

A photograph of a suspension bridge in a dense, lush green forest. The bridge is made of metal cables and a metal grate deck. The forest is thick with various types of trees and plants, creating a vibrant green backdrop. The lighting is soft, suggesting a misty or overcast day. The bridge extends from the foreground into the distance, leading the eye towards the center of the frame.

# Financing Water Conservation for Ecosystem Services

Learning from Experience and Roads Ahead

Peter Vos, Global water sector lead GGGI, innovative financing session, August 28

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GGGI,  
Green Growth,  
and PES

# Global Green Growth Institute at a glance

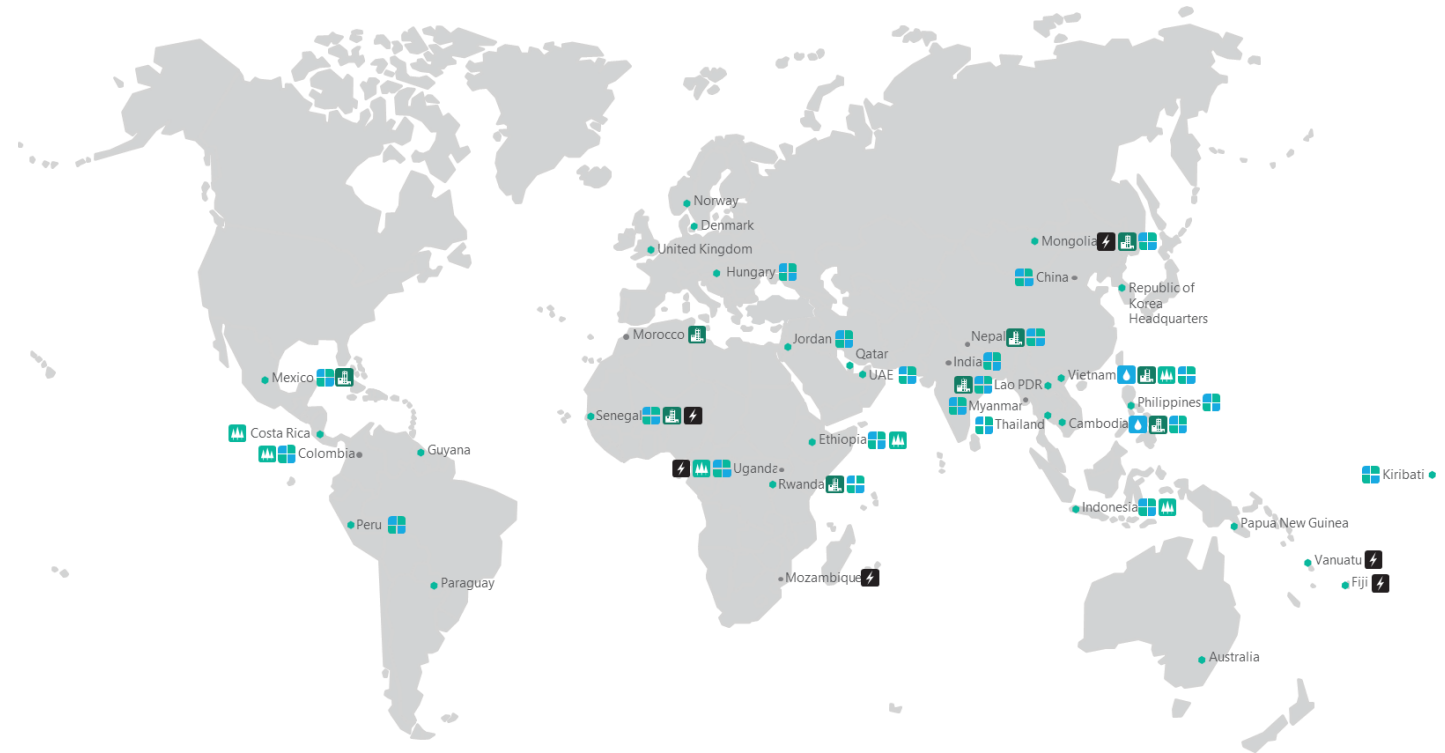


**Vision:** A resilient world of strong, inclusive and sustainable growth

**Mission:** GGGI Partner countries are supported in their transition towards a green growth model that simultaneously achieve poverty reduction, social inclusion, environmental sustainability, and economic growth.

