

## REGIONAL WORKSHOP

# NATIONAL INNOVATION SYSTEMS: INPUT, OUTPUT, AND IMPACT

**A joint EIB/CMI – ETC workshop**  
**25<sup>th</sup> -26<sup>th</sup> November, 2013, Royal Scientific Society, Jordan**

The European Investment Bank (EIB) through the Marseille Centre for Mediterranean Integration (CMI) platform and the United Nations ESCWA Technology Centre (ETC) co-organised a regional workshop on the 25<sup>th</sup> and 26<sup>th</sup> of November, 2013 in Amman, Jordan.

The objective of the workshop was to build awareness in the establishment of National Innovation Systems (NIS) and NIS-observatories, and to exchange experiences on policy definitions, monitoring and impact assessment of a NIS. A NIS approach helps to identify actors and channels in knowledge and technology flows in the national innovation process, as well as systemic failures, and thus the challenges and opportunities in creating NIS in the MENA region. The workshop infused best practices through the contribution of international experts such as the OECD Country Innovation Policy Reviews department, the World Bank, the Global Innovation Index 2013, or the Technopolis Group with its experience in establishing EU innovation data platforms such as ERAWATCH and TrendChart.

Nine countries were represented in the workshop (Egypt, Iraq, Jordan, Kuwait, Libya, Oman, Palestine, Tunisia, Turkey, Yemen) enabling a regional exchange about and a benchmarking of their respective national innovation systems, and mutual learning from best practices but also failures. The presentations of the national delegates demonstrated the differences in scope, scale, and degree of development in the NIS of the different countries, as well as identified common challenges. The workshop consisted of six sessions, each being divided in two parts: presentations followed by questions and answers, and a discussion among all the national delegates. The seventh session was a panel of recommendations.

The seminar endorses that a comparative perspective can help understand which national policies might succeed and how to learn from the experience of others, what existing programs might be enhanced, and what new initiatives might be launched. Besides the technical value the workshop offered, it is hoped that this event is the first step in the creation of a regional network of innovation policy makers in the MENA region as the last session of the workshop highlighted.





## Recommendation for a successful NIS

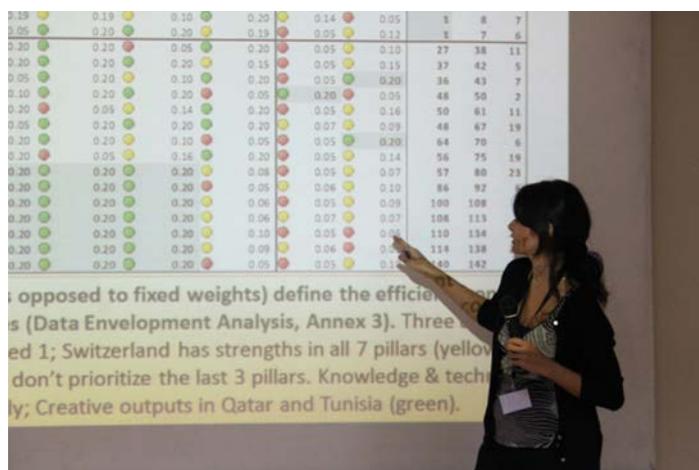
- Take your Science Technology and Innovation (STI) policy to the highest policy level and present it as a priority in the policy agenda.
- At the national level, you need a leader team and a well responsible organization for STI governance. This team should be able to set aims, take actions, and coordinate regional and international benchmarking exercises.
- Involve the private sector in your policy and decision making. Inquire about what they need.
- Have a sustainable funding model
- Support policy learning process: attend international/regional workshops, raise awareness of innovation, train in strategic and operational management of innovation, benchmarking, and evaluation. (Technopolis Group)



## National Innovation Observatories

Tools such as the Global Innovation Index<sup>1</sup>, the European TrendChart<sup>2</sup>, ERAWATCH<sup>3</sup>, the Regional Innovation Monitor<sup>4</sup>, and the OECD STI scoreboard<sup>5</sup> are great benchmarking platforms and tools to monitor, and assess countries' innovation performance and innovation policies. They can be the reference point for innovation actors and innovation policy-makers. They can also improve the transparency and accountability of the policy-making process. These platforms provide examples of good practices, analytical reports on national innovation policies, and allow for cross-country or/and regional comparison.

Establishing NIS observatories in MENA countries will not only allow NIS actors to monitor the progress of the innovation process, but will also feed the policy dialogue with data and information, and support evidence-based policy-making process.



