

Side Event

CARISMA

18 May 2017, Bonn

**Global R&D Cooperation on Climate
Technologies:
Opportunities and Challenges**

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a bit of history...

1992. Technology and the Convention

- Article 4, paragraph 1
 - “All parties...shall:
 - (c) *Promote and cooperate in the development, application and diffusion, including transfer, of technologies...that control, reduce or prevent anthropogenic emissions of greenhouse gases...*”
 - (g) *Promote and cooperate in scientific, technological, technical, socio-economic and other research, systematic observation and development of data archives related to the climate system;*
- Article 4, paragraph 5
 - “The developed country Parties...shall take all practicable steps to *promote, facilitate and finance, as appropriate, the transfer of, or access to, environmentally sound technologies and know-how* to other Parties, particularly developing country Parties, to enable them to implement the provisions of the Convention...”

1995. The consultative process

- ...focused on developing a shared understanding of climate technology issues at the global level.
- Parties explored what information was available on technology development and transfer, what were the technology needs of developing countries...
- Regional workshops in Asia and the Pacific, Africa, and Latin America and the Caribbean explored a broad range of issues
- In 1997, countries also included a provision on technology as Article 10(c) of the Kyoto Protocol.

2001. Technology transfer framework

- covers five key technology themes:
 - Technology needs and needs assessments
 - Technology information
 - Enabling environments for technology transfer
 - Capacity-building for technology transfer
 - Mechanisms for technology transfer
- Between 2001 and 2010, both the EGTT and the technology transfer framework supported developing countries to address technology transfer issues and implement technology activities.

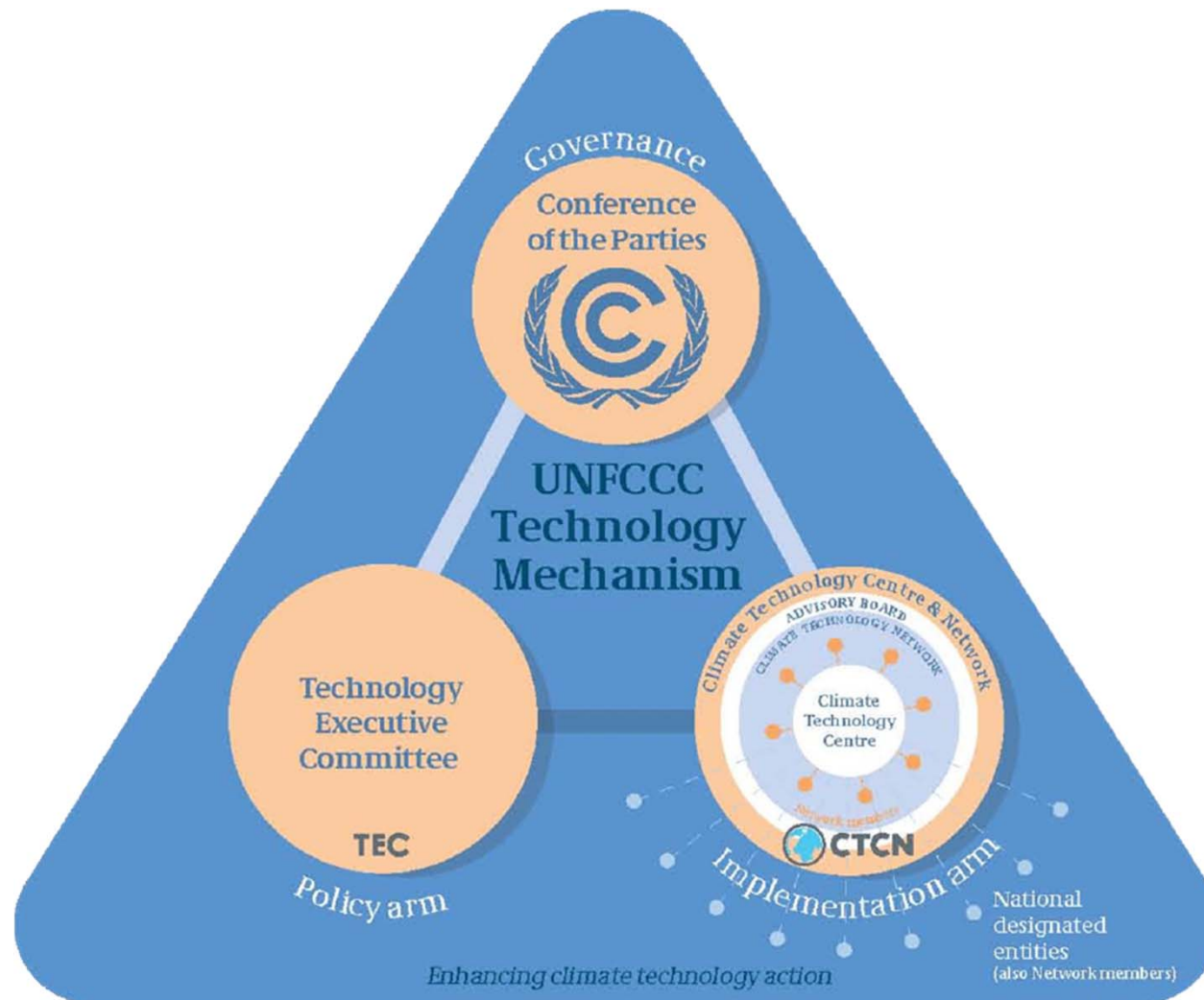
2007. Bali Action Plan

- Four pillars:
 - Mitigation
 - Adaptation
 - Finance
 - Technology and capacity building

2008. Poznan Strategic Programme on technology transfer

- Since 2008, the GEF has supported PSP by:
 - supporting technology needs assessments (TNAs);
 - supporting pilot projects linked to TNAs; and
 - disseminating experience on climate technology activities

2010. The Technology Mechanism (to support the technology cycle!!)



Tech transfer in reality

- Transfer of clean technologies from industrialized countries or private corporations to developing countries usually takes the form of
 - direct private investment that may bring the technologies to developing countries but not necessarily the knowledge to replicate, operate and diffuse those technologies.
- Genuine transfer of technologies from developed to developing countries occurs
 - mainly through private-public joint-ventures that, in some cases, leave the technologies and the know-how in the recipient countries.
- What can the UNFCCC do about this?

