





EXPERT EVALUATION NETWORK DELIVERING POLICY ANALYSIS ON THE PERFORMANCE OF COHESION POLICY 2007–2013

TASK 2: COUNTRY REPORT ON ACHIEVEMENTS OF COHESION POLICY

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EXECUTIVE SUMMARY

As a single NUTS 2 region, Luxembourg implements one ERDF OP and is involved in one cross-border Territorial Cooperation Programme (INTERREG IVA "Great region"). The priorities of these three programmes are highly complementary: whereas the national ERDF OP targets attractiveness for investment and jobs (axis 1) and knowledge and innovation (axis 2), the territorial co-operation programme focuses on supporting innovation, cross-border infrastructure development and the environment. The knowledge based economy and environment support are the two main complementary strategic objectives of the programming period. Concentration of means, both thematically and geographically, is the main feature of the Luxembourg ERDF OP resulting from the willingness of the managing authority, taking into account the limited amount of ERDF financing, to avoid dispersion of effort and loss of added value.

The recent economic crisis has not changed the strategy and the objectives of the two programmes. Targeting innovation and the knowledge based economy, the ERDF OP may be considered as a well suited means of fostering an upturn in the economy, converging with the national "*Programme Conjoncturel*" that provides an additional EUR 30 million on research and innovation.

So far, 38 projects have been approved. The ERDF contribution to these programmes amounts to EUR 11.1 million (representing 44% of the total allocation of the ERDF), with a higher programming level in the axis 2: 33 projects out of the 38 approved concern research and innovation; 28 are research oriented and managed by the University and the other public research organisations. Environment and energy is the second most important policy areas addressed by the ERDF OP, with 4 approved projects". So far as cross-border cooperation is concerned, with regard to the number of selected projects (68 at present), and the amount of ERDF commitments (55%), the programme has been very successful and seems to be well suited to the needs of the cross border stakeholders.

None of these projects has been completed yet. Therefore, evidence on the tangible outcomes and achievements of intervention is rather limited. However, analysis of the list of the projects approved reveals that they are coherent with the objectives set in the OP. The ERDF contributes to the development of the public national Research, Development and Innovation (RDI) system towards providing stronger support to innovation, technology transfer and enterprise-research

collaboration¹, so contributing to the economic diversification of the country. The ERDF is a complementary source of financing for public research organisations and supports projects that are the core of the strategy. ERDF interventions are also consistent with the national strategy for diversifying energy resources and recycling waste, by supporting awareness campaigns and infrastructure projects.

For the same reason, evidence on the effects of ERDF intervention on territorial development and its contribution to tackling major long-term challenges are not obvious. However there is no doubt that the main impact of the three generations of ERDF interventions (1994–1999, 2000–2006, 2007–2013) is their contribution to the Government's effort to rebalance the economy in favour of the Southern part of the country with the aim of building a more attractive place for competitive industries and services to locate ("City of Science" project), consistent with the development of the cross–border region.

Evaluation studies have been carried on the 2000–2006 programmes (mid-term and up-date of the mid-term), and are currently being carried out on research and innovation policy in the form of evaluating the national agencies concerned (Luxinnovation, co-funded by the ERDF; and the National Research Fund) and scientific programmes. However, excluding research and innovation policy, the main evaluation gap in Luxembourg remains the lack of an evaluation culture in the public administration.

¹ See Task 1 Report on Innovation.

SECTION 1 - SOCIO-ECONOMIC CONTEXT

Luxembourg is a single NUTS 2 region with a population of 502,000 as at January 2010, most of whom live in intermediate rural areas close to the capital city, which itself has around 98,500 inhabitants (19.6 % of the population). Most of the remaining population live in the South of the country.

The economy developed from agriculture to significant reliance on the steel industry in the 1950s and 1960s, with the main company, ARBED (later Arcelor), being located in the South close to the border with France. In the late 1970s, the industry declined and banking, which was concentrated in the city, emerged as the key driver of the economy, raising **GDP per head** to be the highest in Europe. Over the 20 years 1985–2005, GDP growth averaged around 5% a year and the share of employment in financial business services increased as that of industry declined (see Table 1²).

However, even before the 2008 recession, the picture was not uniformly favourable. While the employment rate was similar to the EU average (64.2% in 2007) and unemployment below the average, the latter has risen almost continuously since 1999, from 2.4% to 5.1% in 2009, reflecting the persistence of structural unemployment in both the Northern and Eastern parts. In addition the high level of GDP per head owes a great deal to the large number of cross border workers (around 40% of the total) living outside the country, who therefore contribute to GDP without being part of the population.