## Six strategic desired outcomes:

1. GHG emission reduction
2. Creation of green jobs
3. Increased access to sustainable services
4. Improved air quality
5. Adequate supply of ecosystem services
6. Enhanced adaptation to climate change

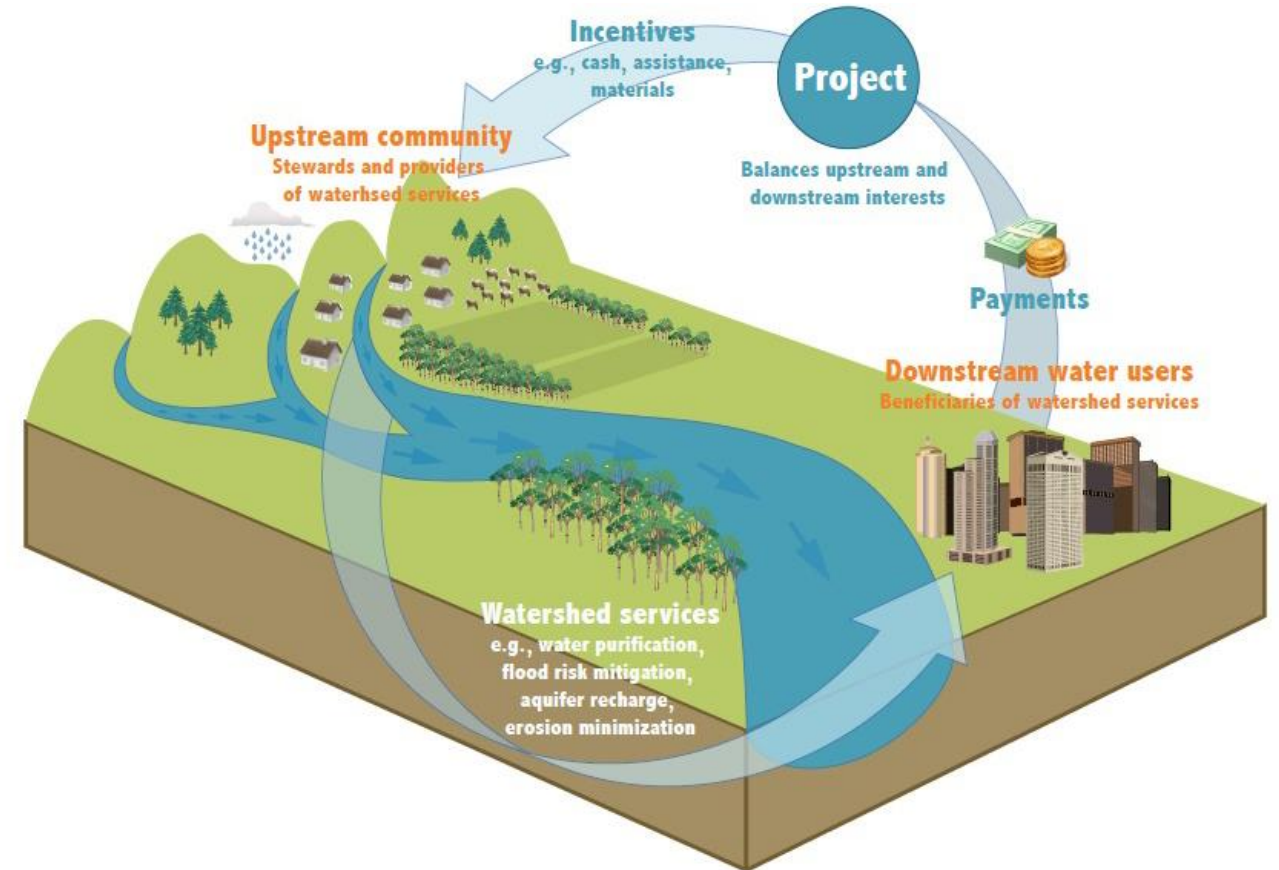


28 member countries



# GGGI's approach towards PES

- **Downstream users pay upstream users** to change water use, so that they can benefit from improved environmental services.
- **Challenging** - > downstream users pay to an area where they are not the beneficiaries or where they may not see immediate results.
- Strictly defined, PES requires **voluntary** transactions to take place between the parties and **payments are made only after beneficiaries receive the environmental service**.
- **In practice:** In Peru, PES scheme allows downstream users to pay before they receive the environmental service



# GGGI's approach towards PES

- Under this strict definition, we become limited in what impact we can deliver.
- We forgo long-term benefits of conservation, if we require that payments are made only after the environmental service is provided.
- Instead, we adopt a more flexible approach to PES.
- Use the PES principle in developing **innovative financial instruments and Funds**.
- Two years ago, GGGI started supporting and strengthening **National Financing Vehicles**. This can be applied also for triggering **Conservation Finance**.