2015. The Paris Agreement

- Article 10, paragraph 1
 - *“Parties share a long-term vision on the importance of fully realizing technology development and transfer in order to improve resilience to climate change and to reduce greenhouse gas emissions.”*
- Article 5, paragraph 5
 - *“Accelerating, encouraging and enabling innovation is critical for an effective, long-term global response to climate change and promoting economic growth and sustainable development.*
 - *Such effort shall be, as appropriate, supported, including by the Technology Mechanism and, through financial means, by the Financial Mechanism of the Convention, for collaborative approaches to research and development, and facilitating access to technology, in particular for early stages of the technology cycle, to developing country Parties.”*

Decision 1/CP.21 - Adoption of the Paris Agreement

- Paragraph 66.
 - Decides to strengthen the Technology Mechanism and requests the Technology Executive Committee and the Climate Technology Centre and Network, in supporting the implementation of the Agreement, to undertake further work relating to, inter alia:
 - **(a) Technology research, development and demonstration;**
 - **(b) The development and enhancement of endogenous capacities and technologies;**

Why RD&D in the Paris Agreement?

TEC's recommendations on R&D?

- TEC Brief on NSI (2015): Possible Actions by the Technology Mechanism
 - Support the strengthening of relevant local actors by supporting human resource training, development of technical infrastructure, implementation of good practices, and **collaborations and partnerships with international counterparts**
 - Invite developed countries to highlight to the CTCN, through their NDE, how they could support developing countries to strengthen their NSIs

From 2013 annual report

- ...
- (i) The **strengthening** of national capacity and the allocation of resources should be prioritized in order to facilitate effective and **sustainable international collaborative research, development and demonstration**.
- (j) **Multi-stakeholder engagement** at the regional and national levels is essential **to achieving effective international collaborative research, development and demonstration**.

From 2015 annual report

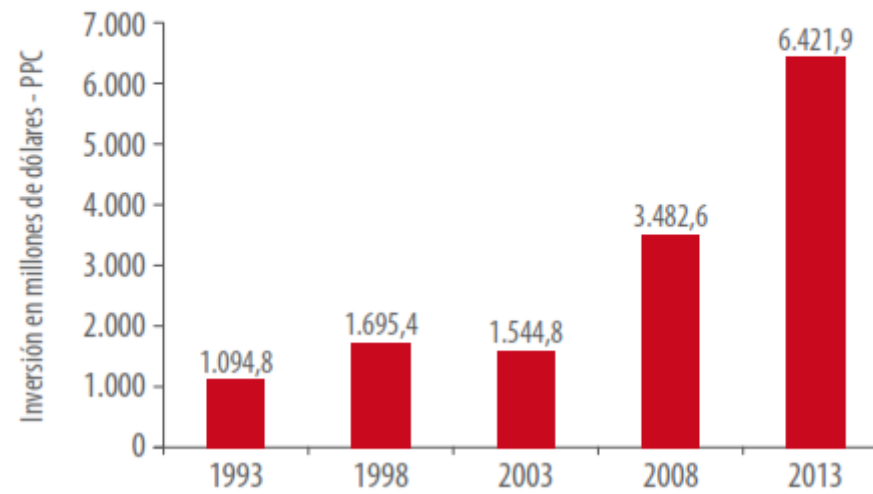
- ...
- Encourage the **CTCN to explore how** it may act as a focal point for knowledge on experiences, good practices and lessons learned in **supporting the strengthening of developing countries' NSIs** with regard to climate technology innovation...

From 2016 annual report

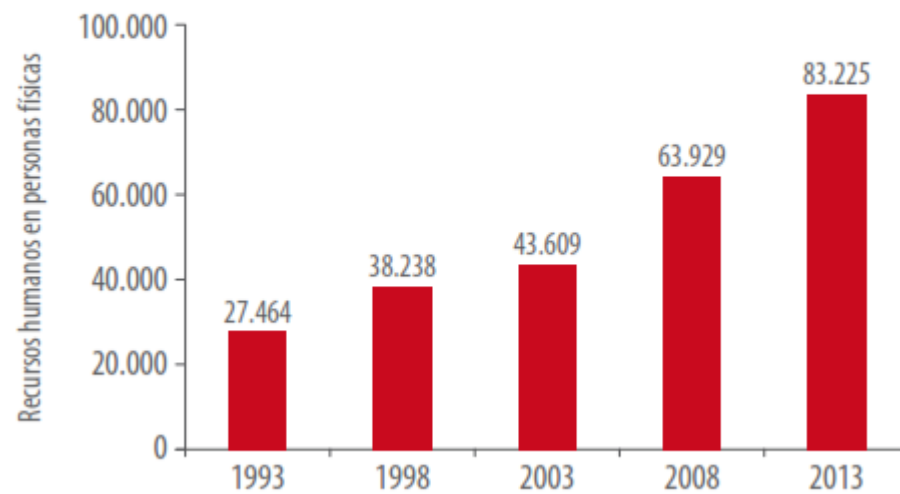
- ...
- (b) Encourage Parties to **promote the use of South–South cooperation and triangular cooperation** on technologies for adaptation through sharing of experiences of best practices and technologies at the national, subregional and regional levels, and through the use of international networks and global knowledge hubs already working on South–South cooperation and triangular cooperation;

