First lessons learnt from the Mediterranean ERA-WIDE projects

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First lessons learnt from the Mediterranean ERA-WIDE projects

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Abstract. In 2010, the European Commission launched a new scheme targeting directly research centres from the European Neighbourhood Policy (ENP) countries. The ERA-WIDE scheme was aimed at reinforcing the cooperation capacities of the ENP countries, involving the different thematic priorities of FP7. Between 2010 and 2011, approximately thirty ERA-WIDE projects were selected for funding with the focus being on the Mediterranean Partner Countries. This paper presents a preliminary assessment of these projects, highlighting the lessons learnt so far. It is divided into four main parts. The first part presents the ERA-WIDE scheme and its potential impact in terms of human capital development. Part two gives an overview of the ERA-WIDE projects funded across the Southern Mediterranean region. Part three highlights some experimental practices used to coordinate the projects at a regional level. It examines the extent to which these practices can contribute to strengthening the impacts of the projects and complementing previous initiatives funded by the International Cooperation Programme of DG Research and Innovation under FP7. The last part of the paper presents some indicators employed to assess the final impact expected at a later stage, as well as some recommendations to make the most of this approach. This paper employs material and observations acquired by the authors through their involvement in ERA-WIDE INCO activities as project officers, coordinators and reviewers.

Keywords. Capacity building – Empowerment – Ownership – Coordination.

Les premières leçons tirées de l'expérience des projets ERA-WIDE en Méditerranée

Résumé. *En 2010, la Commission Européenne a lancé un nouveau programme visant directement le renforcement des capacités de coopération des centres de recherche des pays de la Politique Européenne de Voisinage (PEV) impliqués dans des thématiques prioritaires correspondantes à celles du VII PCRD. Entre 2010 et 2011, une trentaine de projets ERA-WIDE ont obtenu un financement parmi les Pays Partenaires Méditerranéens. Cet article présente une évaluation préliminaire de ces projets en soulignant quelques unes des leçons apprises jusqu'à présent. Il est divisé en quatre principales parties. La première partie introduit le programme ERA-WIDE et son impact potentiel en termes de développement du capital humain. La deuxième partie offre une vue d'ensemble des projets ERA-WIDE financés sur la région Méditerranéenne. La troisième partie souligne quelques pratiques expérimentales utilisées pour coordonner les projets à un niveau régional. Elle analyse dans quelle mesure ces pratiques peuvent contribuer à renforcer l'impact des projets et compléter des initiatives précédentes financées par le Programme de Coopération Internationale de la DG Recherche et Innovation de la Commission Européenne sous son VIIème PCRDT. La dernière partie de cet article propose quelques indicateurs pour évaluer l'impact final des projets une fois qu'ils auront atteint un stade de mis en œuvre plus avancé, ainsi que certaines recommandations pour valoriser cette approche. Cet article repose sur du matériel et des observations acquises par ses auteurs au cours de leur participation dans les activités des projets ERA-WIDE, que ce soit en tant que gestionnaires, coordinateurs ou évaluateurs.*

Mots-clés. *Renforcement des capacités – Autonomisation – Propriété – Coordination.*

An overarching concern informing this paper is the process of moving from the integration in the European Research Area to the knowledge economy in general. Over the last two decades, the

European public policies have highlighted progressive multiplication of the financial resources. As indicated by the OECD report on the governance of research policies (OCDE, 2003), the substantial change in the modalities of allocation of funding for research has generated an important increase in the percentage of funding attributed through competitive mechanisms of grant allocation. Accordingly, research institutions are now bound to organize themselves in new ways in order to be able to respond to this phenomenon and position themselves against this new market.

The confrontation of two dynamics - scientific production and management of research teams – in a reduced time scale has resulted in high organizational stress. Currently, competitiveness of a research institution is not only measured in terms of the quality of its scientific production, but also of its ability to plan, manage and optimize resources and communication. A revealing example is the evaluation criterion used in FP7, where the total scoring is divided equally among three components: (i) scientific quality (5/15), (ii) management (including finance and governance) and composition of consortium partnering (5/15), and (iii) the impact generated by research on the socio-economic and environmental needs (5/15).

The promotion of a European Research Area (ERA) aims to '*enable researchers, research institutions and businesses to increasingly circulate, compete and co-operate across borders'*. In addition, it is intended *'to give them access to a Europe-wide open space for knowledge and technologies in which transnational synergies and complementarities are fully exploited* (ERA, 2012). The participation in networks and consortiums is undoubtedly a good asset to develop all kinds of opportunities in terms of access to information, training and knowledge, access to databases and infrastructures, access to new contacts and partnerships, as well as a marked improvement of the field of vision. Players across Europe have to position themselves strategically in an arena where they will be able to compete for grants.

The Mediterranean Partner Countries (MPC) are directly challenged by similar issues in their attempts to integrate into the ERA: insufficient research funding leading to a high level of competition, redefinition of the role of universities and research centres in a context of massification of access to higher education systems[1], lack of traditional academia-industry collaboration linkages, inadequate system of governance, lack of inter-sectoral mobility, fragmented nature of research activities, inappropriate use of limited resources, lack of intellectual property rights protection, lack of sufficient skills by young scientists and researchers[2], lack of RDI managers able to anticipate difficulties and quickly solve problems. These challenges hinder the career development of researchers and weaken the research actors' capacities of absorption of the knowledge economy in many countries across the Southern Mediterranean region.

I – The ERA-WIDE Scheme: from empowerment to ownership

In terms of management, the notion of empowerment lays on three pillars: vision, autonomy and ownership. An empowered team knows towards where to go (vision), has a sufficient margin of action to go towards this direction (autonomy) and feels legitimate to lead this action (ownership). Within an enterprise, human empowerment leads to numerous benefits given that it improves motivation, service quality, productivity and competitiveness, decision-making process, commitment and involvement. The process of empowerment is a mechanism enabling persons, organizations and communities to acquire control on the events. It is related to the power and capacity of acting (Jouve, 2006) and coping with a situation.

