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

YEAR 1 - 2011

TASK 2: COUNTRY REPORT ON ACHIEVEMENTS OF COHESION POLICY

LUXEMBOURG

VERSION: FINAL

MATTHIEU LACAVE

TECHNOPOLIS-ITD

A report to the European Commission
Directorate-General Regional Policy

CONTENTS

LIST OF ABBREVIATIONS

- AIR Annual Implementation Report
- ERDF European Regional Development Fund
- ESF European Social Fund
- OP Operational Programme
- RTDI Research, Technological Development and Innovation

EXECUTIVE SUMMARY

The development of a knowledge based economy and the environment and energy 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 European Regional Development Fund (ERDF) Operational Programme (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 hasn't led to any change in priorities and/or the allocation of ERDF funding. 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*". However, the market pressure on the public debts in Europe pushed the Government in 2011 to reduce the public expenditures in order to maintain the budget stability in the long term, but this change still does not affect the funds for regional development.

Since 2007, the programme received more than 70 candidate projects and approved 39 projects for a total cost of EUR 39.8 million with an ERDF contribution of EUR 12.1 million by the end of 2010 (including the technical assistance)[1]. The implementation of the ERDF OP is progressing satisfactorily - 48 % of the ERDF allocated funds have been committed. However even though the implementation rate increased, it stood still only at 16% by the end of 2010. In addition, the discrepancy between the axis 1 and 2 in terms of commitment is confirmed, but decreasing: by the end of 2010, the axis 1 represents 41% of the ERDF commitments concentrated on a smaller number of projects (with larger budget), while the axis 2, 58% of the commitments (over 32 projects, mainly applied research projects).

Very few projects have been completed. Therefore, evidence on the tangible outcomes and achievements of intervention is still rather limited. However, the list of physical indicators give some interesting results in respect to the number of research projects, the number of cooperation project research-enterprise and renewable energy projects. That reflects the concentration of the interventions on two main policy areas: "enterprise support and RTDI" (more on Research, Technological Development and Innovation (RTDI) than on enterprise support) and "environment and energy" (again more on energy than on environment).

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, it is worth mentioning that the 39 ERDF supported projects represent 91% of the funds dedicated to the Lisbon/Göteborg earmarking on innovation and sustainable environment. ERDF intervention supported the shift in the policy mix towards a greater focus on innovation and environment. For the "environment and energy policy" area, clearly the ERDF contributes to the promotion of the use of renewable energies sources and the efficiency energy

[1] AIR 2010 (end of 2010).

management. The ERDF programming trend is consistent with the national policy agenda by supporting and testing the development of new renewable sources in Luxembourg (e.g. MINETT-KOMPOST on biogas production). For the "Enterprise support and RTDI" policy area, whereas ERDF support during the 2000-2006 period was mainly focused on research infrastructures and equipment in public research labs, from 2007 to 2013 ERDF support is more balanced between continued finance to research infrastructures and providing funds for soft interventions (research and innovation projects). The ERDF programme is increasingly focusing its support on applied research projects, promotion of innovation within firms, development of enterprise/research collaborations, etc. consistently with the increase in national investments in RDI.

Only evaluations in the RTDI policy area have been carried out in 2010, without relation to the ERDF programme. The managing authority considers that the monitoring tools it developed (financial indicators, physical indicators, annual interim report, dialogue with the beneficiaries) are sufficient for ensuring the monitoring and the *interim* evaluation of the programme. This position also reflects to some extent, the lack of a real evaluation culture in the public administration. The managing authority has not planed evaluations over the remainder of the programming period.

From the literature analysis and interviews, the programming period should address at least two main challenges. The first concerns the capacity to turn research activities into innovation and economic development. For that purpose, an in-depth analysis on the effect of the ERDF interventions on the clusters development and on the impact of the research activities supported by the ERDF in terms of valorisation of the results (patents, licensing, and spin-off creations) deserves to be carried out to eventually better select the RTDI projects. In the light of the programming year 2010, a second challenge is to keep a better balance of the ERDF intervention to the benefit of the rural areas. The current programming is still far from the initial objective of dedicating 35% of the funds in these areas.

1. THE SOCIO-ECONOMIC CONTEXT

The main features which have characterised the social-economic context of the last past years remain valid:

- Luxembourg is a single NUTS 2 region with a slightly growing population of 502,000 by January 2010.
- In the 1950s and 1960s, the economy developed from agriculture to significant reliance on the steel industry. 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 (GDP per head in PPS in 2009 was over 2.5 times higher than the EU average).
- Regional disparities remain important. The country can be divided essentially into three parts:
    - The central part where the financial service sector, public institutions, research centres and the university are concentrated and where 70% of cross-border workers are employed;
    - The southern part where the steel and mining industries were located and where the employment rate decreases with the industry decline (however, manufacturing remains important and still accounts for 30% of total employment);
    - The northern and eastern parts, traditionally dependent on agriculture and tourism.
- The macroeconomic context and budgetary policy were favourable to regional development (more favourable than in the rest of the EU), when the Luxembourg National Strategic Reference Framework 2007-2013 and the operational programmes were formulated.

However, the recent 2008-2009 economic downturn impacted the Luxembourg macro-economic situation. The financial crisis firstly put a strong pressure on the banking and financing sector, which impacted on the "real" economy at the end of 2008. Almost all of the sectors have been affected, particularly the most open activities like the financing and industrial sectors, located in the Centre and Southern parts of Luxembourg. By October 2009, the unemployment rate grew to 6% (compared to 4.1% in 2007)[2] and the short time working increased. Within the framework of the European Recovery Plan, the Government adopted in March 2009 a "*Programme Conjoncturel*" including several measures addressing the main economic crisis effects, for a total cost of EUR 1.2 billion (i.e. 3% of Luxembourg GDP):

- Household purchasing power, mainly through tax reduction (EUR 600 million);
- Public works (EUR 70 million in 2009, EUR 80 million in 2010);

[2] Cf. Etudes économiques de l'OCDE - Luxembourg, mai 2010.

- Social housing (EUR 18 million);
- ICT services (EUR 104 million);
- 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.

To a certain extent, the "*Programme Conjoncturel*" succeeded by maintaining a growth rate at 3.5% in 2010 and 3.2% in 2011[3], slightly higher than the expectations of the economic forecasts (2 to 3% of growth for 2010 and 2011). However, even though the recent report edited by the National Statistics Office in July 2011 confirmed the recovery of the economy, there should be a slowdown in 2012 due to several macro-economic factors: inflation, oil price, public spending savings, etc.[4]

In addition, the market pressure on the public debts in Europe pushed the Government in 2011 (and 2012) to reduce public expenditures, and to remove the measures of the national recovery plan, in order to maintain the budget stability in the long term. In short term, the Government is preparing the transition from an anti-cyclic policy intervention (public expenditures to address the effects of the economic crisis) to a budgetary stability policy. It still does not affect the funds for regional development.

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

THE REGIONAL DEVELOPMENT POLICY PURSUED

The main features which have characterised the regional development policy in the past years remain valid:

- As a single NUTS 2 region, Luxembourg implements one ERDF operational programme (Competitive Objective) and is involved in one cross-border territorial co-operation programme (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.

[3] 12ème Actualisation du Programme de Stabilité et de Croissance du Grand Duché de Luxembourg pour la période 2011-2014, Avril 2011 "Growth and Stability Programme".

[4] Service central de la statistique et des études économiques du ministère de l'Économie et du Commerce extérieur.

- Concentration of means 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 programmes[5]: 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. The second core element of the two programmes relates to environment and energy (e.g. energy represents 9% of the ERDF allocation).
- Geographically, they are no defined eligible areas with the whole country being eligible. However, the managing authority selects projects that tackle the main weaknesses of areas: in urban areas (Capital city/centre; South), efforts are focused on economic diversification (through economic zoning); and the support to R&D and innovation; in rural areas (North, West, East), efforts are focused on the development of economic zones, and environmental protection.

The recent economic crisis has not led to any change in priorities and/or the allocation of EU funding of the both programmes. The OP ERDF is still concentrating its support on innovation related projects and environmental support consistently with the National Reform Programme and the Lisbon/Göteborg Strategy. In addition, the ERDF OP only supports projects led by public or semi-public organisations (public research centres, national public agencies, local authorities etc.) less affected by the economic crisis. The situation could be changed with the stronger pressure on the public budget and the public debt control.

An additional remark concerns the geographic focus of the programming period. Whereas initially the OP targeted 35% of the ERDF in rural areas, only 10% of the total ERDF committed by the end of 2010 focused on rural areas (EUR 1.2 million out of EUR 12.1 million), through two projects on energy production (bio gas) and environmental risk management (Risk Reseau and Minett-Kompost). This change reflects the overwhelming concentration of the funds on innovation and research projects led by public research organisations concentrated in the urban areas, but also the type of the beneficiaries which are mainly national bodies (GIE MyEnergy, Luxinnovation, Etablissement Public Fonds Belval) located in the urban areas (South and Luxembourg City).

POLICY IMPLEMENTATION

The 2010 country report emphasised the following points:

- 38 projects had been approved (resulting from three calls for projects); none of these projects have been completed, but some were likely to be completed by the end of the year.
- The total budget of the 38 selected projects amounted at EUR 36.4 million, with an ERDF contribution of EUR 11.1 million. 44% of allocated ERDF funds had been committed by

[5] See Table 3 in Excel file.

the end of 2009 which was slightly more than the theoretical programming rate (41%)[6] showing that the economic crisis has had no real impact on programming.

