. Officials (Department of Agriculture) indicated that some workers in the construction sector were going back to farming because of the crisis. Other officials evoked the hypothesis of funding large public works in order to fight unemployment. It is widely accepted that the “Canarian model” based on tourism and construction has to be re-oriented: rehabilitation of ‘old’ buildings, especially rental buildings (those built during the construction boom and often of poor quality), introduction of eco-friendly criteria (e.g.: eco-efficiency), improved urban planning, diversification of the tourist offer (segmentation of the market), better trained work force, marketing. Everybody accepts that tourism is here to stay - due to existing investments and the number of tourism-related jobs – but that it has to be ‘re-invented’.

Agriculture

Agriculture now plays a very minor role with respect to its share in the GDP and total added value. However, it is considered a part – especially the banana culture – of the Canarian cultural identity and landscape. Other cultures, such as tomato and flowers, are in a very competitive market (competition from the Netherlands, Morocco, etc.). Niche markets can be found in ‘resurrecting’ traditional varieties (tomato, vine, potato, etc.).

New technologies

The domestic and business use of **ICT** is well developed, but the quality of services is rather weak and competition is insufficient.

Concerning **emerging sectors**, the sectors of biotech/bio-pharmacy, together with sea-related activities³⁵, appear at the moment as the most promising; they are supported by the regional cluster policy. Aquaculture is starting and the issue of aqua-farms waste treatment has to be addressed. In the field of astrophysics, the Canary Islands vie with Chile for the establishment of a large telescope (E-TELT).

In general, researchers and academics consider that the Canary Islands “need a scientific base to survive”.

Renewable energies are dominated by wind energy. However, it seems that political pressure from ecologists, and conflicting views among various departments, are limiting its development.

Three ‘transversal’ important stakes have to be emphasized: education and training, innovation, internationalization.

Education and training: qualification of jobs is generally low and vocational training is insufficiently developed; too many young people are leaving school without a diploma, which tends to increase the unemployment rate of the young dramatically.

³⁵ PLOCAN project (a project of «Ocean Platform»).

Innovation: there is an important potential, according to the ITC (marine resources, renewable energies, biotech, ICT services). The island of El Hierro is considered an excellent place for experimentation. However, innovation is mainly perceived as technological, and insufficient attention is paid to innovation in services and to entrepreneurship. The cluster policy does not seem to be sufficiently promoted. Among the major obstacles to innovation that are cited, are: the small size of firms and their resulting poor financial capacity, which require public intervention in financial engineering (JEREMIE); the difficulty of local public research labs in participating in large-scale research projects, in particular EU FP ones.

Internationalisation: the objective is to build up and develop an offer of high added value services (public and private, through co-operation or market) for the neighbouring African countries. This is clearly stated in the *Plan de Acción de Gran Vecindad*.

Reformulating the REF

Last but not least, local actors, in particular the *Confederación of Empresarios* insist on the **necessity of reformulating the REF (*Regimen Económico y Fiscal*)**. The REF was established by a 1994 Act (*Ley 19/1994*) and has proved very profitable to the economic development of the Canary Islands. However, the business organisation considers today that, due to the very difficult context (*situación absolutamente excepcional*), it is necessary to bring substantial changes to the REF to improve the competitiveness of the regional economic fabric to the benefit of growth and job creation. The changes proposed regard a wide range of topics (taxation, coordination between administrations, special economic zone, sectoral issues, etc.).

3.5.3. Summary of results

3.5.3.1. Main constraints and challenges

Main constraints

- Lack of competitiveness (agriculture, manufacturing industries)
- Relative distant location from major markets
- Vulnerability to natural disasters
- Limited resources (natural and human)
- High population density
- Dependence upon “Tourism+Construction”
- Good infrastructures but some constraints on prices (some competition with African ports)
- Double insularity and double administration (Gran Canaria, Tenerife)
- Some EU regulations and policies

Main challenges

- Creating more jobs and more qualified ones (long-term unemployment has grown fast since the crisis)
- Developing further education and training
- Re-orienting tourism and construction
- Supporting emerging sectors and export of high added value services, promoting innovation and clustering
- Enlarging the capacity for innovation and entrepreneurship
- Addressing issues related to high density and tourism: energy, waste, water, urban planning, public transportation system...
- Strengthening and enlarge market opportunities: Macaronesia, neighbouring African countries

3.5.3.2. SWOT Analysis

Economic conditions	Strengths	Weaknesses
	<ul style="list-style-type: none"> • A service-based economy that has proved able to create jobs until the crisis • A good level of use of ICT • <i>Regímen Fiscal</i> 	<ul style="list-style-type: none"> • Low labour productivity • Dependency upon the couple «Tourism+Construction» • Predominance of micro-enterprises • Low export capacities
	Opportunities	Threats
	<ul style="list-style-type: none"> • Potential niches to be further developed: sea-related innovative activities, renewable energies, biotech • A good scientific base with two universities – innovation support to be further developed (innovation in services, non-technological innovation) • Exporting high added value services to neighbouring countries 	<ul style="list-style-type: none"> • The tourism crisis has a serious impact on the construction sector and on unemployment, and beyond, on all economic sectors of the Canary Islands • Fiercer international competition among tourist destinations • Lack of sufficiently effective implementation of the regional innovation strategy • Change in EU and national regulations concerning the Outermost Regions

Connectivity: transport, accessibility, regional integration	Strengths	Weaknesses
	<ul style="list-style-type: none"> • Air links with mainland Spain and a number of European cities • Good inter-island links • Road infrastructures 	<ul style="list-style-type: none"> • Fragmentation and territorial discontinuity within the region (archipelago) • Air links with non-Spanish EU cities mainly through charter flights • Few air links with neighbouring non-European countries and no charter flights • Limited competition: sea links (Gran Canaria-Tenerife); telecommunications (cable)
	Opportunities	Threats
	<ul style="list-style-type: none"> • Project of port infrastructures for developing services (logistics, naval repair) • Development of transport and trade with African countries 	<ul style="list-style-type: none"> • Transportation costs: internal inter-island and with third countries • Competition with ports in the regional area (e.g.: Tanger) • Cost of mobile telecommunications

Environment, climate change and energy	Strengths	Weaknesses
	<ul style="list-style-type: none"> • Capacities for developing renewable energies (wind, solar/photovoltaic): existence of ITER (renewable energies: technology and innovation); experimentation site • Biodiversity because of the location: at the crossroads between Europe, Africa and America) • 	<ul style="list-style-type: none"> • Orography hampers the development of wind energy in some places • Difficulties concerning the distribution of electricity • Little water resource • Waste treatment (including water in some islands) • Some deficit in telecommunications infrastructure • Strong dependency upon fossil fuels
	Opportunities	Threats
	<ul style="list-style-type: none"> • Awareness of the insular environmental issues as a stake for developing new forms of tourism and for economic development in general • Developing further renewable energies • Marine platform (PLOCAN) as a RTDI and test-bed centre for businesses • Exploring deep-sea waters 	<ul style="list-style-type: none"> • Soil erosion • Pressure of tourism and urbanisation in the coastal areas • Structural weakness of investment in innovation and new technologies (public and private)

Demography and migration	Strengths	Weaknesses
	<ul style="list-style-type: none"> • Positive demographic balance • Good teacher/pupil ratio in primary and secondary education • Two universities 	<ul style="list-style-type: none"> • Low qualification of the work force • Insufficient social infrastructures: nurseries, medico-social housing for old-age people
	Opportunities	Threats
	<ul style="list-style-type: none"> • Creating more technology-based and/or innovation-based jobs (aquaculture, renewable energies, biotech) 	<ul style="list-style-type: none"> • Growing demographic pressure in urban areas and use of agricultural land for urbanisation • Growing unemployment the tourism+construction crisis • Social exclusion • Illegal immigration

3.5.3.3. Identification of vulnerable / high potential sectors

Vulnerable sectors

- **Tourism**

Tourism is still one of the main job providers and is here to stay, but the tourist model has to be 're-invented' or at least 're-positioned'.

- **Construction**

Construction is also a large job provider and has to be re-oriented to upgrade quality, taking into account eco-efficiency through training and better urban and territorial planning.

- **Agriculture / Banana**

The agricultural sector has a minor place in the regional economic fabric and is vulnerable to external competition. Agricultural research is not very important. However, it is fundamental to the cultural identity and the landscape, and there are some niches, related in particular to local traditional varieties.

The banana sector is typically considered as a part of this cultural identity and is exposed to changes in the regulation framework as in Madeira, Guadeloupe and Martinique.

- **Wind energy**

The wind energy sector, up to now the most developed among renewable energies, appears relatively vulnerable because of technical (distribution through the electricity network) and administrative (overlapping of diverse administrations) problems. The share of wind energy has been declining since 2004.

- **Manufacturing industries:**

They are globally vulnerable because of high production costs, and a lack of competitiveness affecting production both for the local and external markets.

High potential sectors

- **Renewable energies**

In spite of the problems concerning wind energy, renewable energies have a strong potential that have to be developed, because of the insular context; the use of wind and water energy (elevating water in tanks and using water energy).

- **Biotechnologies**

Biotechnologies, bio-pharmacy and bio-medicine are supported through the cluster policy. There is a scientific base in the universities, however without a real critical mass; there are also a few innovative businesses in the pharmaceutical sector and in bio-medical engineering. Research on algae may have an impact on the agro-food industry, agriculture and the pharmaceutical/cosmetic sector.

- **Sea-based activities**

Apart from activities related to marine biotechnologies, there are two sorts of opportunities. The first one regards research in deep-sea waters (PLOCAN project) the second regards services to sea transportation (in spite of competition with Tangier).

- **High added value services**

There is a potential for developing and exporting engineering services (water, waste treatment, etc.) and other diverse high added value services such as expertise in health and sanitary systems, GIS, services to sea transportation, education, etc. to neighbouring African countries.

3.6. The Azores

3.6.1. General description of the socio-economic conditions

There are a number of features of the Azores relevant to socio-economic analysis, to developing strategic considerations and to setting-up public policies:

- ✓ It is an archipelago made up of nine islands - 600 Km from east to west of the archipelago, which poses problems of cohesion (a main issue for regional politics and governance) but also of economic efficiency (they may be contradictory to each other leading to difficult political choices).
- ✓ The Azores present a significant concentration of population which may be relevant to economic efficiency – 55% of the total population lives on S. Miguel, the most important island).
- ✓ The Azores have an ultra-peripheral location (distance from Lisbon is 1,500 Km).
- ✓ A small domestic market (less than 245,000 habitants with a low revenue disposable for consumption plus 350,000 visitors / year) and consequently small possibilities for economies of scale.
- ✓ A rich nature and landscape but a challenging topography on some islands of the archipelago (an asset for tourism) causing impacts on costs for infra-structures and for certain activities (namely agriculture).
- ✓ Limited resources, both natural and human (especially skilled labour for some emerging activities).
- ✓ Strong economic dependence (*'filière'* milk) and accordingly high exposure to external risks (evolutions determined outside the Region).
- ✓ A significant contribution of agriculture to GDP (10%) and employment (13%). Agriculture plays an important role in the social fabric; as a crucial element in the environment and landscape; for the identity and authenticity of the region – all key-aspects for investing in 'qualified' tourism.
- ✓ Few manufacturing activities, except the agro-food industry, focused on traditional products and goods for the domestic market.
- ✓ A construction sector based on public works – due to external financial transfers from EU and national budget – and housing/building stimulated by low interest rates since Portugal has become member of the Euro Area; the sector is equivalent in weight to mainland Portugal, but far from the importance it has in the development of Madeira.
- ✓ The services sector is increasing significantly but has a high proportion of public activities (regional and local administration; social activities; para-public agencies).
- ✓ The tourism sector is growing and has great potential; it may play a critical role in the future for generating employment (as the construction sector) and as an absorber of the female work force in the future (female activity rate: only 38.4% today).
- ✓ Human resources are in general poorly qualified – unsuited for new challenges and activities.
- ✓ High vulnerability to natural disasters, first of all of volcanic and seismologic nature, but also as a result of the interplay of social and natural processes.

The general characterisation is rather similar (with nuances and differences) to that of the Madeira Autonomous Region: a small economy with a low critical mass for key activities; far away from main markets for exports of goods as well as synergies in emergent activities intensive in knowledge and human resources competences; high cost for all imported goods; a public-based economy (from employment to investment, from demand to financial transfers); low diversification in productive specialisation.

Creating a sound basis for long term sustainable development in the Azores remains a crucial challenge for politicians, the civil society, academics, entrepreneurs and economic actors of the Region.

The debate in the Azores is similar to the one in the European forums, in particular in the context of the “Strategy Europe 2020”. An intelligent, sustainable growth process integrating all social groups would give rise to an economy more focused on knowledge and innovation, ‘greener’ and more open to the world. This is the objective of the leading people in government and the political forces, businesses and the university in the Azores, in theory. In practice, there is a concrete situation with small ‘room for manoeuvre’ limited by the structural determinants.

The fact that in the Azores there is a large consensus on the diagnostic and the nature of the short term and structural components of the crisis is already a sound basis for the future. Some work on forecasting and assessments on economy, sustainability and society has been done in recent years in the Azores.

3.6.1.1. GDP and GDP per capita

Regional GDP in Azores, in current EUR, grew from 2.3 billion in 2000 to 3.4 billion in 2008 (+49.3% for 2000/2008). But in the period 1995/2000 the nominal growth was +42% (so +111% for the period 1995/2008). Contrary to Madeira, there has been no drop in economic performance recently. But the context is a less dynamic in line with the Portuguese economic cycle, which has changed since 1999/2000 giving rise to mediocre and slow growth or even stagnation with a recession in 2003 (ten years after the last in 1993). From 2008 onward the international crisis has had a severe impact on the country as a whole but also on the Azores and Madeira.

In 2008 the Azores GDP represented 2% of the national GDP (2.3% for population).

The relative economic performance (compared with the Portuguese average) for both Portuguese autonomous regions was high. GDP per capita has grown, compared with the national average (PT = 100):

The Azores: 79% in 1995, 80% in 2000 and 89% in 2008

Madeira: 89% in 1995, 113% in 2000 and 128% in 2008

Even so, this can be considered a good performance for the Azores. A catching-up move with the Portuguese mainland GDP per capita has been observed. In 1990 the Azores and Madeira were at the bottom of the ranking of Portuguese regions.

For recent years, in constant EUR, the real growth of GDP has been as follows:

	2004	2005	2006	2007	2008
The Azores	2.2	2.1	3.1	1.9	2.3
Madeira	4.0	2.0	3.0	1.5	0.6
Portugal	1.5	0.9	1.4	1.9	0.0

Taking in account **GDP pps** and comparing them with EU27, the results in 2008 were:

The Azores: 67%

Madeira: 97%.

Concerning GDP pps of all Portuguese autonomous (2) and administrative regions (5 in mainland Portugal), only Lisbon is over the EU27 average (105%). But Madeira has a high score (97%).

In the Azores, the GDP per capita grew from 9,600 € in 2000 to 13,900 € in 2008 (+45%). In Madeira: 13,500 € in 2000 and 20,000 € in 2008 (+48%).

3.6.1.2. Employment / unemployment

The total employed population in both regions is:

The Azores: 107,500

Madeira: 122,700

The growth the rate for employment is 10% for the Azores for the period 2000 to 2008 but near 13% for the previous 1995/2000 period, which provides an empirical evidence of a slowdown in the economic cycle. For Madeira the equivalent figures are: 4% for 2000/2008 and 10% for the previous period.

From 2000 on, the sector that has been losing jobs in the Azores is agriculture / fisheries. On the opposite side of the scale are tourism, hotels and restaurants and the tertiary sector (commerce).

The performance was not been good enough to prevent an increase of the unemployment rate: 5.5% in 2008 and 6.7% in 2009. The 5.5% in 2008 can be divided as follows: 8.3% for female and 3.5% for male. The official unemployment figure is 6,414 unemployed people in 2008.

It must be stressed that, as in Madeira, historically unemployment levels have been relatively low (3% during most of the 90ies) compared to both mainland Portugal and the rest of the EU. This reflects some dynamics of employment creation (building, public works) as well as significant levels of under-employment, particularly in the agriculture and traditional handicraft activities. It also reflects the relative large number of public jobs in the regional administration and agencies.

But the general unemployment picture is increasingly giving rise to concern. A structural element of the phenomenon (45.4% of the unemployment rate is

considered long term unemployment) has to be taken in account when considering possible new activities capable of absorbing human resources. Limited job opportunities have led to temporary emigration from the Azores to North America and Europe.

There is no evidence of potential serious social breakdowns. But as in other economies and societies (mainland Portugal, EU, and other outermost regions) unemployment is certainly one of the major challenges that The Azores are facing.

3.6.1.3. Economic structure

The structure of the regional economy has changed since 1995 (see tables in Annex for GDP and employment).

In 2008, the Gross Value Added by relevant branches was as follows:

%	Agric/Fish.	Ind./Energy	Build/Const.	Hotels/Rest.	Pub.Services
The Azores	9.4	10.5	5.9	3.8	30.8
Madeira	2.2	7.1	8.5	7.4	23.7
Portugal	2.4	17.3	6.4	4.2	23.2

The pattern results very clear:

- ✓ Azores is an economy where the primary activities still play a significant role (in Madeira or mainland Portugal it tends to be residual);
- ✓ Portugal's joining the EU did not give rise to a great expansion in the building sector (as it did in Madeira) and the relative values of the sector are moderate;
- ✓ hotels and restaurants, tourism in general, are not as high as in Madeira (the 'real' figures, in Madeira, if we consider direct and indirect effects of tourism, are much more impressive);
- ✓ the share of public administration and services (education, health/social) is not only very high, but has grown significantly (28% in 1995).

In 2008, Employment by relevant branch is as follows:

%	Agric/Fish.	Ind./Energy	Build/Const.	Hotels/Rest.	Pub.Services
The Azores	12.7	10.0	11.2	6.5	23.7
Madeira	9.8	7.7	16.1	11.2	21.0
Portugal	11.6	17.5	10.0	6.1	18.2

The branch distribution of employment reflects the growing position of the tertiary sector: in 2008, 65.6% in the Azores, 66.2% in Madeira and 60.5% in mainland Portugal. This move in both regions is consistent but we must stress the role played by the administrative and social tertiary, with a large proportion of public employment. This is a clear pattern of the socio-economic model of the Region.

From 2000 to 2008 the share of agriculture / fisheries in employment declined significantly but it still represents about 13% of jobs.

As in other outermost regions, companies are in general very small. The dimension of the domestic market and the exposure to imports determine a tendency for fragmentation of the local economic fabric.

Some figures for 2008:

- ✓ 82% of the companies have fewer than 10 employees

- ✓ 91.8% have fewer than 20 employees
- ✓ 97.2% have fewer than 50 employees
- ✓ For those with fewer than 10 employees, the most important sectors are: agriculture (97.5%), fisheries (83.4%), restaurants (90.9%) and hotels (70.3%).

Half of the workers (46%) are under 35 and nearly $\frac{3}{4}$ are under 45.

3.6.1.4. Human Resources

Demography

The information concerning demography reveals a positive trend in the last decade (+1.2% between 2001 and 2008). The situation is comparable with what is happening at a national level or in Madeira.

The total population has grown from 241,763 in 2001 to 244,780 in 2008. The island of S. Miguel concentrates 55% of the total population; 23% of the population live on Terceira Island.

The geographic dynamics of the population differ from island to island as can be seen from the table:

<i>Island / Year</i>	1991	2001	2008
TOTAL	237795	241763	244780
Santa Maria	5922	5578	5574
S. Miguel	125915	131609	133816
Terceira	55706	55833	55923
Graciosa	5189	4780	4910
S. Jorge	10219	9674	9473
Pico	15202	14806	14850
Faial	14920	15063	15629
Flores	4329	3995	4117
Corvo	393	425	488

Density is low (104,1) compared with Madeira (312,1) but equivalent to that observed in mainland Portugal.

The active population in 2008 amounts to 117,582. The activity rate is low 48.2% (only 38.4% for women), the figures in Madeira are: 56.8% for men and 47.4% for women.

The structure of the population by age group shows that the population of the Azores is younger than the average in mainland Portugal or EU:

2008

Age		The Azores	Portugal	EU
0 -14	%	18.8	15.3	15.8
15 – 64	%	68.8	67.1	67.3
65 and more	%	12.4	17.4	16.9

The situation is comparable with the one observed in Madeira: the weight of elders (over 65) is equivalent in the Azores and Madeira (13%). As in Madeira, the more recent trends in the demography show a relative decrease in the young population (0-14), their representation was 26.4% in 1991 and has declined consistently to 18.8% in 2008). This tendency follows the movement observed at national level. The slowdown of the birth rate and improvements in public health may explain the phenomenon.

The natural balance of the population in the Azores is positive in the whole period 2001/2008 (+562 in 2008) as is the migratory balance for 2001/2008 (+212 in 2008) but it is negative in 2002.

Education and training – Qualification of human resources

Compared with the EU27 and, less expressively, with mainland Portugal, the ‘formal’ education (school system) is low in the Azores, and figures can be summarised as follows:

	The Azores	Portugal	EU/27
Basic (3 rd . Cycle)	79.3%	69.8%	24.5%
Secondary (12 years)	12.7%	15.2%	49.3%
Superior	8.0%	14.9%	26.1%

This really hampers economic development in the Azores (as in mainland Portugal and in Madeira). The deficit of qualification is one of the two main structural deficits in the country – the other is external deficit (the public accounts deficit does not by any means have the structural importance of the qualification deficit).

So, in spite of autonomous constitutional powers, the Azores are not better than mainland Portugal. Some tend to emphasise that investments in the school system infrastructure is recent (the last ten to fifteen years) and will produce positive outcomes in the near future.

3.6.1.5. Research, Technological Development and Innovation (RTDI) and Information Society

The RTDI system has had a significant development from the mid-1990's. Fields of research such as aerospace (ESA facilities on the island of Santa Maria), seismology and deep-sea research have attained top levels.

A system of Research Centres has been set up to develop scientific and technological work. A Technology Park has now been approved for S. Miguel – in the city of Lagoa. It is directed to Technologies and Information Systems, volcanology and seismology. A new IBBA – Instituto de Biotecnologia e Biomedicina dos Açores may be the key-partner for the planned park in Terceira. Both are developments that should be followed attentively. Their success will depend on several critical factors. The University of the Azores is a key-partner for all these developments.

There has been a great improvement with respect to the Information Society (IS) in the last decade with a clear movement towards the use of the tools of a knowledge based economy.

Some figures for households:

(%)

	2003	2004	2005	2006	2007	2008
Owning a Computer	32.0	35.8	41.0	45.0	50.0	52.0
Connecting to Internet	22.0	31.3	37.4	38.0	40.0	41.0

52% own a computer and 41% have an internet connection, the figures for Portugal and EU 27 are 50% and 46% and 67% and 60%. The Azores are in a 'diffusion' phase. All other available figures (INE: "A sociedade da Informação em Portugal 2008) go in the same direction.

3.6.1.6. Connectivity and opening of the economy

Accessibility and transport, telecommunications

In a SWOT analysis, the geo-strategic position of the Azores tends to be considered as strength. However, to turn this strength into a real asset, the connections between the islands and with the world are crucial: their performance could indiscriminately support the economic development of the Azores or other remote islands.

Good transportation, good accessibility and connectivity can make the Azores part of the global circuit and exploit the opportunities of the Autonomous Region, in particular the opportunities arising from internationalisation. Tourism is heavily dependent upon transportation, but so is RTDI with respect to the university and businesses. Reducing transport costs of commodities and people may make the regional markets more competitive and provide agglomeration gains.

Some transport systems seem to constitute a bottleneck in the development of the Azores. The present model of air connections as a 'public service' should be revised

and corrected. Connections to and from Ponta Delgada, a hub for internal distribution, should be liberalised.

Such an approach could also be applied to other sectors: maritime transports, energy. Making public policies more coherent throughout the whole archipelago and dealing with its problems of geographic extension, dispersion and fragmentation, would have positive consequences on economic efficiency.

Some regulatory frameworks should be re-thought in order to attain better performances and higher levels of efficiency. These changes in the regulatory frameworks might attract newcomers and generate new entrepreneurship initiatives.

Number of Passengers using (approximated figures for 2007/2008):

- The airports of the Azores: 1.8 million
- The commercial ports of the Azores: 1.0 million

Trade balance and foreign direct investment

There is a structural deficit in the external trade of the Azores. All things considered 50% of imports are covered by exports.

