



# IS THERE SUCH A THING AS INNOVATIVE FINANCING FOR ECOSYSTEMS MANAGEMENT?

SESSION 1: ENABLING CONDITIONS FOR IMPLEMENTING ECOSYSTEMS MANAGEMENT

## Tariff Reform for Green Infrastructure in Peru

Ivan M. Lucich

President of the Board - SUNASS

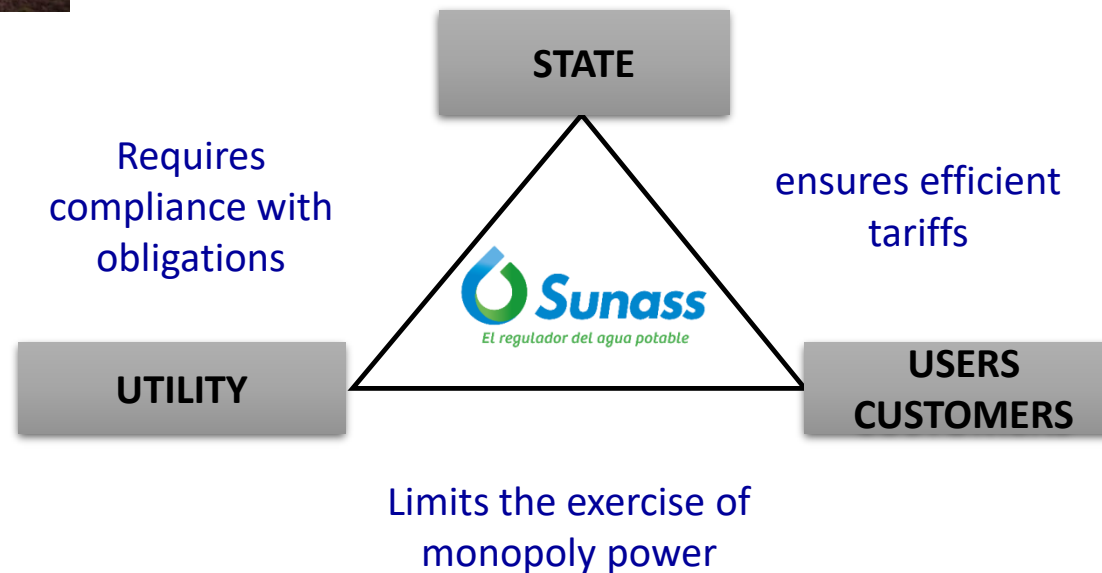
ADB, IDB, SIWI & TNC

Tuesday August 28th / 09:00 – 10:30

# National Superintendence of Sanitation Services – SUNASS

## The Water Utility Regulator

Economic regulator that balance the interest of:



**Sets tariffs for retrieving the economic cost of providing sanitation services**



# Why is Peruvian WUR interested in GI?

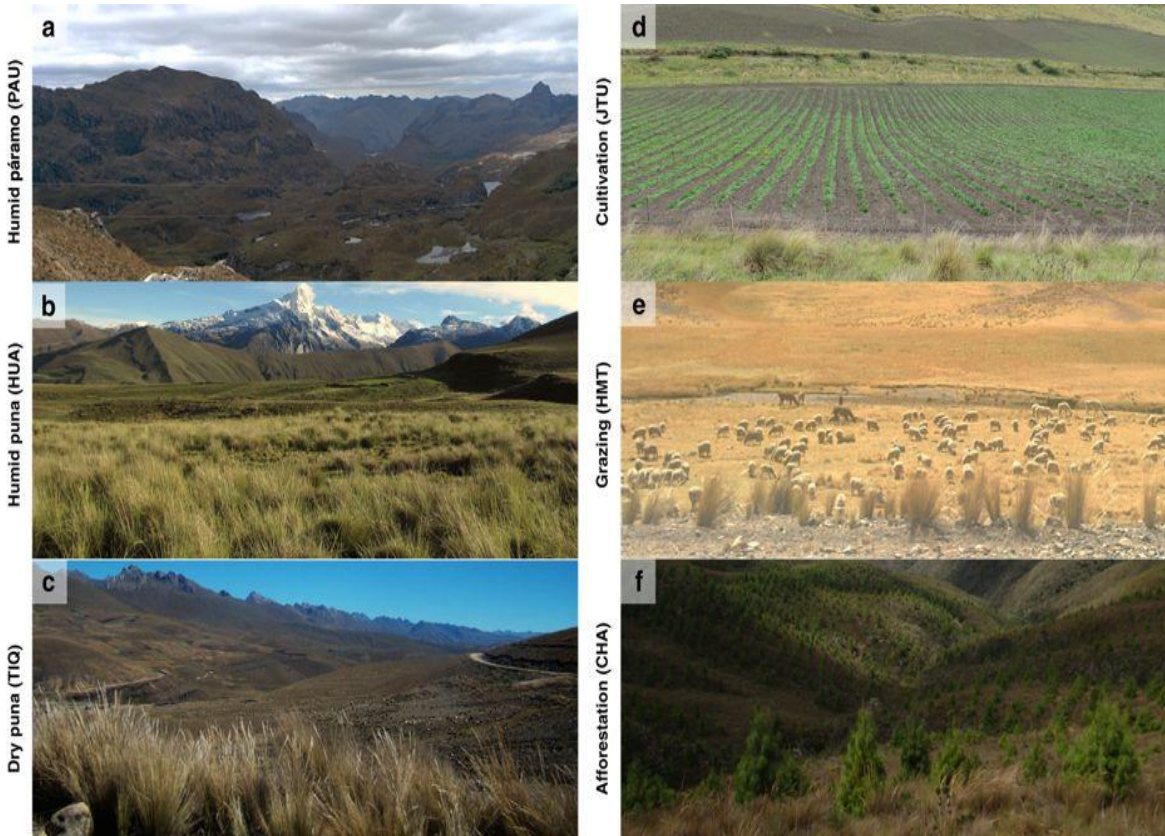


The watershed degradation increases the cost of drinking water service

The water utilities should have control of the raw water supply chain, in order to avoid....

- Additional use of chemical inputs.
- Interruption of DW distribution.
- Investment in pre-treatment units.
- Investment in new sources of water.
- Deterioration of the infrastructure.
- Social conflicts

# There is a direct relationship between Water Ecosystem Services Conservation and Sanitation Services



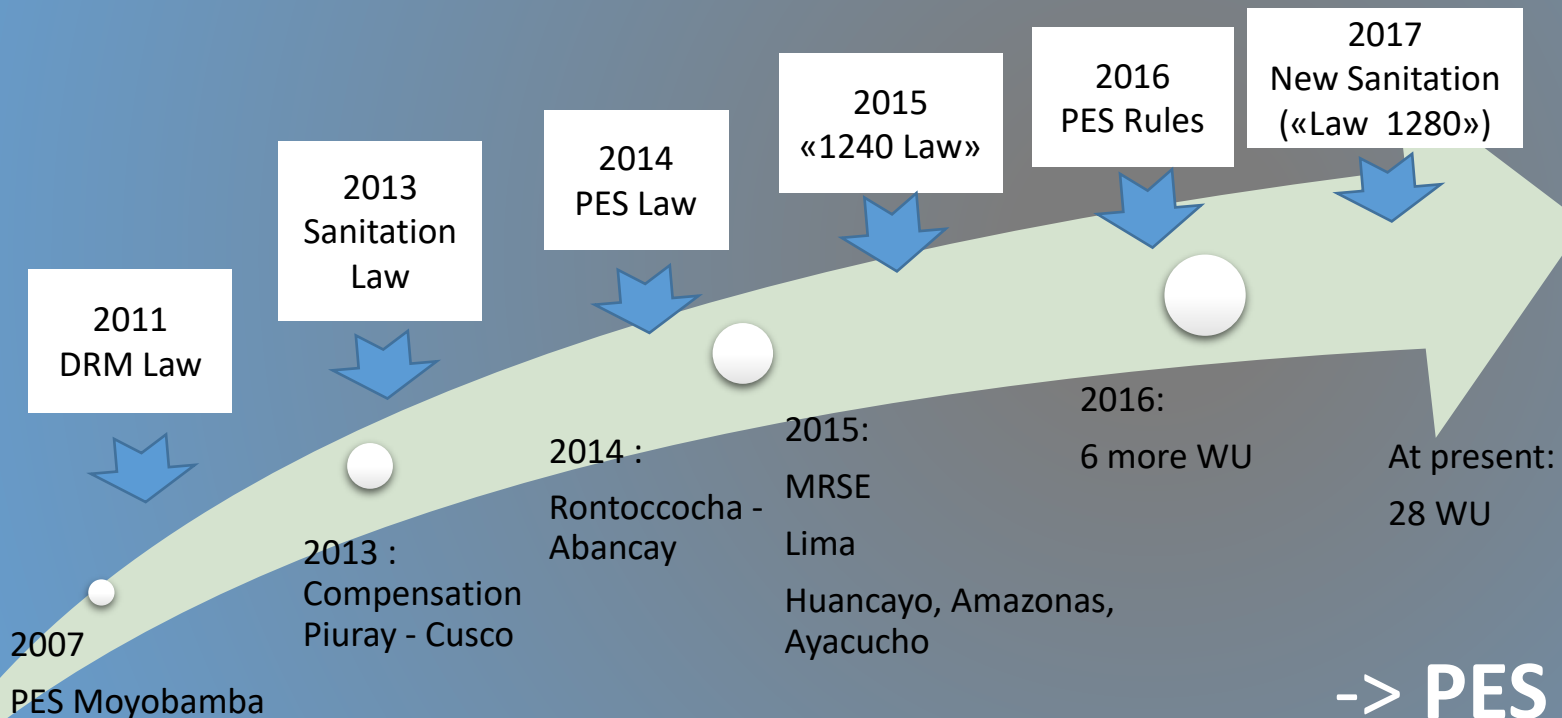
Actual problems registered in Water Utilities	Problem Causes	Affected Water Ecosystem Services
Discontinuity of service, due to lack of water in the sources, especially during low water level periods	Decrease in baseflow, due to anthropogenic pressures: bad practices in ecosystems management within the contribution watershed and especially in the main area of water recharge.	<b>Water regulation</b>
Interruption of service due to clogging and obstruction of grids in the collection	Deforestation in the upper watershed causes soil erosion and landslides that drag palisades.	<b>Sediment Control</b>
Very high turbidity of raw water causes greater consumption of chemical inputs and sometimes stops the water production system	Change of land use in the upper watershed from forest to coffee plantations, mainly without management, causes soil erosion.	<b>Sediment Control</b>