Some statistics

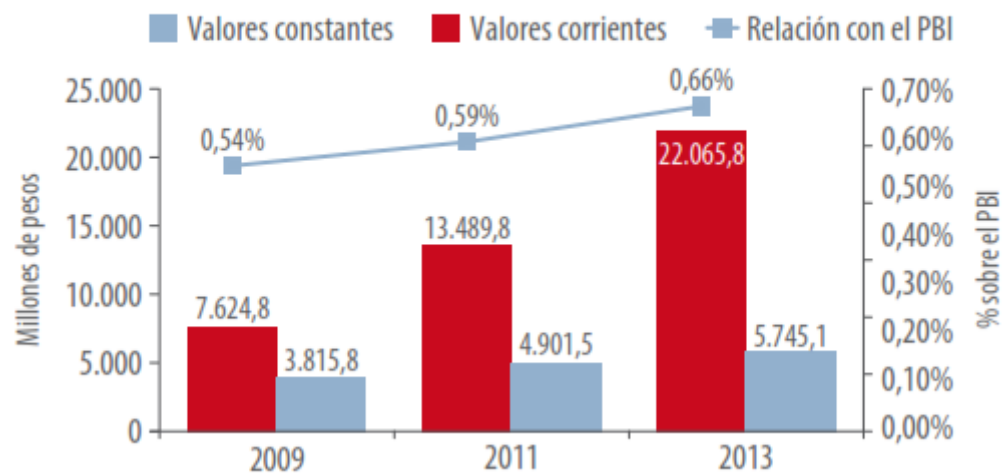
INVERSIÓN ANUAL EN ACTIVIDADES DE CIENCIA Y TECNOLOGÍA (EN MILLONES DE DÓLARES PPC)



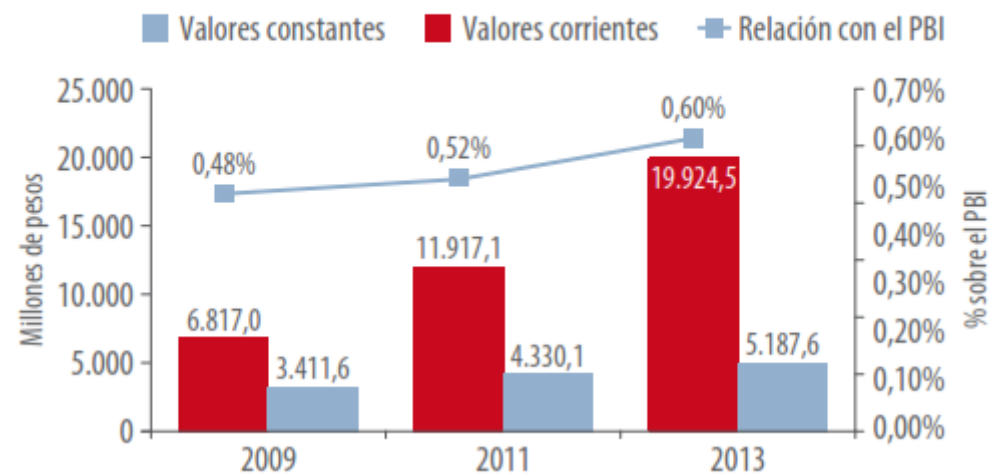
INVESTIGADORES Y BECARIOS DE INVESTIGACIÓN (EN PERSONAS FÍSICAS)



