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Promoting innovation in the Mediterranean. Profiles and expectations of business incubators, technology parks and technology transfer offices

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Abstract. Developing innovation economies is even more important during a crisis and this is why virtually every country in the world is striving to remain competitive. Their aim is to generate added value and create sustainable jobs. The development priorities for all countries, and in particular for the MED countries include developing promising new industrial activities in various areas of excellence, encouraging entrepreneurship and pushing forward future economic leaders, attracting foreign investment in high-end business areas and ensuring that technology parks and innovation showcases play a role in knowledge exchanges. Yet in response to these challenges, several countries in the Mediterranean region are falling behind at different levels. They find it difficult to acquire sufficient critical mass for investments and installations. They also lack global visibility and perform poorly when commercialising research results and public-private partnerships are difficult to establish. The study entitled Promoting Innovation in the Mediterranean is the result of field work, a survey of existing programmes and various workshops conducted alongside the “players of change in the Mediterranean”. It takes stock of current innovative ecosystems that are being developed in the Southern Mediterranean region. Three types of innovation support structures are targeted: technology parks, business incubators and technology transfer offices. The 7 MED countries concerned include: Algeria, Egypt, Jordan, Lebanon, Morocco, Palestine and Tunisia. The study is not simply an analysis of macro-economic issue; it identifies the key elements required to drive new innovation dynamics across the Mediterranean. They include the promotion of best practises, the need to identify and involve industry leaders as well as networking between communities and innovation clusters at regional level.

Keywords. Innovation – Technology transfer – Entrepreneurship – Mediterranean region – Cluster sampling.

Promotion de l'innovation en Méditerranée - Profils et attentes des incubateurs, technopôles et centres de valorisation

Résumé. Le développement des économies de l'innovation est, plus que jamais en période de crise, une course à la compétitivité engagée par quasiment tous les pays, dans le but de créer de la valeur ajoutée et de générer des emplois à long terme. L'essor d'activités industrielles d'avenir dans des domaines d'excellence, le pari sur l'entrepreneuriat et la création de futurs champions économiques, l'attraction d'investissements étrangers sur des activités haut de gamme, l'insertion dans les flux mondiaux d'échanges de connaissance par la promotion de technopôles et de vitrines d'innovation sont autant de priorités de développement pour tous, et pour les pays MED notamment. Pourtant, face à ces enjeux, un décrochage des pays du bassin méditerranéen se dessine à plusieurs niveaux : problèmes de masse critique des investissements et équipements, manque de visibilité internationale, faibles performances de la valorisation de la recherche et difficulté à mettre en place des partenariats public-privé. L'étude Promotion de l'innovation en Méditerranée s'appuie sur un travail de terrain, un recensement des programmes existants, des ateliers avec les « acteurs méditerranéens du changement » pour proposer un état des lieux des écosystèmes de l'innovation qui se développent au sud de la Méditerranée. Trois types de structures d'appui à l'innovation sont ciblés : technopôles, incubateurs et centres de valorisation. 7 pays MED sont concernés : Algérie, Egypte, Jordanie, Liban, Maroc, Palestine et Tunisie. Au-delà des analyses macro-économiques, l'ambition de cette étude est de proposer des éléments clés pour l'émergence de nouvelles dynamiques de développement de l'innovation en Méditerranée : mise en valeur des bonnes pratiques, identification et implication d'acteurs moteurs et mise en réseau de communautés et pôles d'innovation à l'échelle régionale.

Mots-clés. Innovation – Transfert de technologie – Entrepreneuriat – Région Méditerranéenne – Échantillonnage en grappes.

I – State of play: stakeholders and innovation policies in the Mediterranean

The majority of all research and development activity (R&D) in the Mediterranean region is carried out by public universities and research centres (over 90%, compared to 54% on average in the European Union). Amounts invested in R&D are low compared to international averages: between 0.2% and 0.7% of GDP in the MED countries (Tunisia is an exception with approximately 1%), compared to almost 2% in Europe (UNESCO, 2010).

There is a **significant lack in funding for research and facilities across the Mediterranean. Innovation systems are inefficient** in terms of overall strategic vision, research excellence and international visibility. Problems are encountered when commercialising publications and patents and managing the innovation environment. In addition, the MED countries are all suffering from the brain drain phenomenon. However, it is worth noting that there are large differences between certain countries. Performances in countries such as Tunisia and Jordan are very similar or even better than those registered in some countries of southern Europe (France and Italy for example), whereas Algeria is lagging behind in virtually all areas.

