

An exploration of the future Latin America and Caribbean (ALC) and European Union (UE) bi-regional cooperation in science, technology and innovation

A resume of a foresight exercise undertaken for the ALCUE Net Project with support of the ERA Net LAC Project

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1. Background to the bi regional cooperation

The VI European Union – Latin America and Caribbean Summit of Madrid 2010 adopted the Declaration: ***“Towards a new stage in the bi-regional partnership in innovation and technology for sustainable development and social inclusion”***, as a key step towards strengthening and building capacities through the execution of joint research programs, technology transfer activities, and the strengthening of thematic networks. To implement the Declaration, a Senior Officials Meeting (SOM) was established as a dialogue mechanism at the ministerial level. It was also agreed on the implementations of a Joint Initiative for Research and Innovation (JIRI), based on a set of pre-existent and new actions combining different types of instruments.

After the adoption of the Madrid Declaration, the signatories negotiated with the European Union two grants that would support its foreseen activities. These grants gave rise to the Project ALCUE Net, coordinated by the Ministry of Science, Technology and Productive Innovation of Argentina, and the Project ERA Net LAC coordinated by the Aerospace Research Agency of Germany. Under ALCUE Net Project several thematic activities have been held, proposal for joint project have been identified and a network of National Contact Points have been established and strengthened. Under the ERA Net LAC project two successful joint calls have been implemented.

2. Background to the foresight exercise

During the SOM meeting held in Costa Rica in April, 2014, it was stressed by several national representatives the need to develop a strategic vision for the bi regional cooperation to better focus its activities and to provide strategic guidelines. In response the ALCUE Net Executive Committee decided that a foresight exercise should be conducted with priority as a specific activity, under the coordination of SENACYT of Panama.

3. The foresight exercise: main activities

This resume describes the main outputs of the foresight conducted between 2014 and 2016. The “Scenario-Vision” that resulted from the exercise is set to guide policy definitions destined to create joint capacities for facing future challenges. It is also set to motivate actors to mobilize further efforts and resources for the bi-regional cooperation. The above main output of the foresight has been the identification of four exploratory scenarios, based on a set of characteristic features. The core of the scenarios was defined as an innovation-led S&T bi-regional cooperation.

The characteristic features included: a) a contextual influence by factors such as the role of certain larger countries, the impact of past and expected future economic crisis, the social and economic divide; b) the environment understood as the basis for a natural resource base and for sharing of resources; c) the effect of Foreign Direct Investments on the economy and the transfer of technology produced in the way of spillovers; d) A consideration of the research and innovation system, principally dealing with new ways of doing research and innovation; sharing of resources; mobility of students and scientists, and infrastructure.

The features also included: e) the citizen and enterprise participation in the bi regional cooperation in research and innovation; f) the role of large/small countries in the cooperation efforts; g) the influence of European visions, particularly in front of the absence of a common approach to research and innovation in the LAC region; h) The governance required to define thematic areas of S&T cooperation.

4. The Exploratory Scenarios

A set of four exploratory scenarios were built and named as:

Scenario 1: One-sided cooperation model: Business as usual (weak cooperation and strongly based on research). In 2030, the bi regional cooperation is characterized by the presence of asymmetrical relations, which strengthens the big players of the ALC.

Scenario 2: Escalated cooperation model: Enhancing the traditional STI (stronger cooperation but still strongly based on research cooperation). Process dominated by a handful of some eight countries in ALC, which are more prosperous and have defined better STI policies, including availability and access to increased funding. In other countries, the bi-regional cooperation is limited by visions managed by weak institutions that prevent future planning and capitalization of results

Scenario 3: Focused cooperation model: Exclusive STI cooperation (weaker cooperation but more geared towards innovation). Countries have identified issues of strategic interests (grand challenges) to be faced by STI and the

bi-regional cooperation is characterized by the realization of outputs in national markets and the increased ability of negotiation for marketing. This focus has weakened the bi regional cooperation, as a more fierce competition between countries has emerged.

Scenario 4: Transformative cooperation model: Competitive STI cooperation (stronger cooperation and geared towards innovation). Structural changes and practices have taken place as new cooperation instruments have been introduced that take into account the heterogeneity of countries in ALC and the continuous build-up of trust among collaborating partners.

