Mechanisms to enhance dialogue among communities involved in STI policy
The Latin American experience

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1 Context

Research that seeks to explain the performance of a STI system or public policies that seek to promote innovation frequently identify relationships among STI communities as an important determinant or goal. At the same time, research is lacking on how dialogue processes emerge and function, and the inclusiveness of these processes in Latin America. The prevailing view is that there is weak stakeholder participation in designing and implementing STI policies. The relationships among the various actors are neither stable nor clear, which hinders the implementation of actions and the achievement of expected benefits.

The Ciencia y Tecnología para el Desarrollo (CYTED) network created the COM-LALICS programme with the aim to strengthen dialogue on science, technology, and innovation (STI) policies by defining and implementing methodological guidelines. COM-LALICS was designed to analyse and compare country dialogue processes involving the productive sector, the academic sector, civil society, and the public sector. Twelve countries participated in the study (Argentina, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, El Salvador, Spain, Mexico, Peru, Uruguay, and Venezuela). This paper summarizes the conceptual framework and introduces the focus of three country case studies.

2 Empirical Approach and Main Findings

The COM-LALICS program articulated the following objectives : (1) identify the most relevant actors involved in the design and implementation of STI policies within the four communities ; (2) identify the most suitable conceptual frameworks to analyse the processes of dialogue between communities ; (3) generate a flexible set of guidelines for analysing the processes of dialogue ; (4) analyse the processes of dialogue between different actors around public STI policies in the participating countries ; (5) conduct a comparative analysis of different dialogue processes that occur in the participating countries ; (6) disseminate the lessons learned about the process of dialogue to different communities ; and (7) strengthen the synergies between the groups in the network for joint creation of knowledge.

Understanding communities — Defining communities involved in STI dialogues was an important first step. The approach integrates concepts from sociology and complex-systems literatures. Within the complex-systems literature, the concept of community is based on levels of interaction between individuals. From a network perspective, the level of proximity of the nodes determines the existence of communities. An important contribution of this literature is the recognition that individuals may belong simultaneously to different communities and have different behaviours in each community. As a starting point, communities were defined from the perspective of individuals. Organizations are groups of individuals. If individuals belonged to more than one organization, they were considered to be complex actors. If organizations included complex actors, they were considered complex organizations.

Relevant STI communities in Latin America — A complex and multidimensional view of communities was adopted, which allowed actors to belong to more than one community. Four communities were identified : the productive sector ; the academic sector ; other sectors of the civil society ; and the public sector. The productive community included stakeholders who provide goods and services (whether or not they operate under a corporate structure). The academic community included researchers and teachers in higher education institutions, public research institutes, and members of scientific societies (e.g., Academies of Science or the Association of Rectors). The public-sector community included policymakers and civil servant who formulate and implement policies and programs. Other civil-society communities were those capable of obtaining, using and generating knowledge, or participate in the generation of STI.

Dialogues between communities — The Organization of American States (OAS) and the United Nations Development Programme (UNDP) define democratic dialogue as embodying genuine interaction among participants, where the validity of each other's claims are recognized. In this framework, the process of democratic dialogue is characterized by four consecutive stages : exploration ; design ; implementation ; and monitoring. The COM-LALICS program modified this framework, principally by characterizing the dialogue process as having three characteristics : the topic of the dialogue ; the features of the dialogue process ; and the lessons learned. By applying this modified version of the UNDP methodology, CYTED network members have been able to codify and analyse different dialogue process in the region, as reflected in the three summary cases below.

Costa Rica (Jeffrey Orozco, CINPE-UNA) — This study reviewed the dialogue process and its direct and indirect impacts on the generation of national STI indicators in Costa Rica. The development of STI indicators began in 2008 and evolved in several stages. The process commenced as a part of a request for extra STI funding by the Ministry of Science and Technology (MICITT). MICITT conversations with the Ministry of Finance highlighted the lack of baseline indicators and estimates for reaching STI goals. Even the goals needed clarification as the government's Development Plan only mentioned the expenditure goal of reaching 1% of R&D with respect to GDP, without articulating strategies to reach this goal.

