Water Governance Policy Dialogue in Peru

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In total: 159 hydrographic units
Water supply: 1,935,621 hm³/year

- 03 main water slopes:
  - Atlantic: 97.3% water available, 33.5% population.
  - Pacific: 1.76% water available, 62.53% population.
  - Titicaca: 0.6% water available, 4.2% population.

- 2018, Pacific slope: 2% water available, 66% population.
- Since 2011, progress has been made towards watershed management with the creation of Basin’s Water Resources Council.
- Of the 29 planned by the National Water Authority, 13 have been created, 1 Sub-basin Committee for the Mayo river in San Martin and 3 more are in process of being established.

<table>
<thead>
<tr>
<th>Source of water</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glaciers</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3,044 glaciers cover 2,399 km²</td>
</tr>
<tr>
<td>Pacific</td>
<td>1,129 (cover 878 km²)</td>
</tr>
<tr>
<td>Amazon</td>
<td>1,824 (cover 1,113 km²)</td>
</tr>
<tr>
<td>Titicaca</td>
<td>91 (cover 50 km²)</td>
</tr>
<tr>
<td>Lakes and Lagoons</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>12,201</td>
</tr>
<tr>
<td>Pacific</td>
<td>3,896</td>
</tr>
<tr>
<td>Amazon</td>
<td>7,441</td>
</tr>
<tr>
<td>Titicaca</td>
<td>841</td>
</tr>
<tr>
<td>Basins</td>
<td>23</td>
</tr>
<tr>
<td>Rivers</td>
<td>1,007</td>
</tr>
<tr>
<td>Aquifers</td>
<td></td>
</tr>
<tr>
<td>Pacific slope</td>
<td>2,700 Hm³ (reserva aprovechable)</td>
</tr>
<tr>
<td>Atlantic and Titicaca slopes are not determined</td>
<td></td>
</tr>
</tbody>
</table>


Source: National Water Authority (ANA)
Water shortage

The most prone area to drought: the southern highlands of Peru.

1.5 million people directly affected that live above 3,500 meters.

70% of the EAP in these places is dedicated to agriculture and livestock.

80% are grazing land with little cropland.

14.5 millions hectares of degraded ecosystems*

Flood

Not all floods or heavy rains can be attributed to the El Niño phenomenon. Floods caused by human activity occur on river floodplains, mostly in urban and/or agricultural areas.

Coast: rivers overflow with hyper-concentrated flows, causing erosion and sedimentation.

Highlands, overflows of Andean rivers, landslides caused by excessive rains, earthquakes or glacial accidents.

Inadequate water quality

Interferes with the use of water resources: irrigation, animal consumption, water production for human consumption, ecosystem services, etc., causing socio-environmental conflicts between basin stakeholders (water users).

High concentrations of solids produce overload in treatment systems, increasing treatment costs.

41 hydrographic units exceed the water EQS, caused by the dumping of untreated wastewater, inadequate management of solid waste, environmental liabilities, informal and illegal mining.

Risk of undermining the resilience of freshwater systems

Anthropocentric approach: “water resources” suitable for human uses without considering health or integrity of ecosystems.

Knowledge scarcity about the diversity of species that make up aquatic ecosystems, as a basis for water bodies resilience.

Since 1970 Peru has lost +50% of its glacier surface, affecting hydrological regimes that depend on their contributions.

Access to drinking water and sanitation

Urban area: plants for the production of drinking water, whose level of treatment is in most cases of secondary level.

Rural areas, the level is primary with simple disinfection.

In some parts of the country, water is consumed directly, without treatment.