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Lessons Learned  
from GGGI

—

Structuring,  
Practicing, and  
Financing

# GGGI's role in National Financing Funds



- GGGI has been involved in supporting national funds in its partner countries. Some examples include:
- **FONERWA**
  - **Rwanda's Green Fund**, a main fund for international **Environment and Climate Change** finance which has successfully committed almost 100 million USD from donors (DFID, KFW, GCF, UNDP) and GoR and approved 37 high-impact projects in Rwanda.
  - **Impact** so far:
    - **137,000 green jobs created**
    - **38,000 Ha forest recovery**
    - **19,000 Ha watersheds protected**
  - domestic capitalization sources include:
    - **Environmental fines and fees**
    - **Environmental Impact Assessment (EIA) fees**, such as proceeds from forestry and water fund
    - Other **environmental revenues and seed financing from domestic stakeholders**
- **REEF:**
  - To foster development of renewable energy, energy efficiency and solar off grid projects, the Government of Senegal is working on the creation of the **Renewable Energy & Energy Efficiency Fund** "REEF" with the support of the African Development Bank, FONSIS and GGGI.
  - REEF will provide **subordinated debt to energy projects**. Funding for REEF will be sought from the GCF, AfDB and other investors to reach target size of **\$200 million**.
  - GGGI has been appointed to design and structure the Fund.