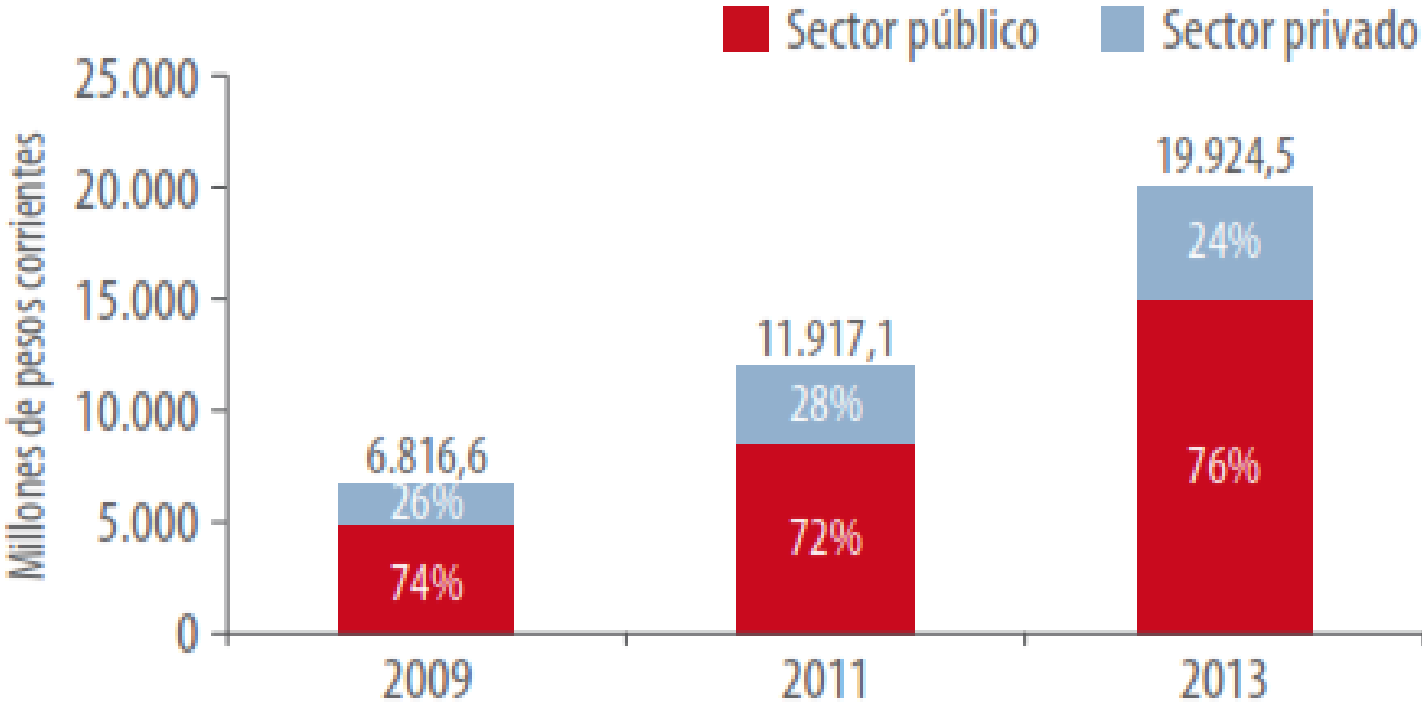
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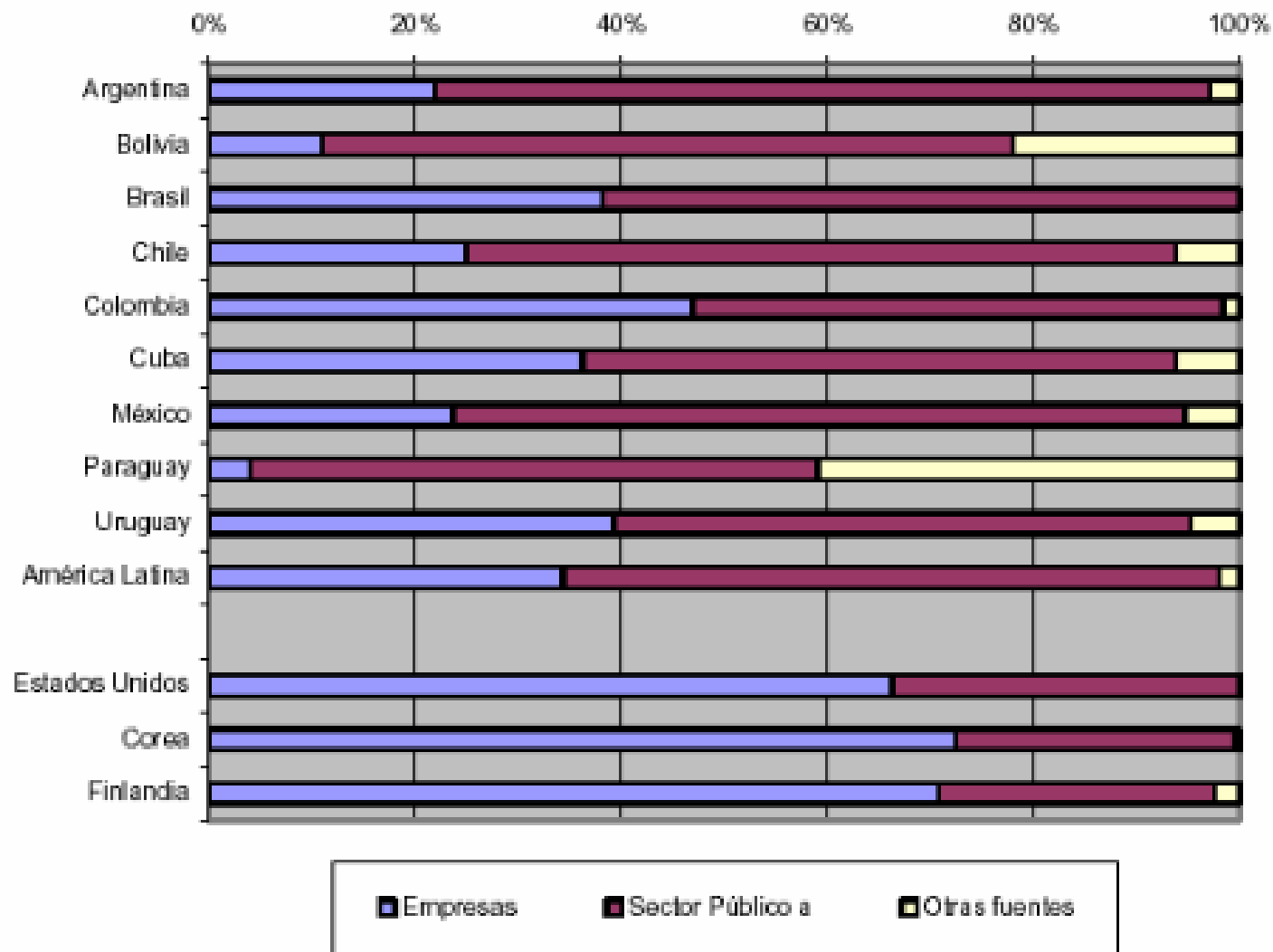
INVERSIÓN ANUAL EN INVESTIGACIÓN Y DESARROLLO