In recent years, the situation has been as follows:

1000 Euros

	Intra-	UE	Extra-	UE
	2005	2007	2005	2007
Imports	25260	34062	29711	44583
Exports	20117	19643	14121	21305
Exp/Imp (%)	79.6	57.7	47.5	47.8

Foodstuffs from the agro-food industry (in particular '*filière*' meat/milk) and drinks are the main exports. Foodstuff products, energy (fuel) and equipment are the main imports.

While mainland Portugal remains the main trading partner, other countries have some importance: the USA and Canada (with a large number of emigrants of the Azores origin), but also Brazil and Angola as export destinations.

An agency for the promotion of investment has been created (APIA / *Agência para a Promoção do Investimento dos Açores*) and good future results are expected concerning FDI.

3.6.1.7. Environment, energy and climate change

The integration of the principles of sustainability in the development of the Azores is a key aspect of which regional authorities and economic actors are aware.

In 2005/2006, extensive work was carried out on the theme: “Perspectives for the Sustainability in the Autonomous Region of the Azores” (it contributed to the setting up of a regional plan for sustainable development).

Environment, energy and climate changes are considered fields of ‘Threats’ and ‘Opportunities’. The development of highly differentiated products using location-specific factors and immobile assets, combined with infrastructure and ICT investments, are considered opportunity for biotechnologies. Competences in the University of the Azores in deep-sea RTDI have been developed and can join partnerships with potential economic outcomes.

The energy strategy intends to address the large dependence on fossil fuels (88% in the energetic ‘bilan’) as well the inefficiencies in the distribution.

Twenty years ago approximately, 93% of the energy produced was thermo-electric (fuel and diesel). Ten years later, the contribution of fossil fuels had already decreased to 79%; the remaining 21% are provided by renewable energy sources (especially geothermal energy, but also water and wind). Despite this positive evolution, and despite its limitations, the use of renewable energy must be a priority of public policies (a strategic plan for energy was established in 2008).

The regulation aspects of the sector could be rethought.

Two major flagship projects for the Azores in the areas of Energy and Environment have been identified in this report. A major flagship project can be established in the area of waste management, a typical field of structural difficulties for islanders namely: difficulties for economies of scale; multiplication of processing solutions and final destination of residues; oversized infrastructure due to the seasonal effects (e.g. tourism.); need to use maritime transport for certain residues; difficulties in ensuring economic viability of recycling at regional level.

3.6.1.8. Focus on specific sectors and emerging sectors

Agriculture – Agro-food industries:

With a very intensive agricultural basis in the 70’s (40% of the active population), the economy of the Azores has always had mono-product export cycles (the historical situation in Madeira is similar) – wheat in the 16th century, dye-stuff plants and oranges in the 19th, alcohol in the 20th and the products of the ‘*filière*’ milk / animal production from the 60’s up to the present.

The agricultural and agro-industrial basis remains dominant (milk and meat products and animals, canned fish). Biologically certified production could help producers to overcome the problem of over-costs and productivity in traditional productions.

Another agriculture basis in the Azores is constituted by the products of natural origin, of quality: agricultural products (pineapple, tea), livestock (milk, cheese, meat), fish, crafts, mineral and thermal waters.

Fisheries:

The sector is relatively important: in 2008, the local fisheries represented 26.8% of the total national production and those of coastal fishing 9.8% - a large proportion compared with the percentage of the active population employed in fisheries.

The monitoring and supervision of EEZ is critical (and is a permanent object of criticism in the Region) for the sustainability of the sector.

New positive links should be established between fisheries and tourism.

Aquaculture is developing in relation to research. It is a sector with potential development.

Tourism:

Tourism (8,000 to 10,000 beds or 1/4 to 1/3 of the capacity of Madeira) is growing. It represents less than 4% of the GDP in 2008, and 7,000 jobs (including adjacent activities), but fewer than 2,000 hotels and traditional unities. It is rather, by nature, a 'niche' than mass tourism. It nevertheless presents assets for the future: sustainable tourism, tourism related to health, "cruise" tourism, scientific tourism if certain positive developments occur (qualification of services; improving the quality of training for employees of the sector; animation / creation of new products; promotion / marketing positioning).

The territory of the Azores is less exposed to demographic pressure than Madeira where the population is concentrated on a single island and 90% on the Southern coast with a high concentration of hotel facilities around the city of Funchal. This is not the case of the Azores where population density is 104 hab./km². In effect, insular dispersion is an asset for the Azores and for the development of a 'niche' tourism, although this is a problem in terms of critical mass, efficiency and competitiveness.

Tourism can also help to absorb a part of the female work force – the female activity rate is very low: 28.7%, in 2000, and 38.4%, in 2008, compared with a national average of 48%.

No large economic group has yet emerged from the Azores at national level (as Pestana in Madeira, the first group in Portugal). However, the Azores have an air transport company (SATA, initially private, later public) which plays an important role in the attraction of tourist flows.

The average number of nights spent per head in 2008 and 2009 was 2.9 and 2.6 respectively (average in Portugal: 2.4 and 2.3; in Madeira: 5.1 and 4.7).

Construction:

As a consequence of financial transfers from national and European funds participation of the construction and public works sector in the economy has increased in the Azores. Following budget consolidation and a tighter control of public expenditure in Portugal (process that will continue for the next few years), the sector adjustment will affect the Azores to a lesser extent than Madeira. The Azores

are also less exposed to the decrease in EU transfers, because the region remains in the Objective "convergence".

The sector has been one of the main drivers of the local economy, in large part due to public sector demands for roads, public buildings, social housing. It employed 9,500 people in 1995 and 12,000 in 2008. It is an evolution that raises some concerns for the future.

Services:

The services sector is the largest employer in the Azores (2/3 of total employment). However, a significant part of these 'services' are provided by public or para-public entities.

There are some potentialities in Business Services (including ICT services). Expectations have been raised by projects in progress at the Technology Park and at the University of the Azores – which should be an incubator for business namely on ITC.

3.6.2. Qualitative analysis – Key issues resulting from field research

The expert who visited the Azores had meetings with 13 people representing 11 institutions, organisations and administrations. The expert's one-week stay in the Azores included meetings in the two main islands and cities: Ponta Delgada / S. Miguel and Angra do Heroísmo / Terceira. The most recent official documents (related in particular to strategy orientations), data (INE, DREM) and literature were collected during the mission.

Following the general methodology for the work, the field research included the major stakeholders of the public sector, at a regional and national levels, private entrepreneurs and entrepreneurial associations, university and researchers, senior professionals as well as development poles. The interviews mainly dealt with development strategy and public policies to overcome structural problems and bottlenecks to the economic and social development.

Overall strategy for the future

Local actors agree on the short term and structural difficulties and the need to change some pillars of the development paradigm in order to achieve more sustainable development and create more permanent jobs. Consensus covers the core aspects of the broad economy strategy to follow.

Strategic objectives for a sustainable long term development in the Azores are under discussion in the Region. It is a key part of the strategic vision for the Region.

From the interviews, the key messages are similar (with different nuances and weights of factors) to those found in Madeira. But in the Azores there is a tendency to emphasize their specificities. The small dimension in terms of population and economic market, the fragmentation and geographical dispersion entail over-costs

and serious political dilemmas with respect to cohesion and competitiveness. So far, the geostrategic value of the archipelago seems to have been under-estimated or, at least, there is a potential that has not been fully developed.

On some major issues a clear consensus emerges.

Economic development

The Azores has had a catching-up move with the Portuguese mainland GDP per capita as well with the EU. The 90's and the beginning of the 2000's were years of strong growth. But there is a clear awareness that some factors explaining that growth will not be replicated in the years to come.

The international and national context has strongly changed. The international economic and financial crises affect the Azores. The strong cut in public national expenses and transfers as well as the economic stagnation – for all the decade but particularly intense since 2008 – impacts negatively the former positive national framework for Azores economic and social development.

The paradigm of development is now under pressure. Additional to those external changes some internal pillars are facing pressures. The significant contribution of agriculture – “filière” milk – to economic income, exports, employment, social stability and environmental richness faces serious challenges coming from the increasing competition and changes in the regulatory framework. The construction sector based on public works and house building is/will be in a declining trend due to less external transfers and growing difficulties to access to bank credits. The services sector has a important role but is mainly of a public nature. It is acknowledged that the oversized weight of the public sector cannot continue to grow.

The tourism sector is growing and has a good potential. In a context of a limited natural resources availability for development (namely for manufacturing industries) and a small domestic market, tourism is a key sector for growth and exports. The Azores have crucial assets for an intelligent and sustainable tourism development. There is a wide consensus about the major role for tourism.

Other activities present high potential (see 3.6.3.3 “identification of vulnerable / high potential sectors”): environment / energy, high added value services, health / medicine and biotechnologies / natural resources / sea.

Sustainable development

As referred before (see 3.6.1) “creating a sound basis for long term sustainable development in the Azores remains a crucial challenge for politicians, the civil society, academics, entrepreneurs and economic actors of the Region”.

There is a large consensus on the relevance of the issue. Environmental issues are a major concern. Some areas have been mentioned by local actors. The protection of the marine resources of the Azores was mentioned (see item 3.6.3.3 – identification of vulnerable / high potential sectors). Agriculture, waste management and natural vulnerabilities were also mentioned.

The importance of the agriculture sector raises serious problems of pollution that affect the environment systems and the water resource management.

There is a positive bet on waste management (see flagship projects).

In addition, the special vulnerability to natural disasters makes obligatory a strict monitoring of the human interventions on environment. Monitoring economic activities, in their relation with natural factors, becomes critical.

Unemployment

The local consensus considers unemployment as one of the major challenges that Azores is facing. For 30 years the Azores has experienced a very low level of unemployment varying from 3% to 4%. But things have changed.

This is a key issue for economic and social development of the Azores even if there is no evidence of potential serious social breakdowns.

The economic empirical evidence shows a slowdown in the economic prospects for growth as well for employment (actually this evidence is already clear comparing 2000/2008 growth with 1995/2000 growth). The integration of the young job seekers into the labour market is a major issue for the near future.

The tourism development may play a significant role for jobs creation. It is a intensive employment sector. Tourism has also a significant spill-over effect in other services sector which are also intensive in job creation, and may offer greater job opportunities for women (the Azores have a quite low female activity rate).

Human capital

For the purpose of economic diversification and changes into the economic pillar of the growth of the Island, the availability of the human capital is a critical issue. Local actors are clearly aware about that concern: the insufficient education and training of the workforce which is a precondition for the new development objectives. A strong effort has to be done.

The new activities in the service sectors, the bet in S&T and in knowledge based activities will demand upper levels of qualification of the human capital.

The investment in education in the last 15 years will help to address this challenge. The University and the RTDI system have significantly developed from the mid 1990's. Now it's time to turn these large investments into concrete results for supporting the economic diversification process.

Cohesion versus efficiency

This is an issue for which the discussion is crucial – even if a consensus is more difficult to achieve on that issue than in all the items referred above.

To attract newcomers, to generate new entrepreneurship activities and to stimulate innovation some regulatory frameworks – that support social and territorial cohesion and equity – may have to be rethought (namely energy and maritime transports) in order to privilege efficiency and to attain greater competitiveness. For instance, following some opinions of regional major stakeholders, to attain upper levels of tourism development the regulatory framework for air transportation could be refined to become more market-oriented (and less of a ‘public service model’ nature’). A new policy mix should be implemented for the purpose, for some stakeholders.

These proposals are part of the road map towards greater competitiveness for the Azores economy and society.

3.6.3. Summary of results

3.6.3.1. Main constraints and challenges

Main constraints:

- Location, dimension and dispersion/fragmentation
- Limited resources, both natural and human
- High degree of dependency: *mono-filière*
- Vulnerability to natural disasters
- Some EU regulations and policies

Main challenges:

- Addressing the issue of a predictable diminution of public funding, national and EU
- Anticipating changes in the system of 'quotas' for their main activity ('*filière*' milk/animal production)
- Addressing the issue of sustainability and modernizing the economic fabric
- Increasing the capacity and efficiency of endogenous energy (renewable, in particular geothermal)
- Creating more jobs to prevent a dramatic increase in unemployment
- Qualifying the human capital
- Generating capacities for entrepreneurship to favour an economic model less dependent upon public demand and transfers
- Integrating internal markets both intra-Azores and Azores/Madeira/Canary Islands
- Rethinking internal regulations that constrain the tourism development, hamper better efficiency levels and blockade newcomers and entrepreneurship.

3.6.3.2. SWOT analysis

Economic conditions	Strengths	Weaknesses
	<ul style="list-style-type: none"> • Autonomous powers implying decentralised and local decisions • Geostrategic position as a political and economic asset (half way from Europe to North America and maritime extension of Portugal / EEZ) • Economic growth (until recently) 	<ul style="list-style-type: none"> • Dispersion and high costs of infrastructures (oversized) • Long distances to input and output markets (significant additional costs affecting competitiveness) • Demographic growth with reduced potential (limited local market) • Low levels of qualification

	<ul style="list-style-type: none"> • Good soil and weather ('edafo-climáticas') conditions for the <i>filière</i> agro-livestock • Landscape and natural beauty (and different popular cultural expressions) favourable for a 'alternative tourism' but a destination that is not sun/beaches/animation • Some UNESCO Heritage (Angra do Heroísmo, Pico cultural vineyard landscape) • Young population • Potentials of the Diaspora (North America) • Some exercises of forecasting and assessment on economy and society • Some organizations increasingly think and act 'glocally' (namely university but also some small entrepreneurs in ICT) 	<p>of human resources</p> <ul style="list-style-type: none"> • Small dimension and fragmentation of the domestic market: <ul style="list-style-type: none"> ○ implying impossibility to benefit from economies of scale) ○ high transport costs due to low volumes of trade • Economic dependency on few (or mono) products • Absence of 'critical mass' (markets, human and other resources) • Low culture of internationalisation in most companies and organizations
	Opportunities	Threats
	<ul style="list-style-type: none"> • Better accessibility (tourism, exports of goods) • Investments in infrastructures and ICT • New regulation models for air and maritime transport, and energy • Sea (EEZ, fisheries, Biotechnologies / Biomedicine, RTDI) • Strong innovation potential and opportunities for environment, health, geo-thermal and renewable energies, ICT • New opportunities in the Economy of the Sea 	<ul style="list-style-type: none"> • Accessibility (imports of competitive goods). Small dimension of urban centres • Growing unemployment and large under-employment with low productivity in services • Cuts in transfers from central budget due to the consolidation of public finance (and possible recession in the mainland economy)

Connectivity: transport, accessibility, regional integration	Strengths	Weaknesses
	<ul style="list-style-type: none"> • Infrastructures (ports and airports) in all 9 islands • Insertion in an 	<ul style="list-style-type: none"> • Territorial discontinuity (far from main markets) • Fragmentation

	intercontinental network of telecommunications by submarine cable of optical fibre	(archipelago with 9 islands) <ul style="list-style-type: none"> • Cost of transportation (key for tourism development) • Absence of regional integration (Azores / Madeira / Canary Islands)
	Opportunities	Threats
	<ul style="list-style-type: none"> • Creation of an internal market (inter-islands of the Archipelago) reducing internal frictions to moving goods, services, capital people and information • New regulation models for air and maritime transport 	<ul style="list-style-type: none"> • Low competitiveness in exposed sectors as tourism due to high prices in air transport • Weak competition derived from fragmentation and absence of big and innovative players

	Strengths	Weaknesses
	<ul style="list-style-type: none"> • Political decision to invest in energy autonomy and diversification • A bet on waste management 	<ul style="list-style-type: none"> • Perversity of the present system of transfers for the 'convergence of the tariffs' • Energy dependency
Environment, climate change and energy	Opportunities	Threats
	<ul style="list-style-type: none"> • Economic value of landscape / environment for tourism development • High endogenous potential (geo-thermal and renewable energy in particular) • An eventual maritime cable connection in the Archipelago for energy • Great potential as a Region-Lab for experimenting energy mix in a closed and small context) 	<ul style="list-style-type: none"> • Special vulnerability to natural disasters • Vulnerability of the environment systems and water resources • Pollution of fresh water • Conflicts on the use of land

	Strengths	Weaknesses
	<ul style="list-style-type: none"> • A young population • No problem related to immigration so far 	<ul style="list-style-type: none"> • Insufficient creation of jobs • Illiteracy remains a problem
Demography and migration	Opportunities	Threats
	<ul style="list-style-type: none"> • Development of training programmes effectively adapted to needs 	<ul style="list-style-type: none"> • Ageing population as a trend

3.6.3.3. Identification of vulnerable/high potential sectors

From the analysis presented in this report and particularly the arguments discussed in this chapter – ‘Main constraints and challenges’ and ‘SWOT Analysis’ – it becomes clear that the situation differs from sector to sector.

However, a too linear approach comparing ‘traditional’ or ‘vulnerable’ vs ‘modern’ and ‘high potential’ sectors must be avoided. New projects with high potential may emerge from some ‘vulnerable’ sectors (in the Azores: genetics applied to livestock or biotechnologies applied to fruit and vegetables for instance) and high potential sectors may face some failures when confronted with the market.

Vulnerable sectors

- **Filière agro-livestock:**
exposed to competition and changes in the regulatory framework.
- **Traditional Commerce:**
exposed to new types of retail trade and new approaches to consumers with social and urban impacts.
- **Construction:**
facing negative trends in investment and an economic conjuncture, and risks as a following a long period of depression.
- **Manufacturing industries:**
globally vulnerable because of high production costs and a lack of competitiveness affecting both the local and external markets.

High potential sectors

- **Agriculture and agro-food industries:**
In spite of a declining share in total employment and added value, agriculture maintains an important potential due to the good soil and weather (‘*edafo-climáticas*’) conditions for the *filière* agro-livestock.
- **Environment / Energy:**
There is a consensus on the potential of a systemic approach (geo-thermal, renewable energy, efficiency, RTDI, mobi-e (mobility linked to the electric automobile), inter-island cable connections, interfaces with waste management.
- **Tourism:**
The Azores can exploit the natural advantages of a territory rich in nature and landscape, that integrates some UNESCO Heritage sites (Angra do Heroísmo and Pico) and that is a 2 to 3 hour flight from mainland Europe. There is room for developing a ‘niche’ tourism.
- **High added value services:**

There are opportunities arising from the health and tourism development (ICT/customer relationship management at micro as meso/macro levels) and from activities developed in the university with international partners.

- **Health / Medicine:**

The Azores can count on the diaspora to invest in the Archipelago which offers a good location for senior citizens (golden age residences and health care) as well as for diagnosis and treatment. The University of the Azores (it runs a local advanced course in medicine in partnership with a Portuguese university) and a new Biotechnology and Biomedicine Centre, on Terceira Island, would play an important role.

- **Biotechnologies / Natural Resources / Sea:**

There are opportunities in several biotech fields related to biodiversity and natural resources, to the '*filière*' sea/fisheries – the potential is mainly linked to the Portuguese EEZ and the abundant resources available in the archipelago.

A example of a multi-purpose project linking these issues around the sea is the development of activities relying on the Earth Observation Station in Santa Maria Island. Recent investments expanded the capacities of the Station to follow the trajectories of several remote observation satellites and to collect useful data especially for ships' detection as well as for monitoring spots oil.

The expanded facilities in Santa Maria is clearly offering new opportunities for strengthening the protection of the marine resources of the Azores but also for transferring knowledge and technologies to businesses and developing new types of economic activities into the Island. Investing in these areas and expanding the research programs will give to the Azores a strategic role in the Atlantic North. In addition, international cooperation projects may complement the regional efforts, especially through the European Spatial Agency (ESA) and the European Maritime Safety Agency (EMSA). The regional authorities are aware of the importance of the project GMES / Global Monitoring for Environment and Security (with a marine observation satellite facility) linking it to Santa Maria

3.7. Madeira

3.7.1. General description of the socio-economic conditions

In Madeira there are a number of significant features relevant for socio-economic analysis, for developing strategic considerations and for setting-up public policies:

- ✓ It is an archipelago (247,161 inhabitants in 2008) with one major island: Madeira Island (242,760 inhab.) and Porto Santo Island (4,401 inhab.).
- ✓ Madeira is small and lies in a peripheral location (870 Km² and 1,000 km from Lisbon).
- ✓ A small domestic market (fewer than 250,000 habitants with a relatively low revenue disposable for consumption, plus 1 M visitors/year) and consequently low possibilities for economies of scale.
- ✓ Rich in nature and landscape but challenging topography (mountainous) with impacts on costs for infrastructures and for economic activities (namely agriculture which is difficult for mechanisation and limited to a small area) but at the same time an asset for tourism.
- ✓ High population density (compared with mainland Portugal or the Azores).
- ✓ Limited resources, both natural and human (especially skilled labour).
- ✓ Strong concentration on a single sector (tourism) and consequent exposure to external risks (enforced by the world market).
- ✓ A limited contribution of agricultural activities to the GDP (2%) but an important role in the social fabric: due to 'external' reasons such as environment and landscape: due to the identity and authenticity of the region (environment and landscape and identity and authenticity are crucial for tourism and the distinctive nature of the region), linked in particular to the cultivation of banana.
- ✓ Few manufacturing industries, mainly focused on traditional products (embroidery, wicker products) and goods for the domestic market (food and drink); wine production is important as it is an export sector based on a good position on the international markets; the production of flowers has become more 'industrialised' but remains fragile and has yet not acquired significant weight.
- ✓ An important construction sector (over 10% for several years in the 90ies until recently) based on public works – due to external financial transfers from EU and national budget – and housing/building stimulated by low interest rates since Portugal became member of the Euro Area.
- ✓ The services sector has increased significantly: in this sector, tourism has had a growing role not only in figures but specifically on externalities and indirect effects – we may say that all the economy in Madeira is transversally affected by tourism.
- ✓ Tourism plays also a critical role for employment (like the construction sector).
- ✓ This high dependency upon tourism means a high vulnerability to the erratic and uncertain movements of tourism – influenced by international terrorism, catastrophic events (as the tragedy of 20 February), the 'ongoing threat' of the volcano in Iceland.

- ✓ The other important employment sectors are construction and the public economy (regional and local administration; social activities; para-public agencies).
- ✓ Human resources are in general poorly qualified even if the region and its workers have a long tradition of high standards in tourism; but the productivity levels are low and the qualifications are insufficient for new challenges and activities.
- ✓ Some vulnerabilities to natural disasters (the last catastrophe occurred on 20th February 2010) as a result of the interplay of social and natural processes.

In brief: a small economy with low critical mass for key activities; far away from main markets for exports of goods as well for synergies in emergent activities that are intensive in knowledge and human resources competences; 'natural' high costs for everything; a public based economy (from employment to investment, from demand to financial transfers); low diversification in productive specialisation.

To diversify the economic fabric of the region, a Madeira Free Zone was created in the 80's. The idea was to generate new high value activities (industry, international services, banking and ship registration), attract skilled human resources and provoke positive externalities (business tourism, administrative jobs, law support services). The Portuguese statistical office has estimated the impact of these activities as 21% of the GDP. But a real figure that excludes all 'offshore' activities (to use an understandable but non rigorous expression), i.e. with no direct economic effects in Madeira, is not available. A global balance for the Madeira Free Zone is planned but it is clear that it has not turned out to be the diversification instrument it was thought to be at the very beginning.

Finding a sound basis for a sustainable development in the long term in Madeira remains a crucial challenge for politicians and entrepreneurs and economic actors of the Region.

The debate in Madeira and the Azores is along the same line as at EU level, in particular, in the context of the Europe 2020 Strategy: innovation and green tech.

The challenges for Madeira were the starting point for our analysis and have been clearly mentioned by most economic and social actors interviewed for this Report.

The current debate states that demand-based policies (increasing local demand through transfers of purchasing power and huge public investments) are exhausted. The time is ripe for supply-side based policies (favouring the development of new differentiated products and services). It will help to achieve new levels of sustainable development and well-being.

The fact that there is a large consensus on the diagnostic and on the nature of the short term and structural components of the crisis is already a sound basis for future strategies. Little work on forecasting and assessment on economy, sustainability and society has been done in the recent years in Madeira.

3.7.1.1. GDP and GDP per capita

Regional GDP in Madeira, in current EUR, grew from 3,2 billion in 2000 to 4,9 billion in 2008 (+52% for 2000/2008). But if we consider the period 1995/2000 the nominal

growth is +72% (so +163% for the period 1995/2008). As figures show, recent years have seen a less dynamic economic performance. The reason is the change in the economic cycle from 1999/2000 onward in the overall Portuguese economy. Since then Portugal has been dogged by a mediocre and slow growth or even stagnation with a recession in 2003 (ten years after the last 1993 recession). From 2008 on the international crisis has had a severe impact on Portugal as a whole and also on regions like Madeira and the Azores.