# Structure of FONERWA's RBF Facility (in process)

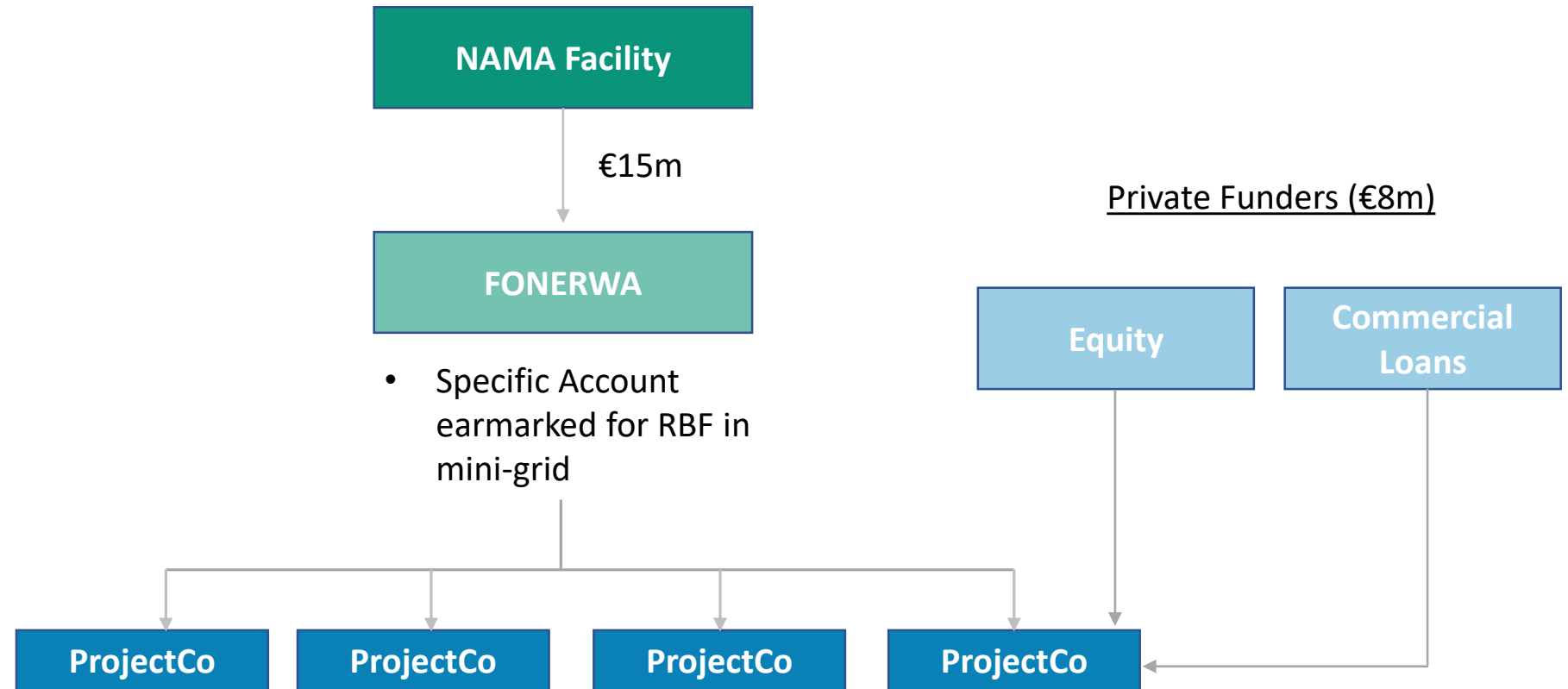


Global  
Green Growth  
Institute

## A Dedicated Result-Based Finance Facility (RBF) for Mini-Grids

If selected by the NAMA Team, The NAMA Facility commits €15m to FONERWA

- The funding will go to a specific earmarked bank account
- FONERWA selects the projects to be funded with the RBF
- FONERWA signs an RBF agreement with the ProjectCo, attracting equity and debt to build the mini-grids
- RBF is disbursed after mini-grid & connections have been built