Generally speaking, the private sector still shows **relatively low commitment to innovation, but is also undergoing fundamental change**. A new generation of entrepreneurs and innovative SMEs is coming up, the venture capital industry is developing and there is a broader involvement of the major groups, along with the introduction of increasing numbers of innovation support programmes at national and international levels.

Table 1. Profile of innovation actors in the Mediterranean.

Type of players	Profile	Innovation focus	Expectations	Interface/ international
Traditional micro-enterprises/ SMEs	Informal structures Family-based management	Low-tech services Food industry	Innovation management Product offering	Chambers of Commerce Federations Local clusters
Start-ups/ new SMEs	High innovation International teams	Mid-tech services High tech	Coaching Seed funding Access to local and global markets	Innovative clusters Business plan competitions Business incubators, technology parks
Major local and international groups	Leaders in innovation Little interaction with local networks	Infrastructures Energy Banks ICT	Talent sourcing Product promotion R&D partnerships	Professional federations Innovative clusters Government and/or promotion agencies
Public universities and R&D centres	Poor research funding Lack of visibility in areas of excellence Brain drain	High Tech Environment Food industry Health ICT	Marketing Improved governance Co-funding and public-private partnerships	International support programmes Technology transfer offices
Financial bodies	Strong development of venture capital over the last 10 years Slow emergence of business angels	Consumer goods Infrastructures Services High Tech	Project sourcing Lower due diligence costs Coaching networks	Business angel networks Regional venture capital funds

Source: ANIMA

II – Profile of innovation support structures: technology parks, business incubators and technology transfer offices

The study focuses on three types of structures and highlights various issues regarding innovation promotion in the Mediterranean:

- **technology parks** are at the heart of all policies adopted by Mediterranean countries to attract investment and address the question of synergies between public and private players;
- **business incubators** deal with questions regarding the financing of innovation projects and the involvement of large companies in innovation ecosystems;
- **technology transfer offices** raise the problem of governance and the need for public sector research to adapt to market needs.

The study lists **41 technology park projects** that have either been completed or announced in the 7 MED countries targeted. Almost **three quarters of them were created after 2005**; they are mainly located in Tunisia (12) and Morocco (9). Often located outside the city centre, they are held back by weak local ecosystems and by a lack of critical mass (lack of companies and research centres). The majority of these technology parks house companies in the **ICT sector (36%)**, but the food sector is also well represented (18%).

90 incubators are listed in the study and half of them are located in Morocco and Tunisia. They are divided into three categories: traditional university incubators with little activity, small business centres concentrating mainly on providing administrative services and innovation accelerators offering short-term assistance and close ties with financial networks. The majority of these incubators (53%) serve a wide range of business sectors. More than a third of them (**37%**) **focus on the ICT sector**.

Over 50 technology transfer offices in the MED countries are listed in the study. They were also created very recently (80% of them after 2008) and generally speaking, they have neither the structure nor the teams required to provide full time service. They are located mainly in Egypt (14) and in Algeria (13). The centres often provide services for in-house teams (student researchers) and are rarely business or globally oriented. Only a quarter of TTOs target specific sectors such as agronomy, biotechnologies or health.

III – Innovation dynamics and partnerships in the Mediterranean: what are the difficulties and opportunities?

In the current context where innovation is increasingly based on open, international networking built around innovation ecosystems, the **lack of proximity and trust between public and private sector stakeholders, rigid administrative frameworks, poorly trained innovation managers and governance problems** all represent major hurdles that prevent MED countries from pushing forward dynamic innovation policies.

Yet **new dynamics are already at work** with, for example, the recent development of a **culture of entrepreneurship** across the Mediterranean as well as the creation of **South-South partnerships** involving key players in innovation. The MED countries can rely on attractive sources of **leverage** to boost their innovation systems, for example using **public procurement** or by inviting **talented expatriates in the diaspora** to contribute to the development of their home countries.

<p style="text-align: center;"><u>Strengths</u></p> <ul style="list-style-type: none"> ▪ Innovative high-growth sectors (ITC, tourism and services, food industry and health) ▪ Skilled workers in the diaspora communities of Europe, the USA and the Gulf countries ▪ Success stories and role models 	<p style="text-align: center;"><u>Weaknesses</u></p> <ul style="list-style-type: none"> ▪ Poorly developed innovative culture ▪ Lack of trust and proximity between private and public stakeholders ▪ Poor understanding and visibility regarding international issues ▪ Rigid regulatory framework ▪ Lack of seed funding
<p style="text-align: center;"><u>Threats</u></p> <ul style="list-style-type: none"> ▪ Falling behind the rest of the world in terms of global knowledge and investment flows ▪ Under-investment and dispersion of available resources ▪ Crisis situation and reduced direct foreign investment 	<p style="text-align: center;"><u>Opportunities</u></p> <ul style="list-style-type: none"> ▪ Entrepreneurial spirit ▪ Leverage of public procurement ▪ New key players are keen to get involved (major groups and business angels) ▪ New innovation policies ▪ South-South partnerships?