- Certified expenditure amounted to EUR 5.8 million represents around 7% of the funding available.
- The programming dynamic showed a discrepancy between axis 1 which included only 5 approved projects (programming rate 32.5%) whereas axis 2 was well advance (programming rate 60%) with 33 approved projects end of 2009.
- The economic crisis had no impact on implementation since projects supported were mainly public research projects already in the pipeline before the start of the current programming period.

In 2010, a fourth call for projects was launched by the Managing Authority resulting in 22 new candidate projects, thanks to a communication campaign in newspapers and the Internet (www.feder.lu). From 2007, the programme received 70 candidate projects and approved 39 projects for a total cost of EUR 39.8 million with an ERDF contribution of EUR 12.1 million (including the technical assistance). The figures show that the implementation of the ERDF OP is progressing satisfactorily – **48 % of the ERDF allocated funds have been committed by end-2010**.

Table A –Allocation of ERDF and commitments by end-2010

ERDF Commitment Rate end-2010	Allocated (EUR million)	Committed (EUR million)	Commitment Rate (%)
	25.2	12.1	48.0
ERDF Implementation rate end-2010	Allocated (EUR million)	Expenditure paid out by the beneficiaries included in payment claims sent to the managing authority (EUR million)	Implementation Rate (%)
	25.2	4.0	15.8

Source: AIR 2010

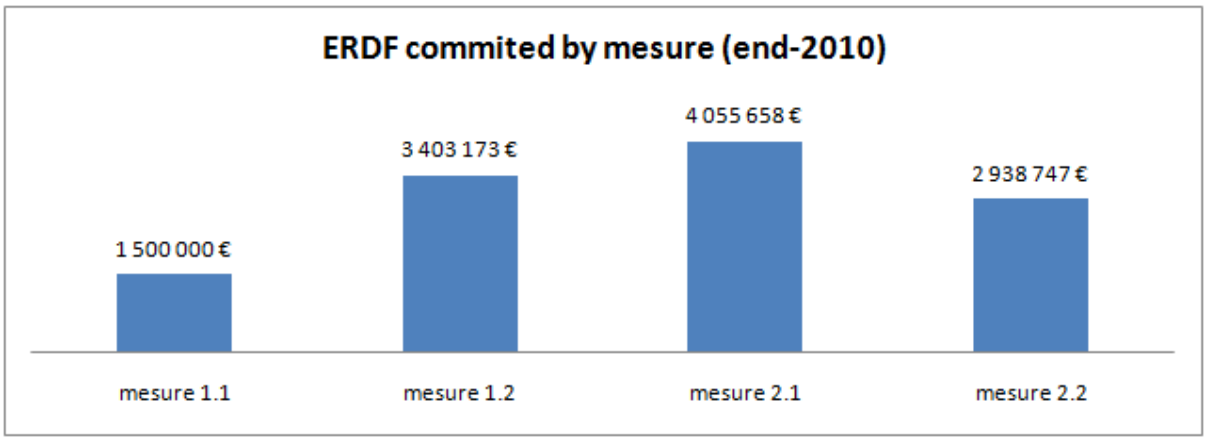
The figures based on the comparison between the Annual Implementation Report (AIR) 2009 and 2010 (see Annex tables A and B) would show the slowing down in the programming dynamic from 2009 to 2010. The programming rate would only progress from 44% to 48%, from EUR 11.1 million to EUR 12.1 million. The list of approved projects in the Annual Activity Report 2010 compared to the list of candidate projects in the AIR 2009 would show that very few new projects emerged from the new call. However, the figures included in the AIRs do not reflect the reality of the programming dynamic. This is due to the fact that some of the "candidate projects" already listed in the AIR 2009, have been effectively committed only in 2010 or 2011 due to delays in obtaining the administrative documents and

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

clarifications on eligible expenditures from the beneficiaries. The latest data provided by the Managing Authority on September 14, 2011 (see Annex Table C and Annex Figure 1) confirm that some project's applications received in 2008 or 2009 have been committed later in 2010 or 2011. Therefore, based on this data, the programming rate by the end of 2010 stands at almost 80%.

The discrepancy between the axis 1 and 2 in terms of commitment is confirmed, but decreasing: by the end of 2010, the axis 1 represents 41% of the ERDF commitments, while the axis 2, 58% of the commitments.

Figure 1 - ERDF commitments by measures (end-2010)



Source: AIR 2010

The ERDF intervention regarding axis 1 is concentrated on a smaller number of projects (7) but with larger amount of financing, mainly in the field of renewable energy production and promotion, as stated in the first 2011 report on the contribution of the ERDF to renewable energy and energy efficiency in residential housing. The support to innovation and research (axis 2) is spread among a higher number (32) of small research projects.

By the end of 2010, the expenditure paid out by the beneficiaries included in payment claims sent to the managing authority amounted to EUR 3.9 million of ERDF, i.e. almost 16% of the ERDF allocation, compared to 6.6% in 2009 (see Annex Table D). The Managing Authority is confident of the fact that it made up for the delay in the starting phase of the programming period. The n+2 rule has been respected (no automatic de-commitment is forecasted). No specific issues, in terms of implementation and management, deserve to be highlighted.

ACHIEVEMENTS OF THE PROGRAMMES SO FAR

The 2010 country report pointed out the following points:

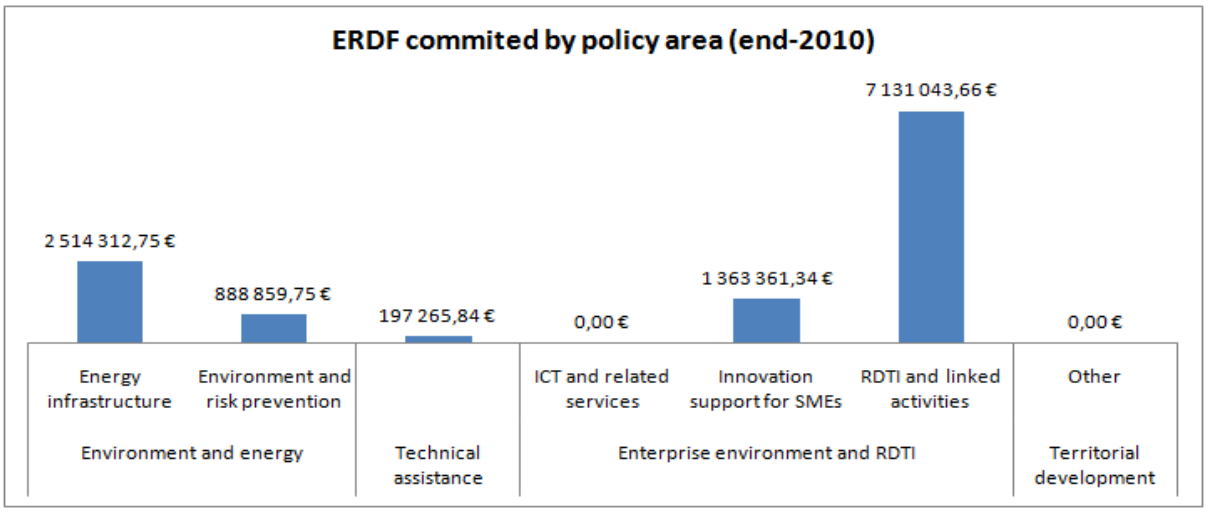
- The analysis of the 15 performance indicators selected by the Managing Authority to assess the implementation of the programme did not give significant evidence on achievements. The selected indicators measured mainly three priorities: employment and the economy (jobs created, support to enterprises), research and innovation (RDT

projects, research infrastructure), and sustainable development (renewable energies, greenhouse gas emissions).

- The ERDF intervention was entirely concentrated on two main policy areas consistent with the Lisbon and Göteborg Strategy: enterprise support and innovation and the environment and energy. No projects had been approved in the other policy areas (transport, ICT, territorial development, human resources).
- Interventions on enterprise support and innovation were mainly focused on supporting research oriented projects, while support to enterprises was only provided indirectly through the support to Luxinnovation, the national innovation agency

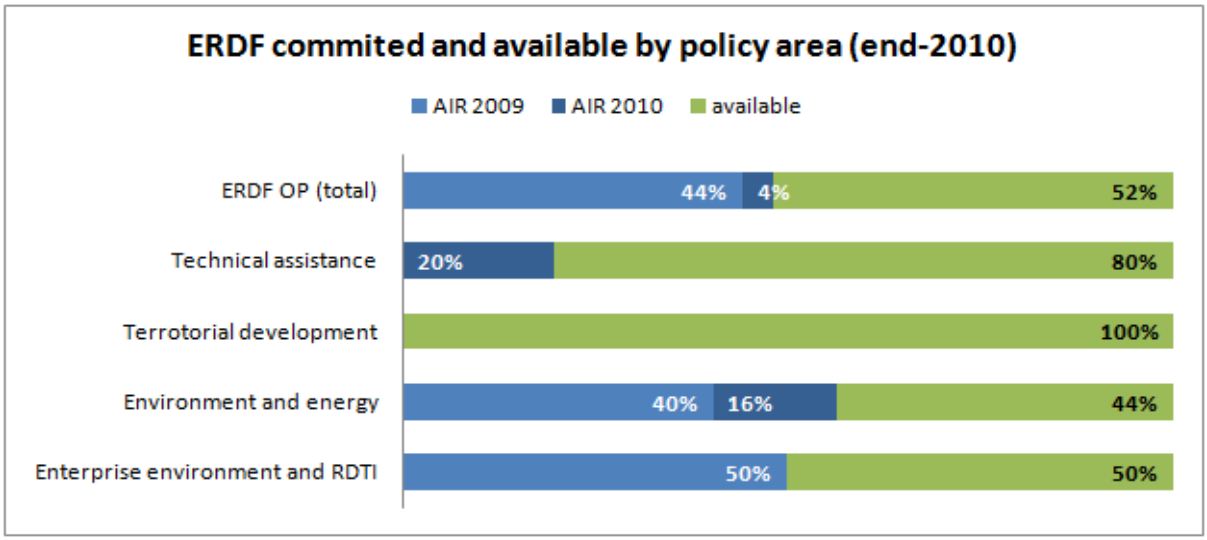
The 2011 country report confirms the major previous statements, particularly in terms of distribution of the ERDF fund by main policy area. The ERDF intervention is still focused on "enterprise environment and RTDI" and "environment and energy" policy areas.