Regional disparities remain important. The country can be divided essentially into three parts in this respect:

- the central part where the financial service sector and public institutions are concentrated and where 70% of cross-border workers are employed:
- the southern part where the steel and mining industries were located, which has large brownfield sites and where, since the 1990s, the economic base has been diversified through the development of SMEs in the service sector, benefiting from both proximity with the financial centre and the French border. Manufacturing, however, remains important, accounting for 30% of total employment, with a number of major industrial companies which increasingly require skills that cannot be found among the local population;

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² See excel file for Table 1.

• the northern and eastern parts, traditionally dependent on agriculture (wine in the eastern part) and tourism.

Regional disparities arise mainly from:

- the large-scale job losses which occurred in the southern part in the past with the decline of the steel industry;
- the economic attractiveness of the capital;
- the lack of highly educated and skilled workers in the southern, northern and eastern parts;
- the concentration of research centres and the university in the central part;
- the inadequacy of basic services in rural areas, which have become the residential areas in which people working in the city live, giving rise to new needs for public services (such as childcare facilities and nurseries as well as public transport).

The macroeconomic context and budgetary policy were favourable to regional development (more favourable than in the rest of the EU), when the Luxembourg «*Cadre de référence stratégique national 2007–2013*» and the operational programmes were formulated.

However, the recent world economic recession had caused much damage to the economy since the end of 2008, striking first the financial sector and then the "real" economy. GDP fell in all sectors, especially in financial services and manufacturing that are largely open to external influence. Demand also declined dramatically. According to the Luxembourg Central Bank, the crisis will affect the economy for several years, at least up until the end of 2011. However, the national statistics office (STATEC) has noted a slight recovery of the economy since the third quarter of 2009.

The main national economic forecasts for 2010–2014 are for 2–2.5% growth in 2010 and then an average rate of around 3% a year 2011–2014 (much below the 1990–2009 figure of over 4%), a continuous increase of unemployment up until 2012, with a slight decline from 2013 (to around 6.5% in 2014).

In March 2009, the Luxembourg Government adopted the "*Programme Conjoncturel*" to cope with the economic crisis. Several measures were introduced to increase:

- Household purchasing power, mainly through tax reduction (EUR 600 million);
- public works (EUR 70 million in 2009, EUR 80 million in 2010);
- social housing (EUR 18 million);
- ICT services (EUR 104 million);

and to implement:

- New schemes for research and innovation (EUR 30 million);
- Financial support to companies in bankruptcy (EUR 30 million);
- Extension of unemployment insurance (EUR 130 million);
- Other measures such as simplification and shortening of administrative procedures for public building construction.

The overall cost of the plan was EUR 1,228 million, i.e. over 3% of Luxembourg GDP.

SECTION 2 – THE REGIONAL DEVELOPMENT POLICY PURSUED, THE EU CONTRIBUTION TO THIS AND THE POLICY ACHIEVEMENTS OVER THE PERIOD

THE REGIONAL DEVELOPMENT POLICY PURSUED

As a single NUTS 2 region, Luxembourg implements one ERDF OP and is involved in one cross-border territorial co-operation programme, namely INTERREG IVA "Great region".

The priorities of these two programmes are highly complementary: whereas the national ERDF OP targets attractiveness for investment and jobs (axis 1) and knowledge and innovation (axis 2), the Territorial Cooperation programme focuses, on "economy", "space" and "people" (i.e. human resources) through supporting innovation, cross-border infrastructure development and the environment. The knowledge based economy and environmental support are the two main complementary strategic objectives of the programming period.

Concentration of means, both thematically and geographically, is the main feature of the Luxembourg ERDF OP resulting from the willingness of the managing authority, taking account of the limited amount of ERDF resources, to avoid dispersion of effort and loss of added value.

Thematically, **innovation is the core element of the three programmes** (see Table 3³): the "Competitiveness and Employment" Operational Programme 2007–2013 dedicated 69% of ERDF finance to innovation (EUR 17 million) consistently with the growing support to innovation at the national level. In line with the national innovation policy, the ERDF contribution focuses mainly on knowledge transfer and growth poles through support to RTD infrastructure in public research organisations and support to Luxinnovation, the national agency in charge of promoting innovation and research (60%) and on boosting applied research (30%) through

³ See Excel file for Table 3.

support to relevant projects. Compared to the previous period, the ERDF contribution to "soft" measures (as opposed to infrastructure) has increased significantly. However, public innovation stakeholders continue to be the main target of ERDF support. Enterprises are not direct recipients of funding, the managing authority considering that the national RDI Aid Scheme provides sufficient funds to innovation projects in companies.

The second core element of the three programmes relates to support to environmental infrastructure (water management, energy supply, waste management) which represents the second largest financial allocation in the ERDF OP. The Great Region INTERREG IVA programme also puts strong emphasis on environmental protection issues, namely waste management (waste production, management and recycling) and renewable energy production.

