COP 20

in Peru

Towards a Global Climate Deal

Sub-Directorate of Global Environmental Issues
Ministry of Foreign Affairs

DEVELOPMENT AND TRANSFER OF TECHNOLOGY FOR CLIMATE CHANGE

I. Importance of development and transfer of technology for climate change

II. Barriers to technological dissemination and their influence on the UNFCCC negotiations

III. Objectives for the COP 20

IV. Proposal on Technology Integration

I. IMPORTANCE OF THE DEVELOPMENT AND TRANSFER OF TECHNOLOGY FOR CLIMATE CHANGE

• Positioning of Peru and other developing countries in CC technologies : Production/adaptation of clean technologies, environmental products and services at low cost and development of long term R&D, in line with the priorities on transfer of technology, competitiveness and industrialization for sustainable development

• Peru and many other developing countries are marginal GHG emitters, but due to their high vulnerability to climate change must prioritize mitigation and adaptation and contribute to the development and transfer of technology, providing local knowledge to confront technological limitations

• Placing climate change as the new “driver” for technology change and innovation, in international R&D and technology integration schemes to address the global problem of CC and sustainable development

STRUCTURE OF THE INTERNATIONAL DIFFUSION OF TECHNOLOGY

International Competitiveness

Global /Regional Value Chains

Non-Equity Modes of International Production

Trade

- Trade in intermediate and capital goods
- R&D content of imports
- Trade in business and professional services
- Export Base
- Import competition

FDI

- Vertical and Horizontal FDI
- Joint ventures, licensing, franchising, others
- Technology content of FDI
- FDI in R&D
- Corporate developmental responsibility of MNCs
- FDI linkage with SMEs

Payment for IP, royalties and licenses fees

IPR regimes/
Patent systems

- Internationalization of R&D
- Direct access to technology (Internet)
- Mobility of Human Resources
- Short Life Cycles of Technology

International collaboration programs
Technology Integration thorugh regional/sub-regional centers/public-private technology pools

Bilateral taxation and investment treaties, FTAs
Multilateral negotiations
Domestic legislations

PROVISIONS FOR TECHNOLOGY TRANSFER IN THE WTO AGREEMENTS

• **Trade-related Aspects of Intellectual Property Rights (TRIPS)**	7, 8.2, 40, 66.2
• Agreement on the Application of SPS Measures	9
• Agreement on Technical Barriers to Trade (TBT)	11
• General Agreement on Trade in Services (GATS)	IV, XIX
• Gats Annex on Telecommunications	6.c, 6.d
• Agreement on Subsidies and Countervailing Measures	8.2
• Agreement on Agriculture	6, Annex 2 (2, 11)
• Ministerial Decision on measures concerning the possible negative effects of the reform program on LDCs and NFIDCs	3.iii) - Art.16 AA

Since 1987 it has been observed that developing countries have tabled initiatives to discuss the topic of development and transfer of technology in various multilateral fora, related to environmental and climate change issues.

OTHER INTERNATIONAL AGREEMENTS WITH PROVISIONS RELATED TO TECHNOLOGY TRANSFER

Montreal Protocol on the Ozone Layer (1987)

Art. 10 Financial Mechanism 10(a) Technology Transfer

Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (1992)

Agenda 21 "Transfer of environmental sound technologies, cooperation and capacity-building " (1992)

Cap. 34: Transfer of Environmentally Sound Technology, Coop and Increased Capcity

Convention on Biological Diversity (1993)

Climate Change Convention (1994) and its related Kyoto Protocol (2005)

Rio+20 UN Conference on Sustainable Development (2012)

Párrafos 19, 48, 58 f), 58 i), 66, 72, 73, 74, 88 f), 109, 110, 120, 127, 128, 143, 154, 160, 184, 187, 191, 193, 217 and Section B

TECHNOLOGICAL OPTIONS FOR MITIGATION

•Mitigation technologies:

a) Technologies to reduce environmental impact of land-use, land-use change
b) Technologies to generate energy efficiency (use of electricity, water, A/C) in the service sector (public institutions, hospitals, hotels, etc.) and in the residential sector
c) Technologies to reduce the environmental impact of agriculture and of production activities intensive in the use of energy (new sources of energy –biomass- and materials)
d) Technologies to recycle, for waste processing (solid, chemical, mineral, etc.)
e) To use renewable (geothermal, solar, wind) energies in certain regions of the country
f) Sustainable public transport

TECHNOLOGICAL OPTIONS FOR ADAPTATION

- Adaptation and sustainable development technologies:

a) To put in place natural (green) infrastructure and ecosystem service protection
b) To improve water availability: micro-dams and sanitation treatment, agricultural terraces (*Andenes*), fog-catching panels, rainwater harvesting systems, etc.
c) To use renewable (geothermal, solar, wind) energies in certain regions of the country
d) To adapt agriculture to new climate conditions, to improve soil productivity, agro biodiversity management
e) To avoid the melting of glaciers: reservoirs for water management at high altitudes
f) To monitor marine species' migration: bio-oceanographic monitoring

II. BARRIERS TO TECHNOLOGICAL DISSEMINATION AND THEIR INFLUENCE ON THE UNFCCC NEGOTIATIONS

- Political and ideological barriers: different technology transfer concepts, IP seen as barrier

- Institutional and regulatory barriers: inadequate National Systems of Innovation, inadequate IP regimes, trade protectionism

- Financial barriers: need for initial investment in infrastructure, lack of link to the UNFCCC financial mechanism, inclusion of FDI and other private sources

- Technical barriers: education and capacity for innovation

- Negotiations: There are discussions on how developing countries could have preferential access to mitigation and adaptation technologies, considering “IP barriers” and “trade protectionism”

III. OBJECTIVES FOR THE COP 20 IN DEVELOPMENT AND TRANSFER OF TECHNOLOGY

1. To achieve a package of substantive results to inject dynamism to the Technology Mechanism.

2. To set up regional/sub-regional centers for technology integration in developing countries to develop R&D, and link them with the financial mechanism by attracting resources from the GCF and GEF, as well as the private sector.