Figure 2 - ERDF Commitment by policy areas (end-2010)



Source: AIR 2010

Figure 3 - Share of ERDF Commitment by policy areas (end-2010)



Source: AIR 2010

However, the annual interim report 2010 gives more concrete evidence on the first achievements of the OP, even though the large majority of the projects are still not closed. By September 14, 2011, 8 projects were closed. More achievements, concrete results from the projects are expected by the end of 2011 and 2012.

Table B – Indicators on outcomes and results

Policy area	Main indicators	Outcomes and results *(see below for comments)*	Final target
Enterprise support and RTDI	CE4 – Number of RTD projects	18	32
	CE5 – Number of cooperation project enterprises-research institutions	7	5
	CE6 – Research jobs created	17	200
	CE40 – Number of projects seeking to promote businesses, entrepreneurship, new technology	1	6
	05 – Number of enterprises created or supported (start-up)	0	5
	02 – Space for research infrastructures (m2)	25,000	33,000
	CE11 – Number of information society projects	0	10
Human Resources	1 – Jobs created	46	2,000
	2 – Jobs created for men	29	1,100
	2 – Jobs created for women	17	900
Environment and energy	CE23 – Number of renewable energy projects	5	6
	CE30 – Reduction greenhouse emissions (CO2 and equivalents, kt)	4	100
	CE 24 – Additional capacity of renewable energy production (MWh)	0	5,000
Territorial development[7]	CE39 – Number of projects ensuring sustainability and improving the attractiveness of towns and cities	0	4

Source: DG Regio – Note: there are some discrepancies on the final targets between the figures delivered by DG Regio and the annual interim report 2010 of the Managing Authority

Enterprise support and RTDI

Enterprise support and RTDI policy area represents a EUR 17.4 million ERDF allocation; EUR 8.5 million ERDF have been committed until the end of 2010 with a particular focus on RTDI projects (EUR 7.3 million).

By the end of 2009, 18 RTD projects were approved and supported by the ERDF. In 2010, apparently only one additional research project was approved by the Managing Authority. The final target of 32 RTD projects should be achieved at the end of the programming

[7] Urban areas, tourism, rural development, cultural heritage, health, public security, local development

period. The number of cooperation projects between enterprises and research institutions is increasing and exceeds the final target of 5 projects.

However, the achievements in terms of support to the business creation and the business environment (number of information society related projects, promotion of business, start-ups creation) are rather poor, demonstrating the operational programme is much more focused on developing research capacities in public research organisations (e.g. new spaces for research infrastructures) and linking them to the enterprise sector. Regarding particularly the start-up creation/support indicator, the programme supports the creation of an incubator in Belval, which is not still in operation. It is also worth mentioning the strong focus on research projects and infrastructures does not result into a great number of research jobs (only 17 out of 200 as targeted initially).

Compared to 2009, there has been low progress on the physical indicators due to the lower number of approved projects within this policy area. By the end of 2010, almost 50% of the ERDF-allocated funds are still available for financing new projects.

Human Resources

This policy area is not directly targeted by the ERDF operational programme. The physical indicators on job creation linked to the programme implementation show limited progress compared to 2009. It seems that the final target of 2,000 jobs is over ambitious with regard to the type of projects supported by the programme (research projects, promotion projects in the field of innovation or energy, small infrastructures projects under axis 1, etc.)

Transport and telecommunications

This policy area is not supported by the ERDF operational programme.

Environment and energy

This policy area is the second core priority of the operational programme with a EUR 6.1 million ERDF allocation and EUR 3.4 million ERDF committed by the end of 2010. Almost 50% of the ERDF allocated funds were still available for financing new projects at the end of 2010, but are decreasing due to the approval of a large project at beginning of 2011.

The OP gives more support to the development of renewable energies and energy efficiency than to environment protection. About EUR 2.2 million of ERDF were originally allocated to **renewable energy and energy efficiency**. However, programming significantly differs from what had been planned in 2007. By March 30, 2011, 6 projects had been approved for an amount of EUR 5.7 million of ERDF, mainly on renewable energies, well over the EUR 2.2 million of ERDF expected, resulting in an over consumption of the ERDF funds. The managing authority still expects to spend from EUR 7 to 8 million of ERDF by the end of the programming period.

Among the 6 projects, 3 concern renewable energies (EUR 5.1 million ERDF) mainly in the fields of biomass production systems (2 projects) and hydro (1 project). The larger project

on biomass (EUR 4 million ERDF) aims to support a pilot infrastructure for biogas production from bio waste, vegetal and green grass covering a population area of 118,000 inhabitants (more than 20% of the population). Three projects concern energy efficiency management (EUR 0.6 million ERDF). Two of them support the MyEnergy activities, the national agency in charge of the promotion of the rational use of energy.

With regard to the other physical indicators[8], the progress is weak mainly because the projects (on energy production infrastructures) are still in progress.

Territorial development

This policy area is not a top priority of the operational programme as it represents only 3% of the ERDF allocation. At the end of 2010 no project had been supported within this policy area.

3. EFFECTS OF INTERVENTION

The 2010 Country Report pointed out the following points:

- difficulty to provide a clear overview of the effects of ERDF interventions, no project being completed;
- due to the low level of ERDF funding (EUR 25 million over 7 years), measuring effects of ERDF interventions per se is a difficult task.

The analysis of the AIR 2010 and of the completed projects (final reports), and the interviews with the Managing Authority confirm the main previous statements.

It is difficult at this stage to give a meaningful presentation of the effects of ERDF intervention on territorial cohesion or in tackling long-term challenges. The implementation of the programme effectively started only in late 2008 and only a few projects have been completed (2 at the end of 2010; 6 more in 2011). In addition, 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 stated "*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)*".

However, it is worth mentioning that the 39 ERDF supported projects from 2007 to 2010 represent 91%[9] of the funds dedicated to the Lisbon/Göteborg earmarking on innovation and sustainable environment. In that sense, the ERDF intervention supported the shift in the policy mix towards a greater focus on innovation and environment.

[8] Reduction of greenhouse emissions; additional capacity of renewable energy production

[9] Annual Interim Report, 2010

For the "environment and energy policy" area, clearly the ERDF contributes to the promotion of the use of renewable energies sources and the efficiency energy management. If the ERDF contribution still remains modest compared to national public funding in the two areas, the ERDF programming trend is consistent with the national policy agenda. This reflects the growing focus of the government on the development of renewable energies and energy efficiency, particularly on biomass (identified as of great potential by the Government in the National Renewable Energy Action Plan), and by testing pilot installations, particularly on biogas production through the second largest project (EUR 1 million ERDF out of EUR 4 million) of the programme: dealing with ecological treatment of organic waste and production of purified biogas, MINNETT-KOMPOST testing phase is fully operational since February 2011.

For the "Enterprise support and RTDI" policy area, whereas ERDF support over 2000-2006 was mainly focused on research infrastructures and equipment in public research labs, over 2007-2013 ERDF support is more balanced between continued finance to research infrastructures and providing funds for soft interventions (research and innovation projects). The ERDF programme is increasing its focus its support on applied research projects, promotion of innovation within firms, development of enterprise/research collaborations, etc. consistently with the increase in national investments in RDI. A good example comes from the ATLAS project (closed in May 2011 and led by the Public Research Centre Gabriel Lippman) on transportation logistics by automated systems. It combined research work on technological development to optimise the strategic planning and management of logistic activities. It also included operational activities involving enterprises, Luxinnovation and members of the logistic clusters with the aim of better defining the needs of enterprises in terms of informatics and logistics and to test new solutions developed by the CRP (as a result, discussions are still in progress with two companies for establishing a cooperation framework).

The ERDF interventions also contribute to strengthening the research capacities and the quality of research in priority research themes, e.g. in the field of materials, biotechnologies. However, the effects on the improvement of exploitation of public research results (patents, licensing, spin-offs creation, etc) still need to be proved. In the field of materials, the evaluations of the "*Science et Analyse des Matériaux*" (SAM) unit at the CRP Lippman and of the "*Advance Materials and Structures"* unit at the CRP Henri Tudor stress that the high quality infrastructure and close relationship with the industrial sector are not sufficiently exploited to produce a satisfactory output in terms of patents, licenses or spin-offs. The evaluators call for a strategy for the handling of intellectual property rights with partners from industry, notably through an increase in the quality of the publications. Additionally, missed opportunities for a closer collaboration with the University are highlighted.