If applied to the South Mediterranean research centres and their involvement in the international networks for ST cooperation, the concept of empowerment tends to respond to two situations: first, failure to open these networks to newcomers, thus generating a "club effect" (Siino, 2009), turning into a protected space for senior experts that prevents replacing the pool of experts

and hence having a new vision; second, a lack of ownership and a passive behaviour from an important number of stakeholders, particularly from the South Mediterranean Countries.

Launched in 2010, the ERA-WIDE scheme builds on the Research Potential scheme (REGPOT), a previous successful pilot initiative aiming to 'adjust Mediterranean Partner RTD research entities' policies, boosting their scientific and technological research potential'. This previous scheme was highly demanded and had generated many expectations from the Mediterranean Partner Countries in 2009. Unlike the REGPOT, for the first time the ERA-WIDE scheme introduced the rule that the consortium coordination is directly assumed by the research centres from the ENP themselves (main beneficiaries), with the support of European partners willing to share and transfer their experiences. The call explicitly mentioned three main categories of activities to be compulsorily performed, among which the definition of a strategy to be usable beyond the project:

- winning/networking with research centres in MS or AC with a view to exchanging knowledge and good practices, disseminating scientific information, identifying partners and setting up joint experiments through short-term visits or exchange of staff, meetings, seminars, and similar activities;
- developing training to build competency and facilitate the participation of these centres in FP7;
- developing research centres' strategy in order to increase their modules, scope and visibility (regional coverage, activities), develop their comparative advantage and improve their competitiveness by enhancing their responses to the socio-economic needs of their countries and of the region[3].

The expected impacts mentioned in the ERA-WIDE call were as follows:

- contribution to RTD capacity building and management in the target country;
- enhanced participation of the country in the FP7;
- increased visibility and scope (regional coverage, subjects, activities) of the centre with increased linkage with economic and social environment;
- networking with other research centres in Member States or Associated Countries (mobilizing the human and material resources existing in a given field, disseminating scientific information as well as the results of research, facilitating communication between the centres having similar scientific interest);
- increased job opportunities that encourage gender equality in the country, in particular for young scientists (measures to avoid 'brain drain' phenomena: better career opportunities, better work conditions, access to research infrastructures).

Despite placing large responsibilities and workload on individuals, the ERA-WIDE scheme appeared to provide a unique opportunity to make things happen. In this respect, we can consider that the main characteristic of this call was to empower the South Mediterranean research players – potential players of change – through a "learning by doing" approach, especially in terms of RTD and knowledge management. Indeed, the funds given to the coordinator and his/her team allow them to measure their strength, thus highlighting the importance of the human capital. In return, they have to develop and demonstrate certain capacities that are not explicitly recognized by the academic arena:

Capacities of mobilization: mobilizing requires reflecting a strategic thought in the way the choices and actions are presented and conducted. They have to be of high level quality, meaning well justified, coherent and easily marketable in the sense that their impact can be logically perceived and believed, hence attracting interest and trust.

Capacities of absorption and responsiveness: absorbing the information and opportunities is intrinsically linked to the capacity of responding and reacting in time to some opportunities and demands made available through the relevant networks. The capacities of absorption depend on the mobilized human and financial resources and their organization. The more efficiently they are organized, the more they can absorb and manage knowledge, and the more attractive they become.

Capacities of building a team: building trust and quality is an important factor in this respect. Team management is a crucial issue and it implies real efforts in terms of skills development. In this respect, training for staff and partners is of strategic importance. The more a research player attracts, the more the research player can share opportunities.

Capacities of building a common goal: abilities to gather different types of actors and projects representing different kinds of interests. Identifying common gaps and burdens to be overcome and finding common denominators to fill them up is a way of mobilizing the efforts of various communities of players towards the achievement of a common goal.

An international network, seen in some cases as an open-innovation system, is organized around a system of rules resting on the game of inter-personal relationships and on explicit laws and sanctions. As mentioned by P. Moreau Defarges in his work on governance (Moreau Defarges, 2008), 'this system of rules evolves at two levels: with respect to the frontiers between public and private spheres and interests; with respect to the concept of general interest understood as a multiform construct, open and permanent'. In order to evolve and progress in such a system, a research player has to work on its attractiveness through the improvement of its capacities in three parallel sectors that correspond to the evaluation criteria mentioned before: (i) the scientific and technological knowledge offer; (ii) the way of ensuring adequate utilization of this knowledge through a regulatory system of contracting and intellectual property protection, meaning the development of legal, administrative and financial engineering and, last but not least, (iii) the development of good communication and interface mechanisms to ensure a sustainable impact on the research player, on the networks it belongs to, and on the other indirect stakeholders of the society. These components are part of a strategic approach.

The power to develop a strategy is linked to a certain degree of independence and autonomy. Indeed, an institution's organizing capacities and autonomy are intimately interrelated. According to Sébastien Bordmann (Bordmann, 2007), 'the autonomy of a university or research centre can be full, partial or inexistent' according to the degree of independence the organization may avail itself of vis-à-vis the public authorities in several fields : (i) the control and management of the budget of the establishment ; (ii) the strategy of development, meaning the internal definition of the long-term development plan of the establishment and its positioning at the national and international level; (iii) the human resources policy; (iv) the students' selection (if applicable) ; (v) the pedagogic organization (if applicable) ; (vi) the management of the real estate park and (vii) the internal audit. In the South Mediterranean countries, some national laws recognize autonomy as a necessary component of an environment conducive to the development of scientific research and technological development (e.g. Algeria[4], Tunisia[5] or Lebanon[6]) but they are not systematically translated into applicable rules. The interest of the ERA-WIDE scheme through EU funding is to give the coordinators, who are the ones signing the grant agreement with the EC, a great deal of autonomy subject to official approval by their superiors. Indeed, they benefit from being independent in the way they can define their project's objectives, implement and fine-tune their activities and manage an independent budget.