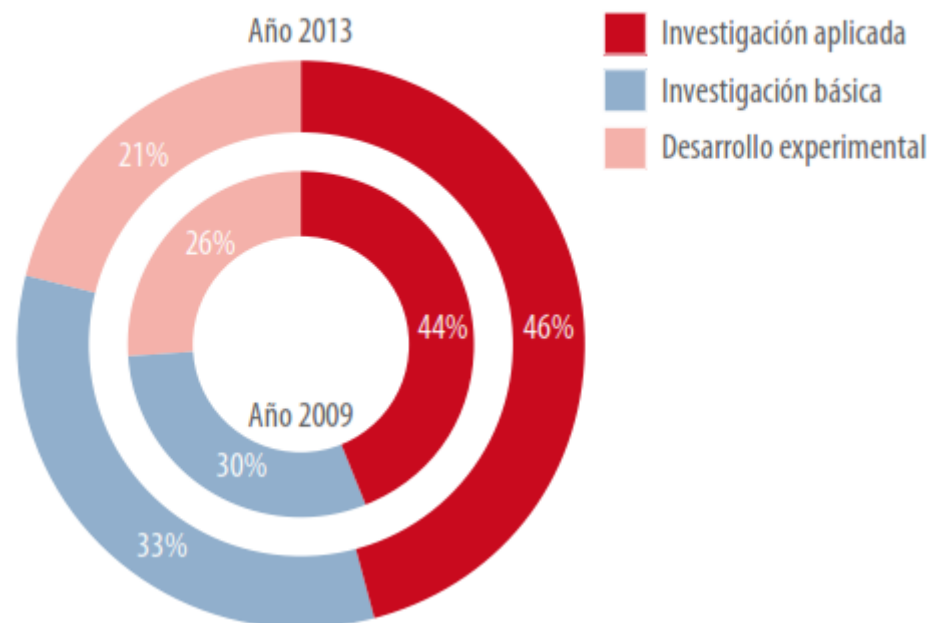
Annual investment in R&D by sector in Argentina