4. EVALUATIONS AND GOOD PRACTICE IN EVALUATION

In Luxembourg, there is no real strategy in place for the evaluation of the effects of interventions co-financed by the ERDF and Cohesion Fund. This is not due to a lack of capacities (human or financial). In practice, the Managing Authority considers that the monitoring tools in place - the financial indicators, the results indicators, the annual interim report, the annual reports provided by the beneficiaries and the in situ control - are sufficient for ensuring the monitoring and an *interim* evaluation of the programme. The Managing Authority has not planed evaluations over the remainder of the programming period.

More generally the evaluation culture in Luxembourg is rather poorly developed within the public administration. Only a limited number of evaluations are available.

The most recent evaluations essentially concern the research and innovation policy area. The Ministry of Higher Education and Research decided in 2010 to carry out a set of evaluations on the national research system. After the review of the national research system in 2006 by the OECD that led the Ministry to a profound reorganisation affecting all the public research institutions (both in terms of research strategy, management and governance), the Ministry aimed to evaluate the scientific excellence of the public research organisations (so called CRP).

The evaluations were focused on the following research institutions which are already supported by the ERDF (except the FNR):

- The National Research Fund (FNR)[10]: the evaluation 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 evaluation was based on three main methodological tools: interviews with stakeholders and beneficiaries of the FNR; workshops with the management board and interlocutors from other research funds in Europe; and a self-assessment report provided by the FNR. Presented to the Parliament in July 201, the evaluation provides a basis for the preparation of the next performance contract 2011-2013 and the establishment of a new law on R&D funding and the FNR (e.g. one of the conclusions of the evaluation to exclude representatives of the Public Research Organisation for the FNR Scientific Committee is already in the legislation proposal).
- The CRP Gabriel Lipman - Evaluation of "*Science et Analyse des Matériaux*" (SAM); the CRP Henri Tudor - Evaluation of *Advance Materials and Structures* (AMS); the CRP Santé - Evaluation of the Department of Oncology; the CEPS - Evaluation of the "Population and

10 External Evaluation carried out by ITD-Eu (Matthieu Lacave).

Emploi" IRISS and RELex research units; the CVCE[11] – Evaluation of KEDL/ICT[12] research unit[13]: The observations and recommendations presented in these reports are based on a peer review by three experts from each field. The peer review consisted in the reading of a self-assessment report written by the research units and a hearing at the evaluation unit. The hearing was composed of a presentation, a group discussion of the self-assessment report and several individual interviews with the managing director of the institutions as well as researchers working in different sections and at different levels of the research units.

Title and date of completion	Policy area and scope	Main objectives	Main findings	Full reference or link to publication
Evaluation of the FNR – 2010	Research policy	Evaluation of : The internal functioning and management of the Agency The selection and monitoring process of the research projects The information workflow management between the various stakeholders The communication strategy The relationships between the FNR and the Public Research Centres	Conclusions are organised around 7 recommendations : (1) Keep the scientific quality as a key objective and as the key selection criterion (2) Explicitly include in the performance contract a strategic objective of contributing to the international visibility and attractiveness of Luxembourg (3) Clarify the distribution of roles between the Scientific Council and the Board (4) Establishing an institutionalised platform of dialogue between the FNR Secretariat and the PROs (5) Improve the understanding of the selection process by the beneficiaries (6) Simplify the management of the programmes (7) Provide a clearer picture of the added value and impact of the FNR activities and communicating on them	http://www.mcesr.public.lu/recherche/rapports_evaluation/Rapport_FNR.pdf
Evaluation of "*Science et Analyse des Matériaux*" – CRP Gabriel Lipman – 2010	Research programmes	Evaluation of the Scientific quality of the SAM research unit around 5 criteria: Strategy – Input (equipment, human resource) –	Conclusions are organised around 6 recommendations : (1) Evaluate past projects (2) Set up a search committee for the succession of the director of the unit (3) Develop an integral internal R&D	

[11] Centre Virtuel de la Connaissance sur l'Europe

[12] Knowledge Environment and Digital Libraries / Information and Communication Technologies

[13] External Evaluations carried out by Interface.

		Processes and implementation – Output (publications) – Outputs (patent, licensing, spin-off	chain (4) Create synergies with AMS at CR Henri Tudor (5) Actively seek to intensify the relationship with the University of Luxembourg (6) Foster the collaboration between institutions engaged in materials research and development by creating a common scientific council	
CRP Henri Tudor – Evaluation of *Advance Materials and Structures* (AMS)	Research programmes	Evaluation of the Scientific quality of the SAM research unit around 5 criteria: Strategy – Input (equipment, human resource) – Processes and implementation – Output (publications) – Outputs (patent, licensing, spin-off	(1) Formulate a research and development agenda by concentrating on a smaller number of key topics (2) Evaluate past projects (3) Reorganise the structure of AMS (4) Adapt the profile of the director of AMS (5) Create synergies with CRP Lipman (SAM unit) (6) Actively seek to intensify the relationship with the University of Luxembourg (7) Foster the collaboration between institutions engaged in materials research and development by creating a common scientific council	http://www.mcesr.public.lu/recherche/rapports_evaluation/3Rapport_AMS.pdf
CRP Santé – Evaluation of the Department of Oncology	Research programmes	Evaluation of the Scientific quality of the SAM research unit around 5 criteria: Strategy – Input (equipment, human resource) – Processes and implementation – Output (publications) – Outputs (patent, licensing, spin-off	(1) Improve the performance of LHCE (2) Set up a joint research programme for LHCE and NorLux (3) Improve the recruitment and development of human resources by strengthening internal and external collaborations	http://www.mcesr.public.lu/recherche/rapports_evaluation/5Rapport_sante.pdf
CEPS – Evaluation of the "Population and Emploi" IRISS and RELex research units	Research programmes	Evaluation of the Scientific quality of the SAM research unit around 5 criteria: Strategy – Input (equipment, human resource) – Processes and implementation	(1) Clearly define the mission of CEPS (2) Further invest in IRISS and RElex (3) Further invest in the recruitment and development of human resources (4) Develop a data policy (5) Actively seek to intensify the relationship with the University of Luxembourg	http://www.mcesr.public.lu/recherche/rapports_evaluation/7rapport_iriss.pdf

		- Output (publications) - Outputs (patent, licensing, spin-off		
CVCE[14] - Evaluation of KEDL/ICT[15] research unit	Research programmes	Evaluation of the Scientific quality of the SAM research unit around 5 criteria: Strategy - Input (equipment, human resource) - Processes and implementation - Output (publications) - Outputs (patent, licensing, spin-off	(1) Develop a strategy for KEDL (2) Develop a project management system for ENA 2010 (3) Foster the collaboration between CVCE's units (4) Obtain scientific and technological knowledge by recruiting new staff (5) Concentrate on developing cooperation potential (6) Conduct a formative evaluation of the whole CVCE	http://www.mcesr.public.lu/recherche/rapports_evaluation/9Rapport_CVCE.pdf

Annex Table G provides an example of good practice in evaluation.

5. CONCLUDING REMARKS - FUTURE CHALLENGES

The main conclusions of the 2010 report were the following:

- pay attention to the emergence of new projects under the axis 1 for optimising the programming rate
- be more selective and support innovation projects involving both research centres and enterprises, or projects which are related to cluster development
- strengthen the evaluation culture in the public administration

Compared to 2009 the development of new projects and initiatives in the field of environment and economic development project has been partly addressed by the programme. The discrepancy between the two axes (environment vs. innovation) in terms of commitment rate has decreased in 2010. Particularly the contribution of ERDF to the development of renewable energies and energy efficiency management is enhanced.

In addition, the certification ISO9001:2008 of the Managing Authority acknowledges the quality of the services delivered to the beneficiaries and the quality of the administrative and financial management of the programme. However, the conclusion on the lack of an evaluation culture in the public administration still remains valid.

As highlighted in the different evaluations, studies and strategic documents, due to the concentration of ERDF funds in RTDI, two main issues deserve an in-depth analysis as regards the effect of the ERDF : the effect of the ERDF interventions on cluster development with the aim of identifying the conditions for boosting this development through ERDF (e.g. that could require a review of the eligibility criteria of the research projects) ; a second issue

[14] Centre Virtuel de la Connaissance sur l'Europe

[15] Knowledge Environment and Digital Libraries / Information and Communication Technologies

regards the impact analysis of the research activities supported by the ERDF (around 20 projects by end-2010) in terms of exploitation of the results (patents, licensing, and spin-off creations).

In the light of the programming year 2010, an additional challenge is to keep a better balance of the ERDF intervention to the benefit of the rural areas. The current programming is still far from the initial objective of dedicating 35% of the funds to these areas.