Designing a strategy does not refer only to the development of objectives and actions to achieve them. It is also intimately linked to the development of a vision and of values. Phillip N Cooke and Andrea Piccaluga (Cooke and Piccaluga, 2004) reported that, 'in knowledge management, the idea is not only to spread values through the firm itself or through the networking but above all to

share values, add values and even change some values that make up the core'. They highlight the fact that 'the framework improves in a stakeholder and values framework'.

The coordinator of an ERA-WIDE project, as all the project coordinators, is placed in between different timelines and agendas as well as different procedures, and has to struggle for the definition of the rules of the game. Depending on the quality of the coordinator's relations with the interlocutors, he/she will develop initiatives and have the flexibility to negotiate and adjust the way resources have to be spent, either in terms of planning or procedures. The coordinator, be it an organization or an autonomous entity, is the one contractually and morally responsible for achieving the project objective. Therefore, he/she is accountable to the donors financing the project, the consortium and team he/she mobilizes, especially the twin organization and the organization he/she represents.

The empowerment of South Mediterranean researchers and research organizations is expected to induce an important impact on the overall international cooperation activities structuring the Euro-Mediterranean ST cooperation, in the sense that it directly feeds and inhabits the new central concept of ownership emerged after the Arab revolutions. Although this approach in ERA-WIDE projects presents some risks and is a bet on the future, it is definitively an innovative method in the new requirements of the knowledge economy. It is based on trust, responsibility, responsiveness, creativity, risk-taking and problem-solving building process, which is more than ever required in the current socio-economic context.

II – The ERA-WIDE funded Projects

In the first ERA-WIDE call launched in 2010, only 19 proposals were submitted, whereas almost 70 proposals were submitted in the 2nd call closing on March 15th of 2011. Despite the critical situation shaking the Arab countries in this period ("Arab Spring"), the participation of the Mediterranean Partner Countries in this call raised to 75%. In total, 29 research centres have been selected for funding among the South Mediterranean countries, for a total amount of 13.5 M€. Only 27 projects are currently under implementation in 8 Mediterranean Partner Countries[7]. The number of projects is from one to seven by country (Fig. 1).

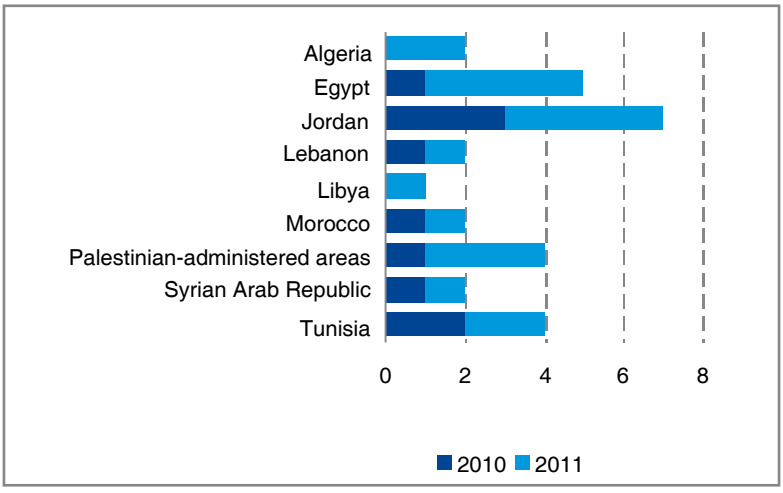

Figure 1. Number of ERA-WIDE projects by country.
Source: 15th MoCo meeting, Szeged, Hungary, June 2011.

The duration of these projects ranges from 24 to 36 months, with an average of 28 months that will certainly increase during the implementation phase in view of the important number of requests for extending the project duration. The average budget by project is 0.5 M€, and in most cases the coordinator receives approximately half of it.

The projects focus on diverse topics related to: (i) environment (integrated coastal zones management, sustainable water management, degraded soils characterization and use, biodiversity, oceanography); (ii) food, agriculture, biotechnology and fisheries (FAB) including seed and plant conservation, aquaculture, water and agriculture, medicinal and aromatic plants; (iii) nanotechnologies and new materials (NMP) applied to cultural heritage and health applications); (iv) renewable energies; (v) information and communication technologies (ICT); and (vi) health (non-communicable diseases, liver diseases, medical research and cancer biobanks).

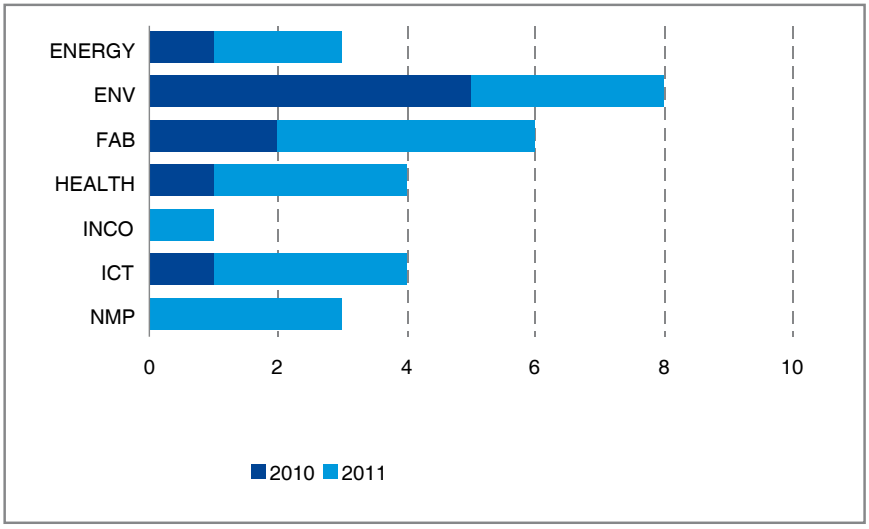

Figure 2. ERA-WIDE Projects by thematic area.
Source: DG Research and Innovation website.