Geographically, over the 2000–2006 period, support was concentrated in the South (former steel industry and mining region) and in rural areas in the North and East. The current programming period has no defined eligible areas, the whole country being eligible. However, the managing authority selects projects that tackle the main weaknesses of areas as follows:

- in urban areas (Capital city/centre; South), efforts are focused on economic diversification (through economic zoning); the recovery of brownfield sites; the support to R&D and innovation; and training the workforce;
- in rural areas (North, West, East), efforts are focused on the development of economic zones and transport infrastructure; the creation of a friendly environment for innovation; the development of public services close to people and protection of natural resources.

The managing authority attempts to concentrate the strategy on policy areas and projects which are strongly placed-based.

The recent economic crisis has led to any change in the strategy and the objectives of the two programmes. Targeting innovation and the knowledge based economy, the ERDF OP may be considered as a well suited means of fostering an upturn in the economy, converging with the national "*Programme Conjoncturel*" that provides additional EUR 30 million on research and innovation.

POLICY IMPLEMENTATION

Table A briefly presents the current financial situation (or more precisely as at the end of 2009) as regards the implementation of the ERDF OP (in terms of commitments⁴ and expenditure⁵).

So far, 48 projects have been submitted through three calls for projects. 38 projects have been approved; all the projects have started; none has been completed, but some are likely to be completed by the end of 2010.

- The total budget of the 38 selected projects amounts at EUR 36.4 million, with an ERDF contribution of EUR 11.1 million. These projects involve Lisbon earmarked resources; 75% of the whole OP being earmarked.
- Certified expenditure amounts to EUR 5.8 million which represent around 7% of the funding available.

The table shows that the implementation of the ERDF OP is progressing satisfactorily: 44% of allocated funds have been committed by end–2009 which is slightly more than the theoretical programming rate (41%)⁶ showing that the economic crisis has had no real impact on programming. However, the situation is quite different for the different axes.

- For axis 1, the programming rate is 32.5% with 5 approved projects and ERDF financing amounting to EUR 3.9 million. The main reason for the relatively low level of programming lies in a delay in setting up complex infrastructure projects under measure 1.1 (namely the recovery of brownfield sites).
- By contrast, programming under axis 2 is well advanced with a rate of 60%.
- EUR 2 million of funding has been disbursed to 33 approved projects on R&D and innovation activities. The economic crisis has had no impact on implementation since projects supported are mainly public research projects already in the pipeline before the start of the current programming period (some of these projects are phase II of projects supported under DOCUP 2000–2006). In addition, ERDF finance is more attractive for public research organisations compared to other funds (either provided through the

⁴ The programming rate: ERDF committed (EUR) / ERDF allocated budget (EUR)

⁵ The implementation rate: Total certified expenditure (EUR) / Total allocation (EUR)

⁶ The theoretical programming rate has been defined on the basis of the ERDF-OP financial plan and the annual provisional fund allocation.)

National Research Fund or through the 7th Framework Programme), which are more selective in requiring a high level of excellence at European level.

Whereas unfavourable economic circumstances have not greatly affected the implementation of Cohesion Policy, the Managing Authority stressed that administrative procedures have affected the effectiveness of implementation. The preliminary phase of the 2007–2013 period has been longer than expected due to a number of audits on the previous OPs (1994–1999 and 2000–2006) that have been carried out by the EC and the European Court of Auditors, preventing the Managing Authority (composed of 5 people) to devote more time to the management of the programme, i.e. the identification of new projects and support for the setting–up of projects⁷. The Managing Authority emphasises strongly the need to adapt the implementation procedures of Cohesion Policy (e.g. indicators, reporting, evaluation, control and audit) to the size of the Country and the amount of ERDF finance received, taking account of Article 13 of Regulation n°1083/2006.

⁷ National Strategic Report 2009, Government of Grand Duché de Luxembourg

Table A - Implementation of the ERDF OP - financial situation end-2009

		2007-2013 allocation		2007–2009 commitments			2007–2009 expenditure			
		Total allocation (A)	ERDF allocation (B)	Total commit- ments	ERDF commit- ments (C)	Program- ming rate (C/B)	Certified eligible expenditure (D)	Public contribution (EU+national)	Private contribution	Imple- mentation rate (D/A)
axis 1	Attractiveness for investment and jobs	48,467,840	12,116,960	15,745,251	3,936,313	32.5	3,791,515	2,843,636.	947,879	7.8
measure 1.1	Basic infrastructure for higher growth and new activities			6,000,000	1,500,000		-		-	-
1.1.1	Development and promotion of new economic activities					-				-
1.1.2	Promotion of information society					-				-
measure 1.2	Synergies – environmental protection and economy			9,745,251	2,436,313		3,791,515	2,843,636	947,879	
1.2.1	Rehabilitation of physical environment					-				-
1.2.2	Measures for renewable energy sources					-				-
axis 2	Knowledge and innovation, two growth factors	34,619,883	12,116,959	20,698,571	7,172,500	59.2	2,038,266	1,324,873	713,393	5.6
measure 2.1	Increased investment for RDT			10,830,555	3 790,694					_
2.1.1	Increased co-operation - public and private research sectors					-				-
2.1.2	Extension of research capacity and development of research infrastructure					-				-
measure 2.2	Support for R&D and innovation			9,868,016	3,381,806		-		_	
	Technical assistance	1,009,747	1,009,747			_				0
	TOTAL	84,097,470	25,243,666	36,443,822	11,108,813	44.0	5,829,781	4,168,509	1,661,272	6.8
		theoretical plan at the end of 2009			10,391,818	41				