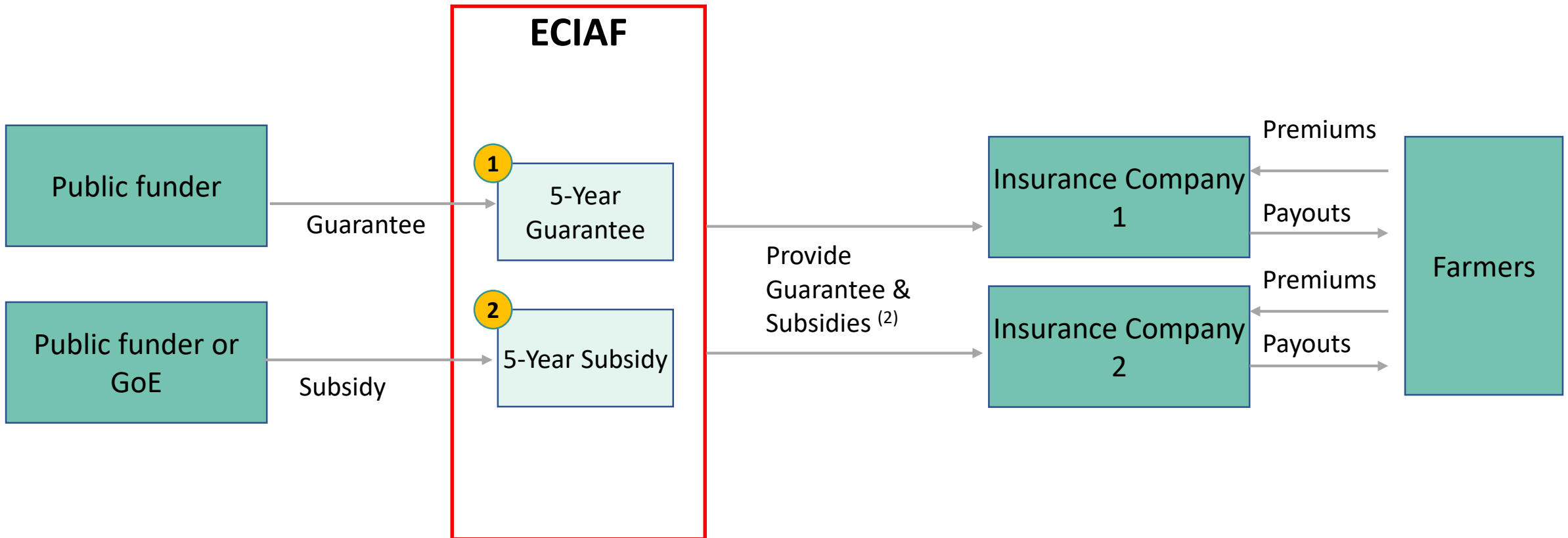


### Note:

(1) Pending approval of the project by the NAMA Facility (September 2018)



# Climate Insurance to Ethiopian small-holder farmers (in process)



# Major questions for Fund structuring



Initial  
Assessment

- **Project Pipeline**
  - Is there a flow of viable and bankable projects that investors are interested in?
  - Can those projects be bundled?
- **Market Demand for Fund**
  - Is there a demonstrated need for a Fund and is finance the key constraint?
  - Investigation of demand and supply conditions?
- **Regulatory Conditions**
  - Are the laws conducive to the establishment of a Fund?



Fund Design

- **Governance and Structure of the Fund**
  - Does it follow good corporate governance principles?
  - Does it have an effective and comprehensive risk management system?
- **Financial Management**
  - Does it have accounting, audit procedures, reporting, and other financial management practices in accordance with its area of business?
  - Can it disburse funds effectively, equitably, in a timely fashion, and transparently?
- **Investment Experience and Capacity**
  - What will be the Fund's modality? What types of watershed/PES investments will it engage in?
  - Will it work with other challenging investments (e.g., SME funding)?
  - Does it clearly define the criteria so applicants can understand the parameters?
- **Partners/Network**
  - Will the fund leverage co-financing, worked on joint projects with partners? What are lessons learned from working with each type of partner?
- **Monitoring, Reporting and Verification (MRV)**
  - Are strong MRV measures in place to ensure unambiguous appraisal and performance criteria?
- **Exit strategy**
  - Are there exit options for investors?

# GGGI support in Peru's PES Water utilities



## Enabling Environment in Peru

Peru has built PES into its **legal and institutional framework**. It is one of the few countries with legislation on PES.

- Country has **experience with PES projects**, from REDD that have sold carbon credits to smaller PES in specific basins.
- Country has **PES registry** run by the Ministry of Environment
- PES is now also part of the **country's water and sanitation official policy** as well.
- Recent laws have mandated that all of **Peru's 50 Public Water Utilities to establish and implement PES** to support green infrastructure.
- Further, the laws mandate that all of them need to set aside a percentage of the water tariff (in most cases, around 1%) to be invested in PES only.
- 22+ are already setting aside a percentage of the water tariff exclusively for PES interventions (including water utilities of large cities, such as Lima and Cusco).