Figure 1. Swot Analysis on innovation dynamics and partnerships in the Mediterranean.

Source: ANIMA

IV – Twelve proposals for action at regional level

There are several elements in favour of Euro-Mediterranean action being taken. These include sharing resources that are currently insufficient in both the north and south of the Mediterranean region. There are also potential synergy opportunities in problem areas or common fields of expertise such as mobility, water management or urban development and there is a pool of skilled workers willing to develop innovative projects in collaboration with Europe and the Mediterranean.

The following proposals address actual problems and seek possible synergies with existing policies and programmes. They involve various players in innovation and are introduced in four steps (**see table 2**):

In the short term, a regional action plan (priorities, players, activation means and leverage); **proposals 1 and 2.**

In the medium term, identification of instruments that may be shared to obtain the critical mass required and synergies between those involved in innovation in the Mediterranean; **proposals 3, 4 and 5.**

In the longer term, coordination of national schemes to ensure continuity of service for innovators in the Euro-Mediterranean region; **proposals 6, 7, 8 and 9.**

Conducted in parallel, governance support for innovation is proposed at different levels to guarantee long-term involvement of key players in innovation policy; **proposals 10, 11 and 12.**

Table 2. Proposals for action.

Proposals	What?	How?
An online platform for collaboration and promotion (MedIn 2.0)	List of stakeholders Database of 100 key technologies Value chains and priority areas for innovation in the Mediterranean Promotional tools (videos, success stories)	By building on the exchange sessions and mapping those conducted by the IT1 group; by decentralising platform management; by coordinating national programmes for innovation, RDFP and regional competitions
4 regional sector-specific task forces	Green Economy Food industry ICT Sustainable tourism and services	With task forces involving 5 stakeholder types and based on regional objectives and action plans
Training programmes	4 priority areas: financing, promotion and technology transfer, communication and intellectual property management	By using case studies and bringing together mentors, innovation stakeholders and market players. By coordinating existing training systems developed in each country
Monitoring service	Alerts and news about opportunities in specific business sectors, innovations and technologies as well as cooperation opportunities.	By developing partnerships with specialised media, platforms monitoring institutional bodies, public research laboratories or major groups
Promotion and prospecting campaigns	“Mediterranean Pavilions” at international fairs, with stands and promotional workshops	Using available expertise in the diaspora (ambassador communities) and by attracting private sponsors for ongoing long term partnerships
International business development	“Mediterranean agencies” in target regions, featuring network leaders, co-working spaces and low-cost market research services	By targeting specific regions: European capital cities, the Gulf countries and the USA
Mentoring and managerial support	Groups offering sector-specific mentoring at regional level	By offering a regional dimension to existing programmes. By bringing together major groups
Seed funding	A framework offering seed funding for Mediterranean projects: project sourcing, co-financing support, joint investments via regional funds	Nomination of a committee of experts, an approval committee and marketing team

Proposals	What?	How?
Innovation project prototyping	A network of Euro-Mediterranean prototyping and proof of concept platforms (living labs).	By encouraging major groups to sponsor these platforms. By networking with European living labs
Develop a strong entrepreneurial culture within innovative clusters	Early stage financing and support tools to help new projects emerge (interest free loans and mentoring) and assistance for the best innovation projects.	With the organization of business plan competitions and by encouraging emulation with financial incentives. By measuring the impact of financing and raising interest towards results among the staff of the innovation support structures
Coordination of measures to attract investment with industrial and innovation policy	Creation of a strategic network of policy committees in charge of business support as well as the creation of a one-stop shop for innovation at operational level	By using the National Contact Points that are part of the 7th R&D Framework Programme By organising an annual conference on the theme of innovation governance
At transnational level: improving the mobility of innovators	Mediterranean Innovation Mobility grants for the 100 most innovative projects in the southern Mediterranean	Based on the Erasmus for Young Entrepreneurs programme or the Euraxess initiative by the European Commission

Source: ANIMA

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