In 2008, Madeira's GDP represents 3% of the national GDP (against 2.3% of the population)..

The relative economic performance (compared with Portugal) for both Portuguese autonomous regions was high. The GDP per capita grew, compared with the national average (PT = 100):

The Azores: 79% in 1995, 80% in 2000 and 89% in 2008

Madeira: 89% in 1995, 113% in 2000 and 128% in 2008

The figures for Madeira GDP are influenced by the Madeira Free Zone. The National Statistical Institute has estimated the effect of the free zone as 21% of GDP.

Even so, this can be considered a good performance for Madeira with a clear slowdown in the growth rate in recent years. There has been a catching-up move with the Portuguese mainland GDP per capita. Both regions were at the bottom of the ranking of Portuguese regions in 1990.

For recent years, in constant EUR, the real growth of GDP has been as follows:

	2004	2005	2006	2007	2008
Azores	2.2	2.1	3.1	1.9	2.3
Madeira	4.0	2.0	3.0	1.5	0.6
Portugal	1.5	0.9	1.4	1.9	0.0

Taking in account GDP pps and comparing it with EU27, the results in 2008 are:

The Azores: 67%

Madeira: 97%.

In Madeira, the GDP per capita grew from 13,500 € in 2000 to 20,000 € in 2008 (+48%). In the Azores, the GDP per capita grew from 9,600 € in 2000 to 13,900 € in 2008 (+45%).

3.7.1.2. Employment / Unemployment

The total employed population in both regions is:

The Azores: 107, 500

Madeira: 122,700

The growth rate of employment was 4% for Madeira in the period 2000 to 2008 (but near 10% in the previous 1995/2000 period): again empirical evidence of a slowdown. Agriculture, manufacturing industries and construction (in recent years) have been losing jobs, whereas tourism, hotels and restaurants and the tertiary sector such as commerce have gained jobs.

Nevertheless, this performance has not been sufficient to stop the growth of the unemployment rate: it grew during the period 2003-2006 (around 5% in 2005/2006) and stabilised during the period 2006-2008. Later it grew fast again: 6.0% in 2008 and 7.6% in 2009.

The official unemployment figure is 9,600 persons (6,254 male and 3,346 female).

Historically, there have been relatively low unemployment levels (3% in many years of the 90's) compared to both mainland Portugal and the rest of the EU. It reflects a positive trend in employment creation (building, public works) as well as significant levels of under-employment, particularly in agriculture and traditional handicraft activities. It also reflects the relatively large amount of public employment in the regional administration.

But the general unemployment picture is causing increasing serious concern. A structural element of the phenomenon (half of the unemployment rate is considered as long-term unemployment) has to be taken in account when considering new activities capable of absorbing human resources. Limited job opportunities have recently given rise to emigration from Madeira to Europe on a temporary basis.

There is no evidence of potential serious social trouble.

3.7.1.3. Economic structure

The structure of the regional economy changed (see tables on GDP and Employment structure in annex) between 1995 and 2005 – a growth and catching-up period of the Madeira economy.

In terms of gross added value, during the period 2000-08, the shares of agriculture and fisheries, of the manufacturing industries and of the construction sector declined. The share of services grew a little while the share of energy/water increased significantly.

The branch distribution of employment reflects the growing position of the tertiary sector. The important role played by the administrative and social tertiary, though public employment must be stressed. The weight of the public sector remains important with 21% of total employment in services. It is a clear pattern of the socio-economic model of the Region.

From 1995 to 2008 (and more radically from 2000 to 2008), the share of agriculture (fisheries is a small sector) in employment declined significantly but still represents about 10% of jobs. The employment share of the construction sector is proportionally larger than that of mainland Portugal and the Azores, but has declined significantly since 2008.

As in the other outermost regions, companies are in general very small. The dimension of the domestic market and the exposure to imports give rise to a tendency for fragmentation of the local economic fabric. Only in sectors competing

internationally (as tourism) or with significant economies of scale in production and/or distribution (as in the beer and mineral water sub-sector), some groups achieved relevant dimensions.

3.7.1.4. Human Resources

Demography and migrations

The demographic figures reveal a positive trend in the last 10 years at regional level (+2.1% between 1998 and 2008).

The total population has grown from 240,025 (112,725 male and 127,300 female) in 2000 to 247,675 (117,065 male and 130,611 female) in 2009. Population is strongly concentrated on the southern coast – Funchal, the capital, and the surrounding cities (Câmara de Lobos, Santa Cruz, Machico):

Funchal:	98,899	(2008)
Câmara de Lobos:	36,044	“
Santa Cruz:	36,553	“
Machico:	21,074	“

78% of the total population in 2008, inhabited a 35-kilometre-long coastal strip.

Compared to mainland Portugal or the Azores the population density is high. In 2009 the active population numbered 128,832 (66,463 male and 61,919 female). The activity rate is 56.8% for men and 47.4% for women.

The structure of the population by age-group shows that:

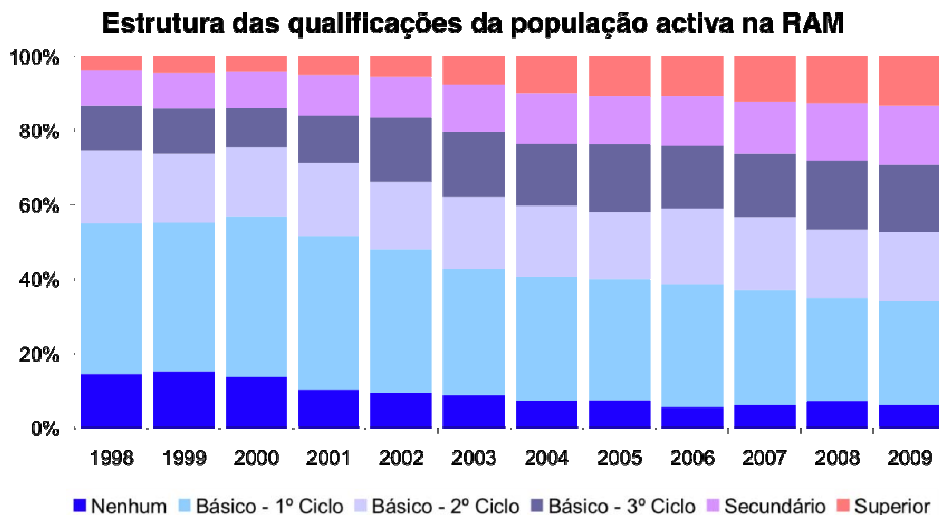
- the population of Madeira is on average younger than that of Portugal (31.6% under 25 in 2008, against 26.6% in mainland Portugal);
- consequently the weight of elders (over 65) is less relevant in Madeira (13%) than in mainland Portugal (17.6%);
- however, the more recent trends in the demography of the region show a relative decrease in the young population (-2.2% from 1998 to 2008 for the 0 - 14 age-group; - 3.8% for the 15 – 24 year olds);
- this tendency follows the movement observed at a national level
- this is due to the slowdown of the birth rate and improvements in public health.

The natural balance is positive throughout the 2000/2008 period (+104 in 2008, the lowest in the period) and so is the migratory balance for 2001/2008 (+368 in 2008). The natural growth rate is 0.4% in 2008 (against 2.3% in 2000).

Education and training – Qualification of human resources

Compared with EU27 and to a minor extent to mainland Portugal, the level of ‘compulsory’ education (school system) is low in Madeira and follows the education pattern in the Azores:

- a huge proportion of the active population with a basic education (proportionally over 3 times more than EU27);
- a relatively low proportion of those with secondary (12 years) education (proportionally 4 times less than EU27) and superior education (3 times less than EU27)



Fonte: INE

The figures reveal the same handicap to economic development in Madeira as in mainland Portugal and the Azores. The deficit of qualifications is one of the two main structural deficits in the country – the other is external deficit (the public accounts deficit does not nearly have the same structural importance as the educational deficit).

Therefore, in spite of autonomous constitutional powers, Madeira (as the Azores) does not compare for better with mainland Portugal. Some tend to emphasise that investments in the schools system infrastructure is recent (starting 10-15 years ago) and will bear fruit in the near future.

The number of young people leaving the educational system is dramatically high.

3.7.1.5. Research, Technological Development and Innovation (RTDI)

There have been radical improvements in the Information Society (IS) in the last decade. The use of computers in schools and by individuals and the access to internet are widespread. There is a consistent movement towards the use of the tools of a knowledge based economy. But those are only the basic elements. The intensity in RTDI remains low compared with GDP or with the active population.

A policy orientation in the 90ies moved towards setting up a more complex architecture of the system of science & technology more consistent with the anticipated challenges of the Information Society. An agency was to support scientific and technological projects as well as specialised training for researchers: CITMA / Centro de C&T of Madeira. It was expected to own RTDI laboratories – that were built with national schemes (Programa Ciência). The founding partners were the Regional Government, the University of Madeira and the Municipality of Funchal (with

tradition in maritime biology). Other private partners joined the project later, but it has suffered from a discontinuity in public policies (except with respect to training activities).

At the same time, another institution was created: Madeira Tecnopolo. It was a project of Science Park project next to the new campus of the university. It included a business incubator, the CEIM / Centro de Empresas e Inovação da Madeira. CEIM has limited facilities for incubation but has developed interesting actions to stimulate an entrepreneurship culture in the Region and promote initiatives among students (at several levels of educational training). Madeira Tecnopolo is associated with the development of RTDI projects involving the university, companies (mostly from outside Madeira) and Carnegie Mellon American University. It operates as an agency and a collaboration platform more than as a 'physical' Science Park.

The University of Madeira is becoming the core of RTDI in Madeira. There are great hopes for the near future if a 'critical mass' is obtained (a major handicap at present for Madeira and the Azores) and if strategic international partnerships are strengthened (a key element).

3.7.1.6. Connectivity and opening of the economy

Accessibility and transport, telecommunications

Madeira Island has an international airport which was expanded 12 years ago: from 1998 to 2008 the movements in the airport increased from 12,200 to 22,000 (2,4 million passengers in and out). Porto Santo Island has an airport with huge facilities (it was planned and used for NATO military purposes).

One year ago, the regulatory scheme for Madeira was changed from a 'public service model' to a 'market-oriented' model (liberalisation). This has led to a growth in the transport offer including the operation of low-cost companies. Prices have dropped for international connections as well as Lisbon, Oporto and Faro connections with Madeira. The tourism industry benefited substantially from this process.

There are cable connections facilities (Madeira is a node of submarine cable facilities) linking the island with international circuits (there are also alternative solutions through satellites as a second choice). Multipurpose cable connections also exist in Madeira in optical fibre (for the backbone) but competition is far from sufficient.

Trade balance, foreign direct investment and regional integration

Foreign trade has a structural deficit. The EU area is the main partner but some gains have been obtained in exports to outside countries such as Angola. Imports of goods from the EU (except mainland Portugal) and extra-EU are covered about 50% by exports from Madeira. Food and drink are the main export and import items (industrial goods and machinery also have a large weight in imports). For exports, in 2008, Netherlands, Spain, UK and Germany are in top of ranking. For imports, Spain is the largest supplier.

Globally, Madeira, as all outermost regions, is heavily dependent upon the 'exterior'. However, income provided by tourism reduces the deficit.

Foreign direct investment has not achieved the level that could be expected. The SDM / Development Society of Madeira has tended to attract investments more with respect to tax benefits or tax breaks than direct productive investment. However, the potential for 'externalities' of some international services companies should be exploited.

3.7.1.7. Environment, energy and climate change

The situation concerning environment and climate change is very much in line with that found in the Azores and other outermost regions (see the recent Memorandum Spain, France, Portugal and ORs, 7th May 2010/ Las Palmas de Gran Canaria).

The regional authorities and economic actors are aware of the challenges. They consider the integration of principles of sustainability in the development of Madeira a key aspect. They are equally aware of the potentialities offered by the natural environment.

The impacts of economic growth as well as demographic growth – on the use of land, pollution (water, air pollution), industrial and household waste, energy consumption – have to be faced carefully and consistently. This is particularly pertinent for Madeira Island where the population density and concentration tends to highlight the potentially negative elements.

Environment, energy and climate change are fields of threats and opportunities. The development of highly differentiated products using location-specific factors and local ('immutable') assets, combined with infrastructural and ICT investments, are seen as an opportunity for biotechnologies. The University of Madeira has started to play a role in this field.

The strategy aims at reducing dependency on fossil fuels (86% in the energetic '*bilan*') as well the inefficiencies in distribution. Renewable energies (their relative weight has grown substantially from 2008 to 2009) as well as the introduction of natural gas in Madeira Island offer a new alternative with a large margin for financial benefits for the Region in this field.

Two major flagship projects, one in the field of Energy and the other in the field of Biotechnologies, have been identified for Madeira.

3.7.1.8. Focus on specific sectors and emerging sectors

Key sectors of the present economic fabric:

Tourism

Tourism is the dominant sector. It has a centenary tradition (Madeira is one of the oldest touristic destinations in the world) and is part of the whole social and economic

life. Taking into account all direct and indirect effects of tourism, the empirical evidence would quantify the importance of tourism in Madeira with a high number (even if official statistics consider lower figures: 21% for GDP and 14% for employment).

With 30,000 beds and 1 M visitors, tourism is far from the mass offer of the Canary Islands but also far from the scarce hotel capacities of the Azores: far from the mass approach of the former but far from the 'niche' approach of the latter.

The other island of Madeira the Archipelago is Porto Santo. It is a newcomer to tourism. It is a very small island with 4,400 habitants, with small hotel capacity and offers a different product – sea, sun and sand (yellow sand, contrary to Madeira). It faces specific problems.

Construction

It is the second relevant sector in quantitative and qualitative terms (GDP, employment and impact). It has grown fast especially after Portugal's entry into the EU. In recent years it has had to deal with a clear decline of a structural nature (cement consumption is declining constantly with a two-digit fall rate from 2005). Its decline raises the problem of how to absorb unemployed from this sector.

Public Administration

If we consider public administration and the healthcare and education sectors (both mostly public), the number of jobs in 2008 is c. 25,700 employees out of a total employed population of 122,700. This figure must be compared with the 19,800 jobs in a large and manpower intensive sector such as commerce or the 19,700 jobs in the construction sector.

Agriculture

The agricultural sector has become marginal in terms of share in the GDP, but it is crucial for several reasons, namely its decisive role in the social fabric, in the culture of the people, in the landscape and environment – also decisive for a tourism based on nature and with distinctive elements. Vineyards and the wine industry have kept their importance. Banana cultivation is exposed to competition. Some eco-biological developments (if there is a perception in the markets) may become critical for the banana crop, tropical fruits and other agricultural products.

General remarks

The crisis in the binomial 'tourism-construction' (even if the former has a more short-term nature) is of great concern and so is the incapacity of the public sector to act as a 'stabilizer' due to the constraints on public budget expenditure (budgetary consolidation process in Portugal).

The Madeira Free Zone is also a cause for concern. Its potential can be used in favour of the development of Madeira. Future negotiations with the EU are planned in the short term and their outcome will be vital for the strategy of the island. It is an important tool for a diversification process.

Emerging sectors:

As in other outermost regions, the local actors consider that the distinction between traditional sectors and sectors with high potential is fallacious.

Some opportunities are particularly relevant:

- Possible openings by the modernisation of the tourism sector (ICT/CRM), the web and the digital economy
- Advanced services based on the Madeira Free Zone
- Renewable energies
- Market-oriented international partnerships of the University
- Activities related to the enormous future exclusive maritime area of Portugal (enlargement of EEZ submitted to the UN)
- Opportunities in the area of the creative and cultural industries.

There are some potentialities in Business Services (including ICT services). Some very small companies with young technology-oriented entrepreneurs are developing top level ICT products and services. The partnerships between the University of Madeira and Carnegie Mellon on the one hand, and between the University of Madeira, Madeira Tecnopolo and companies (as Portugal Telecom, cable operators and others) on the other, may produce outcomes in the mid-term.

3.7.2. Qualitative analysis – Key issues resulting from field research

The expert who visited Madeira had meetings with 21 people from 16 institutions, organisations and administrations, including members of the Regional Government. There was also a meeting with a member of the Portuguese national government, at Secretary of State level, responsible for science & technology and Universities.

The most recent official documents (related in particular to strategy orientations), data (INE, DREM) and literature were collected during the mission.

Following the general methodology for the work the field research included the major stakeholders of the public sector, at a regional and national levels, private entrepreneurs and entrepreneurial associations, university and researchers, senior professionals as well as development poles. The interviews mainly dealt with development strategy and public policies to overcome structural problems and bottlenecks to the economic and social development.

Overall strategy for the future

There is a wide consensus in Madeira on the need for changing. There is a wide perception that the growth factors that have supported the model of development over the last 30 years are not valid any more, due to significant internal and external changes. Consensus covers the core aspects of the broad economy strategy to follow.

Madeira has had a strong development of infrastructures. Airports, roads and maritime works were built. But now the challenge is to turn these assets into concrete economic activities supporting the regional growth for the next decades.

Also the international and national context has strongly changed. The international economic and financial crises affect Madeira as other regions. The strong cut in public national expenses and transfers as well as the economic stagnation – for all the decade but particularly intense since 2008 – impacts the former positive framework for Madeira economic and social development.

Therefore the paradigm of development is now under pressure. Additional to those external changes some internal pillars are facing pressures. The significant contribution of tourism to the regional economic development faces serious challenges coming from increasing competition and from economic difficulties in the countries relevant for the regional tourism industry. The construction sector based on public works and house building is/will be in a declining trend due to less external transfers and growing difficulties to access to bank credits. It is also acknowledged that the oversized weight of the public sector cannot continue to grow.

Economic development model

The model of economic development is under pressure. Addressing the issue of a predictable diminution of public funding (national and EU) becomes crucial. The economy, the investments and jobs are largely depending on the public sector demand and transfers. However, the public sector is facing strong constraints to continue to play (now and in the near future) the same role. There is a large consensus that to become more sustainable things have to change towards economic diversification. Entrepreneurship and stronger competitiveness are at the heart of this crucial process.

There are at the moment also concerns regarding the future of the tourism sector which is now more erratic and is facing strong competition. The sector has to adjust to new air transport conditions and changing consumption patterns..

While tourism will certainly remain a key economic sector, the question of the diversification of the economic fabric is now being raised, through:

- Support to new high added value activities able to generate a new type of growth and the creation of new jobs;
- Elaboration of a new model for tourism (cluster-based);
- Importance of benchmarking studies to understand how to start and support a diversification process;
- Aid mechanisms aimed at reducing transportation costs for exporting activities, in order to build an industrial basis and attract some manufacturing industries in the Free Zone (opinion expressed by some interviewees).

Sustainable development

As said before “finding a sound basis for a sustainable development in the long term in Madeira remains a crucial challenge for politicians and entrepreneurs and economic actors of the Region”. There is a large consensus on this statement.

Madeira is a territory rich in nature and landscape. It is highly dependent on the nature for the daily living of their inhabitants, for agriculture activities, for tourism. Madeira presents an high vulnerability to natural disasters.

The integration of principles of sustainability in the development of Madeira as well as the opportunities offered by the natural assets for developing highly differentiated products using location-specific factors (see 3.7.1.7) are therefore perceived as a key aspect. The strategic vision of Madeira society and economy stresses the need for lowering dependence on fossil fuels for energy use and the changes in patterns of consumption (especially in transport and tourism sectors).

Unemployment

For 30 years the Azores has experienced a very low level of unemployment varying from 3% to 4%. Therefore, unemployment is a relatively new concern, since it has been growing recently, which favours some re-thinking of the Madeira ‘growth model’.

The local consensus considers the unemployment as one of the major challenges that Madeira is facing in the coming years, as in mainland Portugal or the Azores.

This is a key issue for economic and social development of Madeira even if there is no evidence of potential serious social breakdowns.

The economic empirical evidence shows a slowdown in the economic prospects for growth as well for employment (actually this evidence is already clear comparing 2000/2008 growth with 1995/2000 growth). The integration of the young job seekers into the labour market is a major issue for the near future.

A more intelligent development of tourism and the diversification of economic activities are identified as the means for addressing the challenge of jobs creation.

Human capital and governance

For the purpose of economic diversification and changes into the economic pillar of the growth of the Island, the availability of the human capital is a critical issue. Local actors are clearly aware about that concern: the insufficient education and training of the workforce which is a precondition for the new development objectives. A strong effort has to be done.

The new activities in the service sectors, the bet in S&T and in knowledge based activities will demand upper levels of qualification of the human capital.

In addition, according to some interviewees more efficient governance is needed, which requires an effort in terms of capacity-building. According to others the Region – all the community – pays the cost for inefficiencies due to lack of competition in key

activities, especially in maritime transports (air transports have been open to competition recently).

Finally, it seems important to accompany and support recent changes regarding the University of Madeira:

- International partnerships (e.g. with Carnegie Mellon University in the USA);
- Relationship of the University with knowledge-based companies;
- Implementation of the Strategic Plan of the University.

There is a wide consensus about the role of the University of Madeira for the new development model (even if some concrete orientations are controversial issues).

3.7.3. Summary of results

3.7.3.1. Main constraints and challenges

Main constraints:

- Distant location from major markets
- High population density
- But insufficient dimension for economies of scale
- Limited resources, both natural and human
- Degree of dependence on the tourism sector
- Vulnerability to natural disasters
- Good infrastructures but some constraints on prices (operations in the airport and in the ports)
- Some EU regulations and policies

Main challenges:

- Addressing the issue of a predictable diminution of public funding, national and EU
- (Re)Qualifying the tourist offer in a sustainable way to create jobs
- Improving promotion and marketing in tourism with increasing use of the digital economy, the web and social networks
- Diversifying the economic fabric and setting up a new development paradigm
- Assessing, evaluating and exploiting the opportunities in emerging sectors
- Promoting activities with high added value and attracting high qualifications to the university as well as to economic activities
- Enlarging the capacities of innovation and entrepreneurship
- Transforming the university into a critical instrument for the economic development of the Region
- Addressing the issue of sustainability and modernizing the economic fabric

- Increasing the capacity of endogenous energy (water, renewable), diversification and efficiency
- Maintaining agriculture to a sufficient degree to preserve landscape and for economic, social, cultural and environmental reasons
- Creating more jobs to prevent a dramatic increase in unemployment (from the construction sector, in particular)
- Qualifying the human capital, upgrade the training process and the quality of school teaching
- Strengthening and enlarge market opportunities Azores/Madeira/Canary Islands (Macaronesia)

3.7.3.2. SWOT analysis

Economic conditions	Strengths	Weaknesses
	<ul style="list-style-type: none"> • Autonomous powers implying decentralised and local decisions • Geostrategic position as a political and economic asset (maritime extension of Portugal / EEZ) • Economic growth (until recently) • Landscape and natural beauty favouring 'alternative tourism' • Young population • Potentials of the Diaspora (South Africa, Venezuela, North America) • Some organizations increasingly think and act 'glocally' (namely university but also some small entrepreneurs in the ICT sector) 	<ul style="list-style-type: none"> • Distances to import and export markets (significant additional costs affecting competitiveness) • Demographic growth with reduced potential (limited local market) • Low levels of qualification of human resources • Small dimension of the domestic market: <ul style="list-style-type: none"> - implying impossibility to benefit of economies of scale) - high transport costs due to low volumes of trade • Economic dependence on a few products • Absence of 'critical mass' (markets, human and other resources) • Low culture of internationalisation in most companies and organizations (but growing consistently) • Low culture of forecasting and assessment on economy (study, observation and research on tourism is crucial)
	Opportunities	Threats
	<ul style="list-style-type: none"> • Better accessibility (tourism, exports of goods) 	<ul style="list-style-type: none"> • Risks for Madeira as a destination, resulting from the growth of low cost

	<ul style="list-style-type: none"> • ICT applied to tourism, CRM and presence on the Web) • Investment in infrastructures • Recent liberalisation of air transport • Sea (EEZ, fisheries, Bio-Technologies / Biomedicine, RTDI) • Some innovation potential and opportunities for environment, health, renewable energies, ICT • New opportunities on the Economy of the Sea • Internationalisation 	<p>airlines (dependency and randomness)</p> <ul style="list-style-type: none"> • Better accessibility (imports of competitive goods) • Growing unemployment and large under-employment with low productivity in services • Cuts in transfers from central budget due to the consolidation of public finance (and possible recession in the mainland economy)
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Connectivity: transport, accessibility, regional integration	Strengths	Weaknesses
	<ul style="list-style-type: none"> • Infrastructures (ports and airports) both in Madeira and Porto Santo • Insertion in an intercontinental communications network by submarine cable of optical fibre • Good road access around the island 	<ul style="list-style-type: none"> • Territorial discontinuity (far from main markets) • Costs for operations in main port of Madeira are high and contested by business • Airport taxes are high and a double tax effect when using Lisbon as a hub • Insufficient integration (Azores / Madeira / Canary Islands)
	Opportunities	Threats
	<ul style="list-style-type: none"> • Possible expansion of the Port for cruise-tourism • Increasing competition in cable connections 	<ul style="list-style-type: none"> • Decline in some competitiveness frameworks: airports and ports • Risks arising from the growth of low cost airlines (dependency and randomness)

Environment, climate change and energy	Strengths	Weaknesses
	<ul style="list-style-type: none"> • Political decision of obtaining energy autonomy and diversification <p>Waste management</p>	<ul style="list-style-type: none"> • High demographic density with impact on environment • Quite high urban-touristic 'pressure' • Inefficient system of

		transfers for the 'convergence of the tariffs' (energy)
		<ul style="list-style-type: none"> • Energy dependency
	Opportunities	Threats
	<ul style="list-style-type: none"> • Economic value of landscape / environment for tourism development • Good size to act as Region-Lab for experimenting energy mix in a closed and small context 	<ul style="list-style-type: none"> • Special vulnerability to natural disasters • Vulnerability of the environment systems and water resources • Pollution of fresh water • Conflicts in the use of land

Demography and migration	Strengths	Weaknesses
	<ul style="list-style-type: none"> • Young population • No problem related to immigration so far 	<ul style="list-style-type: none"> • Insufficient creation of jobs • Illiteracy remains a problem
	Opportunities	Threats
	<ul style="list-style-type: none"> • Development of training programmes effectively adapted to needs 	<ul style="list-style-type: none"> • Ageing population as a trend

3.7.3.3. Identification of vulnerable/high potential sectors

From the analysis presented in this report and particularly the arguments discussed in this chapter – 'Main constraints and challenges' and 'Swot Analysis' – it becomes clear that the situation differs from sector to sector.