# GGGI support in Peru's PES Water utilities

- GGGI is working closely to support the **National Water and Sanitation Regulator, SUNASS.**
- **Four steps taken:**
  1. The Global Green Growth Institute (GGGI) and the National Water and Sanitation Regulator (SUNASS), signed a Framework Cooperation Agreement on May 8, 2018.
  2. Conducted initial assessment of utilities' capacity to develop and implement green infrastructure projects.
  3. Developing PES implementation guidelines.
  4. Providing advice to SUNASS and SEDAPAL, the Lima water utility, to arrange a financial agreement to manage PES resources.



**GGGI Signs Framework Cooperation Agreement with Peru's National Water and Sanitation Regulator – SUNASS**

# What works?

- Water utilities are reserving funds:

Name of water utility (sub set of 13)	Total projected reserves (5-year term) (in USD)
SEDAPAL S.A.	\$ 26,278,762
SEDA HUÁNUCO S.A.	\$ 264,685
EMSAPA YAULI LA OROYA S.R.L.	\$ 9,262
SEDAPAR S.R.L. (Rioja)	\$ 133,718
EMAPAB S.A.	\$ 99,987
EMAPAT S.A.	\$ 352,720
EPS MARAÑÓN S.R.L.	\$ 363,904
EPS Municipal Mantaro S.A.	\$ 158,841
EMPSSAPAL S.A.	\$ 86,848
CHANKA S.R.L.	\$ 70,363
MOQUEGUA S.A.	\$ 306,676
EPSSMU	\$ 81,784
EPS EMAPICA S.A.	\$ 590,929

# Why it works?

- **Regulations set the stage for PES investment:**
  - Legislation not only useful to mainstream PES, but vital to clarify key aspects (e.g. increase the geographic purview of water utilities to encompass the entire watershed).
- **Cross-sectoral support:**
  - SUNASS, the water and sanitation regulator, has set up a team support PES interventions of 50 water utilities.
  - The Ministry of the Environment has set PES, including those of water utilities, as a priority.
  - The Ministry of Economy and Finance has developed specific public investment guidelines on conservation and restoration interventions.

## Caracterización:

### EPS con reservas para MERESE

**Estudio sobre características de las Empresas Prestadoras de Servicios de Saneamiento (EPS) que tienen autorización para reservar fondos para Mecanismos de Retribución por Servicios Ecosistémicos (MERESE).**

#### Conclusiones:

- Se usan varias formas para calcular las reservas para MERESE y sería importante uniformizarlas.
- Hay EPS que reservarán fondos muy pequeños para MERESE y necesitarán estrategias especiales.
- Mayoría de EPS no tienen "áreas verdes" en sus estructuras internas, y podrían no necesitarlas si funciones internas están bien definidas y personas están capacitadas. Sin embargo, la mayoría de EPS no cumple estas condiciones hoy.
- Mayoría de EPS necesitan capacitar a su personal sobre MERESE de forma comprensiva.
- Mayoría de EPS no tiene apoyo de cooperación técnica. SUNASS podría ayudar a coordinar esta cooperación.
- EPS tendrían problemas para desarrollar proyectos de inversión pública verdes porque tienen poca experiencia en formulación y ejecución de proyectos en general.