ACHIEVEMENTS OF THE PROGRAMMES SO FAR

The ERDF OP is implemented through periodic calls for projects, ensuring a greater visibility of the programme and a bottom-up approach. Following three calls for projects, 38 projects have been selected, mainly under the second axis of the programme. None of these projects has been completed yet. Therefore, evidence on the tangible outcomes of intervention is limited.

In addition, the analysis of the 15 performance indicators selected by the Managing Authority (based on the EC regulation n°1083/2006, article 37) for assessing the implementation of the programme does not give significant evidence on achievements at this stage (see Annex Table A). The selected indicators measure three priorities: employment and the economy (jobs created, support to enterprises), research and innovation (RDT projects, research infrastructure) and sustainable development (renewable energies, greenhouse gas emissions).

A first set of indicators relates to the what has been undertaken under the programme, i.e., the number of projects supported in the various areas (number of RDT projects, number of renewable energy projects, number of enterprise support projects, etc.). The second set of indicators is result oriented (jobs created, square meters reclaimed, reduction in greenhouse gas emissions, etc.). It confirms that it is too early to assess the first achievements of projects.

However, analysis of the list of approved projects indicates that the projects are in line with the objectives set in the OP. The ERDF intervention is entirely concentrated on two main policy areas consistent with the Lisbon and Göteborg Strategy, meeting the development needs of Luxembourg: enterprise support and innovation and the environment and energy. At present no projects have been approved in the other policy areas (transport, ICT, territorial development, human resources).

Enterprise support including assistance to large firms, SMES and handicrafts, RDTI

ERDF intervention in this policy area is essentially focused on strengthening the capacity to innovate and addressing the basic objective of the OP to ensure the diversification of the economy and the development of competitive industries and services. Funding is mainly focused on:

• Support to research and innovation projects: as already mentioned, 33 projects out of the 38 which have been so far selected concern research and innovation; 28 are research oriented and managed by the university and the other public research organisations (the so-called CRP).

The ERDF through these 28 projects, in line with the national and OP strategy, contributes to the development of the national RDI system to provide stronger support to applied research, technology transfer and collaboration between businesses and

research centres⁸. The ERDF is a complementary source of financing for public research organisations and provides support to projects that are the core of the strategy.

 Indirect support to enterprise and SMEs: the contribution of the ERDF to innovation in SMEs is only indirect, in that companies are not direct recipients of funding. Support is mainly provided to Luxinnovation (soft) and to the establishment of a business incubator in Belval (hard); contributing to the creation of a friendly environment for innovation in companies.

Luxinnovation is the national agency for the promotion of innovation and research. ERDF support covers all the objectives of Luxinnovation (EUR 1.3 million out of total expenditure of EUR 3.6 million over the period):

- o Promotion of innovation (communications and information);
- Special support to enterprises and research teams;
- o Implementation of the "alliance for innovation programme";
- o Management of the cluster programme;
- o Promotion of national and EU funds for RDI.

The recent external evaluation of Luxinnovation⁹ concluded that after one year and half of implementation of the performance contract 2008–2010¹⁰, almost all the performance indicators had been either achieved or overachieved, indicating that Luxinnovation has succeeded in its mission and undertaking the tasks assigned to it. Two major results of Luxinnovation activities are highlighted:

- The contribution of Luxinnovation to raising the awareness of companies, in particular SMEs, about innovation issues. This is testified by the growing number of enterprises benefiting from Luxinnovation services and the increasing level of participation in events.
- The capacity of Luxinnovation to generate a pipeline of innovative projects funded nationally under the RDI aid scheme. This results both from the growing

⁸ See Task 1 Report on Innovation.

⁹ Evaluation of Luxinnovation, Ministry of Higher Education and Research (ITD-Eu), July 2010.

¹⁰The performance contract provides the goals and targets that Luxinnovation must address over the period 2008–2010, and the related funding provided by the Ministry of Economy and the Ministry of Higher Education and Research for achieving its goals.

number of clients (enterprises especially) and studies of innovation carried out, but also from the growing number of enterprises benefiting from the RDI aid scheme. Since 2008, the number of projects funded has increased despite the financial and economic crisis.