However, a too linear approach confronting 'traditional' or 'vulnerable' vs. 'modern' and 'high potential' sectors must be avoided. New projects with high potential (in Madeira: biotechnologies applied to local primary productions for instance particularly vineyards / wine) may emerge from some vulnerable sectors and high potential sectors may fail when the market is approached.

Vulnerable sectors

- **Tourism:**

It is exposed to strong international competition and is facing huge changes in transport, distribution and consumer behaviour.

- **Agriculture / Banana:**

It is exposed to changes in the regulation framework; in general, there are structural difficulties in agriculture due to topography (mountainous region) and system of ownership ('*minifúndio*').

- **Traditional Commerce:**

It is exposed to new ways of trade and new approaches to consumers with social and urban impacts.

- **Construction:**

It faces negative trends in the investment and economic situation and risks long term depression.

- **Manufacturing industries:**

They are globally vulnerable because of high production costs, and a lack of competitiveness affecting production both for the local and external markets.

High potential sectors

- **Tourism:**

Tourism is both vulnerable and has a high potential. It is 'the' sector in the Region, a sector with great opportunities but also facing serious challenges, and in need of re-thinking.

- **Biotechnologies / Natural Resources / Sea:**

There are possibilities in several fields of biotechnologies linked to biodiversity and natural resources, in particular in the '*filière*' sea/fisheries – the potential is mainly linked to the Portuguese EEZ and the abundant resources;

- **Environment / Energy:**

Projects are to be developed in both fields (renewable energy, energy efficiency, RTDI; biotechnologies / natural resources / sea).

- **High added value services:**

There are some opportunities arising from the health sector and tourism development (ICT / customer relationship management at micro, medium and macro levels) and from activities developed in the university with international partners; developments in the Madeira Free Zone also have potential.

Satellite Observation: a project for satellite facilities is to be installed in the Industrial Free Zone and can generate some potential for high added value services.

- **Health / Medicine:**

There is a possible flagship project based on the new hospital to be constructed (if the necessary 'financial engineering' succeeds) linked with the future complete graduation course in Medicine at the University of Madeira and some possible business developments (a health cluster).

- **Creative and Cultural Industries:**

There are some assets on which economically valuable projects can be built: there is a market constituted by the Diaspora estimated at 1,5 M people (Europe, Venezuela, North America, Africa and Australia) with an emotional link to regional 'contents' ('*conteúdos*'); the annual 1 M visitors can be used as testing ground;

some cultural actors and facilities in the Region; the University of Madeira is counting on Interactive Technologies and Nanotechnologies.

- **Development of the CINM / Madeira International Business Centre:**

CINM has natural outcomes, depending on the extension of the projects and the strategies both for international investors and local management of the Centre (including the active or passive intervention of the Regional Government).

4. Concrete proposals of flagship projects

4.1. Methodology

Flagship projects have been defined as policy initiatives characterised by the following features:

- They must have a real impact on the regional economic development (not consisting only in technology experimentation projects imported by large companies), in terms of structuring of sectors, value chains or economic clusters.
- They may concern both traditional (e.g. agriculture) and new/emerging sectors (including possible diversification strands within the agricultural sector).
- They may consist in projects already in the pipeline, or new emerging projects. In any case, the projects should be at a stage of their development that allows to analyse and evaluate them.

All the initiatives considered by the study were proposed by the regional officials interviewed during the visits³⁶. The final selection of projects was carried out on the basis of a grid of analysis relying on two sets of criteria (core and optional):

- the core criteria concern: the coherence of the projects with the policy framework; its capacities to address the key challenges; its expected impact on regional economic development; and its added value to regional assets and resources;
- the optional criteria concern: the potential for exports; the innovative nature; transferability and visibility; the dimension of the project in terms of regional partnership.

In facts, the interviewees presented only few 'formalised' projects, as it is stated for each region. We collected some 'catalogues' of heterogeneous projects (see: *Etats généraux de l'Outre-Mer* in the French regions), and potentially strategic projects that had not been so far completely elaborated. In Réunion, major stakeholders preferred emphasising the importance of a comprehensive strategy (*La Réunion Ile Verte*) than pointing at specific 'flagship projects'. As a consequence, the role of the experts in proposing or selecting flagship projects was more important than expected, and accordingly the precisions that could be provided on each project were less detailed than expected.

The most precisely defined (at this stage) projects and/or the most important ones (according to the results of the regional analysis) identified in each region have been benchmarked against the grid of analysis. The only exception is Réunion because the main actors consider as better to consider the global strategy than focusing on specific projects at this stage.

³⁶ The list of officials and stakeholders interviewed has been discussed with the regions and open to their suggestions.

4.2. Guadeloupe

4.2.1. General remarks

The Guadeloupe regional authorities have involved most regional actors and the main stakeholders in the regional development strategy and the discussion of the flagship projects, a fact which should earn it the support of all the relevant actors.

During our on site visit a number of these projects were presented to the expert; other projects presented at the meetings, once requested in a formal way, have not yet been finalized by the regional actors (agro-food and bio-products from local plants incubator).

Some of the flagship projects consist in urgent interventions, mainly public, which are necessary to realign the region to EU environmental standards such as water and waste distribution and treatment, the renovation of cultural heritage buildings and the extension and management of preserved land and marine areas, the improvement of the safety and environmental standards of existing constructions, the development of public transport networks, utilities and facilities that assure an acceptable living standard and quality of life. Some of these may support local productions in the building technologies in which RTDI investments are being carried out.

This typology of flagship projects includes a host of activities, mainly infrastructure which will indirectly promote tourism, cultural activities, intelligent and high tech building techniques and accelerate the demand for skilled work, new technologies which may partly be directed to local firms etc.

Even if the general quality of the infrastructure equipment of the region is good, there are however a number of cases in which a catching up versus the national standards has to be achieved. They concern the following fields of intervention: environment water networks and waste treatment and disposal, natural heritage building, restoration and promotion of urban centres and natural sites, the enlargement of the social housing facilities and the restoration of the existing social housing areas in the cities, the strengthening of the common transport services, anti-seismic intervention in the most exposed old buildings in the city centres and in particular offices, schools and public buildings. Some of these programs will effectively improve the tourist offer and allow the development of a new niche of sustainable tourism based on culture and nature, rather than on sun, sea and sand.

A public debate in 2009 with the participation of more than 500 actors, and a number of workshop in the "États généraux" conference, led to the selection of the flagship projects which are or will be accompanied by a specific regional Plan with public or mixed agencies in charge of their execution. A plan of action in the following fields has been finalized by the regional authorities: tourism (SDAT); an agency for the management of natural resources; water (SDAGE) 2000-2015; waste (PDEDMA), with a first allocation of EUR 270 million; plan seismic Antilles; PRSE on health; an agency for land use management to restore and revitalize the historical centres, improve the environmental standards of the buildings; a number of social integration institutions for young people and other target groups; sport and leisure facilities.

These public interventions aim at improving the infrastructure endowment of the region are not a sufficient condition stimulate the desired change of the regional development patterns, and should be accompanied by more focused interventions which may directly impact on the productive structure, and invert the trend of a public expenditure dependent economy by encouraging private investments to lead GDP growth. Within those types we can distinguish two areas in which there are opportunities to develop marketable services and to attract private capital. The first includes the development of port facilities in deep water for transshipment and related services; the second, a yachting port with maintenance and repairing facilities for medium and large size yachts. Both projects have been finalized by the port authority of Guadeloupe. They are based on public and private financial support, however they have been professionally carried out and are based on an economic feasibility study. The second field concerns the creation of some sort of cluster through an incubator in which the public research centres in agriculture, fishing and forestry cooperate with local manufacturing firms in the agro-food sector to develop new products for the local market and sustain alternative uses of the traditional agricultural products as inputs for final manufacturing and food-stuff, for example, the use of banana flour in livestock production etc.

4.2.2. Proposals of flagship projects

4.2.2.1. Yachting port

The project aims to establish a base for large yachts (over 40 meters) mooring, repair and maintenance. Guadeloupe being at the heart of the Caribbean where hundreds of large yachts cruise each year, close to the famous sites of Saint Barthélemy, the Saint Martin Island etc. is the ideal location for such a project. The development will imply two steps. Step one - the use of existing facilities. This port should offer professional services, safety, high capacity and a large range of additional services. Main infrastructures such as a linear dock in deep water, backyard space, office space in the port warehouse, a pond and a docking area, a floating dock of large capacity etc. are already available at the port site and a specialized company will set up a shipyard to maintain and repair large yachts and provide the services. The demand for large yacht repairs and maintenance in the Caribbean sea is relevant and there is scarcity of shipyard which can offer services in conformity to the international standards; in addition, the services offered by Guadeloupe in terms of high standard hotels, etc. are well known and can be promoted through specific events.

In a second phase an organized space of three hectares with infrastructure and services to host up to 14 yachts simultaneously, have been allocated to the project. A full detailed project is at our disposal of the present study. Many aspects of this project are relevant to the region's development: it is mainly private, it implies private investments and not only public investments or infrastructures, it has impact on the manufacturing and service production of the region, it requires mechanical, electronic, computer science, logistic and other technical skills. The project will therefore increase the demand for qualified employment in a number of firms in various sectors. The project widens the service export base of the island since these

services will be provided to non residents. At the same time it can promote a specific niche of qualified tourism.

Objectives of the project Yachting port	Allowing Guadeloupe for remaining among the Caribbean leading regions for tourism Expanding the number of tourists and positioning the island on a niche market with a great added value Developing qualified jobs and high added value services
Coordinator (possible)	?
Partners of the project	It is mainly a private project which implies a public-private partnership and not only public investment
Analysis of the project according to the criteria proposed for the flagship projects	<p>Guadeloupe is an attractive resort in the core of the most attractive destination for cruisers (Saint Barthélemy or Sainte Lucie) and a major destination for European tourists.</p> <p>However, Guadeloupe has been lagging behind in terms of competitiveness since the second half of the 2000s mainly after the 2008 crisis. In the Caribbean region the demand for large yacht repairs and maintenance services is relevant and the offer of reliable shipyards scarce.</p> <p>The objective is to use the existing infrastructures of the port improving the docks, the port warehouse, etc., and the professional services specialized for yachts. In a second step, the objective is the organisation of a new area with new infrastructures and services allowing for hosting 14 large yachts.</p> <p>The cruise sector is at the moment off the market in Guadeloupe (in spite of a well-known race (<i>Route du Rhum</i>), an annual event allowing for a strong promotion for cruise services; the yachting sector has to stay in the market and to be more competitive:</p> <p>The project addresses the following challenges:</p> <ul style="list-style-type: none"> - Development of touristic niches - Use and rehabilitation of port infrastructure - Improvement of services - Qualification of human resources (initial and vocational training) - And, as an indirect impact, improvement of the quality of urban and territorial planning through a better integration of the marine infrastructure

4.2.2.2. Port Autonome de la Guadeloupe – container terminal or transshipment of large vessels

The Port of Guadeloupe is a key player in the service economy of the archipelago; it enables the region to reduce its dependency on other economic centres and may develop services for other nearby islands. The Port is a vector for reorganizing and rebalancing the territory. It is capable of generating more than € 175 million each year for the island's economy.

The opening of the new locks of Panama and the geographical position of Guadeloupe are an important opportunity to boost the regional economies whose domestic market is and will remain modest and with limited development prospects.

Anticipating the enlargements of the locks of the Panama Canal and taking into account the rapid size increase of container vessels, the Port has launched a business plan to take a new turn from 2008.

The business plan showed that the domestic market does not guaranteed development opportunities and that it is necessary to look beyond Guadeloupe. The analysis demonstrated the importance of the Port on transshipments. There are attractive prospects for economic development linked to the "massification" of routes favoured by the previously mentioned increase in size of container ships.

The Port needs to improve its capacity in all areas: containers, bulk cargo, passengers, in order to capture opportunities that will arise soon. The project envisaged is characterised by two phases:

- 1st phase:

- 350m of docks dredged to – 15.00m
- 25 hectares of embankment
- Access to water -15.50m
- Total capacity = 540,000 TEU (twenty foot equivalent unit)/year

- 2nd phase

- 350m of additional docks
- 15 hectares of embankment
- Access to water -17.50m
- total capacity (1+2) = 1 million TEUs

- Costs:

- Cost of infrastructure: 160 M € (2009 value)
- Access to water: 28 M €
- Quay: 74 M €
- Dam and embankment: 56 M €
- Other costs (*superstructures*): 75 M € (2009 value)

Objectives of the project: Port Autonome de la Guadeloupe – container terminal or transshipment of large vessels	Up-grading the basic port infrastructure Reducing the dependency of Guadeloupe upon other ports Developing an offer of services to nearby islands (without well equipped ports) Diversification of activities (shipyards, naval repair, services,...)
Coordinator (possible)	Port autonome de la Guadeloupe
Partners of the project	
Analysis of the project according to the criteria proposed for the flagship projects	<p>The rationale of the project is based on the new conditions offered by the new locks built for the Panama Canal, which will allow larger ships to pass through and boost the Caribbean economies.</p> <p>The project aims at:</p> <ul style="list-style-type: none"> - Having a better infrastructure for naval repairs and maintaining large ships - Providing better services of loading/downloading using a new turn (2008) allowing for time saving, - Possibly developing a logistic platform to distribute products and goods to the other islands - Ensuring the integration of Guadeloupe in a larger market at the level of the Caribbean region, beyond the small islands market, thus improving business and trade opportunities <p>The project is focused on infrastructures.</p>

4.2.2.3. Incubator for agro-food and bio-agriculture

This is a project mentioned by most institutional and research and entrepreneurial actors and is emblematic for the understanding of the present day situation of Guadeloupe. In Guadeloupe there are a host of public research institutions working in agriculture and fisheries, animal stock and biodiversity issues (INRA, CIRAD, UAG etc.). Explicit research has been produced for a diversification of the industrial use of traditional agricultural products (INRA). Most of this research is of excellent quality and is based on maintaining and improving the traditional products and introducing new species, increasing aqua-culture etc. There is also a cluster of small companies in agro-food which operates in the local market and is a vector to increase local food supply to substitute imports. According to local authorities and entrepreneurs there is a large internal food market which could be developed with low tech products (animal stock etc.) using internal input, less penalized by high transport and intermediation costs. There is also an explicit regional policy aiming at increasing local food supply and import substitution; all the elements are there to set up an initiative with all actors and exploit these resources. Similar opportunities are being developed for the pharmaceutical and cosmetic use of natural plants which may open new perspectives of exploitation of regional biodiversity. The objective of the project is to set up a cooperation research-business and apply research findings to progressively develop prototypes to test and industrialize. In addition, this cooperation could progressively be widened to other participants from the other DOM, as the application of research on agricultural and active ingredients of plants has a high potential in the

pharmaceutical sector and in other fields. The incubator project however is not yet mature at the networking level since no partnership including the research centres has been set up, as these research centres are not yet ready to apply their research findings in direct connection with firms, which are too small and lack technical expertise, and are, therefore, difficult to cooperate with. The expert had the feeling that all potential partners despite their motivations, are waiting for a top down signal, alias for an authority to take responsibility and lead. In other words, entrepreneurial initiatives in a region driven by public intervention and with a pervasive public sector find it hard to substantiate projects and take off independently.

Objectives of the project: Incubator for agro-food and bio-agriculture	Fostering the diversification of the industrial use of traditional agricultural products, in order to maintain traditional products Transferring knowledge and technological innovation among enterprises
Coordinator (possible)	all potential partners despite their motivations, are waiting for a top down signal, alias for an authority to take responsibility and lead
Partners of the project	Public research institutions working in agriculture and fisheries, animal stock and biodiversity issues (INRA, CIRAD, UAG etc.) Regional council (?) But not yet mature
Analysis of the project according to the criteria proposed for the flagship projects	Maintaining and improving traditional products while introducing new species are among the main challenges for the agriculture and agro-food sectors. Local transformation of the agricultural products is contributing to maintain the agricultural sector, to lead producers to more innovation and hopefully improve their competitiveness, to diversify products and to substitute imported goods Innovation in the agro-food sector is a major issue in Guadeloupe; all the conditions to innovate are gathered and a public-private push is an important signal. The same can be said of the valorisation or exploitation of biodiversity. Success stories have promoted the idea of an innovative endogenous capacity; the creation of a specialised incubator may encourage researchers to cooperate with firms and/or enter the business community through becoming entrepreneurs. The experience of cooperation between researchers and entrepreneurs in the agro-food and agro-biotech industries could be transferred at Caribbean level in neighbouring islands and countries. Direct results would be: improvement of technical skills among the small agro-food companies; sharing and exchange of knowledge and know-how among communities (academics/researchers and entrepreneurs).

4.3. Guiana

4.3.1. General remarks

Apart from the needs for basic catching up of infrastructure (housing, education, water treatment, waste management) expressed by almost all the interviewees, a number of projects have been highlighted, without however providing a strategic vision of the economic development of Guiana.

- Industrial plants for the transformation of fisheries products (two projects under study led by CO.GU.MER and SAF)
- Project for setting up a port for the fishing fleet in the Municipality of Remire
- HARMONIE Project (cf. supra) in the gold mining sector and the setting-up of the Mining Technical Pole of Competence ("*Pôle Technique Minier*") to support the structuring of the sector
- International Exportation Free Zone (project of the Chamber of Commerce since 1996) with the objective to create a free zone for re-exporting manufacturing products. This is a project within the framework of the renovation of the port of Dégrad des Cannes (ERDF supported)
- Project «*Guiana, base avancée*» aiming at attracting national sport teams for the preparation of the FIFA World Cup (Brazil, 2014) and Olympic Games (Brazil, 2016) that includes development of sport and tourism infrastructures (4 star hotels).
- Industrial Cluster «*Maison de la Forêt et des Bois de la Guiana*» in the wood sector
- «*Centre européen de la biodiversité*» (CEBIO) – European Centre for Biodiversity (cf. supra)
- Completion of the infrastructures of the University: for 2007-2013, the infrastructures for the research pole, the university library, student hostels and the university restaurant are planned. The medicine and health pole has still not been planned.
- Setting up several projects for developing renewable energies: biomass, wind energy (a farm project), and solar energy.
- Project of Internet connection from Macapa, capital of the Amazonian state of Amapa in Brazil (border with French Guiana) to Cayenne (supported by the INTERREG IVA Amazone cross-border programme and the French Development Agency). Other projects regard the potential of doubling the AMERICAS II cable to ensure a back-up service for French Guiana.

Some of these projects are already relatively precise and are accompanied by preliminary studies. However, others have not been completed yet. Some projects are simple and concentrate on a large investment. Others are more complex and embrace various types of actions.

The proposals of flagship projects have been briefly discussed during the debriefing session with the SGAR. Further exchanges with public authorities, namely the

regional authority, are needed to build up concrete, detailed and realistic flagship projects.

4.3.2. Proposals of flagship projects

4.3.2.1. The structuring of primary sectors (agriculture, fisheries, forestry, mining)

The structuring needs to aim at:

- Supporting a clustering process (from production to transformation) in order to develop inter-enterprise cooperation and support their competitiveness by promoting collective actions on training, quality, environmental regulations, innovation.
- Guaranteeing supply and quality of basic products to the transformation units
- Developing niche products with higher added value

There is a first positive experience in the forestry sector, with the “labellisation” of the industrial cluster “Maison de la Forêt et des Bois” by DATAR, which could be extended to mining (based on the support already provided by the Mining Technical Pole at the Chamber of Commerce of Guiana) and to agriculture (project of a dematerialised market platform for vegetal products submitted by the association of small and medium size industry within the framework of the POSEI programme)

4.3.2.2. The European Centre for Biodiversity project

The project is still in a study phase and managed by Guiana Technopole. It includes three strands:

- Research and economic valorisation of biodiversity: based on a partnership between regional public research organizations and relevant mainland Poles of Competitiveness and enterprises, members of the poles (from pharmaceuticals, cosmetology and agro-food sectors), the first strand includes:
 - inventory of bio-resources and their characteristics and properties (“herbier”)
 - botanic conservation (collection of plants)
 - a technology platform (plant analysis and extraction of the molecules for valorisation)
 - a pre-industrial platform to validate the technological processes that produce the relevant bio-resources
- Training and pedagogical dimension including training programmes at the University on plant biodiversity (partly existing – Master in Biology) and a specific building for training session
- Tourism: marketing the Guyanese biodiversity as a tourism “product”, setting-up of tourist infrastructures related to biodiversity, hotels and resorts (business convention centres) for hosting visiting researchers and tourists.

The project is also offering interesting opportunities of collaboration with Brazil within the framework of the newly established Franco-Brazilian Research Centre on Amazonian Biodiversity.

However, the project raised some critical issues:

- Included in the Regional Innovation Strategy (third axis of the strategy), the new Regional Council has not yet confirmed its intention of supporting the project
- The economic business model of the project for generating revenue in Guiana (partnership with foreign enterprises and co-patenting, structuring of the production of bio-resource) has still not been validated by a concrete signed partnership with a foreign investor (discussion are in progress with one SME)
- The key persons that strongly supported the project in the different regional organizations are being replaced

Objectives of the project: The European Centre for Biodiversity project	Valorisation of the regional biodiversity as a potential for tourism and industry Training programmes on biodiversity as a cultural/social dimension of the project
Coordinator (possible)	Guyane Technopole (project not yet validated by the new elected regional assembly)
Partners of the project	Private partners (cosmetics and pharmaceutical companies) University of Antilles Guiana Public research organizations (IRD, CIRAD...)
Analysis of the project according to the criteria proposed for the flagship projects	Based on the very rich biodiversity of the region, the project is trying to develop an economic/productive sector for diversifying the regional economic fabric. An inventory of natural resources should be done (characteristics of each plant families) as a first step The second step is an investment in a test platform for extraction and analysis of molecules, allowing for the “proof of concept” leading to industrial feasibility. The training component has a social impact: improvement of skills for young graduates, new competences, new jobs for qualified people. The project is also offering interesting opportunities of collaboration with Brazil within the framework of the newly established Franco-Brazilian Research Centre on Amazonian Biodiversity.