To address these gaps, MICITT convened different stakeholders with the goal of measuring R&D in the country. Following several meetings, the group proposed to generate a more complete set of indicators of STI. MICITT designed a law to create a national commission for the generation of STI indicators. The commission included political representatives of the main state and private organizations with interest in these indicators. A technical committee was also established with representatives of the same agencies and organizations. Through ongoing dialogue, a methodology was developed, funding was secured, and a process established to generate the information needed to calculate the indicators.

The work of these bodies led to the creation of STI indicators from 2006 to 2014. Annual dialogues continue with discussions on developing new indicators, methodologies, and analysis of results, and consider opportunities for policies and strategies for the different stakeholders. Directly and indirectly this dialogue process has contributed to open, parallel processes of dialogue for changing the institutional framework of STI and for influencing government planning processes in this sector.

Mexico (Gabriela Dutrénit and Marcela Suárez) — STI policy is confronting the challenge of becoming mainstream public policy in Mexico, and stakeholder participation is necessary for this to happen. In spite of the growing literature around the subject and practical experiences, there is still a long way to go to institutionalize stakeholder participation. STI policy design is set through a top-down governmental process and it is difficult to recognize the voices of other communities. The aim of this study was to discuss the practical experience of stakeholder involvement to inform the design of STI policy, and extract lessons learned from this process. The experience consisted of holding a dialogue between young knowledge-based entrepreneurs and policymakers in Mexico about the challenges they face and the implications this has for STI public policy. This experience enabled a discussion of the methodological aspects of participatory processes.

Uruguay (Melissa Ardanche, Mariela Bianco, Soledad Contreras, Claudia Cohanoff, Maria Goñi Mazzitelli, Lucía Simon, and Judith Sutz) — The study of dialogue processes in the context of STI policies is especially relevant because most Latin American societies suffer from systemic failures that hinder the design and implementation of consensual strategies regarding STI objectives.

This study examined a dialogue process to develop a wind power policy in Uruguay. This policy was the major component of a national energy diversification strategy

to develop renewable energy sources. The strategy was initiated by the Uruguayan government in 2005 and extends to 2030. The successful development of an energy policy that created local capacities for the generation of wind power was based, to a great extent, on a process of dialogue among multiple actors from different sectors (public and private enterprises, government, and academic community). Three phases in the dialogue process (diagnosis, design, and policy implementation) were identified and different stakeholders played diverse roles in different social, political, and institutional contexts. In addition, the analysis of the dialogue process showed the development of circles of trust and the emergence of particular conflicts and their resolution. Finally, the analysis addressed the extent to which this dialogue favoured the development of interactive learning spaces that enhanced Uruguayan capacities to sustain the energy transformation process.

3 Main messages for policy and practice

The COM-LALICS program was motivated by a need for deeper analysis and new tools to understand the formation and implementation of STI policies. This paper introduced the methodology and the focus of three country case studies. The research is ongoing and preliminary findings are emerging. From a methodological perspective, the characterizations of communities and the framework for analysing dialogue processes allowed CYTED members to apply the methodology to heterogeneous contexts and dialogue processes.

The matrix methodology proposed by the UNDP could help structure the analyses of the dialogue process in Latin America. Nevertheless, some important modifications are needed : the topic of the dialogue should be described ; the different roles of the actors should be analyzed ; and a compilation should be made of the lessons learned. This study design undertakes a more complex and inclusive characterization of the dialogue process, for example by highlighting the roles played by organized civil society.

Finally, the preliminary codification of some dialogue processes in Latin American have revealed the heterogeneity of dialogue processes in the region. Different levels of aggregation, agendas, and capabilities of the relevant actors are important findings to emerge from flexible methodological guidelines. At the same time, this heterogeneity has allowed perspectives on the STI policy process to be reconfigured, and led to new ways to understand inclusive STI dynamics in the region.

Related Resources

Additional information on the CYTED network (COM-LALICS) can be found on the lalics.org Website. : These resources include a description of the network, a list of groups involved, a series of working papers, and a number of videos (mostly in Spanish).