REFERENCES

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), 2011, Ministry of Higher Education and Research (ITD-Eu)
- Policy paper on renewable energy and energy efficiency of residential housing, 2011, European Commission (ITD-Eu)
- Études économiques de l'OCDE - Luxembourg, mai 2010

3. Other references:

Operational programmes:

- National Strategic Reference Framework 2007-2013
- ERDF Operational Programme 2007-2013 :
  - Operational programme
  - Annual report 2008
  - Annual report 2009
  - Annual report 2010
- National Strategic Report 2010
- INTERREG IVA Great Region 2007-2013[16]
  - Operational programme
  - Annual report 2009
- INTERREG IVB North West Europe 2007-2013[17]
  - Operational programme
  - Annual report 2010

Strategic documents from the Government:

[16] http://www.interreg-4agr.eu/

[17] http://www.nweurope.eu

- 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, STATEC (Luxembourg Office for Statistics), 2006
- Plan d'action du Luxembourg en vue de la réduction des émissions de CO2 (http://www.gouvernement.lu/salle_presse/actualite/2006/05/03lux/plan_action_co2.pdf)
- 11e actualisation du programme de stabilité et de croissance du Grand-Duché de Luxembourg pour la période 2011-2014
- 12e actualisation du programme de stabilité et de croissance du Grand-Duché de Luxembourg pour la période 2011-2014

INTERVIEWS

M. Romain WEIZEN

Conseiller de direction

Autorité de gestion des fonds européens

Ministère de l'Economie et du Commerce extérieur - Direction de la politique régionale

M. Bob SIMON

Autorité de gestion des fonds européens

Ministère de l'Economie et du Commerce extérieur - Direction de la politique régionale

TABLES

See Excel file for Tables 1-4:

Table 1 - Regional disparities and trends

Table 2 - Macro-economic developments

Table 3 - Financial allocation by main policy area

Table 4 - Commitments by main policy area (by end-2010)

Annex Table A - List of candidate projects from 2008 to end-2009 (source: AIR 2009)

Année Appel	Appel	ID	Porteur	Projet	Axe	Mesure	Coût total	Taux FEDER	FEDER max. *(en EUR)*	Coefficient (1)	Convention et/ou accord de principe
2008	01	001	Université du Luxembourg	Centre national d'information pour la politique urbaine (CIPU)	2	2	360 000,00	15%	54 000,00	1	CV
2008	01	002	Cne de Differdange	Réaménagement de l'entrée en ville de Differdange dans un contexte urbanistique, de croissance économique, de mobilité publique et de développement durable	1	1	17 889 500,00	25%	4 472 375,00	3	
2008	01	003	Ville de Luxembourg	Conduite de transit de chaleur de l'usine d'incinération de Leudelange vers Luxembourg pour l'approvisionnement d'un réseau de chauffage urbain	1	2	9 437 000,00	25%	2 359 250,00	3	
2008	01	004	Syndicat intercommunal SIDOR	Récupération de chaleur thermique à l'usine de SIDOR	1	2	570 000,00	25%	142 500,00	3	
2008	01	006	CRP Henri Tudor	Cassis –Sécurité2	2	2	492 308,00	35%	172 307,80	1	CV
2008	01	007	CRP Henri Tudor	STOCOMAT	2	2	980 000,00	35%	343 000,00	1	CV
2008	01	008	CRP Henri Tudor	MATINTELLO	2	2	996 800,00	35%	348 880,00	1	CV
2008	01	009	CRP Henri Tudor	PEGASE Prototyping ans Evaluation of Geolocalized Advance Services	2	2	300 100,00	35%	105 035,00	1	CV
2008	01	010	Saint-Gobain Abrassifs S.A..	CPD-EXCELLENCE Saint-Gobain Abrasifs – Construction Product Division	2	1	902 000,00	35%	315 700,00	4	N/A
2008	01	011	CRP Gabriel Lippmann	ATLAS Assistance to Transportational Logistic by Automated Systems	2	1.1	286 248,00	35%	100 186,80	1	CV
2008	01	012	CRP Gabriel Lippmann	COVIN Cooperative Visualization of Intagibles	2	1	401 983,00	35%	140 694,05	1	AP
2008	01	013	CRP Gabriel Lippmann	UAM – Plate-forme de caractérisation des matériaux	2	1	2 160 612,00	35%	756 214,00	1	CV
2008	01	014	CRP Henri Tudor	Normalinnove	2	2	261 800,00	35%	91 630,00	1	CV
2008	01	015	CRP Gabriel Lippmann	AIRSPEC – Implementation of an airborne hyperspectral imaging system	2	1	621 702,00	35%	217 595,70	1	AP

2008	01	016	CRP Gabriel Lippmann	BIOGAZ-PILOTES – Appui technique pour la filière biométhanisation	2	1	171 702,00	35%	60 095,70	1	AP
2008	01	017	CRP Gabriel Lippmann	SECAL-GC (analyse de résidus en trace en chaîne alimentaire)	2	1	211 702,00	35%	74 095,70	1	AP
2008	01	018	Cne de Differdange	Zone artisanale Haneboesch	1	1	6 400 000,00	25%	1 600 000,00	3	
2008	01	019	CRP Gabriel Lippmann	IPROME – Initiative for Promotion of Manufacturing Execution Systems	2	2	230 468,00	35%	80 663,80	1	AP
2008	01	020	Luxinnovation	PREDI-INFO	2	1.1	324 200,00	35%	113 470,00	1	CV
2008	01	021	Luxinnovation	PREDI-EVE	2	1	710 800,00	35%	248 780,00	1	CV
2008	01	022	Luxinnovation	PREDI-PRO	2	1	908 400,00	35%	317 940,00	1	CV
2008	01	023	Luxinnovation	PREDI-FIN	2	1	914 000,00	35%	319 900,00	1	CV
2008	01	024	Luxinnovation	PREDI-TECH	2	1	778 000,00	35%	272 300,00	1	CV
2009	02	025	CRP Gabriel Lippmann	ADAGIO (Advanced Terminals for an Ageing Population)	2	2	299 036,00	35%	104 662,60	1	AP
2009	02	026	CRP Henri Tudor	Emissaire – Evaluation multidimensionnelle de l'investissement socialement responsable	2	2	350 000,00	35%	122 500,00	1	AP
2009	02	027	CRP Henri Tudor	ECO-CONCEPTION – Passez à l'acte !	2	2	248 812,00	35%	87 084,20	1	AP
2009	02	028	CRP Henri Tudor	WATERTECH – Outils et méthodes pour une évaluation scientifique d'écotechnologies dans le secteur des eaux usées	2	2	481 460,00	35%	168 511,00	1	AP
2009	02	029	CRP Henri Tudor	PROGRESS – Promotion de la Gestion des Risques pour l'Excellence des Services externalisés	2	2	380 187,00	35%	133 065,45	1	AP
2009	02	030	CRP Henri Tudor	CoCoMo	2	2	466 578,00	35%	163 302,30	2	AP
2009	02	031	Commune de Bettembourg	Mise en place d'infrastructures de base servant entre autre à l'implantation de nouvelles activités économiques en respectant un haut niveau écologique	1		22 119 350,00	25%	5 529 837,50	3	
2009	02	032	CRP Gabriel Lippmann	UAM 2 – Plate-forme de caractérisation des matériaux	2	1.2	1 113 714,00	35%	389 799,90	1	AP
2009	02	033	CRP Gabriel Lippmann	TOOLS4NANO	2	1.2	2 227 492,00	35%	779 622,20	1	AP
2009	02	034	SIDEST (syndicat intercommunal pour la dépollution des eaux résiduaires de l'est)	RISK-RESEAU	2	2	615 000,00	35%	215 250,00	1	AP
2009	02	038	CRP Henri Tudor	HYDROPOL	2	2	987 000,00	35%	345 450,00	1	AP
2009	02	039	CRP Henri Tudor	CAPTOCHEM	2	2	672 000,00	35%	235 200,00	1	AP
2009	02	040	CRP Henri Tudor / Luxinnovation	Sensibilise PME	2	2	461 538,00	35%	161 538,30	2	AP
2009	02	041	CRP Henri Tudor / Luxinnovation	INNOSERV – Innovation dans les Services	2	2	616 744,80	35%	215 860,68	2	AP
2009	02	042	Administration communale de Bascharage	Construction d'un centre de recyclage à Bascharage dénommé « Eco Center Bascharage-Clemency-Dippach	1	2.1	2 660 000,00	25%	665 000,00	4	
2009	02	043	GIE My Energie	Développement d'un stand « My Energie »	1	2.2	276 900,00	25%	69 225,00	1	AP
2009	03	044	Locautovalen S.à r.l	Formula Grand Prix MUSEUM RICHER (Musée de formule 1 à Haller « ENZO HOTEL »)	1	1.1	700 000,00	25%	175 000,00	4	
2009	03	045	Syndicat Minett-Kompost	Installation de compostage et de biogaz à Mondercange Lot 1, équipement technique et éléments de construction immanents	1	2.2	14 755 505,00	25%	3 688 876,25	1	CV
2009	03	046	LUXCONNECT S.A.	Centres internationaux primaires d'accès à l'internet	1	1.2	128 577 000,00	25%	32 144 250,00	4	
2009	03	047	LUXCONNECT S.A.	Réseau de fibres optiques et de communication	1	1.2	29 693 000,00	25%	7 423 250,00	4	
2009	03	048	STEP Bettembourg	Solare Klärschlammtrocknungsanlage	1	2.2	3 500 000,00	25%	875 000,00	1	CV
2009	03	049	CRP-Henri Tudor / (CRTE)	Analyse de conséquences environnementales et économiques de scénarios énergétiques au Luxembourg (LUXEN)	2	2	364 000,00	35%	127 400,00	1	AP
2009	03	050	My Engergie GIE	Mise en place d'un réseau « infopoints »	1	2.2	1 968 351,00	25%	492 087,75	1	AP
2009	03	051	Etablissment Public Fonds Belval	Création d'un incubateur d'entreprises à Belval (cité des sciences)	1	1.1	8 650 000,00	25%	2 162 500,00	1	CV
2009	03	052	CRP Gabriel Lippmann	CROWN – Collaborative & Reliable Organisation of Validation & Verification Needs	2	2	304 184,00	35%	106 464,40	1	AP