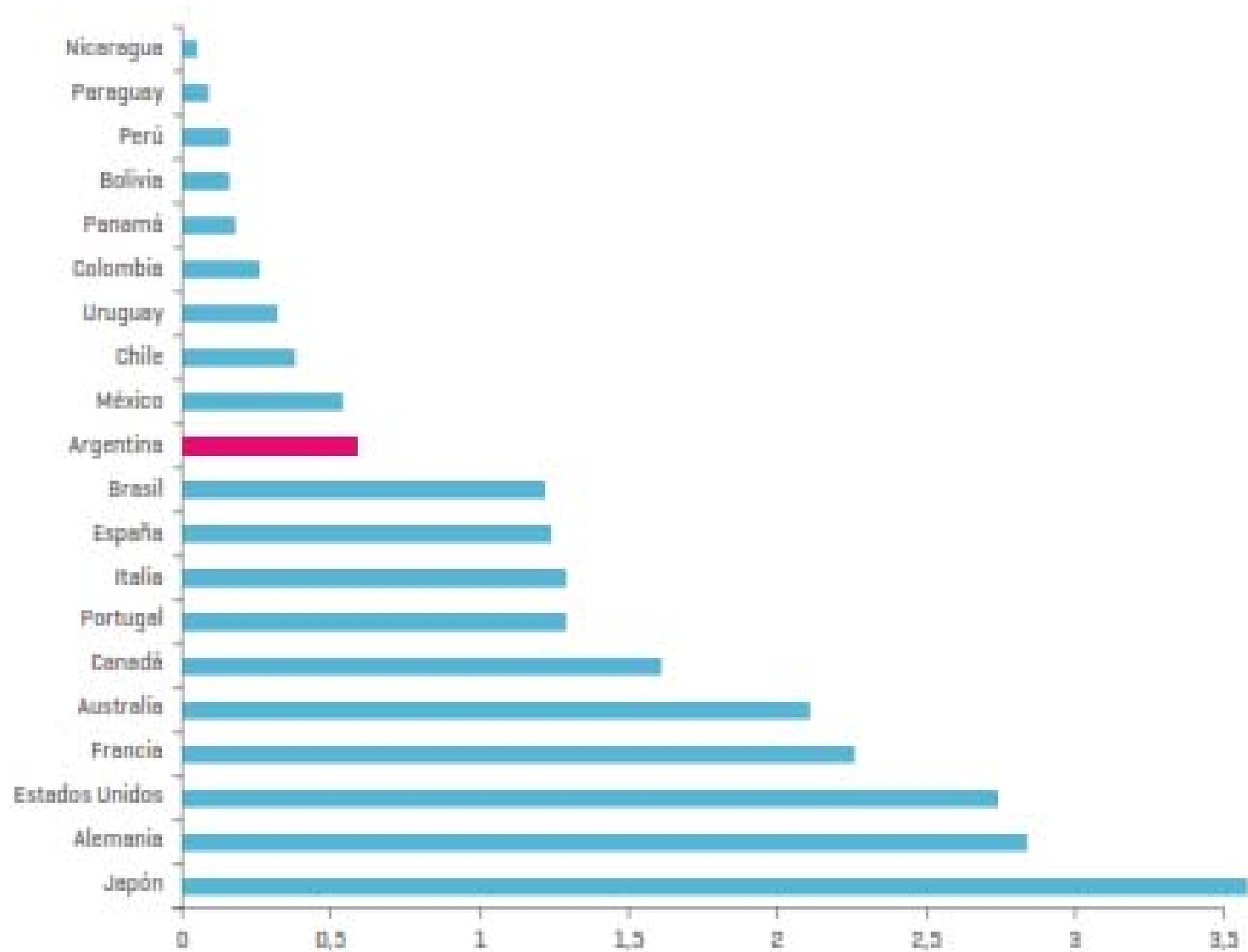
Investment in R&D by financial source



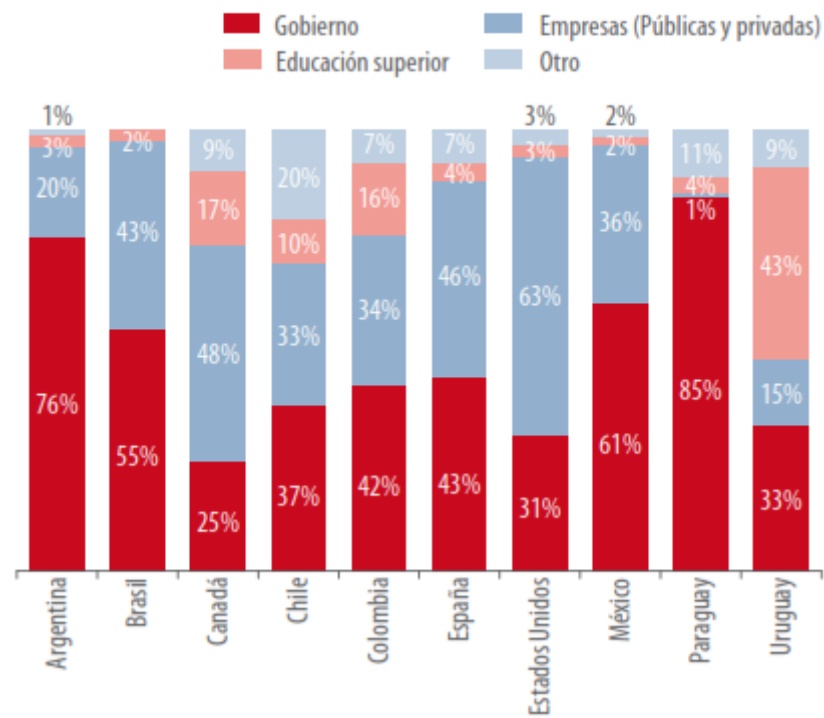
INVERSIÓN ANUAL EN I+D POR TIPO DE ACTIVIDAD



R&D investment in relation to the GDP



INVERSIÓN EN I+D SEGÚN SECTOR DE FINANCIAMIENTO EN PAÍSES SELECCIONADOS. AÑO 2013*



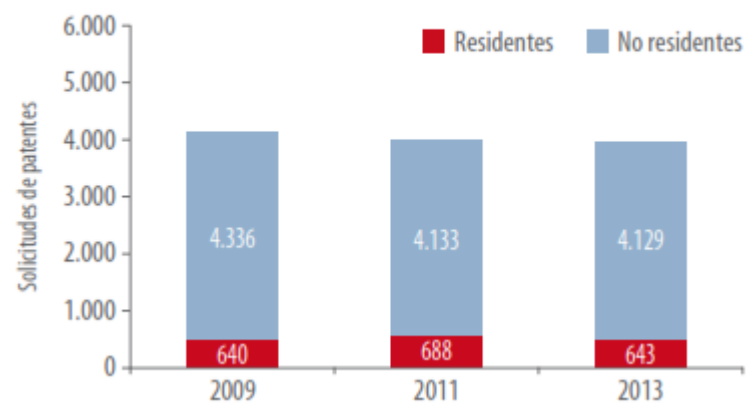
Investment in R&D per capita

País	Inversión en I+D/Habitante en US\$ PPC - 2009	Inversión en I+D/Habitante en US\$ PPC - 2013*	Variación
Estados Unidos	1.321	1.443	9%
Alemania	1.012	1.266	25%
Japón	1.070	1.258	18%
Francia	770	838	9%
Canadá	742	699	-6%
España	443	412	-7%
Portugal	414	377	-9%
Brasil	148	182	23%
Argentina	87	140	60%
Chile	57	77	36%
México	66	73	11%
Uruguay	66	46	-31%
Colombia	22	26	21%