Sources:
- OECD, 2016. Perú Environmental Performance Review.
Public Investment Gaps in Natural Infrastructure

Gap Indicators of the environmental sector

It is stipulated:

**Article 1.- Approve the indicators of infrastructure gaps or access to public services of the Environment Sector, for their application in the Multiannual Investment Programming phase 2020 - 2022, of the three levels of government, indicated below, and whose description is developed in Annexes I and II, which are part of this Ministerial Resolution.**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Size of the Gap</th>
</tr>
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<tbody>
<tr>
<td>Percentage of degraded ecosystems surfaces that provide ecosystem services and require recovery.</td>
<td><strong>4,168,234.9 ha</strong></td>
</tr>
</tbody>
</table>

Source: [http://geoservidor.minam.gob.pe/monitoreo-y-evaluacion/restauracion-de-areas-degradadas/](http://geoservidor.minam.gob.pe/monitoreo-y-evaluacion/restauracion-de-areas-degradadas/)
1° pillar of Policy: Conservation and sustainable use of natural resources and biological diversity

2° pillar of Policy: Integral management of environmental quality

3° pillar of Policy: Environmental governance

4° pillar of Policy: International environmental commitments and opportunities

GOAL: Balance and harmonize the supply and demand of water, protecting its quality and quantity, promoting its efficient use and contributing to local, regional and national development.

TARGET: Determine the ways that allow solving water problems in Peru, establishing costs and sources of financing; as well as implementation programs.
Meet the goals of the Sustainable Development Goals.

Compliance with the international commitments in the context of the Paris Agreement

Progress in the process of accession to the OECD

Increase the competitiveness of economic activities

Linked to poverty reduction priorities

Linked to disaster risk reduction in a context of climate change.

Linked to cleaner production patterns, resilient infrastructure, low carbon growth.

Allow to lay the foundations for the transition to Green Growth.
The measures are aimed at increasing water supply, reducing the impacts of extreme events, and improving water efficiency and management in watersheds vulnerable to climate change.

The measures of the **Multisectoral Management** component are aimed at:

1. Implementation of major hydraulic infrastructure in watersheds vulnerable to climate change
2. *Conservation and recovery of natural infrastructure.*
4. *Monitoring and surveillance of the quality of water resources.*
5. Modernization of the Granting of water use rights.
6. Granting of water use rights in vulnerable basins incorporating climate scenarios
7. *Greater multisectoral and multi-stakeholder articulation for IWRM due to the effects of Climate Change.*
8. *Information services for planning and multisectoral management of water resources.*

**Mechanism for Payment of Environmental Services (MERESE)**

Payment scheme based on voluntary agreements to implement conservation, recovery and sustainable use of ecosystems for the benefit of the population.

Ecosystem services recognized in the Regulation of Law No. 30215 as part of MERESE

<table>
<thead>
<tr>
<th>Water Regulation</th>
<th>Soil Erosion Control</th>
<th>Landscape Beauty</th>
<th>Pollination</th>
<th>Soil formation</th>
<th>Nutrient cycle</th>
<th>Climate Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon sequestration and storage</td>
<td>Regulation of natural risks</td>
<td>Biodiversity Maintenance</td>
<td>Air quality regulation</td>
<td>Recreation and ecotourism</td>
<td>Air quality regulation</td>
<td>Climate Regulation</td>
</tr>
</tbody>
</table>

**RESOURCE PROTECTORS/PAYEES**

- Community groups

**PAYERS**

- Sanitation Service Provider (EPS)
- Irrigation user groups
- Irrigation Projects
- Hydroelectric Companies
- Tourism Companies

Voluntary Agreements
Projected fund of the EPS MERESE reserve

Total
$42,960,770

EPS with viable projects to execute
- EPS SEDAM HUANCAYO S.A.
- EPS SEDAPAL S.A.
- EPS MOYOBAMBA S.A.
- EPS EMUSAP AMAZONAS S.A.
- EPS EMAPA SAN MARTÍN S.A.

EPS with tariff resolution to raise resources for MERESE concept

Water user groups (JU) committed with MERESE:
- 3 JU retributing
- 4 JU committed

Socio-environmental projects accomplished

07
1.5 M*
soles approx.
executed in activities for the sustainability of ecosystems (2014-2016)

05

04

03

02

01
Results of competitive funds:

- **37 conservation** and recovery sub-projects financed (for a total amount of S/ 5’786,256.23).
- **13,988.4 hectares** to be conserved and recovered (1,510 beneficiary households).