4.3.2.3. Renewable energy production units:

Three issues are at stake:

- Diversification of the energy mix by reducing the dependence on oil, and then the price of energy
- Delivering energy supply to the forest area with small production units well suited to local context
- Valorisation of the forests and offering new markets for the wood sector (biomass production units)

A number of projects are under in progress:

- Biomass (from wood): 2 projects supported by the industry (Volitalia, Poweo), the production unit in Kourou
- Wind energy on the coast (wind farm)
- Solar energy
- Small units in the countryside (hydroelectricity)

Objectives of the project: Renewable energy production units	Reducing the regional dependency upon fossil fuels Improving the provision of energy to small communities in the remote areas of the region Verifying the capacities for producing energy from biomass
Coordinator (possible)	Regional Council (?)
Partners of the project	ADEME Private companies Public research organisations
Analysis of the project according to the criteria proposed for the flagship projects	Based on the strong and abundant availability of the Amazonian forest, the rationale of the project is to verify the feasibility of an exploitation of the resources for small biomass plants providing energy (electricity for housing and activities) overall the territory. Corresponding energy-producing units will reduce the consumption of oil and fossil fuels, and the impact of transport to the final consumers. Tests and test plants will assess the feasibility of the extending first experimentations to a larger scale. Biomass, wind, solar, plus small hydroelectric plants are the way to build up an energetic mix adapted to the needs and conditions of a sustainable development in Guiana. Support should be also provided to the private companies willing to export their know-how, namely on the Brazilian market. Some enterprises are already looking for investment in Brazil.

4.3.2.4. Attracting international investors to gold mining (Project HARMONIE):

The HARMONIE project is the renewed version of the former “Camp Caïman” project (a gold mine concession located in the municipality of Roura), promoted by the multinational company Cambior in 2005-2006, but stopped by the decision of the President of Republic in January 2008 for environmental protection reasons³⁷. However, from March 2008, the multinational company IAMGOLD (that acquired Cambior in 2006) has wanted to submit the “new” project, HARMONIE, which includes:

- The exploitation of the gold mine on Camp Caïman (estimated annual production capacity: 3,9 t.)
- The relocation of the gold treatment plant at 12 km from the gold mine and the transportation of the product on closed conveyors in order to reduce the environmental impact on biodiversity
- The Re-forestation of the zone (170 ha)

The project is presented by IAMGOLD and some local actors as a motor for generating large investments and jobs:

- Increasing the legal extraction of gold
- Benefitting from the structuring effect on the sector by providing new competences and transfer of know-how to SMEs
- Job creation (350 direct and 300 indirect jobs)

In addition, the project would be complementary with the support provided by the “*Pôle Technique Minier*” to SMEs and small producers.

However, HARMONIE raises some issues:

- The «Schéma d’Orientation Minière (SDOM)» (Mining orientation plan) is still under public consultation
- The project also depends on the intention of the new regional council to promote the gold mining sector
- It depends also on the capacity of the local actors to find a regional consensus on the balance between the protection of the environment and biodiversity and the valorisation of a primary resource (gold) that has an environmental impact.

Objectives of the project:	
Coordinator (possible)	
Partners of the project	
Analysis of the project according to the criteria proposed for the flagship projects	

37 The gold mine is located in a protected area (Zone naturelle d’intérêt [écologique](#), [faunistique](#) et [floristique](#))

4.4. Réunion

4.4.1. General remarks

- There is a strong and explicit consensus among local actors on strategic objectives. The latest expression of this consensus is to be found in “*La Réunion Ile Verte*”, a strategic document prepared by the business think tank “*La Réunion économique*”, and in the Regional Innovation Strategy, beside other strategic documents³⁸ and programming documents (ERDF and ESF).
- A number of local actors consider that the key issue is strategy, and not flagship projects, in particular the members of “*La Réunion économique*”.
- For that reason, we preferred not to benchmark the projects listed against the grid of analysis. The strategy itself globally fulfils the criteria of the grid.
- The proposals presented here have been collected during the interviews and meetings. All of them are coherent with the latest strategic documents.
- Some of them are quite precise and are accompanied by preliminary studies. However, others have not been completed yet. The expert has helped to present them in a more elaborate form.
- Some projects are simple and concentrate on large investments (projects n. 4, 6 and 8). Others are more complex and embrace various types of actions.
- All proposals were discussed on the last day of the mission, first with the business think tank “*La Réunion économique*”, and second during the debriefing session with the SGAR and representatives of regional and local authorities.
- All proposals will have to be carefully confronted with the economic analysis in order to assess their adequacy with the determinants of growth.
- Further exchanges with public authorities are needed to build up concrete, detailed and realistic flagship projects.

4.4.2. Proposals of flagship projects

4.4.2.1. Re-positioning of the construction (BTP) sector in a perspective of sustainable development

- Training: energy efficiency and use of renewable energies – Target: SMEs
- Certification of construction materials with respect to use in tropical conditions (the ACERBAT project of the *Chambre des Métiers*)
- Development of business-research collaborations (in particular with IUT of Saint-Pierre, Laboratory of Urban Ecology)

³⁸ E.g.: *Plan réunionnais de développement durable*; *Schéma d'aménagement régional*; *Schéma de gestion de l'eau*.

- Financial engineering to support SMEs (equity)
- Supporting a limited number of specific projects embodying the re-positioning of the construction sector:
 - TCO (western grouping of municipalities) Eco-city
 - Plan of rationalization of the *Département de La Réunion* properties
 - Pole 'Building' in Pierrefonds (again a project of the *Chambre des Métiers*)

4.4.2.2. Development of a RTDI agro-nutrition-environment platform

- Strengthening the research base
- Mutualisation of instruments for technology transfer and commercialization of research (a project which is already in the pipe line)
- Investment in industrial and semi-industrial pilots: eco-extraction; bio-refinery (precise projects which are part of the QUALITROPIC strategy 2009-2011)
- Marketing of the platform
- Supporting the development of partnerships in the Indian Ocean Region
- Funding regional (Indian Ocean) RTDI projects
- Actions aimed at food auto-sufficiency (a project of the *Chambre d'Agriculture*)

4.4.2.3. Structuring a Pole "Fisheries & Sea Resources"

- Supporting the structuring of the *filière Pêche*
- Supporting sustainable fishing and fighting illegal fishing
- Developing research and experimentation in aquaculture
- Strengthening the research base

The research component corresponds to a project which has been on standby for about 3 years and is known as "*Pôle Recherche Mer*".

The other components are detailed in a document of the *Comité régional des Pêches* and another one of the *Direction régionale des Affaires maritimes*.

4.4.2.4. Funding an optical fibre cable Réunion-Madagascar (with connection to EASSY cable) to ensure a back-up

- The investment could amount to c. 50 million €
- It is considered by representatives of the ICT sector as a pre-requisite for developing data centres and related activities
- It would probably reduce the costs of the access to the Internet and improve the quality of telecommunications, a major issue for Réunion
- There has been no feasibility and technical study so far

4.4.2.5. Energy autonomy

- Energy efficiency
- Supporting 'guaranteed' renewable energies: hydro-electricity (coupled with photovoltaic installations), biomass
- Experimenting in the field of sea energies (pilots)

4.4.2.6. Tourism strategy

- A thorough market study is urgently needed to determine a strategy before launching a large-scale project in the field of tourism, since there is no clear consensus at the moment among local actors on what should and could be done
- A clear business model should be established taking into account realistic market opportunities

The tourism strategy should also include support to the airport infrastructures:

- the major current issue (though not the only one) regards the infrastructures required for the Airbus A380 which should allow for going toward a more 'mass' oriented form of tourism, and at the same time is expected to reduce transportation costs for local residents
- There is a study by the Chamber of Commerce (a future shareholder of the new public company to be established for managing the airport)
- The total amount of the corresponding investment is 150 million €
- Air Austral (the local airline) promised return air fares to Paris starting from 650 € if the investment is realised

4.4.2.7. Harbour infrastructures

- The objective is first to maintain Réunion as a 2nd level port. A study was realised
- A more ambitious one is to turn the port into a feeder for container-ships. As there are no guarantees that the large maritime transport companies will be interested, it was suggested that a local company should be created; however, the feasibility study was not very optimistic

4.4.2.8. Setting up a regional (Indian Ocean) 'Health-Humanitarian platform of education, training and services

- The creation of a regional school of Health and Medicine (including veterinary studies) relying on existing projects: extending the medicine curricula (this will be implemented next year); turning the *Centre Hospitalier Régional* (CHR) into a *Centre Hospitalier Universitaire* (CHU)
- Strengthening the existing Red Cross Intervention Platform (PIROI) in particular in the field of public health

This project is brand new and assembles various ideas which were expressed during the mission.

It would complement the strategy oriented toward supporting the development of high added value services.

4.5. Martinique

4.5.1. General remarks

The proposals presented have been collected during the interviews and meetings

A number of projects have been highlighted, without necessarily providing a strategic vision:

- Innovation related projects and “soft” projects
 - Support to the Technical Institute of the Banana crop
 - Creation of a Technical Institute of tropical products
 - Creation of a cluster on medicinal and aromatic plants
 - Structuring of entrepreneurial clusters in traditional sectors such as fisheries, agro-food, tourism
 - Support to research programmes on land pollution (chlordécone)
- Infrastructure projects (including delivering of added value services)
 - Setting up of logistic platforms for imports and exports (infrastructures, logistic services, training programmes)
 - Modernization of water management and water treatment infrastructures and up-grading of waste recycling infrastructures
 - Creation of a deep water port used as a platform for dispatching freight around the zone (project in competition with Guadeloupe)
 - Rehabilitation and up-grading of the economic zone fostering the access to business premises and improving the services provided to companies (a study led by the Chamber of Commerce is in progress)
 - Collective public transport with the TCSP (tramway), already included in the ERDF operational programme (delay is expected).
 - Creation of a second tourist pole in Saint-Pierre

Some of these projects are already relatively precise and are accompanied by preliminary studies. However, others are not completed. Some projects are simple and concentrate on a large investment. Others are more complex and embrace various types of actions.

Further exchanges with public authorities, namely the regional authority, are needed to build up concrete, detailed and realistic flagship projects.

4.5.2. Proposals of flagship projects

4.5.2.1. Re-dynamising the tourism industry by creating a second tourist pole in Saint Pierre:

This project arose from a strong political commitment of the new Regional Council, aiming at:

- Making Saint Pierre the second tourist pole and the showcase of the Martinique tourist offer (heritage and natural environment)
- Diversification of touristic activities toward higher added value niches competitive with respect to regional competition (e.g.: cruises)

This global project includes:

- Setting up an appropriate governance structure for the planning and management of the project in its different aspects (economic, social, environmental, etc.)
- Transportation infrastructures (road and maritime for transport of passengers and products)
- Transport Infrastructure: road, sea, cruises
- Harbour infrastructures
- Renovation of buildings, especially hotels and urban heritage of Saint Pierre
- Marketing and commercialization
- Training programmes for the tourist industry

<p>Objectives of the project: Re-dynamising the tourism industry by creating a second touristic pole in Saint Pierre</p>	<p>Diversifying the tourism products of the region Up-grading the tourism infrastructures Setting-up an integrated tourism project combining: environment/tourism, memorial and heritage</p>
<p>Coordinator (possible)</p>	<p>The Regional council is deeply committed to the project</p>
<p>Partners of the project</p>	<p>Local and regional authorities? Business partners?</p>
<p>Analysis of the project according to the criteria proposed for the flagship projects</p>	<p>The area of St Pierre is not included in the tour operators programmes and the local touristic offer is presently limited.</p> <p>The rationale of the project is related to the record of the volcanic eruption (1902) when the city was completely buried under ashes (memorial). The rationale is to create a modern resort competitive at a regional level allowing for cruisers to have a stop-over, with high level services.</p> <p>The project intends to integrate a social dimension with a training programme for tourism-related jobs.</p> <p>It also intends to better connect St Pierre to Fort-de-France with transport and port infrastructures, and by the way to create a second pole of economic development.</p> <p>As an integrated project it has also an urban dimension by the restoration of the existing housing and buildings.</p>

4.5.2.2. Setting up an entrepreneurial cluster programme to improve competitiveness and structure sectors

Issues at stake are:

- the structuring of the main economic sectors in order to foster inter-enterprise collaboration and the emergence of collective needs and collective actions
- the competitiveness of the enterprises by developing innovation processes within companies (both technological and non technological innovations).

Such a cluster programme would cover the following points:

- Covering 'traditional' sectors (tourism and agro-industries) and emerging ones (valorisation of biodiversity, fisheries, green tech and environment, personal services)
- Supporting innovation and eco-efficiency
- Supporting horizontal measures and collective actions on training, quality, integration of environmental management of performance, logistics, etc.

4.5.2.3. Creation of a logistic platform for imports aiming at reducing production and transportation costs through:

- Mutualisation of containers
- Mutualisation of storage capacity
- Rationalization of the distribution system
- Facilitation of re-exportation of goods from Martinique
- Integrating logistic tools in SMEs
- Training programmes (the University is offering initial training on logistic – IUT)

4.5.2.4. Supporting the innovation processes for the diversification of agricultural products and agro-industries/agro-food products towards an innovative agro-food cluster:

- Support to the Technical Institute for Banana plant for the diversification of banana-based products and commercialization of new types of banana
- Creation of the Technical Institute for Tropical Products
- Development of agro food products with the support of the agricultural research pole (PRAM) and the tech transfer pole (PARM). For example, the PARM has launched a call for proposals for the industrialization phase of new food products (ready-made cooked products), based on the technologies they developed in-house.
- Valorisation of non-food transformation of agricultural and sea products;

<p>Objectives of the project:</p> <p>Supporting the innovation processes for the diversification of agricultural products and agro-industries/agro-food products towards an innovative agro-food cluster:</p>	<p>As in Guadeloupe, the objective is the diversification of the agro-industry, in part as a substitute to importation of foodstuffs from mainland France, through using and transforming local agricultural products and resources</p> <p>Demonstrating the capabilities of the research teams to work with business, and the capabilities of the industry to innovate through creating new products</p> <p>Contributing to promoting Martinique through regional food products</p>
<p>Coordinator (possible)</p>	<p>?</p>
<p>Partners of the project</p>	<p>Technical Institute for Banana Technical Institute for Tropical Products PARM and PRAM</p>
<p>Analysis of the project according to the criteria proposed for the flagship projects</p>	<p>Diversification of agro-food products for the local market through support to technical centres interfacing RTDI and business.</p> <p>The research pole (PRAM) and the technology transfer entity (PARM) will be the two main institutions to be involved in the project as main actors in the innovation chain.</p> <p>Expected results are:</p> <ul style="list-style-type: none"> - A change of culture concerning the relationship between researchers and the industry - A larger diversification of products, in particular for banana-based products, for the local consumption and on the national market - A substitution of imported foodstuffs for the local market and for the tourists market - A regional label for Martinique foodstuffs <p>There is a possible impact and extension of the project to non-food transformation of agricultural and sea products.</p>

4.6. The Canary Islands

4.6.1. General remarks

- The proposals presented hereafter have been collected during the interviews and meetings. All of them are coherent with the latest strategic documents.
- Some of them are already relatively precise and are accompanied by preliminary studies. However, others have not been completed yet. The experts helped to present them in a more elaborate form.
- The feasibility of all proposals has to be verified in the light of the economic analysis in order to assess their adequacy with the determinants of growth.
- Further exchanges with public authorities are needed to build up concrete, detailed and realistic flagship projects.

4.6.2. Proposals of flagship projects

4.6.2.1. Renovating the tourism model

In our opinion this project has not been finalised yet. Details given here emerge from the interviews as well as from formalisation proposed by the experts.

There are Spanish national plans aimed at renovating tourism which involve the Canary Islands as well as all Spanish regions:

- *Plan de Renovación de Instalaciones Turísticas (Plan Renove Turismo 2009)*³⁹ which also includes a part on loans to the tourism industry (Agreement of the Council of Ministers 21 November 2008, Official Journal n°289, 1st December 2008)
- *Plan de Turismo Español 'Horizonte 2020'* (April 2009)⁴⁰ – this plan includes a Project of renovation for tourism of Puerto de la Cruz (Tenerife)

Practically all the people the experts met mentioned the project of renovation of the tourist model, considered as a necessity, without providing details on how it could be carried out. It is clear that such a project is considered as going much beyond loans for renovating buildings: it should take into account the entire value chain of the tourist sector, and include all dimensions of the model.

³⁹ Cf. http://www.grancanaria.com/patronato_turismo/Plan-Renove-Turismo.23465.0.html

⁴⁰ Cf. <http://www.turismo2020.es/>

Objectives of the project	<p>Allow the Canary Islands to remain among the world leading regions of tourism</p> <p>Stop the fall in the number of tourists</p> <p>Maintain jobs</p> <p>Improve the quality of services</p>
Coordinator (possible)	Consejería de Turismo del Gobierno de Canarias,
Partners of the project	Professional organisations, Patronato de Turismo de Gran Canaria (Oficina de Renovación), Confederación Canaria de Empresarios, others (architects and urban planners, local authorities)
Analysis of the project according to the criteria proposed for the flagship projects	<p>The Canary Islands are a major destination for European tourists. However, they have lagged behind in terms of competitiveness since the second half of the 2000s and their touristic model is threatened. The importance of the investments and the share that tourism has in employment require a strong response from public policies to combat this trend (private investment alone will not be sufficient).</p> <p>The sector has to stay in the market and to be more competitive:</p> <ul style="list-style-type: none"> - Renovating ageing tourist infrastructures, in particular rental buildings and hotels, through for instance supporting eco-efficiency, the use of renewable energies, a better management of the water cycle - Improving the quality of urban and territorial planning - Upgrading the quality of services, especially through training, adoption of 'charters' and norms of quality at international standards - Diversifying the tourist offer: eco-tourism/sustainable tourism, 'health tourism'... - Promotion and marketing

4.6.2.2. Setting up and implementing a comprehensive cluster policy in a perspective of competitiveness

A policy aimed at supporting clusters was started by the regional government through a call for proposals launched in 2009 (17 Feb. 2009, *Boletín oficial de Canarias*, n°32). The ITC is in charge of its implementation.

Objectives of the project:	<p>Pursuing, developing and enlarging the cluster policy that has been started</p> <p>Structuring innovation-driven clusters and improving the relationship between businesses and RTDI centres and innovation support organizations</p> <p>The existence some critical mass of innovative and/or technology-based businesses</p>
Coordinator (possible)	ACIISI
Partners of the project	ITC and RedCIDE
Analysis of the project according to the criteria proposed	<p>The number of innovative and/or technology-based businesses is so far limited. However, the efforts made by the Innovation-support organizations, such as ACIISI, have started to have interesting results. A network of centres of expertise is operational, and a "núcleo" of innovative enterprises is being structured following the 2009 call for proposals with the 18 projects that were selected.</p> <ul style="list-style-type: none"> - The cluster policy should cover the 'traditional' sectors such as tourism and construction as well as the emerging ones such as biotech/biomedicine/biopharmacy - It should take into account the 'innovation' dimension (including non-technological innovation), and for the clusters directly concerned, the 'eco-efficiency' dimension - Services to production activities in each cluster (and to innovation in these services) need to be reinforced - Priority should be given to a few of them in order to concentrate resources - For instance, the cluster policy could focus, besides tourism, construction and biotech/biomedicine/bio-pharmacy also on: marine activities (ship building and repair, services to sea transportation); activities related to astrophysics (a 'niche' for developing high technology businesses); renewable energies (not only experimentation) - The cluster policy should use all the instruments mobilised in innovation-driven clusters such as: support to RTDI collaborative projects and to business RTDI projects (ACIISI has already a track record in this field); support to hiring of highly qualified staff; support to participation in national and EU RTDI programmes; technological watch; market intelligence; etc. - 'Horizontal' actions such as: financial engineering, and support to entrepreneurship

The current ACIISI work programme is annual. The cluster policy should be based on a multi-annual programme, and a limited number of calls for proposals. An assessment of the already identified clusters should be carried out in order to improve the cluster policy effectiveness and efficiency and re-focus, as far as necessary, the actions on the most promising clusters.

4.6.2.3. Developing and implementing a programme of internationalisation

Internationalisation is considered a priority by a number of people interviewed.

The *Plan de Gran Vecindad* has already set out a basis concerning relationships with neighbouring countries. The rationale of such a programme relies on the small size of the regional market, a weak competitiveness that hampers exports of goods, and the regional capacities for developing exports of knowledge, expertise, and high value added services to neighbouring countries. Within this perspective, co-operation actions (non-profit) and export should combine and support each other through the development of partnerships.

At the same time, internationalisation requires an upgrading of port infrastructures and services for freight and for developing cruise tourism, which can be an element of diversification of the tourism offer.

Objectives of the project	Overcoming the limitations of the regional market through going 'international' Becoming a platform of knowledge and expertise for the neighbouring countries, through co-operation actions and exports of high added value services
Coordinator	Regional Government (Consejería de Economía y Hacienda)
Partners of the project	Confederación Canaria de Empresarios, Universities and research centres, ACIISI, SECARTYS, PROEXCA, etc.
Analysis of the project according to the criteria proposed	<p>The idea is to build on the <i>Plan de Gran Vecindad</i> (Morocco, Mauritania, Senegal, Mali, Cabo Verde, etc.) and the plan of internationalisation of the Canarian enterprises of PROEXCA.</p> <p>There are already rather well identified fields in which the Canary Islands can export: eco-technologies (in particular water resources and desalination); health and sanitary systems; exploitation of marine resources; marine services (logistics, naval repair); ICT⁴¹; public administration (statistics, GIS); training; etc.</p> <p>The internationalisation process concerning neighbouring countries has to rely on: a) both non-profit co-operation and commercialisation of knowledge, expertise and services; b) strong collaboration between the public administration, academics and researchers, and businesses. As far as possible, co-operation and export opportunities should be connected to the cluster policy as an international dimension of this policy.</p> <p>The project should in particular fund missions to neighbouring countries associating the relevant Canarian actors and mobilise the various funding sources that exist for supporting exports.</p> <p>The internationalisation process also requires investment in port infrastructures: modernisation of infrastructures and equipments, quality of freight services, development of cruise tourism</p>

⁴¹ Cf. Agreement between PROEXCA and Secartys

4.6.2.4. Other projects

The ITC (Technological Institute) evoked 4 projects, some of them related to those mentioned above:

- Development of telecommunications infrastructures
- A re-orientation of the RTDI policy toward services and non-technological innovation
 - This can be related to the cluster policy: a cluster policy takes into account all forms of innovation and all the aspects of a cluster including services
- The creation of a technology centre focused on co-operation for development
 - This is clearly related to the project “Developing and implementing a programme of internationalisation” as a ‘horizontal’ instrument for setting up a platform of knowledge and expertise
- Financial engineering through the creation of a JEREMIE fund

4.7. The Azores

4.7.1. General remarks:

- **The proposals presented here have been collected during the interviews and meetings. All of them are coherent with the latest strategic documents.**
- Most have not been completed yet. They are 'strategic options' rather than definitive projects accompanied by preliminary studies. It corresponds to a 'momentum' when the choices concerning the economic model are under discussion. The national and international crises push for this reflexion. Launching projects to foster a systemic and integrated approach is a flagship-project in itself.
- Some projects are simple and concentrate on a large investment (projects n. 2 and 5.3). Others are more complex and embrace various types of actions.
- The feasibility of all proposals will have to be checked in the light of the economic analysis in order to assess their adequacy with the determinants of growth.
- **Further exchanges with public authorities are needed to build concrete, detailed and realistic flagship projects.**

4.7.2. Proposals of flagship projects

4.7.2.1. A coherent and comprehensive energy strategy based on renewable energies with an integrated approach

In the framework of the MIT – Portugal Program (launched in 2006 on the initiative of the national Science, Technology and Higher Education) a project, called "Green Island" centred in the Azores (mainly S. Miguel) was launched, with a focus on systems thinking and the emerging field of engineering systems. The particular target in "Green Islands" is helping "partners in industry, academia and government increase the contribution of renewable energy sources significantly in the next decade and beyond – as well as reduce the dependence on fossil fuels and lower greenhouse gas emissions". Ultimately "the aim is to create a model for similar efforts throughout the world".

The components of the project will permit the "designing of robust, affordable and implementable sustainable energy supplies and demands". And "the new knowledge generated will have a positive impact on economic development".

University of the Azores, Universities Lisbon and Oporto, and Regional Government and companies (EDP, Galp, Efacec, Martifer, SGC Energia and EdA/Electricidade dos Açores) are partners of the project (mainly big national companies but also from the Azores, the University and EdA).

“GREEN ISLANDS” is centred in the Azores and integrates 120 people of which 60 have a PhD (not necessarily based in the Azores).

This project can stimulate the choices, changes and opportunities in the strategic area of energy. As a positive outcome it can lead to actions in education for new attitudes and behaviour concerning all structures of the society in the Azores, from primary schools to industries and common consumers.

For other areas, the Azores may emerge as a ‘natural laboratory’ for experiments and studies (in a small and closed environment) - as the island of Porto Santo, in Madeira (see the report about Madeira). On the Island of Pico a prototype of a wave energy station has been functioning for the last twenty years (an unique experience).

Even with moderate investments in geothermic energy on S. Miguel one can furnish (local estimates) 75% of the electricity needs of the principal island where half of the population of the Azores lives.