(1) Lors des Comités de sélection, des coefficients sont attribués à chacun des projets :
1 : sélection directe
2 : informations complémentaires nécessaires
3 : informations complémentaires nécessaires avec une éventuelle redéfinition de la partie éligible
4 : refusé

Annex Table B – List of projects committed by end-2010 (excluding technical assistance) (source: AIR 2010)

Porteur de projet	Nom du projet	Axe / Mesure		Total approuvé	
				Coût total	FEDER
Établissement Public Fonds Belval	Création d'un incubateur d'entreprises à Belval (cité des sciences)	1	1	6.000.000	1.500.000
			Total mesure 1.1.	**6.000.000**	**1.500.000**
GIE My Energie	Développement d'un stand "My Energie"	1	2	276.900	69.225
Syndicat Minett-Kompost	Installation de compostage et de biogaz à Mondercange Lot 1, équipement technique et éléments de construction immanents	1	2	4.000.000	1.000.000
STEP Bettembourg	Solare Klärschlammtrocknungsanlage	1	2	3.500.000	875.000
My Energie GIE	Mise en place d'un réseau "infopoints"	1	2	1.968.351	492.088
Cne de Sanem	Bassin d'orage, rue de l'Usine à Belvaux	1	2	3.555.439	888.860
CRP-Henri Tudor / (CRTE)	Analyse de conséquences environnementales et économiques de scénarios énergétiques au Luxembourg (LUXEN)	1	2	312.000	78.000
			Total mesure 1.2.	**13.612.690**	**3.403.173**
CRP Gabriel Lippmann	ATLAS Assistance to Transportational Logistic by Automated Systems	2	1	286.248	100.187
CRP Gabriel Lippmann	AIRSPEC - Implementation of an airborne hyperspectral imaging system	2	1	621.702	217.596
CRP Gabriel Lippmann	BIOGAZ-PILOTES - Appui technique pour la filière biométhanisation	2	1	171.702	60.096
CRP Gabriel Lippmann	SECAL-GC (analyse de résidus en trace en chaine alimentaire)	2	1	211.702	74.096
Luxinnovation	PREDI-INFO	2	1	324.200	113.470
Luxinnovation	PREDI-EVE	2	1	710.800	248.780
Luxinnovation	PREDI-PRO	2	1	908.400	317.940
Luxinnovation	PREDI-FIN	2	1	914.000	319.900
Luxinnovation	PREDI-TECH	2	1	778.000	272.300
CRP Henri Tudor	DuraPolyMat	2	1	757.040	264.964
CRP Gabriel Lippmann	COVIN Cooperative Visualization of Intagibles	2	1	401.983	140.694
CRP Gabriel Lippmann	UAM - Plate-forme de caractérisation des matériaux	2	1	2.160.612	756.214
CRP Gabriel Lippmann	UAM 2 - Plate-forme de caractérisation des matériaux	2	1	1.113.714	389.800
CRP Gabriel Lippmann	TOOLS4NANO	2	1	2.227.492	779.622
			Total mesure 2.1.	**11.587.595**	**4.055.658**

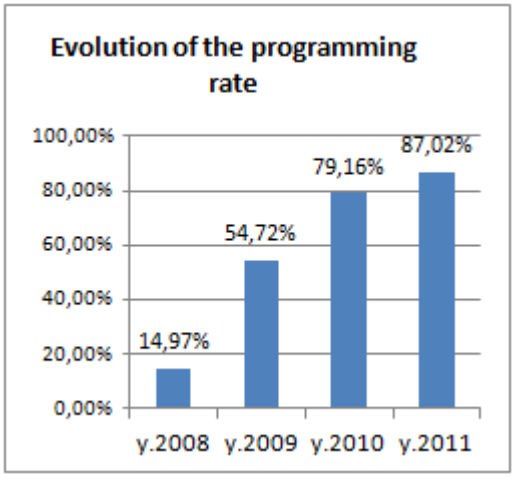
Porteur de projet	Nom du projet	Axe / Mesure		Total approuvé	
				Coût total	FEDER
Université du Luxembourg	Centre national d'information pour la politique urbaine (CIPU)	2	2	360.000	54.000
CRP Henri Tudor	Cassis -Sécurité2	2	2	492.309	172.308
CRP Henri Tudor	MATINTELLO	2	2	996.800	348.880
CRP Gabriel Lippmann	IPROME - Initiative for Promotion of Manufacturing Execution Systems	2	2	230.468	80.664
CRP Gabriel Lippmann	ADAGIO (Advanced Terminals for an Ageing Population)	2	2	299.036	104.663
CRP Henri Tudor	Emissaire - Evaluation multidimensionnelle de l'investissement socialement responsable	2	2	300.000	105.000
CRP Henri Tudor	ECO-CONCEPTION - Passez à l'acte !	2	2	223.803	78.331
CRP Henri Tudor	WATERTECH - Outils et méthodes pour une évaluation scientifique d'écotechnologies dans le secteur des eaux usées	2	2	412.680	144.438
CRP Henri Tudor	PROGRESS - Promotion de la Gestion des Risques pour l'Excellence des Services externalisés	2	2	325.874	114.056
CRP Henri Tudor	CoCoMo	2	2	399.923	139.973
SIDEST (syndicat intercommunal pour la	RISK-RESEAU	2	2	615.000	215.250
CRP Henri Tudor	HYDROPOL	2	2	846.000	296.100
CRP Henri Tudor	CAPTOCHEM	2	2	576.000	201.600
CRP Henri Tudor / Luxinnovation	Sensibilise PME	2	2	399.032	139.661
CRP Henri Tudor / Luxinnovation	INNOSERV - Innovation dans les Services	2	2	540.924	189.324
CRP Gabriel Lippmann	CROWN - Collaborative & Reliable Organization of Validation & Verification Needs	2	2	304.184	106.464
CRP Henri Tudor	STOCOMAT	2	2	980.000	343.000
CRP Henri Tudor	PEGASE Prototyping ans Evaluation of Geolocalized Advance Services	2	2	300.100	105.035
Total mesure 2.2.				**8.602.134**	**2.938.747**
Total axes 1 et 2:				**39.802.419**	**11.897.578**

Annex Table C – List of committed project on September 14, 2011 (source: MA)

	Appel	ID	Porteur de projet	Titre du projet	Axe	Mesure	Sous-mesure	Taux FEDER	FEDER accordé - engagé 14.09.2011 (en EUR)	Projets achevés
2008	01	001	**Université du Luxembourg**	Centre national d'information pour la politique urbaine (CIPU)	2	2		15%	100 500,00	
2008	01	006	**CRP Henri Tudor**	Cassis -Sécurité2	2	2		35%	172 308,00	
2008	01	007	**CRP Henri Tudor**	STOCOMAT	2	2		35%	343 000,00	
2008	01	008	**CRP Henri Tudor**	MATINTELLO	2	2		35%	348 880,00	
2008	01	009	**CRP Henri Tudor**	PEGASE Prototyping ans Evaluation of Geolocalized Advance Services	2	2		35%	105 035,00	
2008	01	011	**CRP Gabriel Lippmann**	ATLAS Assistance to Transportational Logistic by Automated Systems	2	1	1	35%	100 186,80	X
2008	01	012	**CRP Gabriel Lippmann**	COVIN Cooperative Visualization of Intagibles	2	1	1	35%	140 694,05	
2008	01	013	**CRP Gabriel Lippmann**	UAM - Plate-forme de caractérisation des matériaux	2	1	2	35%	756 214,20	
2008	01	015	**CRP Gabriel Lippmann**	AIRSPEC - Implementation of an airborne hyperspectral imaging system	2	1	2	35%	217 595,70	
2008	01	016	**CRP Gabriel Lippmann**	BIOGAZ-PILOTES - Appui technique pour la filière biométhanisation	2	1	2	35%	60 095,70	
2008	01	017	**CRP Gabriel Lippmann**	SECAL-GC (analyse de résidus en trace en chaîne alimentaire)	2	1	2	35%	74 095,70	
2008	01	019	**CRP Gabriel Lippmann**	IPROME - Initiative for Promotion of Manufacturing Execution Systems	2	2		35%	80 663,80	
2008	01	020	**Luxinnovation**	PREDI-INFO	2	1	1	35%	113 470,00	X
2008	01	021	**Luxinnovation**	PREDI-EVE	2	1	1	35%	248 780,00	X
2008	01	022	**Luxinnovation**	PREDI-PRO	2	1	1	35%	317 940,00	X
2008	01	023	**Luxinnovation**	PREDI-FIN	2	1	1	35%	319 900,00	X
2008	01	024	**Luxinnovation**	PREDI-TECH	2	1	1	35%	272 300,00	X
2009	02	025	**CRP Gabriel Lippmann**	ADAGIO (Advanced Terminals for an Ageing Population)	2	2		35%	104 662,60	
2009	02	026	**CRP Henri Tudor**	Emissaire - Evaluation multidimensionnelle de l'investissement socialement responsable	2	2		35%	105 000,00	
2009	02	027	**CRP Henri Tudor**	ECO-CONCEPTION - Passez à l'acte !	2	2		35%	78 331,05	
2009	02	028	**CRP Henri Tudor**	WATERTECH - Outils et méthodes pour une évaluation scientifique d'écotechnologies dans le secteur des eaux usées	2	2		35%	144 438,00	
2009	02	029	**CRP Henri Tudor**	PROGRESS - Promotion de la Gestion des Risques pour l'Excellence des Services externalisés	2	2		35%	114 056,00	
2009	02	030	**CRP Henri Tudor**	CoCoMo	2	2		35%	139 973,00	
2009	02	032	**CRP Gabriel Lippmann**	UAM 2 - Plate-forme de caractérisation des matériaux	2	1	2	35%	389 799,90	
2009	02	033	**CRP Gabriel Lippmann**	TOOLS4NANO	2	1	2	35%	779 622,20	
2009	02	034	**SIDEST (syndicat intercommunal pour la dépollution des eaux**	RISK-RESEAU	2	2		35%	215 250,00	
2009	02	038	**CRP Henri Tudor**	HYDROPOL	2	2		35%	296 100,00	
2009	02	039	**CRP Henri Tudor**	CAPTOCHEM	2	2		35%	201 600,00	
2009	02	040	**CRP Henri Tudor / Luxinnovation**	Sensibilise PME	2	2		35%	139 661,34	
2009	02	041	**CRP Henri Tudor / Luxinnovation**	INNOSERV - Innovation dans les Services	2	2		35%	189 323,56	
2009	02	043	**GIE My Energie**	Développement d'un stand "My Energie"	1	2	2	25%	69 225,00	