Although topics are not specified in the ERA-WIDE calls, project topics are equivalent to the FP7 thematic areas and represent the research priorities of the Mediterranean region. Most research centres are working in the environment field (50%, first call). The topics of the selected projects during the second call are more diversified than in the first one (addition of NMP, ICT and higher participation related to FAB).

The number of partners in the consortiums ranges from 2 to 6 and the great majority of them have 3 partners. In total, there are 85 participations from 23 different countries in the 27 projects under implementation. The majority of the partners are European (78 from 16 European countries), 3 are from associated or candidate countries (3 from Turkey, Romania and Switzerland), 3 are from Mediterranean Countries and 1 from West Balkan Countries (Croatia).

The most active partners are from Italy (17 institutions participating in 24 projects out of 27, that is to say in almost all the projects), Spain (8 institutions participating in 13 projects, meaning almost half of the total number of projects), France (8 institutions participating in 12 projects) and UK (5 institutions in 9 projects). Germany participates in 5 projects, while Greece and Ireland participate in 3 each. The other 9 European Countries[8] participate only in one of these projects. As the

ERA-WIDE call targets the South Mediterranean research centres, it is interesting to explore the profile of EU partners. It is presented in Figure 3 and it mostly corresponds to public, non-profit organizations of research and higher education.

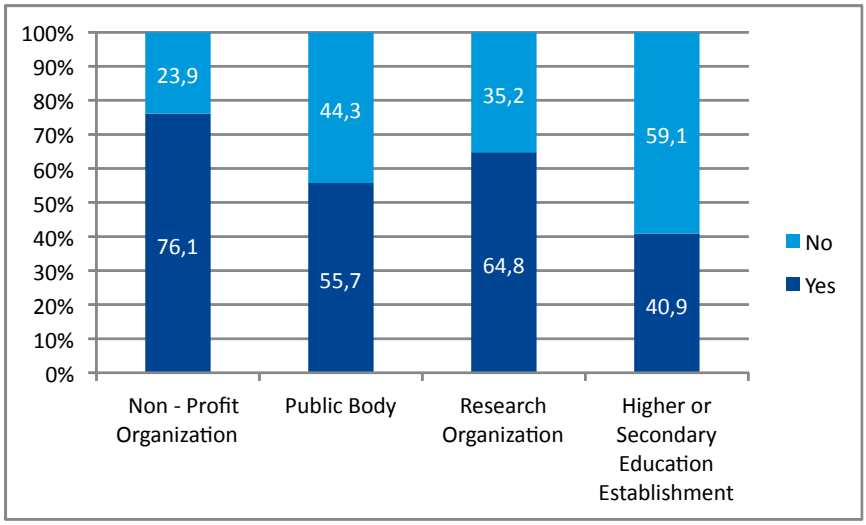

Figure 3. Legal Status of ERA-WIDE Partner Organization.
Source: ERA-WIDE survey 2011.

It is interesting to observe that the size of MPC organizations vary considerably (Fig. 4); some of them reach a number of 50 employees, while others have several hundreds of employees, almost 1,500 in one case. Obviously, depending on the size of the beneficiary organization, a project like an ERA-WIDE one will not have the same level and type of impact.

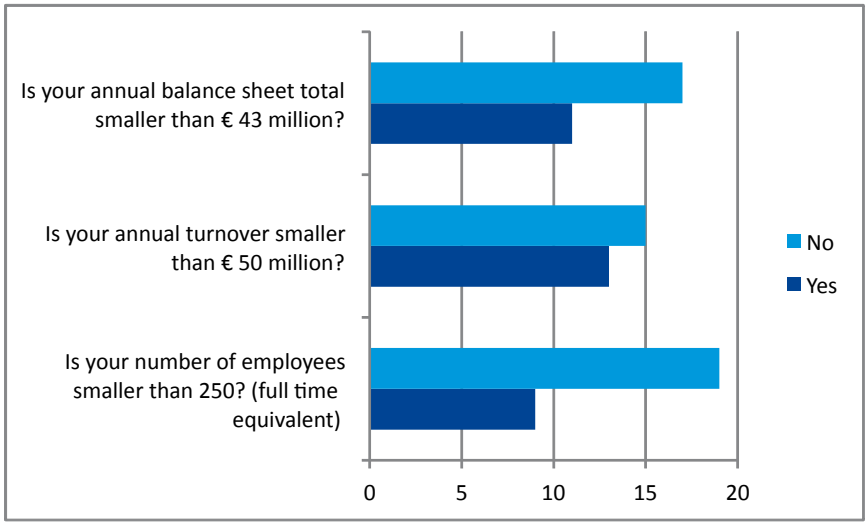

Figure 4. Size of ERA-WIDE Research Institutes.
Source: ERA-WIDE survey 2011.

Likewise, the legal status of the beneficiary organizations is different, although the majority of them are non-profit research public organizations (Fig. 5). Two thirds of them are not recognized as Higher Education establishments, while a third represents universities. Another noteworthy observation is that almost half of the interviewed institutions considered themselves as autonomous, while the others are not. Coordinating institutions of ERA-WIDE projects are non-profit organizations (92%) and public institutions (88%). Moreover, almost half of the South Mediterranean institutes coordinating an ERA-WIDE project claimed to have a legal autonomous status.