Electric component ‘mobility’ (electric or hybrid automobile) in S. Miguel can be considered as giving ‘critical mass’ since traffic congestion is a main handicap in Azores and the short distances on the island are a favourable element.

There are potential Investments in wind power and storage technologies.

There are good possibilities for RTDI in volcanology / volcanic geology / geothermic (fields with strong international interest).

Objectives of the project	<p>Increase significantly the contribution of renewable energy sources as well as reduce dependence on fossil fuels and lower greenhouse gas emissions.</p> <p>Attain better performances in the Energy Systems and higher levels of efficiency.</p> <p>Create an area of knowledge and competences.</p>
Coordinator	Regional Government (Secretaria Regional do Ambiente e do Mar)
Partners of the project	Government, University of the Azores and EdA / Electricidade dos Açores, as new entrants and companies from mainland Portugal and abroad
Analysis of the project according to the criteria proposed	<p>The idea is to develop the ‘Green Islands’ international project and stimulate choices, changes and opportunities in the strategic area of energy (see detailed arguments above).</p> <p>Launch new investments on key energetic areas in the Azores.</p> <p>Consider the Azores a ‘natural laboratory’ for experiments and studies.</p> <p>Develop information and educational initiatives on energy attitudes and behaviours.</p>

To counterbalance dispersion/fragmentation of the Archipelago some during the interviews and meetings some interviewees opposed the rational behind an ‘energy inter-connection’ of the Azores by under-seawater cable. Investments are not clearly estimated but there is a strong international experience (Baltic Sea, Japan).

Others think the reconsideration of the energy regulation framework a necessary condition a strong development. The liberalization of the sector could generate better levels of efficiency and new investment initiatives in geothermics, wind energy and hydric.

4.7.2.2. Management of waste

There is an investment project submitted to the ‘Fond de Cohesion’. In addition to its economic, environmental and social role, this project may be an opportunity to generate spin-offs (EdA, University).

It is an investment of 165,685,000€ (102,350,000€ of public investment) based on the specificities of the insular systems which have:

- ✓ Higher technical difficulties and increased costs on residue management;
- ✓ a deficit of infrastructures;
- ✓ difficulties in re-use (products are imported by sea and quantity of packages is high);
- ✓ and low economies of scale.

Objectives are:

- ✓ prevention in the production of waste/residues and the recovery of their value as well minimize their negative impacts;
- ✓ the promotion of the eco-efficiency of the entrepreneurial sector;
- ✓ the economic and financial support to the system of waste/residues management.

Prospects and potentials: to launch a pro-activity process integrating Government, economic actors of the geothermics and energy sector – including EdA, University, new Technological Park, new “Entidade Reguladora de Serviço de Águas e Resíduos dos Açores”.

Objectives of the project:	<ul style="list-style-type: none"> ✓ the prevention in the production of waste/residues and the recovery of their value as well minimize their negative impacts; ✓ the promotion of the eco-efficiency of the entrepreneurial sector; ✓ the economic and financial support to the system of waste/residues management.
Coordinator (possible)	Regional Government (Secretaria Regional do Ambiente e do Mar)
Partners of the project	Regional Government, EdA, University, Technological Park of S. Miguel, “Entidade Reguladora de Serviço de Águas e Resíduos dos Açores”
Analysis of the project according to the criteria proposed for the flagship projects	The project aims to solve a major problem of the sustainable development of the Azores. It corresponds to key-criteria for flagship projects:

	<ul style="list-style-type: none"> ✓ it addresses critical challenges (identified in this Report) ✓ it focuses on the economic and social fabric and impacts development ✓ it relays and valorises local assets ✓ it may provoke innovative processes
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4.7.2.3. Development of the tourism sector through a systemic integrated approach

The development of tourism is strategic. It is a hope for the future of the Azores. But a systemic integrated approach is needed.

This flagship project has not been finalised. Details given here emerge from the interviews as well as from formalisation proposed by the expert. However, the strategic aims and concerns are agreed on.

The assets of tourism of the Azores are quite strong for the development of certain tourist fields:

- nature tourism (walking holidays, geology, biology, bird watching)
- durable tourism
- resort tourism
- golf
- tourism related to Health/Wellbeing (Thermal, SPA)
- cruises
- sea tourism and sports (Diving, Big Fishing Range, Whale Watching)
- scientific tourism.

The Azores fly some UNESCO heritage ‘flags’ that were attributed to the Region and that should be preserved and strengthened.

The Azores are quite an authentic destination with ‘sensual/sensitive’ nature. The Azores may follow the common (but difficult to implement) suggestion “*explore as many senses as you can: sight, sound, smell, taste, touch*”.

Gastronomy is an asset for the Azores. It offers an unusual ‘best of two worlds’: best meat and best fish in the same place.

The Azores destination has a good reputation in the national market (even if in 2009 the results favoured Madeira). The Azores have a good holiday reputation on mainland Portugal but there are very few events to attract tourism which is also seasonal and linked to a small number of operators.

Since positive factors are developing (qualification of services and improved quality of the training for the employees; animation/creation of tourism-products; promotion/positioning marketing; investments in the digital economy, presence on the Web and customer relationship management) tourism in the Azores has great potential. Training guides for new segments of discovery tourism to exploit the rich biodiversity and geology; and other tourist products should be developed.

The flagship features of this project are:

- ✓ Its major economic and social dimension (employment, integration of women in the labour market)
- ✓ It's systemic / transversal nature
- ✓ The need for a strong coherence of private and public investments (infrastructures in particular)
- ✓ Crucial need for adequate public policies.

Moreover, it integrates the policies of education and training of human resources, the policies of territory management, the dynamics of events with tourist potential and the options of national and international promotion.

The project is also invests the air transport issue: to liberalize or not to liberalize. Those who are in favour of a liberalization process stress the decisive nature of transport prices in the development of tourism and the recent experiment in Madeira (with very good results attracting the interest of 'low-cost' companies).

This possibility could mean using Ponta Delgada as an entry 'hub' for tourists and passengers in general in the Azores.

Objectives of the project:	<p>Taking full advantage of the assets in the Azores to improve tourism performance; exploit positive impacts and externalities for economic and social fabric.</p> <p>Help to absorb unemployment.</p>
Coordinator (possible)	Regional Government (Secretaria Regional da Economia)
Partners of the project	Regional Government and investors (the Azores have a major economic group in tourism with 8 hotels in the Archipelago and 1 in Lisbon)
Analysis of the project according to the criteria proposed for the flagship projects	<p>The project has a strategic nature aiming to diversify the economic specialisation of the Azores (agriculture) fortifying the export bases.</p> <p>It impacts the economic and the social fabric.</p> <p>It corresponds to the following key-criteria for flagship projects:</p> <ul style="list-style-type: none"> ✓ it addresses critical challenges (identified in this Report) ✓ it is nuclear for economic and social fabric and impacts development ✓ it relays and valorises local assets ✓ it may provoke innovative processes ✓ it counts on internationalization

4.7.2.4. International medical care cluster

This flagship project has not yet been finalised. Details given here emerge from the interviews as well as from the formalisation proposed by the expert. However the strategic aims and concerns are acknowledged.

The Azores (like Madeira) runs a degree course in Medicine: the first two years at the University of the Azores and the following years on mainland Portugal. A possible extension of the course should be considered, but Madeira seems a more probable candidate for this.

This extension could be linked to a specialist medical cluster. The Azores could then become a centre of attraction (patients) and a centre of excellence in certain fields. North America could be a market-target for this development as the costs would be greatly inferior to those in North America and the insurance companies would be partly interested in this project.

Objectives of the project:	<p>Using the location in the Azores (with North American clients in mind) and cost advantages to launch a new internationalised high value added activity.</p> <p>Bet on Diaspora for investing in the Azores.</p> <p>Cross-fertilize university developments and RTDI facilities with business opportunities.</p>
Coordinator (possible)	Regional Government (Vice-Presidência)
Partners of the project	Regional Government, University of the Azores, Centre of Biotechnology and Biomedicine of the Azores and investors
Analysis of the project according to the criteria proposed for the flagship projects	<p>The project has a strategic nature.</p> <p>It impacts the economic and social fabric. It helps to structure innovation-driven clusters and improves the relationship between businesses and RTDI centres and innovation support organizations. It also helps to create a critical mass of innovative and/or technology-based capacity.</p> <p>The key-criteria corresponding to flagship projects are:</p> <ul style="list-style-type: none"> ✓ it addresses critical challenges (identified in this Report) ✓ it is nuclear to the economic and society fabric and impacts development ✓ it relays and valorises local assets ✓ it has an innovative nature ✓ it wages on internationalization

Possible stakes are: Senior citizens; Diagnosis and Treatment; Recovery. Some (opinions expressed in interviews) consider that there are possibilities in certain specialities like oncology and orthopaedics.

Investors from Diaspora (North America) may be interested in financing these developments.

Studies are needed to concretize these ideas but a potential flagship project is in the making.

The creation of the Centre of Biotechnology and Biomedicine of the Azores, on Terceira Island (a university/hospital/government partnership), could be a major element in this health cluster. The connections with the industry of biotechnologies could represent a strong potential (pharmaceutical).

4.7.2.5. Other projects with a growth potential and a systemic impact

Some other possibilities were mentioned during the interviews and meetings in the Azores, strategic options rather than flagship projects. But in the post 2013 period some developments arising from these selected areas of opportunities may occur.

The three main stakes are:

- a sea cluster, biotechnologies and natural resources
- the University
- a Technology Park

4.7.2.6. Sea cluster based on biotechnologies and natural resources

The morphological characteristics and climatic singularities of the Azores offer an exceptional biodiversity and a great variety of natural resources. That is true for other islands and ORs (as mentioned in the recent (7th May, 2010) Memorandum Spain / France / Portugal – Canary Islands / Azores / Madeira).

The concept of a 'natural-laboratory' (mentioned in connection with 'energy') is a real asset.

The Biotechnologies should stimulate biodiversity and natural resources:

- a potential cluster in which bio-prospection is applied to the endemic and indigenous species is included,
- others like energy and water
- marine biodiversity (with strong connections with the pharmaceutical and cosmetics industries, and the synthesis of new materials).

Food and environmental safety is another potential field: control and local product linked to tourist demand, the protection and control of the sea (pollution by oil tankers for example) but also energy production (algae).

The biotechnologies/natural resources/sea are, par excellence, a field for co-operation between the three RUPs (Madeira, the Canary Islands, the Azores). As cooperation is natural and of great interest, would a common strategy of research be possible?

Significant extension planned for the EEZ of Portugal - where the Azores and Madeira seas play a central role – constitutes an opportunity to generate possibilities in several economic and scientific fields. The opportunity of setting up a more powerful Fishing-Sea pole does not seem at all remote and could function like a flagship project. It is essential to structure the fisheries 'filière', to fight illicit fishing in the EEZ, to support durable-fisheries and to develop aquaculture. An integrated

approach is advisable: fisheries, transports and accessibilities, tourism and leisure, environment, research, innovation.

The potential of RTDI of the university would be mobilized for this project.

The installation of the Centre of Biotechnology and Biomedicine of the Azores would be a major element. The Centre can exploit potential connections with industry (pharmaceutical, milk 'filière').

4.7.2.7. Development and internationalisation of the University of the Azores

The UA / University of the Azores is potentially present in all stakes described above making it a transversal element in a development effort based on new paradigms where international connectivity and benchmarking are crucial and partnerships with companies (local, national and international) are a critical element.

UA already has a strong base of expertise, on a world level, in its Departamento de Oceanografia e Pescas / DOP.

The numerous applications for post-graduate courses in deep sea oceanography and volcanology at University are a clear sign of great notoriety and recognition of world level competences.

Competences in agricultural sciences are also recognized.

The University of the Azores also plays an important role in the "Green Islands" projects, located in the Azores (mainly S. Miguel), within the framework of the MIT – Portugal Program (launched in 2006 on the initiative of the National Science, Technology and Higher Education Centre) – see Energy / Flagship Project 1.

A problem of UA (common to Madeira) is the absence of critical mass for RTDI and for top level teaching. The possibility of attracting the Azores-descendants from Boston, in particular, but also other localities in EUA/Canada (400,000 or 500,000 according to some estimations) has a potential solution to this problem of critical mass. Attraction can be created for students too, by providing English courses in the Azores.

The internationalization of the University of the Azores could also appeal to students in the Portuguese-speaking African countries, in particular Cabo Verde and Angola. But the strategic value lies in the USA.

An effort must be made to foster an entrepreneurship culture within the University in all scientific areas (not only Economics, Management and Sociology as at present). The general challenge impact the local economic fabric is far from relevant. The accumulated knowledge has not yet generated business and employment by externalities.

The Portuguese government recently established a "contract of confidence" with the Portuguese universities. The budgetary resources were greatly increased. But the University of the Azores has not yet signed the contract of development which should follow the decision of Lisbon (the University of Madeira has already signed its contract).

4.7.2.8. Setting up a Technology Park

A Technology Park is planned. It is a public initiative project.

It will be set up in S. Miguel, in Lagoa (west of Ponta Delgada) with the Regional Government, the Town hall of Lagoa and the University as partners.

Technologies and Information systems as well as volcanology/seismology (in partnership with the research centre of the university, a centre of excellence) will be priorities. A BIC will be installed in co-operation with the university.

The first buildings will be up in first half of the year of 2011. The Government will install its dated centre. An incubation and administration building is planned for 2012. Civil protection will be installed in the Park, and the university will build its volcanology / seismology centre there.

The Centre of Biotechnology and Biomedicine of the Azores, in Terceira, would be a potential pole of this Park.

The installation of the Park of S&T of S. Miguel is a structuring initiative. The involvement of private interests and investors in the future will be crucial. If all goes as planned the Technological Park may play crucial a role in promoting the economic development and competitiveness of the Azores by:

- | |
|--|
| <ul style="list-style-type: none">➤ Creating new <u>business opportunities</u> and adding value to mature companies➤ Fostering <u>entrepreneurship</u> and <u>incubating</u> new innovative companies➤ Generating knowledge-based <u>jobs</u>➤ Building <u>attractive spaces</u> for the emerging knowledge workers➤ Enhancing the <u>synergy between universities and companies</u> |
|--|

4.7.2.9. Final remarks on possible flagship projects

Four key issues (from a global perspective) are at the basis for the flagship projects identified above, namely:

- Agriculture (even if not referred to as a flagship project) constitutes a fundamental activity in the Azores and will remain an essential base of the economic fabric, for several nuclear reasons: it is competitive and a ('the') net exporter of the Azores economy; it is based on assets of the archipelago (nature and climate; historical competences and comparative advantages which can be reinforced by biological practices which will differentiate the products in the markets); it is part of the identity of the Azores and a vital asset for the landscape/environment; it is a source of fundamental social balances and a large provider of employment.
- More permanent and intense sources of growth are external (as in the past). Historically the Azores, like Madeira, need an export basis (agriculture in the Azores, tourism and others in the future; tourism and international services in Madeira). It gives to internationalization a strategic nature.

- Overcoming the obstacles to technology is a major challenge and a strategic one: the Azores have few technology intensive companies.
- Employment is a major concern in the short and medium term, because:
 - Young population flow leaving for mainland Portugal after the 12th school year (a brain drain) has to be inverted;
 - Ulterior degradation of unemployment would disturb the social fabric balance and the development conditions for tourism, and would lead to the marginalisation of certain social layers.

Finally, a last remark: the Azores and Madeira are located in the European 'neighbourhood'. Therefore, even if outermost regions, the two regions are in a good position to develop the projects discussed above (attracting human resources, setting up tourism of proximity, developing RTDI in partnership).

4.8. Madeira

4.8.1. General remarks

- **The proposals presented here have been collected during the interviews and meetings. All of them are coherent with the latest strategic documents.**
- They have not been completed and are 'strategic options' rather than definitive projects accompanied by preliminary studies. It corresponds to a 'moment of reflection created by the international crises and stimulating discussions about economic choices and patterns. Launching A systemic and integrated approach is a flagship-project in itself.
- Some projects are simple and concentrate on large investment (projects n. 4,5). Others are more complex and embrace various types of actions.
- The feasibility of all proposals will be examined in the light of the economic analysis.
- **Further exchanges with public authorities are needed to build up concrete, detailed and realistic flagship projects.**

4.8.2. Proposals of flagship projects:

4.8.2.1. Modernisation and renovation of the Tourism 'model' (with a systemic and integrated approach)

The tourism sector is the dominant sector in the specialisation pattern of Madeira economy. Its influence goes well beyond the 21% weight in GDP and 14% in employment. It is a transversal sector that impacts the whole economy and society of Madeira. Vulnerabilities and exposures to external risks (facts and evolutions determined outside Madeira) are high. Recent declining trends are cause for major concerns. A need for a systemic and integrated approach is a major strategic item for public policies and for private investment decisions in order to strengthen the basis of such a fundamental activity.

This flagship-project has not really been finalised. It is a new systemic integrated approach and the structuring nature of tourism in Madeira that classify it as a flagship project. Details given here emerge from the interviews as well as from formalisation proposals by the expert.

Renovating the tourism model means:

- ✓ re-qualifying and emphasising authenticity and identity (a distinctive nature);
- ✓ focusing on key-markets;
- ✓ adjusting to changes in distribution and transports as well as to new customers (re-understanding travellers);

- ✓ investments in marketing, to gain international “electronic notoriety” (active presence in the Web and social media such as Twitter, Facebook and You Tube – useful and increasing important tools for information and notoriety);
- ✓ preserving and reinforcing UNESCO heritage sites attributed to the Region;
- ✓ raising the quality and sophistication of services offered to customers, in particular by training and the intensive use of the TIC;
- ✓ special consideration for training of specialised guides for new segments of discovery tourism, very rich local biodiversity as well as economic history (sugar, embroideries, banana, wine);
- ✓ diversifying the offer: eco-tourism, health tourism, scientific tourism;
- ✓ strengthening the systemic cluster of the nature sector.

The coherency and quality of the ‘macro-product’ (tourism destination Madeira as a whole; systemic hospitality and macro-efficiency; territorial planning and urban policies) is essential. There is a key role for public policies. Without that any huge promotion effort is bound to fail.

Objectives of the project:	<p>Keep tourism as a major activity on Madeira Island.</p> <p>Counteract the recent negative tendencies (decline in tourists, in average length of stay and in revenue per room).</p> <p>Reposition tourism as a macro-system whose coherence and quality is determinant.</p> <p>Improve the cluster’s effect. Enlarge positive externalities.</p> <p>Improve marketing and promotion.</p> <p>Maintain jobs.</p> <p>Consider Porto Santo Island assets with their specificities (a small island with a limited offer, very different from Madeira Island)</p>
Coordinator (possible)	Regional Government (Secretaria Regional dos Transportes e Turismo)
Partners of the project	Regional Government and entrepreneurs of the sector
Analysis of the project according to the criteria proposed for the flagship projects	<p>The project has a strategic nature aiming to strengthen the economic specialisation of Madeira.</p> <p>It has impacts on the economic and social fabric.</p> <p>It corresponds to key-criteria for flagship projects as:</p> <ul style="list-style-type: none"> ✓ it addresses critical challenges (identified in this Report) ✓ it is nuclear to the economic and society fabric and impacts development ✓ it relays and valorises local assets ✓ it may provoke innovative processes ✓ it relies on internationalization

For reflexion on this new integrated approach:

- New events in addition to Carnival, Flower Party, Wine Festival, Atlantic Festival and the new Festival of the Cinema should be created.
- An extension of the harbour of Funchal to improve and increase mooring facilities for cruise ships. The huge marine landfill left by the storms last February could become a new quay in the south but would it be enough to attract and accommodate large yachts?

4.8.2.2. A coherent and comprehensive energy strategy including renewable energies

Energy is strategic for economic development, society and wellbeing. That's true for Madeira as other economies. Nevertheless as an Archipelago it has specific determinants (namely energetic connections and low critical mass). Energy can be a threat or source of opportunities.

Strategic orientations in an integrated approach:

- ✓ Reducing the dependence on oil and diversifying by introducing natural gas and renewable energies;
- ✓ Completing important projects, planned or already in progress: hydro-electric projects in particular;
- ✓ Looking for potentials on a medium/large term horizon in the medium term: ethanol (sugar cane); geo-thermal; photovoltaic;
- ✓ Improving rational use of energy;
- ✓ Starting a sensitizing campaign to change the attitudes and behaviour in energy consumptions.

The introduction of natural gas is already a project (transported by ships and stored for distribution). However the question of critical mass can be decisive. The changeover to the use of natural gas in automobiles should be considered an important possibility (but has not been raised in the local meetings and interviews).

Investments in wind power and technologies of storage are important, especially in the context of the "Green Islands" project of the Azores. The connection with the University of Madeira would be extremely useful for the strategy of the university in this area.

The objective for Porto Santo is to become a "green island". It represents a strong ambition and requires a great coherence of aims, projects and interfaces: environment, renewable energies, sustainable development, durable tourism.

In Porto Santo various projects involving bio-combustibles (algae) experiments, biomass and wind energies are in progress or in the planning stages.

Porto Santo makes a good 'natural laboratory' for demonstrations or pilot schemes.

Objectives of the project	<p>Increasing significantly the contribution of renewable energy sources as well as reducing dependence on fossil fuels and lowering greenhouse gas emissions.</p> <p>Attain better performances in the Energy Systems and higher levels of efficiency.</p> <p>Create an area of knowledge and competences.</p>
Coordinator	Regional Government (Vice-Presidência)
Partners of the project	Government, EEM / Empresa de Electricidade da Madeira, University of Madeira and companies from mainland Portugal or abroad.
Analysis of the project according to the criteria proposed	<p>Launch new investments on energetic key-areas.</p> <p>Offer Madeira and Porto Santo as 'natural laboratories' for experiments and studies.</p> <p>Develop information and educational initiatives on energy attitudes and behaviour.</p> <p>Replicate the 'Green Islands' international project.</p>

4.8.2.3. Building up an international medical care cluster

This flagship-project has not been finalised yet. Details given here emerge from the interviews as well as from formalisation proposals by the expert.

Considerations are similar to those produced for the Azores analysis. Madeira and the Azores can either compete in attracting investors and competences or complementarities.

Like the Azores, Madeira has an important Diaspora which can be persuaded to invest in the home-island. As the Azores, Madeira has a degree course in Medicine: the first two years at the University of Madeira and the following years on mainland Portugal. The extension of the course should be considered and Madeira is the more likely candidate for this. This extension could be linked to a specialist medical cluster. The Azores could then become a centre of attraction (patients) and a centre of excellence in certain fields. The insurance companies would be partly interested in this project.

The difference to the Azores is the fact that in Madeira there is already a project to construct a new hospital in the near future if an efficient financing "formula" is found (a PPP?). It is an excellent opportunity to develop an ambitious internationalized project (including international markets, scientific partners and foreign medical doctors) with a Medical Care Cluster with all the strategic linkages referred to above. An internationalised hospital is itself a major asset for a tourist destination like Madeira.

The three fields that the future hospital in Madeira could invest in are: hereditary and allergic diseases; clinical tests; tropical diseases resulting from the climatic changes.

Objectives of the project:	<p>Take advantage of the new hospital project and enlarge its concept and impacts.</p> <p>Explore cost advantages to launch a new internationalised high value added activity.</p> <p>Convince Diaspora to invest in Madeira.</p> <p>Cross-fertilize university developments and RTDI facilities with business opportunities.</p>
Coordinator (possible)	Regional Government (Presidência or Secretaria Regional dos Assuntos Sociais)
Partners of the project	Regional Government, University of Madeira and investors
Analysis of the project according to the criteria proposed for the flagship projects	<p>The project has a strategic nature.</p> <p>It has impacts on the economic and social fabric. It helps to structure innovation-driven clusters and improves the relationship between businesses and RTDI centres and innovation support organizations. It also helps to create a critical mass of innovative and/or technology-based capacity.</p> <p>It corresponds to the following key-criteria for flagship projects:</p> <ul style="list-style-type: none"> ✓ it addresses critical challenges (identified in this Report) ✓ it is nuclear for the economic and social fabric and impacts development ✓ it relays and valorises local assets ✓ it has an innovative nature ✓ it invests in internationalization

4.8.2.4. Other projects with a potential for growth and a systemic impact

Other possibilities were mentioned during the interviews and meetings in Madeira.

They are strategic options and concerns rather than flagship projects. But some developments may emerge from these opportunities in the post-2013 period.

Five main stakes are mentioned:

- a sea cluster, biotechnologies and natural resources
- the University
- creative industries
- the Madeira Free Zone
- a Monitoring Satellites Centre

4.8.2.5. Sea cluster based on biotechnologies and natural resources

Details given here emerge from the interviews as well as from formalisation proposals by the expert.

