

Innovation Policies for Inclusiveness – Policy Cases

Royalties for Science, Technology and Innovation

Country: **Colombia**

1. Short Description

The ***Royalties for Science, Technology and Innovation*** scheme devotes 10% of the royalties obtained from the extraction of non-renewable natural resources to a fund for **financing regional projects** that consolidate STI as a regional level development strategy. The resources of the STI Fund are distributed among the 33 departmental (sub-national) governments on the basis of socio-economic criteria (population, unemployment and poverty). Since 2012, 264 projects have been financed for a total budget of COP 2.67 billion (approx. USD 849 million): 80% are drawn from royalties and 20% are matching funds from multiple sources (national government, universities, the private sector, etc.).

This policy profile is part of a [policy toolkit on innovation policies for inclusiveness](#). It is relevant for territorial inclusiveness.

2. Policy Characteristics

Basic Information

Country and implementing institution(s):	Timeline:
Colombia National Planning Department (DNP) and Colciencias (Administrative Department for STI).	2012 to the present (as of December 2016)
Target group	Size and budget:
Regions: sub-national governments Royalties for STI are distributed to the 33 department-level (sub-national) governments of Colombia. All regions have access to public resources to support STI projects according to their own needs and visions regarding development.	32 departmental (sub-national) governments and the capital city district (Bogotá) receive resources from royalties for STI. 264 projects have been financed with an average of COP 9.8 billion (about USD 3.1 million) per project. Between 2012 and 2015, the STI Fund received COP 3.23 billion (about USD 1.1 million). Between 2016 and 2024, about COP 0.7 billion (approx. USD 24 million) are expected to enter the fund per year. 264 projects are being financed for a total budget of COP 2.67 billion (approx.



	USD 849 million), of which COP 2.15 billion (approx. USD 684 million) are funds from royalties and COP 0.52 billion (approx. USD 165 million) are matching funds from multiple sources (national government, universities, private sector, etc.).
Type of policy instrument(s)	Inclusiveness focus
Financial support: investment in STI projects	Territorial inclusiveness

Policy objectives

The objective of the STI Fund is to **increase the scientific, technological, innovation and competitiveness** capacities of Colombia's regions. This is achieved through projects that contribute to knowledge production, use, integration and engagement in the productive sector and in society in general, including projects related to biotechnology and ICTs. These contribute to **social progress, economic dynamism, sustainable growth** and enhanced prosperity for Colombia's entire population.

Rationale

In the aftermath of 50 years of armed conflict, Colombia is facing several economic and social challenges that threaten the country's **socio-economic development**. The country's political and security instability has resulted in **sub-optimal investment, brain drain** and **school desertion, damaged institutions** and a **lack of social cohesion**. In particular, poverty incidences reveal marked regional inequalities within the country's territory. Furthermore, Colombia's exports rely heavily on the extraction of natural resources. This primary sector attracts most of the country's foreign direct investment. However, few of these resources are invested in R&D and other innovation-related expenditures that could help address Colombia's challenges.

Policy target recipient and selection mechanism

The Collegiate Body for Administration and Decision (*Órgano Colegiado de Administración y Decisión – OACD*) takes decisions regarding which projects the STI Fund will finance. OACD is built on a tripartite model with the participation of the national government, the territorial government and universities (academia). Each has a single vote and members have to achieve internal consensus in order to vote. Decisions are taken within the OACD by following simple majority rule. The specific composition of the OACD is as follows:

- **National government:** this includes representatives from the Administrative Department for STI (Colciencias), the National Planning Department (DNP) and three ministries chosen by the President, currently the Ministry of Agriculture, the Ministry of Information and Communication Technologies (ICTs) and the Ministry of Education.



- **Territorial government:** six regional bodies, each chaired by a governor of a department within the region, as defined by the General System of Royalties.¹
- **Universities:** this consists of representatives from four public universities and two private universities, chosen from within the Colombian Association of Universities (ASCUN).

Projects may be formulated by any person, but can only be presented to the OCAD by territorial governments. All projects that apply to the STI Fund must be consistent with development plans at national and territorial levels. Territorial governments begin the application by first filing the project with Colciencias, which reviews the proposals to ensure they meet submission requirements. It also conducts a preliminary technical review led by external expert panels to assess the projects' relevance in employing and promoting STI. After passing these reviews, projects are evaluated by OCAD in terms of social pertinence, feasibility, financial and environmental sustainability, and impact. The OCAD is in charge of evaluating, prioritising and approving the funding of projects, as well as identifying the public entity responsible for contracting the project's activities.

Policy instrument(s)

Financial support (investment in STI): The resources of the STI Fund are distributed to fund regional projects that: (i) generate long-term STI capacities in the regions and competitiveness; (ii) are consistent with public policies at the national, territorial and sectoral levels; and (iii) consolidate synergies among the different actors involved. **Selected projects aim to contribute towards the production, use and absorption of knowledge in the productive sector and society in general.** The instrument targets sectors such as biotechnology and ICTs that contribute towards socio-economic progress, sustainable development and general wellbeing.

