

## Assessment programme of *PM2.V* (Marshall Plan 2.Green, *Plan Marshall 2.Vert*)

### Executive summary

#### THEMATIC ASSESSMENT 2 - DEVELOPMENTAL PROGRAMMES

In the context of the assessment programme of *PM2.V* (Marshall Plan 2.Green, *Plan Marshall 2.Vert*) commissioned by the Walloon Government from the IWEPS, the objective of this report is to assess the *effectiveness* of the regional *Developmental Programme* policy (*programmes mobilisateurs*).

Developmental Programmes are *one of the instruments for financing research and innovation* in Wallonia. They were set up during the Nineties. They take the form of *calls for projects* focusing on priority *topics* for the Walloon economic fabric (“energy”, “health”, “ICT” and “materials” mainly), which select and finance, for a limited period of time, *collaborative research projects*, carried out by *university or polytechnic units, public research organisations or approved research centres*. The financed projects are selected with the idea that building upon their research results can contribute, in the long term, to *sustainable regional economic and social development*. One of the features of the Developmental Programmes is that it involves the corporate world, through project sponsorship, or even with a company as a research partner in its own right.

In a perspective of *ex-post assessment of the research*, it is a question of identifying the *results* that are actually observed at the conclusion of the research work and of understanding the extent to which they have been developed; the *development* being appreciated from the *economic, scientific, technological and environmental* points of view. This assessment is focusing on the short- and medium-term effects of the policy and questions the “*additionality*” of the developmental programmes, namely “something which is obtained thanks to public intervention, which would not have existed without and which directly meets the incentivising effect of the public policy” (GEORGHIU, 1994 in TEIRLINCK et al, 2011, p.144). These additional effects are observed *at the level of the research projects*, that is to say the *assessment unit*.

*The data collection and analysis methodology* applied in this work is an approach known as *mixed*, involving both quantitative and qualitative methods, with *triangulation* of the results. The quantitative approach is based on an *electronic survey*. As for the qualitative approach, it is articulated around *focus groups*, that is to say a form of collective discussions.

Out of thirty or so calls for projects for developmental programmes launched to date, fifteen have been included in the assessment *field*, namely calls of which the projects were engaged between 2002 and 2009. The last calls for projects carried out, including the calls known as “*PM2.V* (Marshall Plan 2.Green, *Plan Marshall 2.Vert*)”, do not directly appear in this field. However, these recent programmes show characteristics which are enshrined within the rationale on which the conclusions and the recommendations are founded. The latter are consequently applicable to them.

The *conclusions* of the analysis and assessment work are articulated around three main lines.

Firstly, the developmental programmes are, on the one hand, an *evolving policy* and, on the other, a *policy experiencing several forms of tension*.

In addition to the *change of the decree basis* in response to the prescriptions of new Community framing of the research, the drafters have evolved the developmental programme policy in three major directions: *a*

*reinforcement of the socio-economic development objective, an extension of the development objectives to the environmental field and the application of an enlarged definition of innovation.*

The *tensions* to which the developmental programmes are subject emerge at the level of the *expected effects, the vision of the players on their respective roles and the action timetables concerned.*

- The nature of the pursued objectives, namely, in the short term, the reinforcement of the pedestal of scientific knowledge and technical skills and, in the medium term, the exploitation of this scientific potential in regional productive fabric, places the beneficiaries of the policy before a strong constraint. This tension leads to priority being given to scientific concern. The possible upgradings, although they constitute the reference for the orientation of the research, represent a more distant concern, difficult to envisage in detail at the start of the research projects.
- The players have different visions of their respective roles. Through the developmental programmes, the industrial world aims, at least, at having information of first order on the scientific developments in various sectors and is expecting from the scientific community that it is able to envisage upgrading within its research dynamic. From the other side, the scientists assert their role of “researchers” and expect from companies that they hold their hand in formulating programmes for building upon the results. This tension in the socio-economic players’ play would be reinforced by drafters’ variable expectations as for the place of the companies. If their involvement is systematically confirmed as the guarantee of a connection between the research and the socio-economic fabric, the degree of that involvement varies, from the company having a role of “sponsor”, via the company as a research partner, until the company being the promoter of the research project.
- Tension is also expressed at the level of the action timetables involved. The companies are confronted with commercial and immediate management constraints, whereas the scientific teams are inspired by longer-term scientific objectives. Moreover, it would be a question of reconciling these different timetables with, in terms of exploitation, pressure from the drafters of the policy for an increasingly fast “return on investment”.