5. “Scenario-VISION 2030”

Vision 2030 highlights the collective wisdom of the invention, expressions of multiculturalism and multi-territoriality by strengthening local economies and regional identities. The bi regional cooperation has become of profit for both sides, particularly as it is having a focus on a shared understanding of responsible research and innovation which distinguishes the cooperation with other partners such as USA or China.

In 2030 the bi-regional cooperation is innovation-led. However, the mission of the bi-regional cooperation has become to develop innovations for “Wellbeing - Living Well in harmony” and solution oriented innovations, that is, the bi-regional cooperation focuses on wellbeing and not only on a growth paradigm, it looks into a more sustainability oriented vision of the future. The success of the ALC – UE bi regional cooperation can now be measured by the degree that it has achieved through the application of different drivers: innovation, collaboration policies for sustainable long term solutions, and focused on a sustainable well-being and not only in economic growth.

The bi-regional cooperation in science, technology and innovation develops in 2030 under a context characterized by a large number of global economic, societal, social and environmental challenges, one of which is the unprecedented acceleration in the production of knowledge. Most of the challenges that affect both ALC and EU regions are being faced by global efforts, of which the bi-regional cooperation between ALC and EU constitutes an important and noticeable component.

Underpinned by the global challenges, the bi-regional cooperation in STI strives to develop a collective intelligence capacity under new forms of organizations and processes, different than those of past decades. In 2030 the latter routinely connects global research and technology knowledge to allow improved priority setting for national, regional and bi-regional policies and strategies. An overarching

organization has been formed on the basis of the former SOM arrangement that has operated since the adoption of the Madrid Declaration in 2010.

The bi regional cooperation has also allowed closing the large research and innovation gap that exists within regions and particularly the imbalance between most countries of ALC with respect to their European counterparts. Particularly important has been the increase of R&D expenditures. A characteristic that still remains from the past is that research particularly in ALC is still largely executed in the larger public universities. In some countries universities are being merged into single larger national entities.

ERA Net type initiatives accommodate or facilitate the participation of smaller universities and research centers, by providing information services and facilitating contacts with more well established research universities and public research organizations.

Under this context, in 2030, there is not only an important role played by universities and research organizations but also by large and small enterprises that participate in joint projects and are producing marketable products and services, including those improving environmental situation, climate change mitigation and those contributing to tackling societal challenges

In 2030, the policies of long-term collaboration are thus developed to solve big challenges at the bi-regional, inter-regional, and local levels. The policies focus on promoting new public-private instruments for cooperation, the establishment of long-term budgets, establishing mechanisms to solve common problems, increase the participation of smaller players, opening transparent processes to promote citizen participation and declining shares of organized crime.

In 2030 the execution of bi-regional cooperation actions is facilitated by a more common understanding of the role of the public sector in the innovation system than that for example with USA that attributes a stronger role to private initiatives and military expenditure for R&D.

-ups to broaden product mix with broadening a product mix and up-scaling and new solutions independent of marketability with substantial change /improvement in social practice, often not requiring high-tech but new and cheap technologies.

6. How do we get there?

Reaching the “Scenario-Vision 2030” requires adopting a large set of decisions by SOM. The following suggestions are only indicative of a large range of possibilities:

- a) A cornerstone of the “Scenario-Vision 2030” is the solution of **challenges being faced by local communities**. The bi regional cooperation should

along these lines deepen its efforts on the search for inclusive innovation and innovations for inclusion.

- b) The development of strategic intelligence, including support to research infrastructures, in the ALC region is of key importance to enhance a more balanced bi regional cooperation.
- c) Policy dialogues should be enhanced. An understanding of the cultural factors fostering and hindering innovation activities can be an important outcome of policy dialogues. The results can speed up the development of Strategic Research Agendas.
- d) A more focused strategy on innovation is required to promote the involvement of public and principally private actors, including the EU industry in the bi regional cooperation.
- e) Key to the success of the bi-regional cooperation is the **creation of research and innovation networks**, including social networks.
- f) Reaching vision 2030 requires a better definition or strengthening of R&D priorities, along thematic and sectorial lines. This means reducing the present number of thematic areas so as to have a better impact on those remaining. At the same time, thematic areas could include those that link technology to social challenges, in particular social exclusion. This implies the need to better shape the national innovation system that can attend both economic and social objectives at the same time.
- g) One other set of thematic areas could include those technologies that are now developing and will have a well defined impact on energy, climate change, agriculture and several other activities. Particular priority should be placed on the development of an ICT infrastructure.