However, the evaluation also stresses the need to streamline the objectives and mission of Luxinnovation and to develop more personalised services and to monitor of the enterprises supported over the long-term, so as to properly assess results of the research funded and the support given to collaborative R&D projects involving both public research laboratories and SMEs in key economic sectors and cluster organisations.

Enterprise support is also indirectly provided through improving business infrastructure for hosting SMEs and new innovative companies in both services and industry. As an example, the project managed by the *Fonds Belval* is aimed at establishing a new business incubator in the Southern part of the country on the former ARBED industrial site, the reclamation of which had been supported during the previous programming period. This project is one of the largest supported by the ERDF (with a contribution of EUR 2.2 million, almost 10% of the total funding provided) and is part of the Luxembourg Government strategy of establishing a new scientific and innovation complex in Belval, the so-called "*Cité des Sciences*". It addresses two different needs. In terms of territorial policy, it is in line with the Government strategy of developing an alternative location for attracting FDI and new enterprises to the congested capital. In addition, the presence of large industrial companies close to Belval will offer new potential for developing business services. In terms of economic policy, the project contributes to the diversification of the economy and to the development of higher value added industries and services. It complements the measures taken to relocate the main public research and innovation organisations in the South of the country under the umbrella of "*Cité des Science*".

After the first stage of renovation of the building (3,000 sq metres), which was supported under the 2000–2006 programme, the second stage of the Belval Incubator project consists of equipping and developing the provision of support services for SMEs.

The environment and energy

The environment and energy is the second most important policy area addressed by the ERDF OP. Four projects out of 38 relate to the measure for "Strengthening synergies between environmental protection and the economy", though so far progress in implementing the measure has been below expectations.

Overall, ERDF intervention is consistent with the national strategy of diversifying energy resources and recycling waste by supporting awareness campaigns and infrastructure projects. One initiative is of particular interest: the MINNETT-KOMPOST project which is concerned with

the ecological treatment of organic waste and the production of purified biogas. The plant is scheduled to be operational by the end of 2010, at a total cost of EUR 5 million, EUR 1 million coming from the ERDF. The project is in line with the national environmental strategy and has been selected as a pilot–scheme under the Luxembourg National Plan for Greenhouse Gas Emission Reductions. The project also addresses the environmental challenges identified in the ERDF OP, namely the high level of soil and water pollution from many decades of steel production. The project is expected to reduce CO2 emission by 1,500 tons per year and to create 5–6 jobs by the end of 2011.

Territorial cooperation programmes

Luxembourg is involved in six territorial cooperation programmes, coordinated by a national consultation Committee.

Cross-border cooperation has been improved greatly through the formulation of a single programme for the 'Great Region' (France-Luxembourg-Germany), replacing the previous three cross-border programmes. The programme can be judged to be successful in terms of the number of projects selected (68 at present), and the high commitment rate (55%) and seems to meet the needs of cross border stakeholders. A number of strategic projects supported in the Great Region would have been smaller and less ambitious without the contribution from the ERDF.

The main projects co-financed are the Great Region University, a network of natural parks, the *Flows MS* project for flood risk management and the bi-national Schengen school. The Great Region University project involves 7 universities in the cross border area, including the University of Luxembourg. Inaugurated in April 2009, the aim is to develop academic cooperation to increase the mobility of students and staff and joint training programmes and curricula and to support joint research projects and improve the scientific and academic international attractiveness of the region. From a Luxembourg perspective, the project tackles the lack of critical mass in the public research and academic system and contributes to the development of the University, which was established only in 2003. It complements the efforts made by the Government and the ERDF OP to strengthen the academic and scientific excellence of the Luxembourg research and innovation system.

SECTION 3 - EFFECTS OF INTERVENTION

It is difficult at this stage to give a meaningful presentation of the effects of ERDF intervention on territorial development or in tackling long-term challenges. The implementation of the programme effectively started only late in 2008 and no project has yet been completed.

As already noted, the economic forecast for the next 4 years indicates that there will be a recovery but it will take time to restore the same rate of growth as before the crisis. The constraints on the public budget are exceptional and will require a long-term effort to keep the budget in balance. In this context, the contribution of Cohesion Policy should support economic recovery since it is focused mainly on strengthening growth potential through support for innovation. However, it should be emphasised that the contribution of Cohesion Policy will be proportional to the amount of funding involved. ERDF intervention in Luxembourg amount to only EUR 25 million in relation to GDP of EUR 10 billion. Accordingly, even though Cohesion Policy fully supports the national strategy on competitiveness and innovation, its impact can barely be measured or isolated from the overall funding. As a concluding remark, the 2009 National Strategic Report states "regarding a structural policy, aimed at boosting growth potential, especially in the Lisbon context and the coming EU2020 strategy, as well as sustainable development, the attended and real contribution of Cohesion Policy against the economic crisis, should be positive, all things being relative (financial impact)".