	Appel	ID	Porteur de projet	Titre du projet	Axe	Mesure	Sous-mesure	Taux FEDER	FEDER accordé - engagé 14.09.2011 (en EUR)	Projets achevés
2009	03	045	**Syndicat Minett-Kompost**	Installation de compostage et de biogaz à Mondercange Lot 1, équipement technique et éléments de construction immanents	1	2	2	25%	4 000 000,00	X
2009	03	048	**STEP Bettembourg**	Solare Klärschlammtrocknungsanlage	1	2	2	25%	875 000,00	X
2009	03	049	**CRP-Henri Tudor / (CRTE)**	Analyse de conséquences environnementales et économiques de scénarios énergétiques au Luxembourg (LUXEN)	1	2	2	25%	78 000,00	
2009	03	050	**My Energie GIE**	Mise en place d'un réseau "infopoints"	1	2	2	25%	492 087,75	
2009	03	051	**Établissement Public Fonds Belval**	Création d'un incubateur d'entreprises à Belval (cité des sciences)	1	1		25%	1 500 000,00	
2009	03	052	**CRP Gabriel Lippmann**	CROWN - Collaborative & Reliable Organization of Validation & Verification Needs	2	2		35%	106 464,40	
2010	04	053	**METRICO s.à.r.l**	OpenGeoportail pour le Luxembourg et les régions frontalières	1	1	2	25%	19 425,00	
2010	04	054	**Cne de Sanem**	Bassin d'orage, rue de l'Usine à Belvaux	1	2	1	25%	888 859,75	
2010	04	057	**Cne de Mamer**	Centrale énergétique et réseau de chaleur "Nahwärmeverbund Energieturm Capellen"	1	2	2	25%	271 400,00	
2010	04	059	**Luxinnovation**	MEET & TOUCH	2	1	1	35%	286 650,00	
2010	04	061	**Luxinnovation**	ACCEED	2	1	1	35%	292 425,00	
2010	04	062	**Luxinnovation**	VALORIZE	2	1	1	35%	290 500,00	
2010	04	063	**Luxinnovation**	CLUSTER	2	1	1	35%	342 825,00	
2010	04	064	**Luxinnovation**	SUPPORT	2	1	1	35%	325 675,00	
2010	04	065	**Luxinnovation**	EMPOWER	2	1	1	35%	344 925,00	
2010	04	069	**CRP Henri Tudor**	DuraPolyMat	2	1	2	35%	264 964,00	
2010	04	075	**Établissement Public Fonds Belval**	Luxembourg Center for Systems Biomedecine LCSB	2	1		35%	2 667 000,00	
2010	04	076	**Université du Luxembourg**	CCTL Centre de Compétences en Technologie Laser	2	1		35%	163 230,62	
2011	05	079	**CRP Henri Tudor**	Boost-IP	2	2		35%	116 608,80	
2011	05	081	**CRP Henri Tudor**	Smart-Heat-Flow	1	2	2	25%	35 791,25	
2011	05	084	**CRP Henri Tudor / Communes d'Ettelbück, Diekirch, Schieren,**	Nordstad-eMovin	1	2	2	25%	163 785,00	
2011	05	085	**CRP Henri Tudor / CEPS/INSTEAD**	ZAC-eMovin	1	2	2	25%	81 839,00	
2011	05	086	**CRP Henri Tudor / MECE - Sécurité informatique**	ISIS - Integrated Services in Information Security	1	1	2	25%	122 580,00	
2011	05	087	**CRP Gabriel Lippmann**	ELECTRO4NANO	2	1		35%	679 457,80	
2011	05	089	**GIE My Energie**	MyEnergy Days - Le salon de l'assainissement énergétique	1	2	2	25%	552 710,00	
2011	05	091	**CRP- Santé**	Extentsion bâtiement modulaire "BAM"	2	1	2	35%	228 004,70	
									21 928 909,67	8

Annex Figure 1: Evolution of the programming rate (source: data of the Managing Authority, September 14, 2011)



Annex Table D – Implementation rate by end-2010 (source: AIR 2010)

		AIR 2010					Certified eligible expenditure 2010				
Country	OP	Expenditure paid out by the beneficiaries included in payment claims sent to the managing authority	Corresponding public Contribution	Private Expenditure	Expenditure paid by the body responsible for making payments to the beneficiaries	Total payments received from the Commission	Total funding of the OP (Union and national)	Total amount of certified eligible expenditure paid by beneficiaries	Corresponding public contribution	In public cost	Implementation rate
LU	Axis 1	9 416 795,00	7 062 596,00	0,00	0,00	2 137 313,00	48 467 840,00	9 416 796,00	7 062 597,00	N	19,43 %
LU	Axis 2	4 144 764,00	2 717 852,00	0,00	514 082,00	2 137 313,00	34 619 882,00	4 144 764,00	2 717 852,00	N	11,97 %
LU	Technical Assistance	394 531,00	197 265,00	0,00	207 321,00	178 109,00	2 019 494,00	394 531,00	197 266,00	N	19,54 %
	Total	13 956 090,00	9 977 713,00	0,00	721 403,00	4 452 735,00	85 107 216,00	13 956 091,00	9 977 715,00		16,40%

Annex Table E – Indicators referred to in Article 37, paragraph 1, point c) of Regulation (EC) 1083/2006 (source: AIR 2010)

ID	Indicateurs cumulés 2007-2010	Axe		2007	2008	2009	2010
1	Emplois créés	1 et 2	Indicateur annuel	0	0	38	8
			Programme: Objectif annue	0	230	310	310
			Indicateur cumulé	0	0	38	46
			Programme: Objectif cumul	0	230	540	850
2	Emplois créés - hommes	1 et 2	Indicateur annuel	0	0	23	6
			Programme: Objectif annue	0	130	160	160
			Indicateur cumulé	0	0	23	29
			Objectif cumulé	0	130	290	450
3	Emplois créés - femmes	1 et 2	Indicateur annuel	0	0	15	2
			Programme: Objectif annue	0	100	150	150
			Indicateur cumulé	0	0	15	17
			Objectif cumulé	0	100	250	400
4	Nombre de projets de RDT	2	Indicateur annuel	0	4	14	0
			Programme: Objectif annue	0	4	4	4
			Indicateur cumulé	0	4	18	18
			Objectif cumulé	0	4	8	12
5	Nombre de projets de coopération entreprises - instituts de recherche	2	Indicateur annuel	0	0	7	0
			Programme: Objectif annue	0	1	1	1
			Indicateur cumulé	0	0	7	7
			Objectif cumulé	0	1	2	3
6	Nombre de postes de chercheurs créés (de préférence 5 ans après le début du projet)	2	Indicateur annuel	0	0	11	6
			Programme: Objectif annue	0	25	25	25
			Indicateur cumulé	0	0	11	17
			Objectif cumulé	0	25	50	75
11	Nombre de projets liés à la société de l'information	1	Indicateur annuel	0	0	0	0
			Programme: Objectif annue	0	1	1	2
			Indicateur cumulé	0	0	0	0
			Objectif cumulé	0	1	2	4
23	Nombre de projets liés aux énergies renouvelables	1	Indicateur annuel	0	0	4	1
			Programme: Objectif annue	0	1	1	1
			Indicateur cumulé	0	0	4	5
			Objectif cumulé	0	1	2	3
24	Capacité supplémentaire de production d'énergie renouvelable (MWh)	1	Indicateur annuel	0	0	0	0
			Programme: Objectif annue	0	625	625	625
			Indicateur cumulé	0	0	0	0
			Objectif cumulé	0	625	1250	1875
29	Surfaces réhabilitées (km^2)	1	Indicateur annuel	0	0	0	0,2
			Programme: Objectif annue	0	0,2	0,2	0,2
			Indicateur cumulé	0	0	0	0,2
			Objectif cumulé	0	0,2	0,4	0,6
30	Réduction d'émissions de gaz à effet de serre (CO_2 et équivalents / kt)	1	Indicateur annuel	0	0	3	1
			Programme: Objectif annue	0	12	12	12
			Indicateur cumulé	0	0	3	4
			Objectif cumulé	0	12	24	36
39	Nombre de projets assurant la durabilité et améliorant l'attractivité des communes et des villes	1	Indicateur annuel	0	0	0	0
			Programme: Objectif annue	0	1	1	1
			Indicateur cumulé	0	0	0	0
			Objectif cumulé	0	1	2	3
40	Nombre de projets soutenant les entreprises, l'entreprenariat et les nouvelles technologies	1	Indicateur annuel	0		1	0
			Programme: Objectif annue	0	1	1	1
			Indicateur cumulé	0	0	1	1
			Objectif cumulé	0	1	2	3
I02	Surfaces d'infrastructure créées à des fins de recherche (m^2)	2	Indicateur annuel	0	0	122	80
			Programme: Objectif annue	0	1000	1000	1000
			Indicateur cumulé	0	25000	25122	25202
			Objectif cumulé	25000	26000	27000	28000
I05	Nombre d'entreprises créées ou aidées (start-up)	1	Indicateur annuel	0	0	0	0
			Programme: Objectif annue	0	0	1	1
			Indicateur cumulé	0	0	0	0
			Objectif cumulé	0	0	1	2