IV. PROPOSAL ON TECHNOLOGY INTEGRATION

PUBLIC-PRIVATE TECHNOLOGY POOL (N-S, S-S, TRIANGULAR)

A B C D

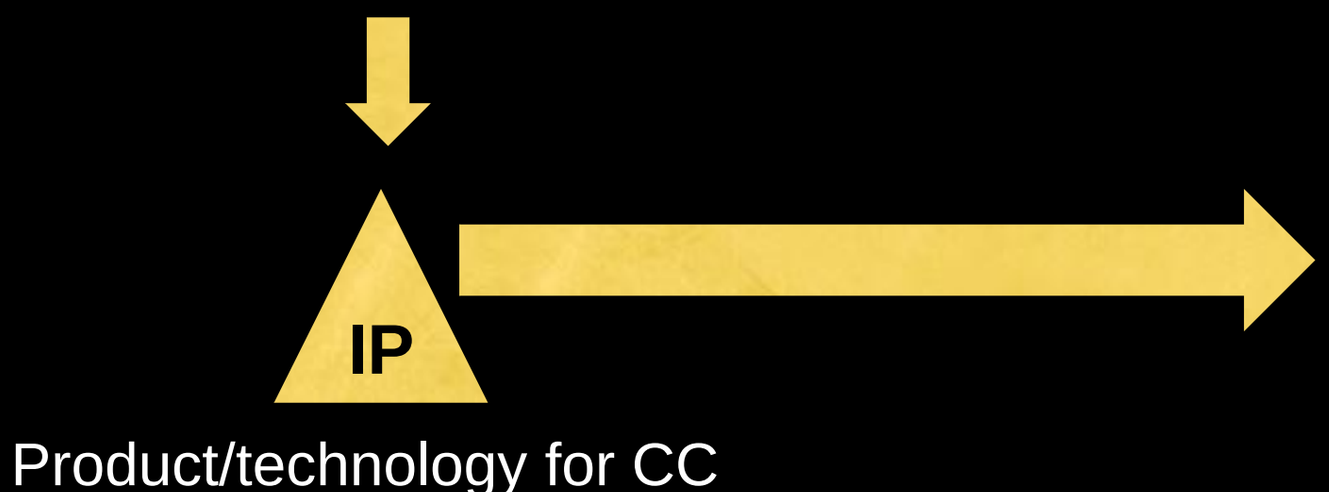
Definition of function structure, stakeholder roles and scope

GOVERNMENTS, UNIVERSITIES, COMPANIES, RESEARCH INSTITUTES

Scientists/Local Technology/Knowledge
Public financing/Intern.coop.
(GCF, GEF) /FDI

REGIONAL/SUB-REGIONAL TECHNOLOGY INTEGRATION CENTER

R&D on technologies for adaptation and mitigation



IV. PROPOSAL ON TECHNOLOGY INTEGRATION

- Goes beyond the IPCC technology transfer definition
- Places both developed and developing countries at the same level, as partners in terms of contribution of knowledge to fight CC
- Considers the regional/geographical dimension of the CC impact
- Reduces IP confrontation through technology pools, where participants have the ownership of specific technologies for mitigation and adaptation
- Promotes innovation and produces technologies, according to national and regional/sub-regional mitigation and adaptation needs, adapting foreign technologies and producing new technology, incorporating local knowledge
- Reduces time and shares costs and risks of R&D and allows the development of larger projects
- Strengthen supervision on the effectiveness, results and impacts of the financing from stakeholders participating in the pool

IV. PROPOSAL ON TECHNOLOGY INTEGRATION

- Increases capacity to attract financial resources (public, private, from multilateral banks, etc.) in N-S, S-S or triangular technology pools
- Allows effective involvement of the private sector and access to hidden market opportunities, through FDI, pension funds, etc.
- Promotes regional technology integration using the CTCN infrastructure where the regional/sub-regional centers would be inserted as “technology providers”
- Addresses current limitations of technology
- Reduces duplication of R&D and increases the complementariness of efforts to produce technologies identified in the TNAs
- Access to technology licenses with preferential fees for LDCs, LLCs, etc.

POSSIBLE ELEMENTS FOR A JOINT SUBMISSION ON TECHNOLOGY

Enhanced Action on Technology Development and Transfer

•*All Parties to promote new collaborative schemes, in particular Technology Integration based on public-private technology pools, in order to:*

a) use all knowledge available, including local knowledge, to develop R&D to adapt and to produce new technologies to address climate change and sustainable development, through regional technology integration centers aimed to produce technologies for mitigation and adaptation;

b) promote financing from both public and private sources, to develop technology integration, taking into account the effectiveness, results and their impacts on climate change mitigation and adaptation;

c) enhance their national systems of innovation, in order to promote technology integration, to address barriers and serve as enablers for the development and transfer of technology.