In addition, there is a strong coherence between successive ERDF OPs, in the sense that the projects implemented have usually been long lasting, the initial phases, or preliminary studies, being financed under the 2000–2006 programme and the completion being funded under the 2007–2013 programme (Belval Incubator, STEP and Minett–Kompost for instance). These projects are now reaching completion and any positive impact on the environment will only become apparent in the coming years.

However, the contribution of the three generations of ERDF interventions (1994–1999, 2000–2006, 2007–2013) has been most important in supporting Government efforts to restructure the economy spatially in favour of the Southern part of the country so as to develop it into a more attractive place for industries and services to locate, which is also in line with developing the cross–border region with Lorraine in France.

SECTION 4 - EVALUATIONS AND GOOD PRACTICE IN EVALUATION

Between 2007 and 2009, no evaluation of the ERDF OP was carried out either by or on behalf of the Managing Authority, which gave priority to carrying out numerous controls and audits of programmes from the previous period. As stressed by the Managing Authority, the monitoring of the implementation of the 2007–2013 programme consists essentially of analysing financial and physical indicators, annual reports by the programme stakeholders and the controls in situ.

The only evaluation studies that are relevant for the present report are the following:

• The mid-term evaluation and the up-date of the mid-term evaluation of the 2000-2006 programme. The key objectives of the programme were to maintain territorial balance and to strengthen the economic base of the areas assisted by contributing to the

regeneration of old industrial sites, the diversification of economic activity and an improvement in the business environment. The evaluation report stressed that the funding for some strategic priorities was underused and that specific efforts should be made to encourage the development of new projects under measure 1.2 (economic local development and diversification), 3.2 (innovation awareness) and 4.1 (strengthening of environmental strategies and development of environmental techniques). Following the mid-term evaluation, a pragmatic approach was adopted which involved transferring funds from the under-used budget lines to the over-used ones. The best performing axis, axis 1 (endogenous economic development) and axis 2 (brownfield sites and sustainable development) were allocated additional funds. Recommendations were also made regarding the territorial allocation of funding for the next ERDF programme: that preliminary zoning in fund allocation should be abandoned and Member States should identify the areas and projects to be eligible for ERDF financing. The Ex Post Evaluation of Cohesion Policy Programmes 2000-2006, prepared on behalf of the European Commission, DG REGIO, also stressed that the programme had been important in strengthening the growth potential of the Southern part of the country with support to industrial regeneration mega projects (e.g. Belval Ouest) and the emergence of the "City of Sciences" concept. In addition, it helped pave the way for the economic diversification of the South by supporting the relocation of R&D centres (CRP Henri Tudor) and R&D activities. In terms of programme management, the report also stressed the need for improving the communication and promotion of the programme, for Ministerial Departments to be involved in daily management and the evaluation process to be more strategically-oriented by assessing the extent to which objectives have been achieved and the wider of effects of this.

The mid-term evaluation and its up-date were important in preparing the current programming period 2007–2013, especially in relation to the ending of zoning and the concentration of resources on specific issues, as recommended by the two evaluation reports. In addition, the evaluation of Cohesion Policy in Luxembourg also contributed (a little) to spreading an "evaluation culture".

In terms of the evaluation method adopted, the mid-term evaluation was outsourced to a consultancy group, the second one was directed internally by the Managing Authority. The approach was roughly the same, relying on previous evaluation reports, with a focus on the relevance and coherence of the programme in a changing context, the achievements of the programme (axis by axis) and financial performance.

As regards research and innovation, after the implementation of the first performance contracts for 2008–2010 (recommended by the OECD review of the national research and innovation system carried out in 2006) with the public research organisations (CRPs,

National Research Fund) and the innovation agency (Luxinnovation), the Ministry of Higher Education and Research is carrying out a series of evaluation studies to assess the effects of the activities of the various bodies but also to evaluate the extent to which the performance contract has improved the management of research and innovation programmes in Luxembourg. Two studies are of particular interest:

- The evaluation of Luxinnovation was carried out in 2010, indicating its generally good performance in carrying out its missions and in the efforts made to achieve its goals (see section 2). The evaluation was based on three main methods: interviews with stakeholders and beneficiaries of the Luxinnovation portfolio of services; workshops with the management board and people from other innovation agencies in Europe (Tekes in Finland, NL Agency in The Netherlands, Transferts LR in France, a regional based innovation agency); and a self-assessment report provided by Luxinnovation. Based on a review of the portfolio of activities and services of Luxinnovation, the evaluation was aimed at preparing the next performance contract 2011-2013 for the organisation and for the related funding from the different Ministries. The main recommendations were as follows: to streamline the objectives and mission of Luxinnovation; to develop more personalised services and the long-term follow-up of the enterprises supported; to ensure stronger coordination and a closer relationship with public research organisations in making the most of public research and access to EU research funding programmes; to define a limited set of performance indicators which are more impact oriented; and to improve the governance and management of the organisation.
- The evaluation of the National Research Fund¹¹ (FNR) is still in progress. This is focused on the internal functioning and management of the FNR rather than on the scientific strategy of the fund, in particular, on the optimisation of the funding process; the roles of the respective actors; the transparency of the evaluation process for beneficiaries; the communication strategy; and the management of information flow. The recommendations of the evaluation are intended to provide an integrated view of transparency, simplification and effectiveness and can include proposals to reduce administration, shorten project cycle times, increase efficiency and impact and to improve the task orientation of information systems. The three main methods used are the same as for the evaluation of Luxinnovation listed above.

¹¹ This evaluation is carried out by ITD-Eu on behalf the Ministry of Higher Education and Research.

Table B - Evaluations

Evaluation	Policy area	Scope	Methodology	Main conclusions
Mid-term evaluation and the up- date of the mid-term evaluation of the SPD 2000-2006	Cohesion Policy	Relevance of the programme Coherence of the programme with the socio economic context Achievements and financial perspectives	A mix of external (mid-term) and internal evaluation by the Managing Authority (up-date) Based on thematic meetings axis per axis and literature analysis.	Effects: the SPD strengthened the growth potential and economic diversification of the Southern part with the support to industrial regeneration mega projects (e.g. Belval Ouest) and the emergence of the "City of Sciences" concept. Management improvements: (i) the communication and promotion; (ii) the involvement of ministerial departments in the daily management; (iii) the evaluation process to be more strategically-oriented
Evaluation of Luxinnovation	Innovation policy	The strategy of the Agency (new portfolio of services, sectoral approach, etc.) The management of the Agency The relationships between the innovation system stakeholders	External evaluation Involvement of stakeholders and final beneficiaries (interviews and workshops) Self-Assessment Report by Luxinnovation	Recommendations: (i) streamlining the objectives and missions (sectoral approach); (ii) developing more personalised services and long-term follow-up of enterprises; (iii) ensuring a stronger coordination with the public research organisations; (iv) improving the governance and management
Evaluation of the National Research Fund	Research policy	The internal functioning and management of the Agency The selection and monitoring process of the research projects The information workflow management The communication strategy	External evaluation Involvement of stakeholders and final beneficiaries (interviews and workshops) Self-Assessment Report by the FNR	Still in progress

The main gaps as regards evaluation in Luxembourg are related to the lack of an evaluation culture in the public administration. This results in very few evaluations of public policy being undertaken, except on research and innovation, on which evaluation is now planned systematically, both of research programmes and of management structures (FNR, Luxinnovation, CRPs). Currently, the Managing Authority of the ERDF OP does not plan to carry out a formal mid-term evaluation of the programme in view of the small amount of financial support provided by the ERDF in Luxembourg.

SECTION 5 - CONCLUDING REMARKS - FUTURE CHALLENGES

So far, even if the recent economic recession has had a deep and long-term impact on the Luxembourg economy, there is no need to reshape the ERDF OP or to change its strategic focus:

- As defined, the strategy is in line with needs and with the Government's economic programme as set out in the "*Plan de Conjoncture 2009*", by targeting the diversification of the economy through support to innovation and the creation of an environment conducive to innovation and strengthening competitiveness.
- The ERDF strategy contributes to the national effort to build a new dynamic economic area in the Southern part of the country and to create a more attractive place for industries and services to locate, in line with the development of the "Grande Région" cross-border area.

However, there is some room for improvement in managing the programme:

- Given the relatively low rate of progress of the first axis of the OP compared to the second axis, the Managing Authority should focus more on promoting the programme and on identifying new projects and initiatives as well as on strengthening technical assistance to project developers.
- Given the types of innovation project supported under axis 2, the Managing Authority should consider being more selective and support innovation projects involving both research centers and enterprises or which are related to cluster development.
- The Managing authority emphasises the need to adapt the reporting and evaluation process and workload to the size of the country and the amount of EU funding received by enforcing Article 13 of EC Regulation n°1083/2006 (the proportionality principle).
- There is a need to strengthen the culture of evaluation in the public administration.