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May 29, 2018

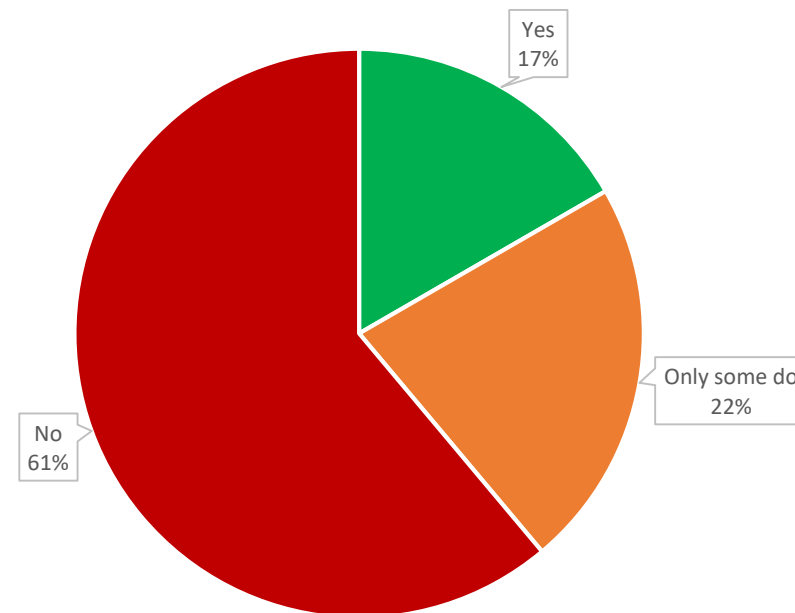
# What are the challenges?

- Water utilities are starting to set aside the PES funds, but have yet to use them.
- Most lack the capacities and technical cooperation support.

E.g. Perception of general managers of water utilities **on readiness of their personnel** to implement PES:

(GGGI Survey, 2018)

Does your personnel has the capacities to implement PES at your Water Utility?



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The Way Forward

—  
Unlocking  
Private Financing  
Potentials



# The Way Forward

## *Unlocking Private Financing Potentials*



1. **Annual global funding for conservation** is estimated at roughly **US\$50 billion**, mainly from government, multilateral agencies, and philanthropic sources.
2. Identified **annual global conservation needs** are around **US\$300-400 billion**
3. **Private** investors can contribute to **meet gap**
4. ***Issues to overcome to trigger private conservation finance and PES:***
  - **Lack of sizable cash flows** after project start
    - Monetizing ecosystem assets is a challenge – very little precedence, only niche projects
    - Slow and risky business. Can take decades to realize, verify, and capitalize on conservation benefits.
  - **Uncertainty in cash flows**
  - **lack of widely accepted standards** for measuring impact
  - **high transaction costs of investing in small projects**, and abundance of early-stage project concepts that are too speculative, shortage of financial-management experience
  - **Inherent complexity and unpredictability of natural systems**. Many stakeholders are involved and there is difficulty to agree on conservation principles

# The Way Forward

## *GGGI's approach to unlocking Private Financing Potentials*



- Owing to changing financial landscape trends, GGGI has focused on **unlocking private financing** by:
- **structuring and blending** of capital from private, public, multilateral and bilateral sources to provide maximum leverage for such funds.
- creating a **solid project pipeline** first before approaching investors. Only with a solid project pipeline, there is a need for extra private financing for conservation
- focusing on **sustainable fund structuring** to disburse finance to projects and programmes which provide maximum ecosystem and watershed benefits in a sustainable manner with tariffs/revenues from beneficiaries.
- creating **transparent accounting and clear governance structure** to ensure effective and efficient use of capital and there is transparency and accountability in processes
- ensuring **political buy in from** national governments to structure enabling environment for funds (we are embedded within the Ministry).

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**Conclusion**

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**Key Takeaways**

# Key takeaways

- Triggering **innovative finance and designing financial instruments** that can work is most important, rather than concentrating on purely PES solutions only
- The case of **Peru shows that conservation finance has to be build in the institutional and legal framework**
- **Private financing is indispensable** to meet the needs of conservation and development finance
- In attracting more private financing, **impact investors might be the first target group** to be followed by more risk averse investors
- Proper fund **structuring and blending financing is important** to attract private financing
- Creating a **stable and conducive environment with stable revenue streams** is critical in attracting long-term private financing
- **Political buy in** to set up conservation finance funds & structures are indispensable

# Thank You

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