The instrument encourages collaboration among actors of the Colombian innovation system by favouring proposals submitted jointly by regional governments with universities, science parks and companies. It also fosters regional collaboration by prioritising projects submitted jointly by two different regions sharing geographic and cultural boundaries or economic interests.

Policy challenges

There have been two main challenges to the implementation of the new royalties scheme, leading to the **low uptake of available funds**.

First, regional governments need to elicit proposals for evaluation by the national government. This involves **administrative complexities**, which have discouraged applications. Moreover, public expenditure in STI activities outside Bogota and the surrounding department of Cundinamarca is limited. Consequently, most regional governments have little experience in

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<https://www.sgr.gov.co/Qui%C3%A9nesSomos/%C3%93rganosdelSGR/%C3%93rganosColegiadosdeAdministraci%C3%B3nyDecisi%C3%B3n.aspx>.



building STI-intensive projects. Initial investments implemented by these regional authorities are often sponsored by the new royalties scheme.

Second, the limitations of STI funding also translate into **poor research capacity**, particularly in terms of infrastructure and human capital. Regional governments are often unable to meet application requirements and formulate proposals reflecting the lack of resources within their region.

Actions undertaken to address challenges

The following strategies aim to address the above challenges:

- DNP and Colciencias are creating **teams of experts to provide assistance** in situ to regional authorities to structure proposals and execute projects.
- The instrument **favours interregional proposals** involving research organisations and actors from departments other than those where the project is to be implemented.
- DNP and Colciencias are **developing a portfolio of standardised projects** to be promoted in regions with limited capacity to use their share of STI royalty funds. These consist of technological extension services for agriculture and manufacturing (SMEs). These packages can be adapted to the region's local conditions and have been rolled out and promoted in the second half of 2016.

Evaluation and outcomes of the scheme

The appearance of the STI Fund in 2012 represented **a more than 30% increase in the availability of public funding for STI activities** – an unprecedented event in public budgeting in Colombia. Furthermore, the fund's resources per year are equivalent to more than double the investment resources of Colciencias, indicating progress in the decentralisation of public resources for STI.

To date, **264 projects have been financed** to a total of **COP 2.67 billion (approx. USD 849 million)**, of which COP 2.15 billion (approx. USD 684 million) are funds from royalties and COP 0.52 billion (approx. USD 165 million) are matching funds from multiple sources (national government, universities, private sector, etc.).

Furthermore, about COP 310 billion (approx. USD 99 million) are being invested to support **the PhD studies** of more than **300 individuals** and the **Masters studies** of more than **2 500 individuals**, and about COP 290 billion (approx. USD 92 million) are being used to support educational activities related to STI for over 85 000 children and young people across the country. To complement these activities, over COP 600 billion (approx. USD 191 million) are helping to fund projects in areas as diverse as health, biodiversity, hydrobiological resources, alternative energies and mining, among others.

These investments have translated into the publication of over **150 articles for indexed peer-reviewed scientific journals**. They have also enabled the delivery of 70 technological packages to support productive sectors, and about 100 products in the field of technology development



(prototypes, pilots, plants), as well as over 12 000 dedicated hectares of land for experimentation with new technologies.

Another impact of the STI Fund has been the revitalisation of the Departmental Councils of Science, Technology and Innovation (CODECTI). These function at the territorial level as spaces for decision making and the exchange of opinions regarding the use of resources for STI. The STI Fund encourages the development of synergies among local stakeholders that participate in these Councils.

In 2015, the Government of Colombia collected baseline data on these investments through the National Planning Department (DNP) to evaluate the impact of STI on the scientific, technological, innovation and competitiveness capacities of the regions over the medium and long term (Fedesarrollo, 2015).

Sources

Colciencias/DNP (2015), Manual Metodológico General para la Identificación, Preparación, Programación y Evaluación de Proyectos: Guía No.2 de Programas y Proyectos de Ciencia, Tecnología e Innovación [General Methodological Manual for the Identification, Preparation, Programming and Evaluation of Projects: Guide No. 2 for Science, Technology and Innovation Programmes and Projects]. Administrative Department for STI (Colciencias) and National Planning Department (DNP), Bogotá.

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Fedesarrollo (2015), Levantamiento y consolidación de la línea de base de las inversiones financiadas con recursos del Fondo de Ciencia, Tecnología e Innovación [Survey and consolidation of the baseline of investments financed with resources from the Fund of Science,



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Background

*This document is part of a repository of examples of **innovation policies that have for explicit aim to contribute to territorial, industrial and social inclusiveness**. The repository is part of an innovation policy toolkit developed for the **Innovation for Inclusive Growth** project and gathers national innovation policy programmes that:*

- A.** Explicitly target **lagging and less innovative regions** (outside of regions that are highly innovative) or by design are more likely to support these lagging / less innovative regions.*
- B.** Explicitly aim to include in innovation activities **individuals and groups that are not usually participating** in those activities and in support of broadening the group of innovators.*
- C.** Explicitly aim to foster innovation activities in non-innovative firms, in particular by targeting **non-innovative sectors and non-innovative Small and Medium-sized Enterprises (SMEs)**.*

Policies are searchable by inclusiveness type, objective and implementation challenge on: <https://innovationpolicyplatform.org/inclusivetoolkit>