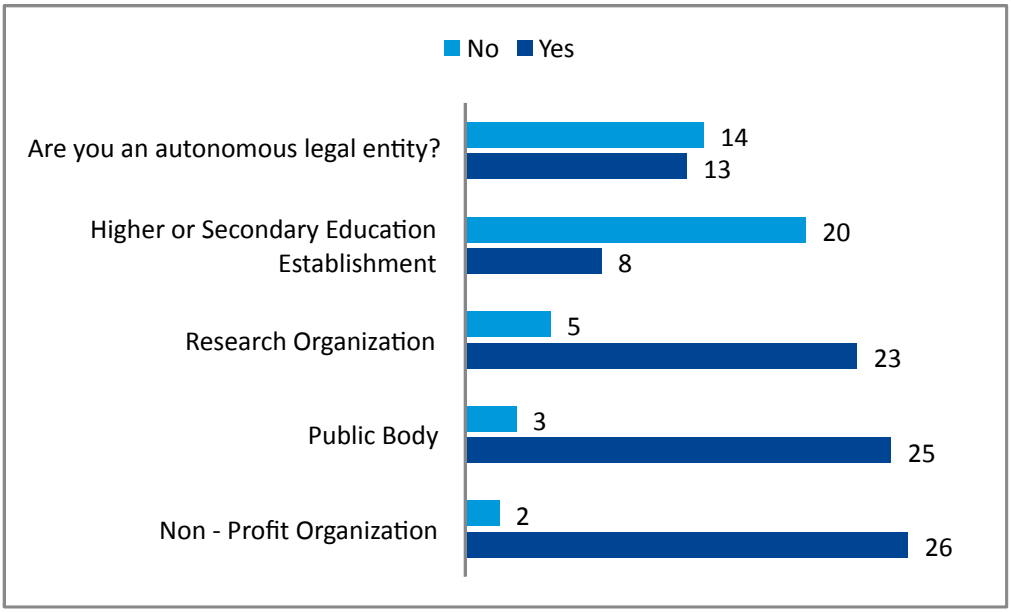

Figure 5. Legal Status of ERA-WIDE Research Institutes.
Source: ERA-WIDE survey 2011.

On the basis of the data presented above and collected through a short survey with the ERA-WIDE coordinators on their impact pre-assessment, the following part further examines how the coordination of these projects was attempted.

III – Leveraging the impacts of ERA-WIDE projects at the regional level: coordination through clustering

The FP7 mid-term evaluation in 2010 (Warrington *et al*., 2010) pointed to the valuable results and achievements of the INCO projects, but noted the lack of coordination between the different consortiums implementing the BILAT and INCO-NET schemes as one of their limitations leading, in some cases, to a duplication of work and inefficient use of the limited resources[9]. In the case of the ERA-WIDEs, their coordination was promoted during the negotiation and implementation process in order to leverage the global impact of the projects. A concrete method used to promote coordination is the clustering of projects. This clustering approach has been increasingly practiced

over the last three years with a view to avoiding the duplication of efforts and favouring synergies. Implemented at the project level, its aim is to cope with the fragmentation of the activities financed, both in terms of the diversity of the calls and financial schemes.

Taking the example of the Water Cluster Initiative (WCI) established through the REGPOT and Regions of Knowledge schemes and the so-called 'open method of coordination (OMC)[10], the International Cooperation Directorate started exploring the relevance of this approach to boost the impact of projects. At the same time, the input received from MIRA project, especially through the work on the Euro-Mediterranean Innovation Space (EMIS), also supported the development of a research-driven cluster pilot case on water as a new concept to foster innovation.

Table 1 depicts the drivers of a clustering approach, while raising the following questions: *What is the effectiveness of this method and how can its real added value be assessed? How can this approach support a more coherent and sustainable impact of the clustered projects? What could be the expected advantage and limits?* This table could be further developed by making a comparative cost analysis for this approach, as well as developing different types of clusters.

Through this coordination method, some positive preliminary results that are worth mentioning were developed. In Tunisia, the BILAT and ERA-WIDE project coordinators worked together with the support of the Ministry in order to fit FP7 management rules to Tunisian ones and elaborate a guide for researchers and participants. The National Agency of Research Promotion (ANPR – *Agence Nationale de Promotion de la Recherche*), along with FP7 project coordinators, supported the implementation of the guide. The target impacts are: (i) an efficient management procedure in agreement with FP7 rules and supported by ANPR, (ii) clearer rules of FP7 calls for Tunisian applicants in order to enhance Tunisian participation and integration into the European Research Area.

Another positive example of coordination through clustering was the drafting process of a regional policy document on the formulation of a strategic research agenda in support of the broader strategy on the de-pollution of the Mediterranean Sea. Since the process of negotiation of the first wave of ERA-WIDE (2010) coincided with the negotiation on the new mandate of MIRA, through the project officers the European Commission encouraged the successful ERA-WIDE proposals to explicitly mention the coordination between the INCO-NETs, BILATs and other ERA-WIDEs in the description of work to be annexed to all grant agreements. Six out of ten projects focused on water-related fields, all of which had proposed to review the national policies and initiatives related to the water sector in their countries as a preliminary exercise to further develop their strategy. On the other hand, MIRA tried to mobilize a representative and multidisciplinary group of experts to assess and recommend actions to tackle the de-pollution of the Mediterranean Sea. Based on a match of interests, it was decided to cooperate to formulate a 'shared deliverable': the report on the Mediterranean Sea pollution situation addressed by the Horizon 2020 Programme of the ENPI, focusing on the challenges in the research domain[11]. A quite interesting point in this process is the emerging practice of signing Memoranda of Understanding between projects. From interviews with the project coordinators, it appeared that this practice aimed at clarifying the rules of the scheme and encouraged the value of trust and recognition among the regional networks. The advantage of this 'shared deliverable' was, on one hand, to directly build on the existing work performed at a national level by the ERA-WIDE projects and make the most of it on the regional scene; on the other hand, MIRA benefited from a more cost-effective and quality-tested collaboration as well as a more legitimized result representing a larger number of projects.

Table 1. Drivers of a clustering approach.