INVESTIGADORES Y BECARIOS EJC POR TIPO DE ENTIDAD AÑO 2013



SOLICITUDES DE PATENTES SEGÚN RESIDENCIA



Number of researchers per 1000 economically active inhabitants

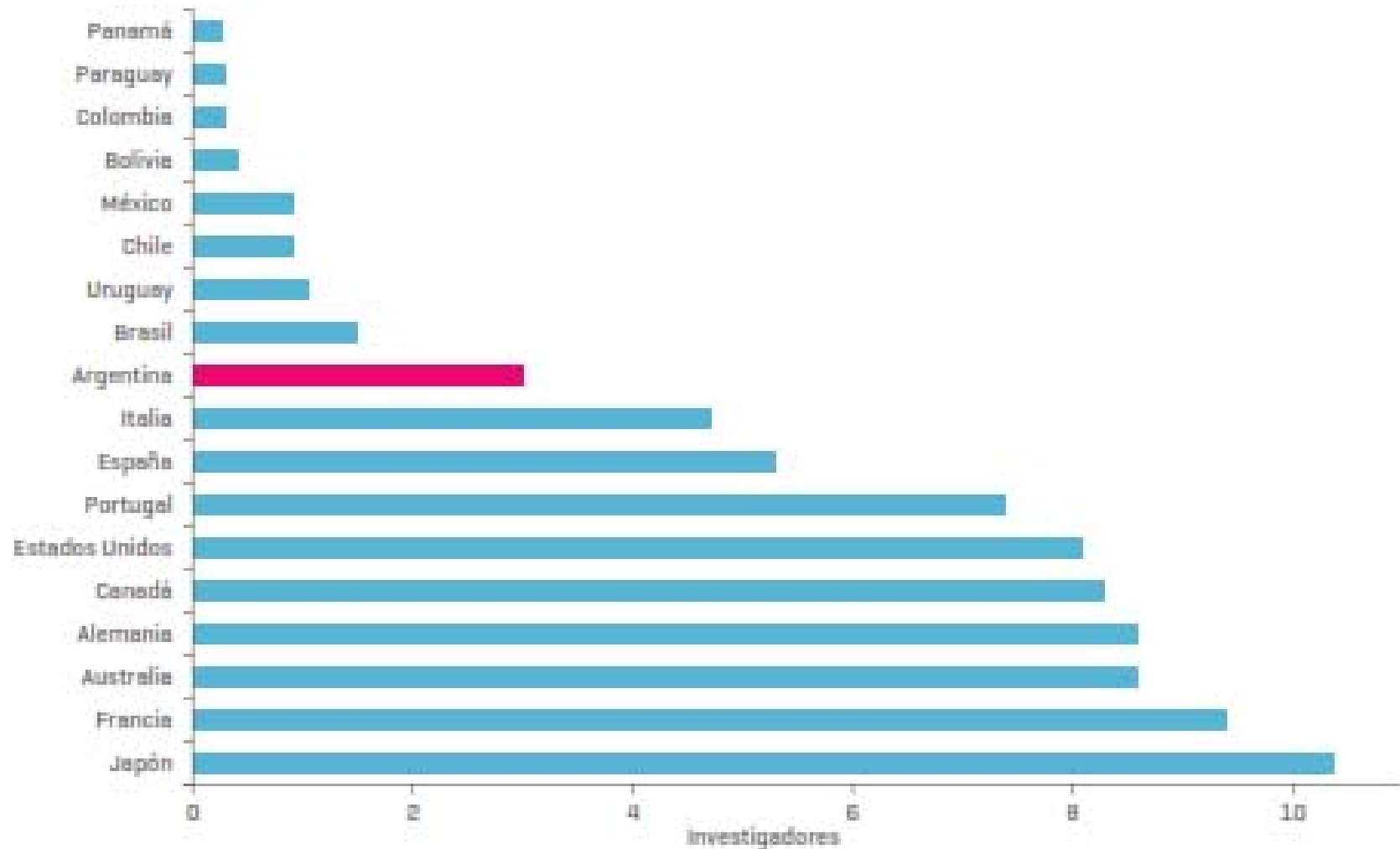


GRÁFICO 3: INVERSIÓN DE INVESTIGACIÓN Y DESARROLLO POR SECTOR DE EJECUCIÓN. AÑOS 2010 A 2014 (EN VALORES CORRIENTES).