These platforms need a dedicated unit or organisation with competent experts. Ownership and support by the policy-makers, sustainability, partnership & cooperation between the main stakeholders, and autonomy are all necessary ingredients for instituting effective NIS observatories.

### Examples

- Network on Science and Technology Indicators for Latin American Countries (RICYT) [www.ricyt.org](http://www.ricyt.org)
- The African Network of Science, Technology and Innovation Observatory [www.aosti.org](http://www.aosti.org)
- Co-ordination of Research Policies with the Western Balkan Countries [www.wbc-inco.net](http://www.wbc-inco.net)
- Science, Technology and Innovation Observatory – STIO – Western As [www.palestineacademy.org/main/en/science-technology-and-innovation-observatory-stio.html](http://www.palestineacademy.org/main/en/science-technology-and-innovation-observatory-stio.html)



<sup>1</sup> [www.globalinnovationindex.org](http://www.globalinnovationindex.org)  
<sup>2</sup> [www.proinno-europe.eu/trendchart](http://www.proinno-europe.eu/trendchart)  
<sup>3</sup> [www.erawatch.jrc.ec.europa.eu](http://www.erawatch.jrc.ec.europa.eu)  
<sup>4</sup> [www.rim-europa.eu](http://www.rim-europa.eu)  
<sup>5</sup> [www.oecd.org/sti/scoreboard.htm](http://www.oecd.org/sti/scoreboard.htm)

## Characteristics of high-performing innovative countries

Favorable economic institutions and framework conditions for innovation providing powerful **incentives for innovation**.

High and **sustained investment in knowledge**: education, R&D and ICT.

**High share of business** in financing and performing R&D.  
A diversified **population of innovators**, including SMEs.

**High levels of networking** among innovators, including well-developed industry-science relationships.

Openness to and good **use of international knowledge flows**.  
**An adaptive approach** to innovation policy, tailored to specific conditions.

## Successful NIS typically perform well in pursuing strategic tasks

Mobilizing additional resources for R&D and innovation towards the business enterprise core.

Developing and re-focusing STI policies with the goal of making enterprises the main driver of innovation in the longer term - leveraging on collaboration with stronger universities.

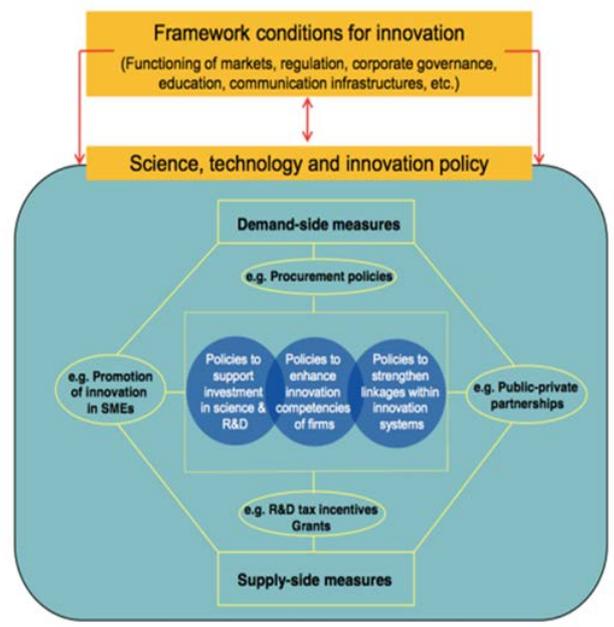
Enhancing a broad set of skills and innovation capabilities in a range of business firms and making innovation more pervasive in the economy

Developing the required STI institutions and policy instruments



Strong STI governance, including effective **co-ordination between policy institutions and instruments**.

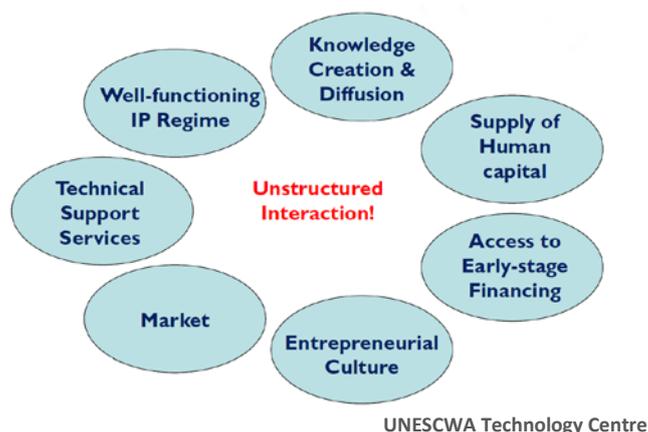
**Learning**: evaluation and feedback.  
(OECD)