Stakeholders	Policy-makers /donors	Researchers	Enterprises
Expected advantage of a "clustering approach"	Science-policy interface: – to raise success stories and build up a critical mass able to assess the efficiency and relevance of public policies (representativeness and legitimacy) – to raise the capacities of absorption of the policy makers through pooling the analyses and recommendations made by the projects as a result of their research activities – to help define financial needs and budget orientation (e.g. innovation: set of different financing mechanisms to support the whole chains of innovation from research to access to the market) – to gain in visibility and capacities of incidence – to create employment – to eliminate fragmentation and overlapping – to increase dissemination, multiplication and impacts	– Knowledge dissemination and upgrade (excellence) – recognition and useful application of the research – users' target: to integrate researchers in the 'innovation' process. – finding information – capacity building – infrastructure sharing – saving of money and time – exchange of experience and expertise – improving competitiveness of research centres in the new research-innovation approach – efficient networking – gaining autonomy and flexibility with respect to some national and local contexts	– Access to the market or new opportunities - making business – user's target – saving of money and time – marketing orientation – access to RDI results – value creation
Factors of success	Creating and demonstrating value added with respect to the efforts invested (cost/benefit analysis - concrete outcomes) Finding a common 'what for': win-win approach based on needs → necessity to identify topics for 'clustering' Need to achieve objectives with an interdisciplinary approach		
Limits	Multiplication of clusters Knowledge coordination and mutualisation is very time-consuming Funding plan/possibilities	– Work valorisation and recognition for individual career development – Fear to be abused	– Difficult to understand the added value (investment/cost analysis) – Property rights
Recommendations	Need for extra-funding and administrative mechanisms in order to support mutualisation of deliverables and peer review exercise	Need for developing mechanisms to protect the ideas to be shared	Need for structures and human resources for RDI management and integration

Source: 1st Week of ERA-WIDE integration - Towards integration of the Mediterranean Research and Innovation networks in water-related fields, 22-24 March 2011, Brussels.

Another positive illustration is the way by which a sample of ERA-WIDE projects can contribute to the formulation of a new financial scheme. Inspired by the clustering approach, the European Commission decided to promote the organization of joint activities co-funded between the

projects and external partners. As the ERA-WIDE projects were not targeted in the contract implementing the International Learning Platform (ILN)[12], the project officers in charge decided to establish the regional ERA-WIDE 'weeks of integration' in coordination with MIRA and the BILATs and in collaboration with several services of the EC or other institutions, such as the European Investment Bank and *Centre de Marseille pour l'Intégration de la Méditerrannée* (World Bank). These 'regional weeks of integration' played a kind of 'incubation' role, with the main objective of connecting the Mediterranean researchers involved in project coordination for them to exchange their experience and support each other in their respective mandates. To generate fruitful discussions, these regional meetings were organized around one of the expected impacts with a view to providing food for thought to elaborate a strategy for internationalization and research valorisation. Another objective was to keep project coordinators and EC scientific, legal and financial officers in touch. This bottom-up approach proved to be quite useful to grasp needs and potentials, and efficiently contributed and oriented to the design of new schemes for the Euro-Mediterranean region.

Figure 6 illustrates the dynamic approach of policy formulation in the Euro-Mediterranean ST cooperation. It also shows to what extent the international cooperation activities (INCO Programme) of the FP7 Capacities Programme, as a whole, constitutes a coherent programme allowing a top-down and a bottom-up approach to converge.

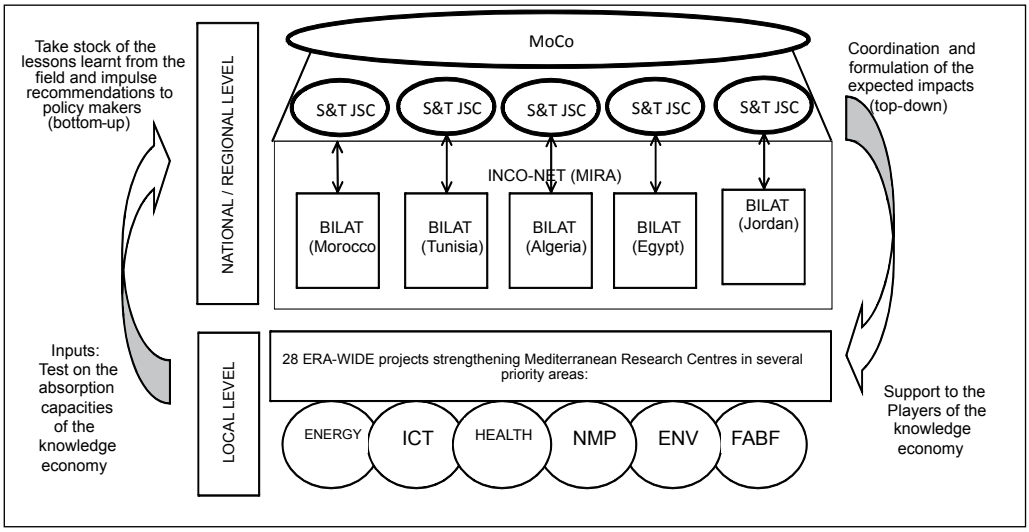

Figure 6. Policy formulation in the Euro-Mediterranean ST cooperation.

Source: European Commission, Directorate D, DG Research and Innovation, 2nd week of ERA-WIDE integration - Joint CMI-EC-EIB workshop for Mediterranean Research Centres Managers: "Strategy for internationalization and research valorisation", 3-6 October 2011, Centre for Mediterranean Integration, Marseille.

IV – Assessing the greater impact of the ERA-WIDE scheme: is it a driver of innovation in public administration?

The European Training Foundation observed that donors make important efforts to support reforms through pilot actions. Nevertheless, it also stressed the limited results obtained with

respect to the translation of pilot actions into systemic changes. This limitation needs to be overcome by appropriate monitoring and ensuring that the best practices are not only exchanged but also supported. In order to assess the long-term effects of the ERA-WIDE scheme, several questions need to be addressed: *To what extent can a pilot scheme contribute to identify and build innovative practices that fit the current challenges faced by the Mediterranean societies? How can innovative processes in the public sector (motors and barriers) be identified and recognized? How can innovations that have a positive impact on the efficiency, effectiveness and fairness of the public sector be taken up and developed?* To respond to these questions, it is important to develop an appropriate assessment method based on building indicators.