**FAS**

*The Social Advancement Fund* (DL 1334)

The Operations Manual of the Social Advancement Fund is approved.

The FAS will finance prioritized programs and projects that allow closing gaps in basic services and infrastructure in the influence areas of energy and mining activities and of other sectors.
Promoting the Business Water Footprint

- Creation of the Water Footprint Program, as a result of a voluntary procedure (Chief Resolution No. 104-2018-ANA).
- Recognition of the State of the good practices applied by private companies in the efficient use of water.
- It places value on social responsibility in the water resources management at basin level.

Source: National Water Authority (ANA)
Goals:

- **Strengthen multilevel governance**, both in the management of water resources and in the provision of water services;
- **Design and implement sound economic instruments** to manage demand; and,
- **Strengthen the regulatory framework** for water resources management and the provision of sanitation services.

**Water Governance Policy Dialogue in Peru**

1. **Diagnosis and identification** of measures to overcome the multilevel governance gaps.
2. **Economic instruments** to achieve broader water policy objectives.
3. **Improving the regulatory framework** for water resource management and service delivery.
4. **Case studies** (governance framework, economic and social consequences, options for the management of the revenues and tailor recommendations).

5. **Action Plan**: Policy recommendations and key stakeholders.

- Short/medium/long term actions,
- Indicators to track progress in implementation,
- Relevant best international practices,
- Identification: who can do what within the country, how and when.
Key Stakeholders Involved

- **First OECD mission:** interviews with 70 actors from governmental and non-governmental entities (public, private and civil society).

- **Second OECD mission:** interviews with 46 entities involved in water resources management in the basins of Ica-Huancavelica, Olmos, and the Chillón, Rímac and Lurín river basin.
Key Elements of Dialogue

Public Management

- Basin’s Water Resources Council (CRHC) set as multi-actor and multilevel articulation instances.
- Fragmentation, coordination and articulation gaps persist: Govt. National, Regional, Local, CRHC, users, among others.

Operationalization

- Need to link national planning versus planning at the basin level.
- None of the 6 CRHC with water resources management plans have been fully implemented yet.
- Its operationalization lacks the political commitment and provision of necessary resources.

Water Culture

- Raise awareness about the efficient use of water.
- Interventions have focused on infrastructure for capturing and distributing water resources, without taking into account:
  i. source of the water resource and
  ii. impacts that the discharges have on the health of the population.
- Articulation of the water resources policy with the needs of the indigenous and peasant communities located in influence areas of economic interventions.

Information Quality

- Platforms for the information exchange are mostly set at the national level, pending at basin level.
- Lack of interoperability of multilevel information systems and service providers.
- Need to communicate the results obtained, with clarity and fluency, in order to generate predictability and trust among the actors involved in the management of water resources.
Key Elements of Dialogue

Tariffs and Sanitation
Service Providers
Sustainability

• Progress in the establishment of tariffs and economic retributions (for example, groundwater). Low value allocation affects the financial sustainability of service providers.
• Dependence of the public budget.
• Review investment approaches that leverage and expand funding sources.

Natural Infrastructure

• Goal: inclusion of natural infrastructure definition in the national investment system Invierte.pe
• Still a need for adapting the actual process for projects in natural infrastructure.
• It is necessary to continue generating technical tools as a guide for project developers.
• Water MERSE: good practice not globally common. Its implementation requires solving:
  i. Subscription of agreements and determination of economic retribution;
  ii. Indicators that measure the relationship between conserved hectares vs. water flows.

Capacity Building

• Knowledge gaps difficult the interaction and understanding between actors.
• Need to develop evidence to support decision making.
• It is not clear that water resources have a dual function: resource and service provider.
• Result: Population needs are not efficiently covered or attended (poverty, anemia, sustainable use of the resource, distribution of income)