A second fundamental contribution of the assessment lies in the identification of a *lever effect* of the developmental programme policy. The quantitative survey has indeed made it possible to observe the presence of an *additionality of input: from 77 to 80% of the research projects have not or would not have been implemented without public financial support through developmental programmes.* As for the effects in terms of co-operation (a dimension of *behavioural additionality*), they are highlighted, both in the survey’s responses and in the *focus groups’* exchanges: improvement of the capacity for co-operation with private and public partners (including a third party located in Europe) or the development of new partnerships.

Thirdly, in a direct link with the effects of the policy, it appears that the expected and observed results are first and foremost *results of a directly scientific nature*: development of knowledge, of multidisciplinary synergies, production of scientific publications and, specifically for the companies, integration into an open innovation process. In terms of upgrading, the quantitative survey has identified *industrial impact (economic upgrading)* in *38% of the projects*, thanks to a shared contribution from the various players involved, with at the head the *spin offs*, then the SMEs and the universities/polytechnics and, finally, the big companies. As for the *environmental upgrading* approaches that were embarked upon, *three fields are differentiated: the reduction of energy consumption, the reduction of the use of raw materials and the reduction of greenhouse gas emissions.* More widely, the integration of environmental concerns as from the design of the research projects constitutes a sign of the players’ progressive awareness of these questions (reflection on a product’s lifecycle, for example), in line with a public concern for sustainable development.

An important aspect of the assessment lies in light being shed on some *critical factors of success*, that is to say factors likely to block or facilitate the achievement of the policy's objectives. *Some internal factors*, specific to the implementation process, have been indicated: mainly, an *authorised duration of the research projects consistent with upgrading and stability in time of the objectives set for the research projects by the drafters of the policy*. Factors relating to the framework conditions in which the developmental programmes evolve, i.e. to the *regional system of innovation* and its six interdependent pillars, have also been targeted:

- *The availability and conservation of skilled labour* ("Human Resources" pillar);
- *The degree of involvement of the corporate world* ("Entrepreneurship" pillar);
- *The size of the Walloon productive fabric, its specialisation and its openness to internationalism* ("Capacity for Absorption of Innovation" pillar);
- *Specialist guidance in terms of building upon the research results* ("Capacity of Upgrading of Research Results" pillar);
- *The financing of the stages remaining to be crossed by the innovation process between the end of the aid brought by the developmental programmes and the commercialisation* ("Financing" pillar).

These critical factors are as many starting points for an improvement of the developmental programmes' effectiveness. At the conclusion of the assessment, the following *recommendations* are formulated in that sense:

- ***Ensure a continuity of the objectives pursued by the developmental programmes policy;***
- ***Objectify the question of economically building upon the research results by using a technological maturity scale;***
- ***Objectify the question of the environmental upgrading in line with the European approaches in progress;***
- ***Make sure of the follow-up of the financing of the projects at the conclusion of the developmental programmes.***

Furthermore, *in order to go further in relation to the assessment of the developmental programmes*, the following *proposals* have been identified:

- *Implement a case study interested in the results resulting from the projects according to the roles played by the companies (sponsor, partner, promoter);*
- *Develop thematic / sectoral assessments, conducted jointly by assessment specialists and thematic experts, in addition to this general assessment of the developmental programmes.*