Considerations are similar to those in the Azores analysis. Both Madeira and the Azores present morphological characteristics and climatic singularities that give rise to an exceptional biodiversity and a great variety of natural resources. That is also true for other islands and ORs (as mentioned in the recent (7th May, 2010) Memorandum Spain / France / Portugal – Canary Islands / Azores / Madeira).

For both, the concept of a 'natural laboratory' (see 'energy') is a real asset.

In both, investment in Biotechnologies should stimulate biodiversity and natural resources:

- ✓ a potential cluster which includes bio-prospection applied to the endemic and indigenous species,
- ✓ energy and water
- ✓ marine biodiversity (with strong connections with pharmaceutical industry, cosmetics and the synthesis of new materials).

Food and environmental safety is another potential field: control and local product linked to tourist demand, control and protection of the sea (pollution) but also energy production (algae).

The biotechnologies/natural resources/sea are a field, par excellence, for co-operation between the three RUP (Madeira, the Canary Islands, the Azores). A common strategy of research should be possible would be very advantageous.

Significant extension planned for the EEZ of Portugal - where the Azores and Madeira seas play a determining role – constitutes an opportunity to generate possibilities in several economic and scientific fields. A more powerful Fishing-Sea pole would seem an obvious project and could function as a flagship project. Contrary to the Azores the Fisheries Sector in Madeira is marginal and would need major restructuring and financial investments. As in the Azores an integrated approach is advisable: fisheries, transports and accessibilities, environment, research, innovation.

The University of Madeira should be involved in this project. But it does not have the competences of the Azores University – where the strong pole for deep sea research and submarine biotechnologies (hydro-thermal sources, live organisms) is emerging as a 'new generation of Biotech'.

4.8.2.6. Development and internationalisation of the University of Madeira **(along an integrated approach)**

The University of Madeira is potentially present in all projects described above. It is thus a transversal element in this development effort following new paradigms in which international connectivity and benchmarking are crucial. The University should follow globalisation objectives and principles and enhance the recruitment of international students. Partnerships with companies (local, national and international) are another critical element.

In the framework of the Carnegie Mellon / Portugal Program (launched under the initiative of the national Science, Technology and Higher Education) intense cooperation has emerged recently. The general mission of the Carnegie Mellon / Portugal Program is "to create new knowledge in key focused areas of information

and communications technologies by means of cutting-edge research, world class graduate education and a close connection with the Portuguese industry, thus placing Portugal at the forefront of science and innovation”.

Among other outcomes, this cooperation, in Madeira, has promoted the newly created “Madeira Interactive Technologies Institute” which basks in the success of the dual degree professional master’s program in human computer interaction. “The close relationship with Carnegie Mellon and various companies helped the University of Madeira to recruit top faculty staff and students from all over the world. The institute shall function as an autonomous academic department with the goal of sustaining a long-term collaboration with related institutes as Carnegie Mellon”.

However, the challenge of the impact of this cooperation and the UMA on the local economic fabric is still relevant. The accumulated knowledge has not generated business and employment by externalities yet; the dependence on a sole partner is also a disadvantage.

Strategic orientations in an integrated approach:

- ✓ Increasing international partnerships with the partners of reference (Carnegie Mellon, MIT) starting from the current experiment in TIC and Interactive Technologies with application to new fields (UMA identifies the nanotechnologies and energy).
- ✓ Attracting international qualified human resources (to acquire international acclaim for post graduate qualifications at UMA);
- ✓ Creating Innovation Institutes in strategic fields for post-graduation, doctorates and projects of RTDI with companies; a priority for fields such as games/entertainment and usability/user-friendly (e.g. i-pod, i-phone...).
- ✓ Increasing the links of the University with sectors applying biology (namely agriculture) and applying geology knowledge;
- ✓ Creating a technological course of specialization in fields with strong potentials;
- ✓ To look further into a systemic approach of university (UMA, public and private laboratories, companies, SDM/CINM...).

Madeira Tecnopolo and BIC should be strategic and instrumental partners of the university in its projects.

An effort must be made for the diffusion of entrepreneurship within the University in all scientific courses (not only in economics).

The extension of the degree in Medicine is planned for 2015 or 2016. At the present UMA provides only the first two years, the students continue their studies at the University of Lisbon. The new situation is a real opportunity. The choice of an international partner (an English school, given the traditional relations with the U.K. and the impacts on tourism) would be very important.

A problem of the University of Madeira (common with of the Azores) is the lack of critical mass for RTDI and top level teaching. Attracting Madeira-descendants located in particular in EUA/Canada, South Africa and Venezuela (400,000 or 500, 000 according to one estimate, 1,000,000 to 1,500,000 according to another) could help to overcome the problem of critical mass.

In addition to attracting top level teachers and candidates for post-graduation and doctorates, the internationalization of the University of Madeira also involve students

from the Portuguese-speaking African countries in particular Cabo Verde and Angola. But the key strategic value lies in the countries mentioned above.

The 'contract of confidence' established between the Portuguese government and the Portuguese universities ensured increased budgetary resources. Following that general 'contract' the University of Madeira has already signed its 'contract of development'.

4.8.2.7. A cluster of creative industries

Creative and Cultural Industries have some assets for economic valuable projects: there is a market constituted by the Diaspora (Europe, Venezuela, North America, Africa and Australia) with an emotional link to regional contents ('conteúdos'); 1 million visitors that can be used as testing ground; cultural actors and facilities exist in the Region; the University of Madeira is investing in Interactive Technologies and Nanotechnologies. The local television (RTP-Madeira, part of the public Portuguese TV broadcast) with its international network (RTP-International, with a large expansion on Diaspora) should be part of this project.

A Strategic Project of Internationalization of the Creative Industries of Madeira can be developed with three main objectives:

- ✓ To associate producers and creative people in a development strategy of an atomized sector;
- ✓ To invest in a internationalization program (with public support) for the active presence in international decision-making centres in creative industries (in various segments);
- ✓ To generate links and 'cross-fertilization' between tourism and cultural products using the tools of the digital economy and improving creative people's business capacities.

4.8.2.8. Development of the Madeira International Business Centre (CINM)

The development of the CINM / Madeira International Business Centre has natural outcomes, depending on the extension of the projects and on the strategies implemented.

CINM is under the regulation of Portuguese authorities (Central Bank, Insurances Regulatory Authority). It has developed a credible services and financial centre with a good international image. Advocacy and audit companies patronize CINM internationally putting their high competences and prestige at its disposal. They play an essential role in business affairs.

However some concerns are raised:

- Is it possible to go further without creating an offshore enclave activity?
- Could the capacity to attract international investors be greater than it is at present?
- Could the CINM take on the role of 'regional agency for investment' in general, benefiting from an accumulated competences basis?

- Which management model would be more adequate for the Centre – a passive intervention of the Regional Government (the present situation), acting as a ‘sleeping partner’, or an active and direct intervention (to develop public policies and strategies).

Strengthening the CINM in its four components (industries, international services, financial sector, registration of ships) and its connections with Madeira University and companies remains a crucial aspect for the future. Developing positive externalities with local activities, In particular, a major international investment in the industrial free zone with linkages with local companies and the university is a major challenge.

Crucial negotiations with the EC will be initiated in 2011/2012.

4.8.2.9. Satellite observation: facilities and services

This Centre (an investment of 86 million Euros to be located in the free industrial zone) will permit:

- ✓ Satellite location (“*rastreio*”/“*repérage*”)
- ✓ Sales capacity of satellite telecommunication services

Some potential links from externalities should be exploited.

4.8.2.10. Final remarks on possible flagship projects

Four key issues (from a global perspective) have to be emphasised as a basis for the flagship projects proposed above, namely:

- Tourism constitutes a fundamental activity and will remain an essential basis of the economy in Madeira, for at least the following reasons: it is founded on the assets of the Archipelago (nature, sea and climate); image in markets of reference; historical competences; it is a large provider of employment. A persisting negative downward jeopardizes the future of Madeira.
- More permanent and intense sources of growth are external (as they were in the past). It gives internationalization a strategic nature: tourism; cruises; university competences; health and RTDI. Growth in the Azores and Madeira have always needed an export basis (agriculture in the Azores, tourism and others in the future; tourism and international services in Madeira).
- Agriculture must be maintained at its current level in terms of share in the GDP and the working population; it is a part of the historical and national identity of Madeira and is a vital asset for maintaining the landscape and environment;
- Employment is an absolutely the greatest concern in the short and medium term, degradation of unemployment would disturb the balance of the social fabric and the conditions of development of tourism, and would lead to the marginalisation of certain social layers.

Finally, the Azores and Madeira are in the European ‘neighbourhood’. Therefore, even if outermost regions, this fact places both regions in a rather good position to

develop the projects referred to above (attracting human resources, setting up tourism of proximity, developing RTDI in partnership).

5. ANNEX A – Note on institutional and legal framework in French overseas departments

The French Outermost Regions are both French “*Départements*” (from 1946) and French Regions (from 1982). The 1982 law on “*decentralisation*” transferred to the “*Département*”/Region competences that previously belonged to the State. This transfer was further enlarged by laws in 2003 and 2004 which established that all territorial authorities could act in their field of competences (economic development, education, health, social benefits, social housing, culture, transport). However, the Region has a role of coordination for what regards economic development, and the “*Département*” for what regards social benefits.

National laws and regulations apply to each French Outermost Regions («regulation identity» principle). However, they can benefit from adaptations. A number of law provides adaptations taking into account the specific situation of the French Outermost Regions: Loi d’orientation pour l’Outre Mer (LOOM, 2000), Loi de programme pour l’Outre Mer (LOPOM, 2003), Loi pour le développement économique de l’Outre Mer (LODEOM, 2009).

Four main areas of adaptation are concerned, favouring their economic and social development:

Taxation regulations

- for what regards VAT, the French ORs are considered as non-EU territory;
- a reduced VAT rate (8.5% in Martinique, Guadeloupe and Réunion) and no VAT in French Guiana.
- a specific tax on imports: «*octroi de mer*» and additional *octroi de mer* (a regional tax). Created in 1670, *l’Octroi de Mer* is a tax on imported goods in French Outermost Regions, with the aim to protect the local production from the outside competition. The rate and base differs from one region to another, from one product to another. In January 2005, the *Octroi de Mer* was prolonging until 2015.
- a reduced income tax on revenues (30% in Martinique, Guadeloupe and Réunion; 40% in French Guiana)
- a reduced income tax on businesses
- tax credit for investments (défiscalisation) (Dispositif Girardin until 2012 and loi Scellier Outre-Mer until 2017), between 25% and 60%.
- Free Zones (*zones franches globales d’activités*) since 2009. The LODEOM make possible the creation of Free Zones for developing the regional competitiveness by reducing the production costs and facilitating the endogenous development of businesses.

Free Zones regime includes, for the enterprises, of Guadeloupe, Martinique and Réunion, a deduction of 50% of their fiscal base (company tax, land tax and *taxe professionnelle*). All companies are eligible. In addition, for priority sectors of development (RTDI, ICT, tourism, environment and renewable energy, agri-nutrition), the deduction grows up to 80%. In French Guiana and in the Southern islands of Guadeloupe (Saintes, Marie Galante, La Désirade), the deduction is 80% of the fiscal base.

Price regulation: regards sectors in which competition is considered as insufficient: oil products, flour, rice, books, medicines, urban transportation, etc.

Employment and social benefits: a large set of measures aimed at favouring employment, including exemptions from employers' contributions. In addition, salaries of public officers are 35% higher than in "Metropole".

Public property: the maritime public area is enlarged. *La règle des cinquante pas géométriques* defines a legal status which can apply to plots of land located on the coast of French Outermost Regions.

The impact of tax benefits on economic growth was recently challenged as contributing mainly to tax evasion by the wealthiest taxpayers. However, it is generally considered that it has significantly favoured investment (in particular in the tourism sector), and that, if it was suppressed, it should be replaced by grants.

Civil servants benefit from higher salaries than in the mainland (+35%), a situation which is widely considered as responsible for high prices in the islands.

There has not been so far an in-depth evaluation of the impact of tax benefits, tax reductions and exemption from employers' contribution on the economic performance of the French Outermost Regions.

Globally, the autonomy of the French ORs remains very limited and the measures listed above have to be considered much more as adjustments or adaptations of the national legislation and taxation system than as a truly territorial legal and taxation framework.

6. ANNEX B – Note on the evaluation of POSEI

The outermost regions (ORs), including the Canary Islands (Spain), the Azores and Madeira (Portugal) and the 4 French Overseas Departments (DOM) (Guadeloupe, French Guiana, Martinique and Réunion) have an exceptional geographical situation, in comparison to the rest of the EU, due to their remoteness, insularity, small size, topography and specific climate. These specific features give rise to a series of socio-economic difficulties (relating to the supply, the competitiveness of agriculture, etc.) which, since 1991 have justified, the implementation of specific measures to support agriculture, through the “Programmes d’Options Spécifiques pour l’Eloignement et l’Insularité” (POSEI) in the ORs and a specific program in the SIAS in 1993.

The goal of this evaluation is to assess, from 2001 to 2008 in the ORs, the impact of the implementation of the main instruments of these programs:

- Specific Supply Arrangements (SSA)
- Measures to assist Local Agricultural Products (MLAP).

The evaluation revealed:

- The diversity of the implemented measures (SSA and the MLAP including direct aid to producers, processing, marketing and inter-branch supports, etc.),
- The high number of supported sectors (sugar, bananas and other fruit and vegetables, livestock production, etc.),
- The different levels of support applied by the territories for similar measures,
- The diversity of the products benefiting from the SSA.

1. SSA, MLAP AND THEIR EFFECTS

Specific Supply Arrangements (SSA)

The SSA has two main goals:

- to guarantee supply to ORs of products essential for human consumption, for the manufacture of other products and as agricultural inputs;
- to mitigate the additional costs arising from remoteness, insularity and the outermost character of the territories under review.

This instrument thus aims at reducing these handicaps, which increase the supply costs and the consumer prices and reduce the profitability of local agricultural productions.

Within the ORs, SSA consists of:

- an aid to operators that introduce EU products, in order to compensate for the additional costs;
- an exemption of custom duties for imported products from third countries.

Effects of the SSA on supply

In all the ORs, the implementation rate (the ratio between volumes defined by the SSA forecast supply balance and the actual supplied volumes) **are high** (over 74% both before and after the reform for all the ORs).

For each type of product, the rate of need coverage (ratio between actual SSA volumes and total volumes entering the ORs) **is very unequal and reflects the priorities set by each territory**. For cereals, the rate of need coverage is high in all the ORs. Since the reform, it has reached 77% in the Canary Islands, 82% in Guadeloupe, 84% in Martinique, 66% in French Guiana and 73% in Réunion. In the Canary Islands after the reform, in addition to good coverage of cereal needs, the SSA also significantly covers the needs for direct human consumption and the agro-food industry with regards to meat (70% after the reform) and oils (69%). These good cover rates have sparked off discussions about the competition with local meat and milk productions. In the French DOM, needs of the agro-food industry are significantly less well met, except for cereals (in the 4 French DOM) and oils in Réunion (ratio of 64% after the reform).

The SSA helps agricultural producers and the agro-food industry to build up stocks and to supply the markets during the frequent breaks in supply. **Therefore the SSA plays an important role in ensuring supply to the end users in the ORs**. The effects of the SSA are more significant when used for products aimed at covering the needs of the agricultural and/or agro-food sectors. The effects are more limited when the SSA products are intended to direct consumption needs.

SSA and additional costs:

The additional costs that operators have to cope with can be broken down into additional transport costs, storage and industrial additional costs.

The evaluation reveals that **additional costs fluctuate and are dependent on worldwide changes in transport costs**. The latter are very volatile, especially maritime freight in bulk, where as the SSA supports remain steady. Therefore, from one year to the next, the aid compensation rate for additional costs fluctuates widely.

SSA advantages to end users

The objective of the SSA advantages is to reduce the price of agricultural products essential for human consumption, for the processing of other products, and as agriculture inputs. For this purpose, they should be passed on by direct beneficiaries to the end users (agricultural producers, 2nd processors and consumers depending on the type of SSA products).

End user prices in the ORs have not always been of an equivalent level to those on the mainland, because the aid compensates only a part of the additional costs. Moreover, not all raw materials benefit from the SSA, and the advantages are not always fully passed on.

Effects of the SSA on economic and social developments

One of the main effects of the SSA, is to support the agro-food industry (AFI). The aid compensates a significant part of the production costs of the AFI and supports their sustainability in a context of competition with imported products.

The SSA effect on the AFI is very important: as AFI is an essential sector for jobs creation and regional consumption reducing the importation dependency and the prices at a regional level. Furthermore, it plays a significant role in securing supply to the territories. Finally, the SSA aid diminishes the animal feeding stuff prices and, by the way enhances the profitability of local animal breeding activities.

SSA and EU import arrangements

SSA volumes imported with an import duty exemption are low (0% to 21%) in ORs, for several reasons: existence of traditional commercial relations which favour imports between the ORs and continental EU as well as transportation lines; small supply from the ORs on international markets; quality and EU standards requirements. Furthermore, because customs duties on certain products have been reduced (the case of soya cakes and corn), the operators can decide to no longer use the SSA and so avoid the necessary administrative workload.

Measures to assist Local Agricultural Products (MLAP)

The MLAP aims to maintain the supported sectors and, in the most favourable cases, to develop them. However, these achievements are not the only result of MLAP. Indeed, they are also due to the SSA support, especially in animal sectors, as well as other types of support for agriculture and rural development in these territories.

Thus the overall effectiveness of the MLAP⁴² support in terms of competitiveness, for the 24 studied sectors⁴³ can be considered as:

- Improved for 16 sectors, representing 66% of the overall sectors;
- Slightly or not improved for 8 sectors, representing 34% of the overall sectors.

It can be considered that **the POSEI programs are in general effective in improving the competitiveness of local production, even if it is not for all the sectors and each territory.**

Concerning the sectors, the support is the more effective for:

- The export sectors: banana and sugar which benefit from a very strong support, and obtain good results,
- The bovine meat sector and, to a lesser extent, the milk sector.
- The fruit and vegetable sector is the least effectively supported, in spite of its good potential.

⁴² The number of products and/or sectors that have been studied in each territory had to be restricted due to the high number of the MLAP and of supported sectors in the POSEI. Their selection was based on their relative weight in terms of agricultural gross value. The products underlined are banana, sugar, Bovine meat, bovine milk and fruits and vegetables.

⁴³ Within the overall regional territories

The MLAP maintain, and sometimes even develop, the agricultural sector⁴⁴, by mitigating negative factors such as: high conflict of use for land, small holdings often run by part time farmers, a difficult climate, remoteness, small sized market, strong competition from imported equivalent products. Moreover, agriculture is often an important pillar of these economies and has a major social role. The instruments established by the POSEI programs are the same as the EU instruments within the continental regions (ex: price support, production aid, aid to dispatch local production outside the territory, etc.). It is definitely justified to use these instruments in programs, whose explicit objective is to guarantee the continuation and the development of agricultural activities and implicitly to increase the market shares of the agriculture (at least on the local market). It should however be stressed that the structural handicaps of the ORs mean that a great number of agricultural activities would not be (or very poorly) profitable without assistance.

The budgets are much higher for large export sectors, in particular for banana and sugar, than for other sectors. These two sectors are important in terms of job creation, maintenance of industrial structures, trade balance and flow of exports (effect on the total cost of freight, if the boats return empty). These two sectors (banana and sugar) were reformed recently and need clear messages on their future in terms of support. as operators (producers, operators of marketing and/or processors) have made recent investments financed by loans.

MLAP effects on producers income

In the majority of the sectors under review, **the POSEI supports have an important effect on income**: they allow the family farm income to be maintained above 5,000 €/ha or 500 €/head, except in two cases:

- sugar cane sector in Réunion where the income level is 2,360 €/ha.
- banana sector within the French DOM, where the FNVA (farm net value-added) is around 3,000 €/ha in Guadeloupe and 4,500 €/ha in Martinique (according to data provided by POs concerning costs, and statistical data on the yield per ha).

Effect of POSEI aid on income strongly varies depending on the sector, profitability of which (without support) is very variable. Finally, the 2006 POSEI reform has generated, an increase, and its support instruments had impact on producer incomes.

2. CONTRIBUTION OF POSEI PROGRAM TO DIVERSIFICATION OF RURAL ACTIVITIES AND TO THE DEVELOPMENT OF RURAL AREAS

Diversification of rural activities

POSEI programs, elaborated by local authorities, are rarely made to diversify producer incomes. The measures of the POSEI rather indirectly benefit to specialization. **According to the “Farm Structure Survey”, tendencies towards diversification can be observed on the one hand in French Guiana, Martinique**

⁴⁴ A few sectors in the OR are presently profitable without POSEI support (positive margin over total costs): the banana sector in the Canary Islands, bovine milk and meat sectors in the Azores, the vegetable sector in Madeira, fruit and vegetable sectors in the DOM.

and Réunion. On the other hand, in Guadeloupe, the Azores and the Canary Islands, there are no such tendencies. There is no clear tendency in Madeira.

Employment

The number of jobs in the agricultural sector is decreasing in most of the ORs, and in a higher degree than in their respective mainland. In spite of the decline in terms of jobs, agriculture and the agro-industry are nevertheless critical.

Moreover, it is clear that **the POSEI significantly contributes to the maintenance of agriculture and agro-industry activities in the overall ORs, and to maintain jobs in remote areas including** indirect employments, which are integrated as coming out from agriculture sector.

Environment

Generally, the POSEI was not set up as an environmental protection objective. Nevertheless it has been implemented within the framework of the cross compliance which constraint producers to integrate environmental rules, animal wellbeing charts, etc.

Indirect effects can however be identified. **By making a choice between different types of instruments, the POSEI can encourage intensification and/or specialization.**

Moreover, POSEI plays an essential role in the maintenance of landscapes. Actually, it complements the RDPs, which include various measures targeting environment issues. Finally, the MLAP, are improving self supply within the ORs through local productions, limiting external supplies, and transportation of goods, etc... and therefore limiting GHG emissions, and climate change.

Guiana

Guiana is the smallest user of the scheme with only 9,500 t. However the help increased of 68% after the reform. In the case of cereals (the main products benefiting from the SSA), the SSA aid covers between 50% and 80% of the transport cost, of multiple unloading and storage (in 2007). It does not cover industrial additional costs, which are covered by other schemes. According to the study conducted by ODEADOM, a few products are entitled to aid that overcompensates the transport costs by a couple of percent. The volume of imports benefiting of custom duty exemption under the SSA compared to the total volume benefiting of the SSA is, after the reform close to 0%. The SSA moreover serves interests of end users; for the animal feeding stuff; the SSA aid reduces the production cost per ton from around 10 to 27% in 2008.

The effectiveness of the MLAP is highly improved for bovine meat (but not for fruits and vegetables), and, like in all the DOM, for producer incomes. Indeed, for cane, banana, bovine meat and bovine milk sectors, the family farm income without the support POSEI represents 100% of the family farm income.

Réunion

In Réunion the volumes of products which benefit from the SSA are 227,000 t (+20% since the reform). No product imported under the SSA is in competition (importation of milk powder could possibly lead to competition). In the case of cereals (the main products benefiting from the SSA), the SSA aid covers between 50 and 80% of the transport cost, of multiple unloading and storage (in 2007). It does not cover industrial additional costs, covered by other schemes. According to the study conducted by ODEADOM, a few products are entitled to aid that overcompensates the transport costs by a couple of percent. The volume of imports benefiting of custom duty exemption under the SSA compared to the total volume benefiting from the SSA is, after the reform on average 21%.

The SSA doesn't support products intended for direct consumption. This could be seen as a result of the high competition between local productions and imports, which seem to contribute to limiting consumer food price increases. For flours, the SSA aid for wheat has led to a reduction in the production cost of one ton of flour by 13%.

The effectiveness of the MLAP is highly improved for sugar, bovine meat and bovine milk (it is slightly improved for fruits and vegetables). Like in all the DOM, for cane, banana, bovine meat and bovine milk sectors, the family farm income without the support POSEI represents 100% of the family farm income..

Guadeloupe

In Guadeloupe the volumes of products which benefit from the SSA are 52,250 t, showing no significant variation after the reform. In the case of cereals (the main products benefiting from the SSA), the SSA aid covers between 50 and 80% of the transport cost, of multiple unloading and storage (in 2007). It does not cover industrial additional costs, covered by other schemes. The volume of imports benefiting of custom duty exemption under the SSA compared to the total volume benefiting from the SSA is, after the reform close to 0%. According to the study conducted by ODEADOM, a few products are entitled to aid that overcompensates the transport costs by a couple of percent. For the animal feeding stuff, the SSA aid reduces the production cost per ton from around 6 to 25% in 2008. For flours, the SSA aid for wheat has led to a reduction in the production cost of one ton of flour by 20%.