A survey performed by MIRA in 2010 (Bonas, 2010) to obtain feedback on programmes and projects on the members of the MoCo illustrated that the existing mechanisms of follow-up and monitoring appear inadequate for assessing the impact of the programmes designed to achieve the objectives committed in the Cairo Declaration. This trend is reinforced by the difficulty to set up common indicators based on accessible and available data, and the lack of skilled persons for their interpretation. Recognizing this, the *White paper on strategic indicators for the measurement and impact of international scientific cooperation and collaborations in the Mediterranean region* produced by MIRA in the frame of its Euro-Mediterranean ST Observatory recommended the MoCo that 'impact assessments should [rather] be oriented towards programmes [than policies]'. In other terms, the indicators for impact measurement should be designed at the programme definition stage. Contrary to other existing programmes using the method of the logical framework, the ERA-WIDE scheme, as most FP7 projects, does not envisage a proper set of indicators to measure its impact. Consequently, only a soft evaluation can be performed, either through self-assessment and project officers' supervision or external reviewers in charge of assessing the quality and relevance of the deliverables.

In response to this challenge, the first coordination meeting organized in Brussels few months after the start of the projects, proposed to discuss the adoption of indicators that could be used to measure the progress of the projects and hence progressively build and valorise their impact. This exercise aimed at suggesting ways by which the ERA-WIDE coordinators could self-evaluate their actions and communicate their decisions while implementing their projects. Another objective was to develop awareness by thinking together about similar actions to be considered in the development of their own individual project strategies. To ensure the proper ownership of the project objectives by the coordinators and partners, they all brainstormed together during the event. The objectives and indicators were theoretically discussed based on the way they were mentioned in the ERA-WIDE call text as well as on general frames and strategic orientations, such as the ones set in the bilateral cooperation within the ST Agreements or the regional ones mentioned in the Cairo Declaration of 2007, the European Research Area and the Innovation Union flagship initiative.

Table 2 illustrates the results of these discussions in a logical framework through a reverse engineering process. Several methodological approaches were taken into account and used in a combined way in this exercise:

Systemic approach: the discussions took into account the heuristic system proposed by C. Bogliotti and J. H. Spangenberg (2005) to understand the concept of sustainable development with a comprehensive and global vision. This systemic approach is based on three functions: (i) durability, founded on the inter-linkages between economy, environment and society; (ii) governance, based on the relation between knowledge, capacity and critical mass; and (iii) ethics, linked to a system of values. This approach was used as an introduction to the exercise and constituted the basic criteria to select the indicators (see Table 2).

Table 2. ERA-WIDE logical framework.

Macro-level/strategic objectives	**Sustainability (scientific excellence)**		
	1. Social cohesion	**2. Environmental quality (limit throughput/out)**	**3. Economic development**
Programme level objectives (FP7 – ERA-WIDE Call)	**1.1. Employment**	**1.2. Emissions reduction and resources conservation**	**1.3. Ethical competitiveness**
Project level objectives / results (ERA-WIDE projects)	**1.1.1. Improved work conditions and employability**	**1.2.1. Limit throughout resources conservation, contribution to decrease ecological footprint**	**1.3.1. Access to research infrastructures and burden reduction**
Project level activities (Indicators)	Creation of new permanent positions for young researchers; integration of researchers in public/ private-related field sectors; salary increase; better career opportunities; development of new skills and profiles; number of contracts; type of contracts (e.g. permanent, temporary); courses related to innovation market; number of completed PhDs; number of new young researchers involved.	Courses related to environmental impact decrease; cost-effectiveness of each event; improved net return from the implementation of the event.	Increased fund rising; % of increased budget of the laboratory with respect to the institutional budget; level and share of the budget; time of equipment use; number of new measures taken to solve administrative burdens; evolution of financial schemes; number of financial pilot actions adopted, lab modernization (investment done for use by people with disabilities and improvement of safety conditions); list of recently acquired high level experimental equipment and software; indirect costs/total costs ratio.
	Governance (management)		
Macro-level/strategic objectives	**1. Innovation**	**2. Reinforcement of research national system and capacity**	**3. Shared knowledge**
Programme level objectives (FP7 – ERA-WIDE Call)	**1.1. Competitive research**	**1.2. Research internationalization**	**1.3. Communication and dissemination**
Project level objectives / results (ERA-WIDE projects)	**1.1.1. Links with private sector and socio-economic environment**	**1.2.1. Networking and opportunities development**	**1.3.1. Win-win cooperation (social innovation)**
Project level activities (Indicators)	Number of established or transferred patents; number of partnerships with SMEs; number of contacts started up with private companies; number of projects with direct application by final users/for social improvement; % of increased budget of the laboratory compared with the institution budget; number of agreements and contracts signed/ under discussion; number of industrial partners; contribution (in %) from industrial investors to total R&D budget; number of the RTD Centre papers in international peer-reviewed journals.	Number of participations in international events; number of international scientific networks accessed; number of proposals submitted to international calls; number of projects approved; truthfulness; capacities of planning and risk taking; timing reduction for decision making process; number of foreign researchers joining research teams of the center; number of interdisciplinary teams.	Number of shared deliverables; number of Memoranda of Understanding with other projects and research institutions; cost-effectiveness of each event; improved net return from the execution of the event; accessibility to available information.
Macro-level/strategic objectives	**Policy (impact)**		
	1. Euro-Mediterranean integration	**2. Converging political determination**	**3. Tackling global challenges**
Programme level objectives (FP7 – ERA-WIDE Call)	**1.1. Increased visibility and scope**	**1.2. Euro-Mediterranean knowledge/research in support of sectorial policies**	**1.3. Interdisciplinarity and systemic approach**
Project level objectives/ results (ERA-WIDE projects)	**1.1.1. Contribution to regional decision-making process (e.g. MoCo) - Incidence**	**1.2.1. Incidence on sectoral public policies, programmes and initiatives**	**1.3.1. Contribution/outputs for a comprehensive national/ regional strategy**
Project level activities (Indicators)	Relation with media and policy-makers; representativity of critical mass; number of recommendations proposed and adopted.	Participation in regional events related to priority policies; contributions to regional policy papers and recommendations; links between focal points and EU programmes at the local level.	Complementarity, match and/or contribution as expert to other local/regional initiatives related to other socio-economic fields but with cause/effect links.