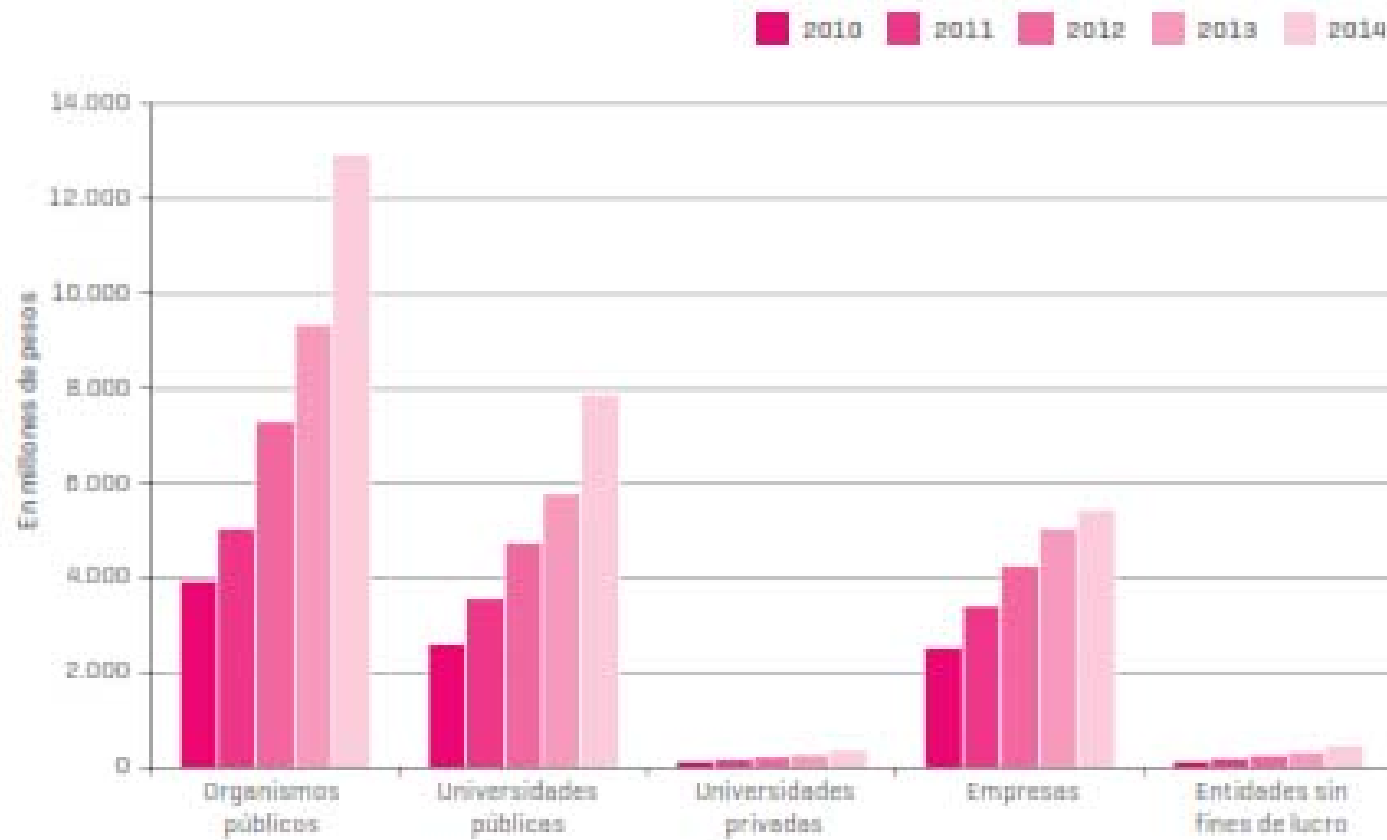
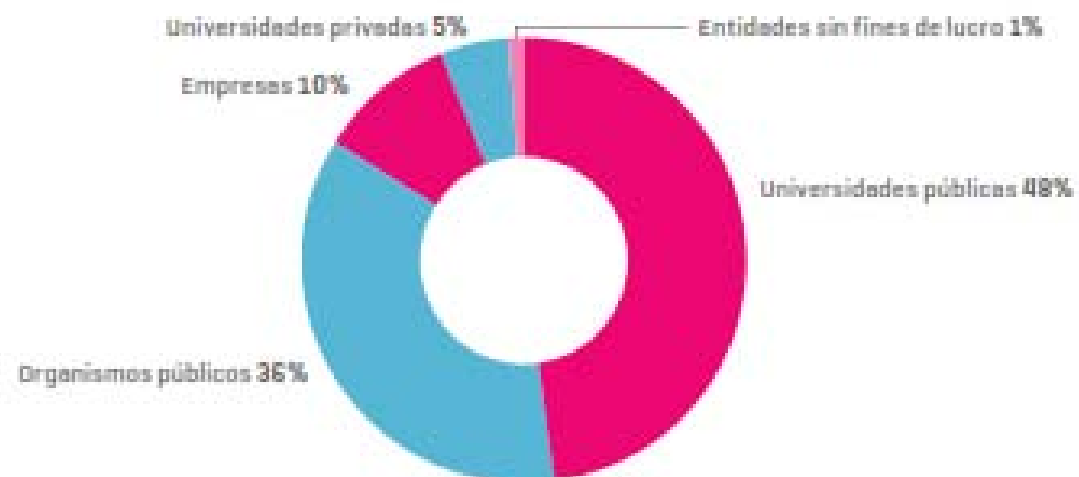


GRÁFICO 5: CARGOS OCUPADOS POR PERSONAS DEDICADAS A INVESTIGACIÓN Y DESARROLLO, SEGÚN TIPO DE ENTIDAD, AL 31 DE DICIEMBRE DE 2014.



Cooperative RD&D is the right action looking into the future

- A meaningful process for the development and actual transfer/knowledge of technology can be accomplished by means of cooperative RD&D among public sector, firms and research institutions.
- Cooperative RD&D activities promote cross border movements of skilled scientists, technicians and workers exchanging know-how and experiences; two forms of embodied information that can be crucial for tech development
- Cooperative RD&D would support the demonstration of new technologies, the stage of the technology cycle where neither the public nor the private sector are willing to take investment risks, although demonstration of new technologies is key to successfully close the technology cycle.
- Cooperative RD&D could lead to the creation of new private enterprises and public-private joint ventures that may lead to the sharing of intellectual property rights (IPR) and joint patents.

The role of the TM

- The Technology Mechanism is in a position to promote this type of cooperation at international level through both arms, the TEC and the CTCN.
 - The TEC by providing the conceptual framework and highlighting the possible barriers and needs for this endeavour to be successful and
 - the CTCN by bringing the stakeholders together and helping to organize them.
 - Possible TEC and CTCN merge is worth exploring

Predictable and adequate financial resources are needed

- The Technology Mechanism has to be endowed with predictable and sufficient resources to play this role.
- It will be critical to establish links with the Convention's financial mechanisms, in particular with the Green Climate Fund.

Few additional recommendations (from my side)

- Make it simple when promoting, supporting and implementing cooperative RD&D actions:
 - Do not try to involve “all” institutions in a country
 - Do not try to change the regulations or policies in place
 - Do not ask for the activities to be perfectly aligned with national strategies and policies, we may not even have these
 - Small RD&D can make the difference (a new practice or a new application of an existing technology)
 - Keep in mind the mutual benefit of the cooperation

THANK YOU / GRACIAS

Gabriel Blanco

- Estadísticas
 - Ver ICTSD sobre tech transfer
 - Recommendations from TEC
 - Recommendations from me: small is also good, make it simple, do not involve all institutions in the country
 - UNFCCC articles on I+D ver Mincyt
-
- Beauties of I+D
 - Role of GCF
 - Role of CTCN
 - TEC CTCN merge