The effectiveness of the MLAP is highly improved for banana, sugar, bovine meat and bovine milk, (but it is slightly improved for fruits and vegetables) and on producer incomes. Indeed, for cane, banana, bovine meat and bovine milk sectors, the family farm income without the support POSEI represents 100% of the family farm income.

Martinique

In Martinique, the volumes of products which benefit from the SSA are 53,200 t, showing a 19% increase since the reform. There is no product imported under the SSA which is in competition. In the case of cereals (the main products benefiting from the SSA), the SSA aid covers between 50 and 80% of the transport cost, of multiple unloading and storage (in 2007). It does not cover industrial additional costs, covered by other schemes. According to the study conducted by ODEADOM, a few products are entitled to aid that overcompensates the transport costs by a couple of percent. The volume of imports benefiting of custom duty exemption under the SSA compared to the total volume benefiting from the SSA is, after the reform close to 0%. For the animal feeding stuff, the SSA aid reduces the production cost per ton from around 6 to 25% in 2008. For flours, the SSA aid for wheat has led to a reduction in the production cost of one ton of flour by 20%.

The effectiveness of the MLAP is highly improved for banana, sugar, bovine meat and bovine milk, (but it is slightly improved for fruits and vegetables), and on producer incomes. Indeed, the family farm income without support is highly negative. The POSEI supports represent 100% of the family farm income cane, banana, bovine meat and bovine milk sectors.

The Canary Islands

The Canary Islands are the main SSA user between OR, with 790,500 t of products benefiting from this scheme (-3% compared to the situation before the reform). The support fully compensates transport and storage costs and the volume of imports benefiting of custom duty exemption is on average 12%.

The SSA has a real impact on end users consumption. First, the SSA is likely to affect consumer prices in this territory. Then, for the animal feeding stuff, it reduces the production costs per ton from around 23 to 26% in 2008 and contributes for milk beverages to diminishing the production cost by 8%.

The effectiveness of the MLAP is highly improved for a few sectors, as banana, bovine meat and bovine milk (but it is very slightly improved tomatoes). Its effects on producer incomes are very variable. It can represent around 50% in the case of bananas and less for other sectors which have a positive income without any supports, like the tomato sector and the meat bovine sector (which also faces difficulties today).

Madeira:

In Madeira, the volumes are 82,300 t of products benefiting from the SSA (-15%). This is the only territory where the scheme shows a significant decrease, due to local authorities, withdrew UHT milk from the SSA forecast supply balance in order to avoid competition with local milk production, and a decrease in the numbers of livestock, which in turn reduces cereal needs.

The SSA fully compensates the transport and storage costs of all products and the industrial additional costs for a few products (cereals in bulk for human consumption, fruit juices and milk powder). For some products (butter, cheese and milk powder) the aid is overestimated. Furthermore, the volume of imports benefiting of custom duty exemption under the SSA compared to the total volume benefiting from the SSA is, after the reform, on average 9%.

The aid has no impact on consumer prices; the upward trends of the price index are higher than the national index trend. But it reduces the production costs per ton from around 16 to 25% in 2008.

The effectiveness of the MLAP is highly improved in Madeira for banana and bovine milk in

The Azores

In the Azores, the volumes are 174,400 t of products benefiting from SSA (-3% since the reform). No product imported under the SSA is in competition. The aid fully compensates the transport costs of cereals. The volume of imports benefiting of custom duty exemption under the SSA compared to the total volume benefiting from the SSA is on average 13%. The measure however seems to have a negative impact on end users. Indeed, the upward trends of the price index are higher than the national trend. This might be considered as an effect of the SSA.

The effectiveness of the MLAP is highly improved for sugar, bovine meat, pineapples and bovine milk and on producer incomes. Indeed, for the farm animal's reproduction sector, the family farm income without support is highly negative. The POSEI supports represent 100% or more of the family farm income. The family farm income derives mainly from the POSEI supports. The milk sector provides producers a positive income without supports.

7. ANNEX C – Persons interviewed

Guadeloupe

structure	contacts	Lieu du RDV	observations
Conseil régional de Guadeloupe	-Mme Sylvie VARDE, directrice de la stratégie et des interventions économiques - Mme Vanessa WECK, chef du service recherche et innovation	Conseil régional de Guadeloupe Avenue Paul Lacavé 97100 Basse-Terre Tel: 0590.80.41.51	RDV en présence de Mme Varde, et en visioconférence avec Mme WECK, hors du département.
Direction régionale de l'industrie, de la recherche et de l'environnement de Guadeloupe (DRIRE)	Mr Ludovic DE GAILLANDE, adjoint au responsable départemental chargé du développement économique	DRIRE Antilles Guiana - Antenne de Guadeloupe 552 rue de la Chapelle - ZI Jarry 97122 Baie-Mahault tél: 0590 38 03 61	
Délégation Régionale à la Recherche et Technologie (DRRT)	Mme Lisiane KECLARD-CHRISTOPHE, déléguée régionale de la DRRT	DRRT 20, rue de la Chapelle - ZI Jarry 97122 Baie-Mahault Tel: 05 90 38 03 56	Locaux communs avec la DRIRE
Chambre de commerce et d'industrie de Pointe-à-Pitre (CCI)	Monsieur Mathias BINI, chargé de mission à l'observatoire économique de la CCI	CCI de Pointe à Pitre Rue Félix Eboué 97110 Pointe à Pitre Tel:0590 93 76 00	Autres services de la CCI présents à l'entretien selon les disponibilités.
Association des Moyennes et Petites Industries de Guadeloupe	- Mr Christophe WACHTER, secrétaire général des MPI, - Mr Franck DESALME, Président MPI, - Me Jean JOACHIM, délégué général des MPI.	AMPI Centre d'Affaires ACTUALIS, 44 rue Henri Becquerel ZI de Jarry 97122 Baie-Mahault Tel: 0590 26 98 61	
Agence régionale de développement économique de Guadeloupe (ARDEG)	Mr Charly BIONDEAU, directeur général	Maison régionale des entreprises Imm. Le Squale ZAC de Houelbourg – ZI de Jarry	

Guiana

Name	Organisation	Position
Mme FLORY	SGAR	Chef du Département Europe
M. GATTO	DRAM	Directeur
M. CASSIUS	DRAM	Directeur adjoint
Mme OSTRORERO	Conseil régional	6 ^{ème} Vice Présidente, en charge du développement économique
M. VELINOR	Conseil régional	Chef du département économie et innovation
M. LEMOINE	SGAR	Secrétaire général aux Affaires régionales

M. AUBIN	MEDEF	Président
M. GERMAIN	MEDEF	Administrateur du MEDEF, chef d'entreprise (audiovisuel et système d'information)
M. IBOS	MEDEF	Vice-président, chef d'entreprise (commerce)
M. LOISEAU	Caisse des Dépôts et Consignations (CDC)	Directeur régional
M. SAGNE	Conseil régional	Chef du Département Développement territorial
M. CHANTRE	SGAR	Chargé de mission Aménagement du territoire
Mme GOMIS	SGAR	Chargée de mission Développement économique
M. BUDOC	Conseil régional	Elu régional, Président de la Commission Coopération régionale et Affaires européennes, Directeur de l'Aéroport (CCIG)
Mme TCHUNG-MING	Conseil régional	Chef de la Mission Coordination et Suivi des PO et CPER
M. ARON	Conseil régional	Directeur général adjoint –Pôle Affaires européennes et coopération régionale
M. VASSAS	DRIRE	Chef de division - Industrie
Mme GAUTIER	Mission Guiana du CNES	Chargée de mission Développement économique
Mme BALLARIN	DDTEFP	Directrice déléguée
Mme CHRETIEN	DDTEFP	Directrice adjointe – Mission d'Appui aux Affaires européennes et régionales
M. BOULLANGER	MPI (Moyennes et Petites Industries)	Président, chef d'entreprise (Caresse Antillaise – agro-transformation)
M. Ernest PREVOST	MPI (Moyennes et Petites Industries)	Administrateur de la MPI, chef d'entreprise (Rhum Prevost)
M. POLLIEN	MPI (Moyennes et Petites Industries)	Administrateur de la MPI, chef d'entreprise (conseil aux entreprises)
M. BOURGUIGNON	MPI (Moyennes et Petites Industries)	Chargé de mission MPI
M. LUBERT	Guiana Technopole	Directeur par intérim
Mme VIOT	Guiana Technopole	Chargée de communication Pôles de compétitivité
Mme PREVOST-MADERE	CGPME	Présidente, chef d'entreprise (transport collectif)
M. MADERE	CGPME	Vice Président, chef d'entreprise (pêcherie)
M. HUISMAN	Institut d'étude supérieur de la Guiana – IESG (Université des Antilles et de la Guiana) Initiative pour une Recherche Interdisciplinaire sur les Systèmes et Territoires Amazoniens	Directeur de l'IESG et Président de l'IRISTA
M. LACOMBE	DRRT	Délégué Régional
M. SATGE	Agence française de développement (AFD)	Directeur régional
Mme BONJOUR	CCI de Guiana	Responsable de la Maison de la Forêt et des Bois de Guiana
Mme VERNEYRE	DIREN	Chef du service Eaux et milieux aquatiques, risques et déchets
M. QUENTIN	DRTPA	Délégué régional au Tourisme, au Commerce et à l'Artisanat

M. BIRONNEAU	Atout France	Délégué régional de l'Agence de développement touristique de la France
M. HORATIUS-CLOVIS	INSEE	Responsable interrégional Antilles-Guiana - Démographie
M. HURPEAU	INSEE	Chargé d'études
Mme MATHURIN-BROUARD	Conseil régional	4 ^{ème} Vice Présidente, en charge de la coopération, du patrimoine et de la culture, et de l'intercommunalité
Mme. VICTOR	Conseil régional	Chef du département Coopération régionale (INTERREG)

Réunion

Personnes, institutions et organisations rencontrées	lundi 03 mai 2010	mardi 04 mai 2010	mercredi 05 mai 2010	jeudi 06 mai 2010	vendredi 07 mai 2010
Nombre d'institutions et d'organisations	6	8	7	8	7
Nombre de personnes	23	12	8	10	11
08H00/09H00	8h30/9h30 SGAR (Jean Ballandras, Guyslaine Charier, Evelyne Mercier), Conseil général (Bruno Oudard), AGILE (Serge Joseph)	ADEME: Philippe Beutin		CCIR: Mohamed Ahmed (Directeur général des Services)	10h00/12h30 REUNION ECONOMIQUE: Jean-François Moser (Président, Agence de Développement), Germain Gulizgoff (SG, Réunion économique), Bernard Tillon (Fédération BTP), Anita Germond-Masson (MEDEF), Jérôme Isautier (MEDEF), Sandrine Durand-Roux (MEDEF), Philippe Rousseau (ARTIC, MEDEF), Christiane Albert (Syndicat de l'importation), Philippe Arnaud (ARTIC, MEDEF), Françoise Delmont-De Palmas (ADIR)
09H00/10H00		Direction régionale du Tourisme: la réunion n'a pas eu lieu	Direction régionale de l'Environnement: Christian Léger, Secrétaire général		
10H00/11H00	9h30/11h00 AGILE (Serge Joseph et Bruno Bertil)	Direction de l'Agriculture et de la Forêt: Michel Sinoir (Directeur)	Direction régionale de l'Industrie: Damien Huot Marchand (Division Développement industriel et technologique)	CRITT: Gilles Ham Chou Chong (Directeur)	
11H00/12H00	DTEFP: Denise Hong Hoc Cheong (Directrice déléguée du Travail), Philippe Caillon		Direction régionale des Affaires maritimes: Jean-Marie Coupu (Directeur)	TEMERGIE: la réunion n'a pas eu lieu (Directeur à Paris pour le concours "grappes d'entreprises")	
12H00/13H00				12h30/13h30 IEDOM: Arnaud	

13h00/14h00	13h30/15h30 Conseil régional: David Laurion (Vice-Président Aménagement et	INSEE: Pascal Chevalier (Directeur régional), Claude Parain (Service Etudes et diffusion)		Bellamy-Brown (Directeur), Yann Caron (Directeur adjoint), David Perrain (Service Etudes)	
14h00/15h00	Economie), Patrick Guillaumin (DGA), Jean-Claude Futhazar (DGA), Candida Aldehuelo (chargée de	CESR: Jean- Raymond Mondon (Président), Guy Dupont (Vice- Président, FEDOM)	PIROI (Croix Rouge): Christian Pailler (Chef de Délégation régionale), Melissa Commins	Table ronde Université et grands organismes de recherche: Joaquin Martinez (CHR-Directeur de la Recherche, de l'Innovation et de	CRPMEM (Comité régional des Pêches): Pulchérie Meralli-Ballou (SG)
15h00/16h00	mission Europe), Mme. Fock (chargée de mission Recherche et innovation), Sylvie Lemaire (Directrice Affaires économiques et TIC)	AFD: Philippe Leboucq (Directeur adjoint), Valérie Driot (Chargée de mission)	DDE: Christophe Huss (Service Aménagement et Prospective	l'Enseignement), Gilles Mandret (CIRAD-Directeur régional), Christophe Celerier (CYROI)	SGAR + Condeil Régional + Conseil général + AGILE Restitution de la mission
16H00/17H00	Conseil Général: Ismaël Locate (DGA Management et Europe), Bruno Oudard (Directeur, Développement rural, Agriculture et Forêt), Sylvain Garbal (Patrimoine), Jean- Claude Laffin (Directeur, Patrimoine), Jean- Jacques Fung (Directeur, Déplacements et Voirie), M.-Lourdes Lebrun (Finances), Sébastien Piffarely (DDRAF, Europe), Mickaële Quelo (Eau), Michel Courteaud (Eau), Jean-Claude Pitou (DGA Développement)	CHAMBRE DE METIERS ET DE L'ARTISANAT: Alçay Mourouvaye (Secrétaire général adjoint), Jacques Maunier (Directeur, Développement économique), Nadjib Vali (Etudes et Prospective)	REUNION ENTREPRENDRE: Stéphane Laoussing (Chargé de mission)	QUALITROPIC: Françoise Delabaere (Directrice)	
17H00/18H00		CHAMBRE D'AGRICULTURE: Jean-François Apaya (Directeur général des services)		DRRT: Gilles Lajoie	

18H00/19H00			FEHAP: Christian Bonneau (Directeur général de la Fondation Père Favron)	TECHNOPOLE REUNION: contact téléphonique avec Elizabeth Peguillan (Directrice) à 18h15	
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Martinique

Nom	Organisation	Position
M. DE GENTILE	CCI	Vice-président
Mme ANDRE	CCI	Directeur de cabinet du Président
Mme MASTON GOSPODNETIC	CCI	Directrice de la Direction de l'accompagnement des entreprises
M. BRIVAL	ADEM	Délégué général de l'Agence de développement économique de la Martinique
Mme CONCONNE	Conseil régional	Première Vice Présidente du Conseil régional
M. CELIMENE	Université (UAG) / CEREGMIA	Directeur du Centre d'Etude et de Recherche en Economie, Gestion, Modélisation et Informatique Appliquée
Mme ANGEON	Université (UAG) / CEREGMIA	Maître de conférences - Chercheuse au CEREGMIA
M. MAGDALOU	Université (UAG) / CEREGMIA	Maître de conférences - Chercheur au CEREGMIA
M. GRANVERKA	Université (UAG) / CEREGMIA	Doctorante au CEREGMIA
M. ANGE-LEVI	Université (UAG) / CEREGMIA	Doctorant au CEREGMIA
Mme ANGELO	Université (UAG) / CEREGMIA	Doctorante au CEREGMIA
M. MARQUES	UAG-CEREGMIA / Comité Martiniquais du Tourisme (CMT)	Chargé de mission au CMT / Professeur associé au CEREGMIA
M. PARA	INSEE	Chef du service régional de Martinique
M. FROJOT	INSEE	Chargé de mission / Chercheur associé au CEREGMIA
M. TROGNON	DDTEFP	Directeur de la Direction du Travail, de l'Emploi et de la Formation Professionnelle
M. RICHOL	CGPME	Président
Mme CONCY	CGPME	Déléguée générale
M. COMTE	MEDEF	Président
M. AUBERY	MEDEF	Président de la Commission Economie
M. DERSION	Pépinière d'entreprises CHRYSALIA	Directeur de la pépinière (CACEM)
M. GESTEL	Technopole de Martinique	Directeur de l'ITEC (service Innovation et entreprise de la CACEM) et du CEEI
M. AURORE	Communauté d'Agglomération du Centre de la Martinique (CACEM)	Directeur général des services
Mme DEFORT	Communauté d'Agglomération du Centre de la Martinique (CACEM)	Directrice du développement économique
M. ANDRIEU	DRAM	Directeur régional de la Direction régionale des Affaires maritimes
Mme ROCHEFORT	PARM	Directrice du Pôle Agro-alimentaire régional de Martinique
M. MARIE-JOSEPH	AMPI	Président

M. CRESTOR	AMPI	Secrétaire général
M. CHABRIER	PRAM / CIRAD	Directeur du CIRAD et du Pôle de Recherche Agro-environnementale de la Martinique
Mme VALETTE	CIRAD	Affaires financières
M. SAINTE ROSE	SGAR	Adjoint au Chef du Département Europe
M. CHARLERY-ADELE	DRIRE	Adjoint au responsable départemental chargé du développement industriel
M. PIERRE-LOUIS	Préfecture / SGAR	Chargé de mission pour le développement économique et social, l'emploi et la formation
M. CRUSOL	Conseil régional	Vice Président du Conseil régional, Président de la Commission Affaires économiques
M. CHOMET	Conseil régional	Vice Président du Conseil régional, Président de la Commission Développement durable, Transport, Energie

Canary Islands

NOMBRE	CARGO	ENTIDAD	DIRECCIÓN	TEL
María del Pino Betancor Linares	Jefa de Sección Programas Europeo Cooperación	Dirección General de Planificación y Presupuesto -Consejería de Economía y Hacienda	C/ Tomás Miller, 38 2ª planta	928 303 000 / (Ext. 84238)
Esther Lidia del Toro Cáceres	Directora	Instituto Canario de Estadística (ISTAC)	C/ Luis Doreste Silva, 101-7ª	928293724
José Cristobal García	Coordinador del departamento Económico	Confederación Canaria de Empresarios	C/ León y Castillo, 54 – 2ª	928 383 500
Antonio López		ITC	C/ San Cebrián, 3 – 6º planta	928 379 879
José Manuel Soria	Vicepresidente del GC	Vicepresidencia del Gobierno de Canarias.	en la Plaza Dr. Rafael O'Shanahan 1	928 452 101
Javier Mariscal Anaya <u>reemplacé par Cosme Garcia Falcon</u>	Consejero Delegado Director Gerente	PROEXCA Sociedad de promoción económica de Gran Canaria INFECAR	C/Emilio Castelar, 4 - 5ª planta Avda. de la Feria, nº 1	606 735 893
Jesús Velayos Morales	Secretario General	ITC	C/ Cebrián 3	928 379 879
Ildfonso Socorro Quevedo	Dir. Gnrl de Astos. Emcos. con la UE	Gobierno Autónomo de Canarias	C/ Muelle de los Vapores, s/n – 2ª planta.	928 47 22 18
Fernando Redondo Rodriguez,	Président Conseil économique et social	Consejo Económico y Social de Canarias	Plaza de la Feria (entreplana) Edificio Marina Las Palmas de Gran Canaria.	928 384 932 /63

Rosa Rodríguez Díaz	Viceconsejera	Viceconsejería de Hacienda y Planificación	C/ Tomás Miller, 38 – 4ª planta	928 303 000
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NOMBRE	CARGO	ENTIDAD	DIRECCIÓN	TELÉFONO
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Elsa Casas Cabello,	Comisionada de Acción Exterior,	Comisionada de Acción Exterior	Avda. José Manuel Guimerá, nº 10 Edif. M2, 2ª	922 476 623
Fernando Segura Cebada	Servicio de Estudios, Análisis Sectorial y Coordinación	Cons. de Agricultura, Ganadería, Pesca y Alimentación	Avda José Manuel Guimerá, 8 - 4º P. Múltiples II	922 476 527
Ernesto Aguiar Rodríguez Ricardo González	Director General de Desarrollo Rural Jefe del Servicio de Estructuras Agrarias y Desarrollo Rural	Cons. de Agricultura, Ganadería, Pesca y Alimentación.	Avda José Manuel Guimerá, 8 -. Múltiples II	922 476 765
Yurena Carrillo, Eulalia García, Graciela Castañeira	Rel. Laborales, Adjta Sctrio Gral., Economista	Confederación de Empresarios de Tenerife (CEOE)	Rambla de Santa Cruz, Nº 147, edificio Tulipán	922 285 958
Francisco Martín León	Director General	Dirección General del Medio Natural	Edif. Arco Iris. C/ José Antonio de Zárate y Peniché, 5 dqmn@gobiernodecanarias.org (Secretaria: Macu)	928 287 200 (Macu) ou 922 922 312
Manuel Cendagorta-Galarza	Director	Instituto Tecnológico y de Energías Renovables	Pol. Ind. de Granadilla, s/n 38600 - Granadilla de Abona	922 391 000
Arturo Manchado Torres	Coordinador de Investigación	Instituto de Investigación Astrofísica	c/ Vía Láctea s/n de La Laguna	922 605 239

Azores

NOME	CARGO	ENTIDADE	DIRECÇÃO	TEL
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Rui Bettencourt	Director Regional	Direcção Regional do Trabalho, Qualificação Profissional e Defesa do Consumidor	Rua Dr. José Bruno Tavares Carreiro Ponta Delgada São Miguel	351 296308000

Rui von Amann	Director Regional	Direcção Regional do Planeamento e Fundos Estruturais	Caminho do Meio, 58 Angra do Heroísmo Terceira	351 295206380
Álamo Menezes	Secretário Regional do Ambiente e Mar	Governo Regional	Angra do Heroísmo Terceira	
José Cabral Vieira	Director Regional	Direcção Regional da Energia	Angra do Heroísmo Terceira	296309739
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Arnaldo Machado	Director Regional	Direcção Regional do Apoio ao Investimento e à Competitividade	Praça Gonçalo Verlho, 3 Ponta Delgada São Miguel	351 296309100
António Castro Freire	Administrador e accionista de referência	Grupo Bensaúde	Rua de Lisboa, Edifício Varela, 4º Ponta Delgada São Miguel	351 296301813
Paulo Menezes	Director Regional	Direcção Regional da Ciência, tecnologia e Comunicações	Rua Conselheiro Dr. Luís Bettencourt, 16 Ponta Delgada São Miguel	351 296206500
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Helder Fialho	Director Geral	Azores Parque	Rua Azores Parque, 102 Ponta Delgada São Miguel	

Madeira

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Castanheira da Costa	Reitor	Universidade da Madeira	Praça do Município 9000-082 Funchal	351 291209400
Francisco Costa	Chairman/CEO	SDM/Sociedade de Desenvolvimento da Madeira	Rua da Mouraria, 9 1º 9000-047 Funchal	351 291201333
Sílvia Costa	Presidente	IDR/Instituto de Desenvolvimento Regional	Travessa do Cabido, 16 9000-715 Funchal	351 291214000
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Carlos Estudante	Director Regional	Direcção Regional de Estatística	Calçada de Santa Clara, 38 1º 9004-545 Funchal	351 291720060
Emília Alves	Responsável de Contas (contas regionais, transportes, turismo, agricultura...)	Direcção Regional de Estatística	Calçada de Santa Clara, 38 1º 9004-545 Funchal	351 291720060
Angela Gouveia	Responsável de Contas (famílias e Empresas, Demografia e Saúde)	Direcção Regional de Estatística	Calçada de Santa Clara, 38 1º 9004-545 Funchal	351 291720060
Paulo Videira	Chairman/CEO	BKat Consulting	Rua da Alfândega, 78 3º 9000-059 Funchal	351 291740930
Carlos Pereira	Chairman/CEO	Segthor (Groupe BKat)	Rua da Alfândega, 78 3º 9000-059 Funchal	351 291740930
Maurício Marques	Director	BKat Consulting	Rua da Alfândega, 78 3º 9000-059 Funchal	351 291740930
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Conceição Estudante	Secretária Regional dos Transportes e Turismo	Governo Regional	Av. Arriaga, 18 9004-513 Funchal	351 291900
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