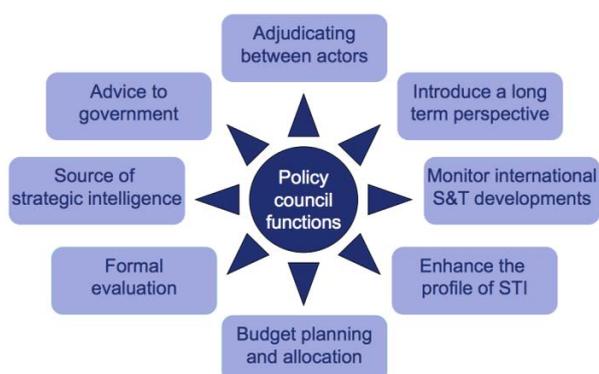
**Innovation is more than science and technology. It is the value added. It is no longer restricted to R&D, published scientific papers, and patents. It includes social innovations, business model innovations and innovation in the creative sectors.**

## Participants Input and Recommendations

**Policy co-ordination:** On the governance level, the quality of co-ordination of STI policies across ministries and agencies and between stakeholders is a determining factor for a successful National innovation System. Stakeholders' participation and involvement in the debate on STI policy is necessary. The information base for decision-making is crucial. STI governance needs to be adaptive to deal effectively with a changing environment.



**Political champion model:** The involvement of the highest level in government is often requested in order to secure policy attention and commitment. Inter-ministerial co-operation, coordinated by a central council to advise government on science and innovation with representatives from relevant ministries, academics and industries can be very effective. An idea that was suggested during the workshop was to associate the salary of the head of the Council (e.g. Prime Minister) to the number of innovative enterprises that he/she creates under his/her leadership.



**Concentrate innovation on the countries' social needs.** Rather than scientific, innovation activities should be driven by local needs and indigenous sectors in the region. Indigenous innovation and innovation in the informal or traditional sectors have both great potential as they are based upon local competences and knowledge, where the region may command a comparative advantage. Innovation should also be in sectors addressing socio-economic needs and sustainability challenges (water, food, health care, environment and energy).

Emphasis **education in innovation policies.** Consult with universities and adapt their curriculum with market needs, RDI investments, and policy targets. Stimulate universities interest in the industry. Encourage applied research that translates findings into commercial products, processes and services. Emphasis entrepreneurial skills in the curriculums. Train the teachers to deliver curricula that correspond with future market needs (e.g. ICT).

Promote **private sector engagement in Research Development and Innovation.** Encourage FDI that increases local industrialization and technology absorption capacity.

Establish a **structured network of NIS policy and decision-makers** in each country, and then interconnect through platforms such as the CMI and ETC and social media. Create a regional working group to learn from each other; selected country correspondents could constitute it. Create focal points with national authorities for NIS related data gathering.

**Capacity building:** Raise awareness about innovation and train all stakeholders on policy innovation management.

Work towards fostering or creating an **entrepreneurship culture at all levels.** E.g. a suggestion made by one of the participants was to select and promote best ideas in the region with large potential in MENA countries and assist in their development and commercialization.

**Benchmark NIS and STI policies** with other countries in and outside the region. Many lessons can be drawn from countries past and current successes and failures.

## Conclusions

Innovation is increasingly acknowledged as an important driver of value creation, economic growth and social welfare. It is driven by an interest to find new sources of economic growth, raise productivity and international competitiveness. Establishing and managing effective National Innovation Systems have never been more important than today.

The workshop underlined that a well-functioning

coordination between all National Innovation System actors and the linkages for technology and knowledge flow between them is key for a country innovation performance. Innovation policies should involve representatives of the private sector, public sector, academia, financial sector, international organisations etc., and should be coordinated by a central council (e.g. Turkey). Measuring NIS performance and establishing Innovation observatories allow NIS actors to monitor the progress of the country innovation process serving as a reference point for policy-makers. It also feeds the policy dialogue with data and information, and supports evidence-based policy-making processes. Innovation policies and resource allocations are then better articulated and benchmarking with other countries or regions is possible and leveraged.