REFERENCS

- 1. Evaluations of specific operational programmes:
 - The mid-term evaluation (2003) and up-date of the mid-term evaluation (2005) of the SPD 2000-2006
 - Ex Post Evaluation of Cohesion Policy Programmes 2000–2006 financed by the ERDF in Objective 1 and 2 regions (WP1)
- 2. Other relevant research studies and impact assessments carried out in the Member State:
 - Evaluation of Luxinnovation, July 2010. Ministry of Higher Education and Research (ITD–Eu)
 - Evaluation of the FNR (National Research Fund), still in progress, Ministry of Higher
 Education and Research (ITD-Eu)

3. Other references:

Operational programmes:

- National Strategic Reference Framework 2007–2013
- ERDF Operational Programme 2007-2013 :
 - Operational programme
 - o Annual report 2008
 - o Annual report 2009
- National Strategic Report 2009
- INTERREG IVA Great Region 2007-2013
 - o Operational programme
 - o Annual report 2009
- INTERREG IVB North West Europe 2007-2013
 - o Operational programme
 - o Annual report 2009

Strategic documents from the Government:

- National Plan for Innovation and Full Employment (National Reform Programme) 2008 and the annual implementation report 2009;
- "Plan de conjoncture" of the Government, 2009.
- Declaration of the government on the economic, social and financial situation of the country 2009;

- Special Commission Report on "Economic and Financial Crisis", Chamber of the Deputies. 23/03/2009
- L'économie luxembourgeoise. Un Kaléidoscope 2006. 2006. STATEC (Luxembourg Office for Statistics).
- Plan d'action du Luxembourg en vue de la réduction des émissions de CO2
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 df)

INTERVIEWS

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TABLES

See Excel file for Tables 1, 2 and 3

Table 1: Regional disparities and trends

Table 2: Macro-economic developments

Table 3: Financial allocation by main policy area

Annex Table A – Indicators mentioned by article 37, paragraph 1, point c of EC regulation 1083/200

ID	Indicators	Axis		2007	2008	2009
1	Jobs created	1 and 2	Annual indicator	0	0	38
			Annual objective	0	230	310
			Cumulative indicator	0	0	38
			Cumulative objective	0	230	540
2	Jobs created – men	1 and 2	Annual indicator	0	0	23
			Annual objective	0	130	160
			Cumulative indicator	0	0	23
			Cumulative objective	0	130	290
3	Jobs created - women	1 and 2	Annual indicator	0	0	15
			Annual objective	0	100	150
			Cumulative indicator	0	0	15
			Cumulative objective	0	100	250
4	N. of RDT projects	2	Annual indicator	0	8	10
			Annual objective	0	4	4
			Cumulative indicator	0	8	18
			Cumulative objective	0	4	8
5	N. of projects promoting	2	Annual indicator	0	0	5
	cooperation between enterprises		Annual objective	0	1	1
	and research institutes		Cumulative indicator	0	0	5
			Cumulative objective	0	1	2
6	N. of research jobs created	2	Annual indicator	0	0	11
	(preferably 5 years after the		Annual objective	0	25	25
	starting of the project)		Cumulative indicator	0	0	11
			Cumulative objective	0	25	50
11	N. of projects in relation to the	1	Annual indicator	0	0	0
	information society		Annual objective	0	1	1
			Cumulative indicator	0	0	0
			Cumulative objective	0	1	2
23	N. of projects in relation to	1	Annual indicator	0	0	4
	renewable energies		Annual objective	0	1	1
			Cumulative indicator	0	0	4
			Cumulative objective	0	1	2
24	Additional production capacity of	1	Annual indicator	0	0	0
	renewable energy (MWh)		Annual objective	0	625	625
			Cumulative indicator	0	0	0
			Cumulative objective	0	625	1250
29	Rehabilitated surface (km²)	1	Annual indicator	0	0	0
			Annual objective	0	0.2	0.2
			Cumulative indicator	0	0	0
			Cumulative objective	0	0.2	0.4
30	Reduction of greenhouse gas 1		Annual indicator	0	0	3
	emissions (CO2 and		Annual objective	0	12	12
	equivalent/kt)		Cumulative indicator	0	0	3
			Cumulative objective	0	12	24

ID	Indicators	Axis		2007	2008	2009
39	N. of projects ensuring	1	Annual indicator	0	0	0
	sustainability of cities and		Annual objective	0	1	1
	municipalities and improving		Cumulative indicator	0	0	0
	their attractiveness		Cumulative objective	0	1	2
40	N. of projects supporting	1	Annual indicator	0		2
	enterprises, entrepreneurship		Annual objective	0	1	1
	and new technologies		Cumulative indicator	0	0	2
			Cumulative objective	0	1	2
102	Surface of infrastructure created	2	Annual indicator	0	0	70
	for research purposes (m²)		Annual objective	0	1,000	1,000
			Cumulative indicator	0	25,000	25,070
			Cumulative objective	25,000	25,000	27,000
105	N. of start-ups created or	1	Annual indicator	0	0	0
	supported		Annual objective	0	0	1
			Cumulative indicator	0	0	0
			Cumulative objective	0	0	1

Source: Annual Implementation Report, 2009