Annex Table F - Broad policy areas and correspondence with fields of intervention (FOI)

Policy area		Code	Priority themes
1. Enterprise environment	RTDI and linked activities	01	R&TD activities in research centres
		02	R&TD infrastructure and centres of competence in a specific technology
		05	Advanced support services for firms and groups of firms
		07	Investment in firms directly linked to research and innovation (...)
		74	Developing human potential in the field of research and innovation, in particular through post-graduate studies ...
	Innovation support for SMEs	03	Technology transfer and improvement of cooperation networks ...
		04	Assistance to R&TD, particularly in SMEs (including access to R&TD services in research centres)
		06	Assistance to SMEs for the promotion of environmentally-friendly products and production processes (...)
		09	Other measures to stimulate research and innovation and entrepreneurship in SMEs
		14	Services and applications for SMEs (e-commerce, education and training, networking, etc.)
		15	Other measures for improving access to and efficient use of ICT by SMEs
	ICT and related services	11	Information and communication technologies (...)
		12	Information and communication technologies (TEN-ICT)
		13	Services and applications for citizens (e-health, e-government, e-learning, e-inclusion, etc.)
	Other investment in firms	08	Other investment in firms
2. Human resources	Education and training	62	Development of life-long learning systems and strategies in firms; training and services for employees ...
		63	Design and dissemination of innovative and more productive ways of organising work
		64	Development of special services for employment, training and support in connection with restructuring of sectors ...
		72	Design, introduction and implementing of reforms in education and training systems ...
		73	Measures to increase participation in education and training throughout the life-cycle ...
	Labour market policies	65	Modernisation and strengthening labour market institutions
		66	Implementing active and preventive measures on the labour market
		67	Measures encouraging active ageing and prolonging working lives
		68	Support for self-employment and business start-up
2. Human resources (Cont.)	Labour market policies (Cont.)	69	Measures to improve access to employment and increase sustainable participation and progress of women ...
		70	Specific action to increase migrants' participation in employment ...

Policy area		Code	Priority themes
		71	Pathways to integration and re-entry into employment for disadvantaged people ...
		80	Promoting the partnerships, pacts and initiatives through the networking of relevant stakeholders
3. Transport	Rail	16	Railways
		17	Railways (TEN-T)
		18	Mobile rail assets
		19	Mobile rail assets (TEN-T)
	Road	20	Motorways
		21	Motorways (TEN-T)
		22	National roads
		23	Regional/local roads
	Other transport	24	Cycle tracks
		25	Urban transport
		26	Multimodal transport
		27	Multimodal transport (TEN-T)
		28	Intelligent transport systems
		29	Airports
		30	Ports
		31	Inland waterways (regional and local)
		32	Inland waterways (TEN-T)
4. Environment and energy	Energy infrastructure	33	Electricity
		34	Electricity (TEN-E)
		35	Natural gas
		36	Natural gas (TEN-E)
		37	Petroleum products
		38	Petroleum products (TEN-E)
		39	Renewable energy: wind
		40	Renewable energy: solar
		41	Renewable energy: biomass
		42	Renewable energy: hydroelectric, geothermal and other
		43	Energy efficiency, co-generation, energy management
	Environment and risk prevention	44	Management of household and industrial waste
		45	Management and distribution of water (drink water)
		46	Water treatment (waste water)
		47	Air quality
		48	Integrated prevention and pollution control
		49	Mitigation and adaption to climate change
		50	Rehabilitation of industrial sites and contaminated land
		51	Promotion of biodiversity and nature protection (including Natura 2000)
		52	Promotion of clean urban transport
		53	Risk prevention (...)
		54	Other measures to preserve the environment and prevent risks
5. Territorial development	Social Infrastructure	10	Telephone infrastructure (including broadband networks)
		75	Education infrastructure
		77	Childcare infrastructure
		78	Housing infrastructure

Policy area		Code	Priority themes
	Tourism and culture	79	Other social infrastructure
		55	Promotion of natural assets
		56	Protection and development of natural heritage
		57	Other assistance to improve tourist services
		58	Protection and preservation of the cultural heritage
		59	Development of cultural infrastructure
	Planning and rehabilitation	60	Other assistance to improve cultural services
	Other	61	Integrated projects for urban and rural regeneration
		82	Compensation of any additional costs due to accessibility deficit and territorial fragmentation
		83	Specific action addressed to compensate additional costs due to size market factors
6. Technical assistance		84	Support to compensate additional costs due to climate conditions and relief difficulties
		81	Mechanisms for improving good policy and programme design, monitoring and evaluation ...
		85	Preparation, implementation, monitoring and inspection
		86	Evaluation and studies; information and communication

Annex Table G – Example of good practice in evaluation:

BASIC INFORMATION		
Country : Luxembourg		
Policy area : RTDI		
Title of evaluation and full reference : Evaluation of the "Science et Analyse des Matériaux" (SAM) research unit of the CRP Gabriel Lipman		
Intervention period covered : 2007-2010		
Timing of the evaluation : 2010		
Budget (if known): unknown		
Evaluator : External evaluator		
Method • drafting of a self-assessment report by the research unit evaluated (template prepared by the external evaluator) • individual interviews with research team members • peer review process (involving 3 scientists from the thematic field) • hearing of the head of the research unit with evaluation team and peers • right of response for the research unit		
Main objectives and main findings In the context of the review of the performance contract (2008-2010) between the Ministry of Research and the CRP Lippman, the Ministry launched a set of evaluation of research units of the Public Research Centres, including the SAM research unit of the CRP Lippman. The evaluation had 5 objectives: assess the relevance of the research strategy of the research unit; the quality of the research environment (in terms of equipment and human resources); the efficacy of the processes and implementation for the definition of the research agenda and the management of the research unit ; the quality of the outputs (publications), and of the outcomes (patent, licensing, spin-off)		
Appraisal The methodology is a mix of a self-assessment, scientific review (peer reviews) and external evaluation (not scientific) that facilitated a real dialogue between the evaluators (contradictory debate), the research unit and the Ministry on the conclusions. Recommendations are operational and clearly formulated (the final report is clearly formulated, easy to read for a non-specialist of the scientific field). Results of the evaluation have been endorsed by the Ministry of Research (presentation of the results to the Parliament Committee in charge of research and higher education policy, and to the media; final report available on-line; right of response of the CRP Lippman also available on-line.)		
CHECK LIST	**YES**	**NO**
UTILITY		
Report Clarity and Balance		
Are the objectives, methods and findings of the evaluation clearly described?	X	
Are the conclusions and recommendations clearly supported by the analysis?	X	
Are the strengths and weaknesses of the intervention being evaluated fairly assessed and reported?	X	
Is the outcome of the intervention clearly reported?	X	
RELIABILITY OF FINDINGS		
Evaluation design		
Is the approach adopted by the evaluation and method used clearly set out?	X	
Is the approach and methods suitable given the objectives of the valuation and the intervention being assessed?	X	
Are the details of the operation of the intervention clearly described?		X
Are the mechanisms through which the intervention is intended to achieve its objectives		X

clearly identified?		
Context		
Is the socio-economic and policy context clearly set out?		X
Are the effects of the economic and/or policy context on the outcome of the intervention clearly described?		X
Information Sources		
Are the quantitative and/or qualitative data used suitable for the purpose for which they are used?	X	
Is the reliability of the data fairly assessed and described?	NA	NA
Analysis		
Are appropriate procedures/techniques used to analyse the data and/or qualitative information?	X	
Are suitable procedures used to check the validity of findings?	NA	NA
Is the validity of the findings reached clearly demonstrated?	X	
Do the policy recommendations follow clearly from the findings of the analysis?	X	