Source: Authors' elaboration from the results of "regional weeks of integration".

Empirical approach: during the discussion, the indicators were adapted to the objectives and activities negotiated in each of the contracts. It took into account the learning process and maturity curve embedded in the implementation process and leading to some actions/corrections along the different steps of the project life: proposal, evaluation, negotiation, implementation, amendment, reporting, and dissemination of the results and post evaluation of the impact. In this respect, the empirical approach consists in a flexible evaluation method of the activities and impacts, and approximates closely to the action research or participatory action research.

Participatory action research approach: first developed by Kurt Lewin in the sixties (Lewin, 1958), this method aims at solving an immediate problem or building a reflective process led by individuals working with others in teams or as part of a 'community of practice' to improve the way they address issues and solve problems. As exposed by Wendell L. French and Cecil Bell four decades ago, 'action research involves the process of actively participating in an organization change situation whilst conducting research' (French and Bell, 1995). In the implementation process of the ERA-WIDE projects, the philosophy consists in a "learning by doing approach", which should be reflected in the design of the indicators. As an example, the timing reduction of the decision-making process is a qualitative indicator that can result from innovative ways of communication with the hierarchy enabled by the need to implement the objectives of the project.

Comparative approach: the potential impacts were compared according to the different contexts and some convergence was identified.

Prospective approach: while part of these effects can be directly linked to the impacts that were expected from the call, others – certainly the most important ones – are more intangible.

The results of these approaches should be verified, ordered and applied at several levels and scales: (i) the micro-level would concern the enhancement of the human capital of the individuals through the development of their capacities, (ii) the meso-level would be related to the increase in the performance of their research institutions, and (iii) the macro-level would correspond to the efficient absorptiveness of the innovative practices by the national research and innovation systems of the Mediterranean Partner Countries and, more generally, to the degree of inclusiveness of the Euro-Mediterranean Research and Innovation Space. These results could also be classified according to two types of requirements: (i) progress indicators to ensure sound self-assessment and monitoring during the project implementation and (ii) impact indicators to assess the final outcomes.

V – Conclusions

The recent developments within the regional ST policy dialogue confirmed the will of further shaping a Euro-Mediterranean Research and Innovation Area, based on the principles of co-ownership, co-design, co-funding, mutual interest and shared benefits[13]. In this perspective, the modernization, governance and reforms of the ST National Systems remain by far some of the most challenging objectives already highlighted in 2007 in the Cairo Declaration. More than promoting the integration into the European Research Area, the ERA-WIDE scheme appears to have great potential in contributing to shape a more inclusive knowledge economy in the Euro-Mediterranean region. First, its uniqueness rests on directly supporting the human capacities and empowerment of the South Mediterranean research players, which in turn encourages the broader trend and demand of ownership and responsiveness. This ownership from the South Mediterranean research and innovation players can create some pressure vis-à-vis the decision-makers to further encourage and/or build on such initiatives. Second, the sample of projects funded under ERA-WIDE scheme provides a useful and representative feedback from the field needs to monitor the adequacy of the public policies, either in terms of budget or legal and financial reforms. Although it is too early to assess the results of the projects, it was important

to develop a common understanding of their parameters and potential impact so as to increase the alignment of the quality of projects. This alignment is a condition to efficiently support the decision-making processes and should be further promoted through the adoption and application of common indicators. Third, the project clustering developed under this scheme complementarily with others is relevant to build adequate communication channels able to convey strong messages from empowered practitioners to the decision-makers. These channels of communication could be further recognized and used through the BILAT and INCO-NET schemes, acting as field-to-policy 'transmission belts'. A benchmarking exercise between the different countries or sectors of research could be envisaged to assess the degree of dynamism of these processes.

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Notes

1 Report of the EU-Southern Mediterranean dialogue on higher education policies and programmes, launching event, 2-3 July 2012, Berlaymont, Brussels.

2 European Commission, Mobility of Researchers between Academia and Industry-12 Practical Recommendations, DG Research, EUR 22573.

3 http://ec.europa.eu/research/participants/portal/page/capacities?callIdentifier=FP7-REGPOT-2009-2

4 Loi d'orientation et de programme à projection *quinquennale* sur la recherche scientifique et le développement technologique, 23 février 2008.

5 Tunisia recently adopted some legal rules to change the status of some research centres now recognized as public establishments with a scientific and technical character.

6 The Science, Technology and Innovation Policy in Lebanon promotes the culture of responsibility and good performance.

7 Two projects with Syrian institutions were selected but have been frozen due to the current political situation in Syria.

8 Austria, Belgium, Czech Republic, Denmark, Finland, Hungary, Luxembourg, Portugal, Sweden.

9 The INCO-NET and BILAT schemes are two previous schemes targeting the Mediterranean region and financed under the international cooperation activities (INCO) programme of FP7 Capacities Programme.

10 OMC refers to a relatively new means of governance based on voluntary cooperation. The open method rests on soft law mechanisms such as guidelines and indicators, benchmarking and sharing of best practice. This means that there are no official sanctions for laggards. Rather, the method effectiveness relies on a form of peer pressure and naming and shaming, as no member state wants to be seen as the worst in a given policy area.

11 See MIRA website : www.miraproject.eu

12 The ILN has been developed by the International Cooperation Directorate of DG RTD to promote the exchange of best practices between the international cooperation projects financed under the INCO-NET, ERA-NET, BILAT and ACCESS4EU schemes.

13 See the conclusions of the Euro-Mediterranean Conference for Research and Innovation: an agenda for a renewed partnership, organized by the EC in April 2012 on the EC website.

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