Water ecosystem service

➤ Water ecosystem service

# When did the Tariff Reform begin ?

SUNASS decided to promote the inclusion of PES in the WU tariff through the Sanitation Law

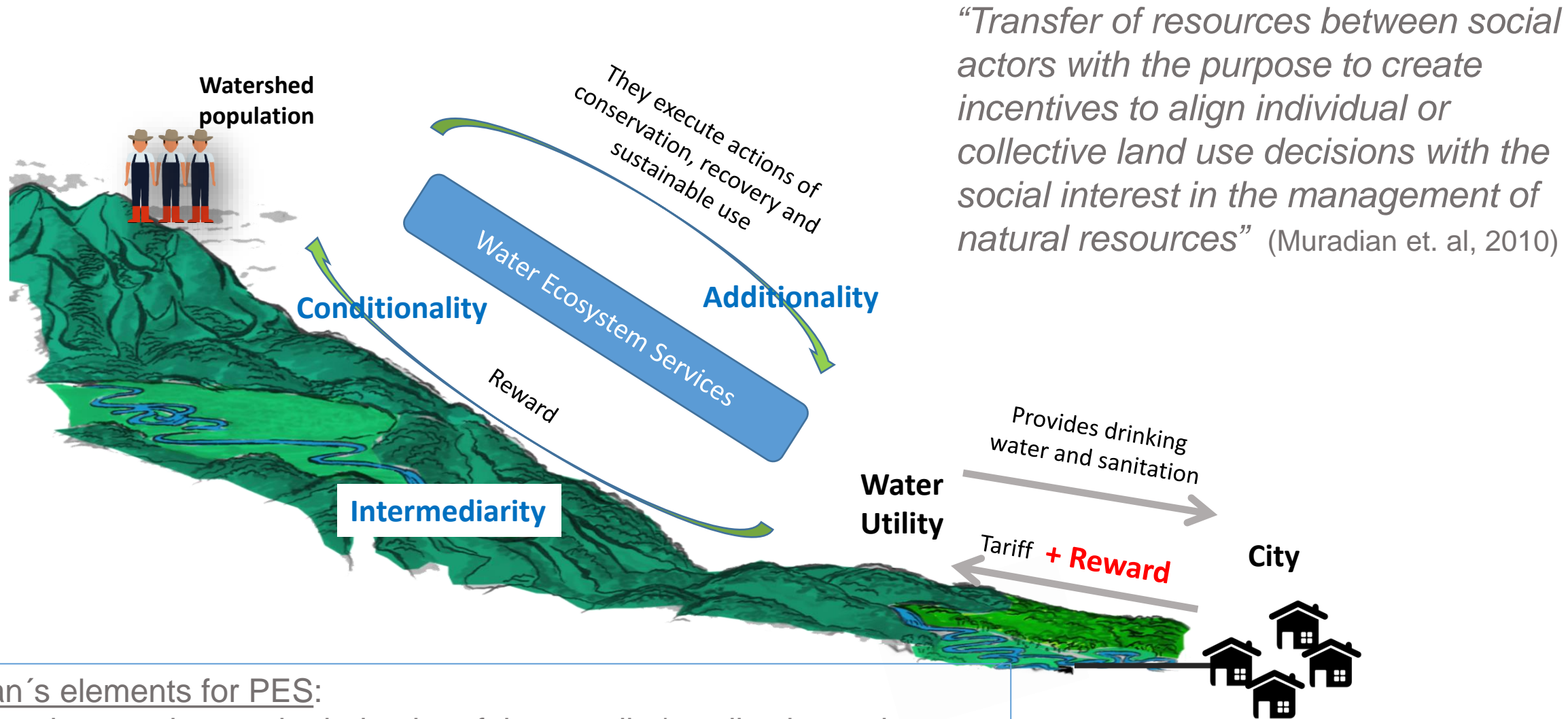


A large process.....

- ✓ Moyobamba 2007
- ✓ DRM Law
- ✓ Sanitation Law
- ✓ PES Law
- ✓ New Sanitation Law

-> PES as a Public Policy

# The Peruvian PES: Mechanisms of Rewards for Ecosystem Services - MRSE

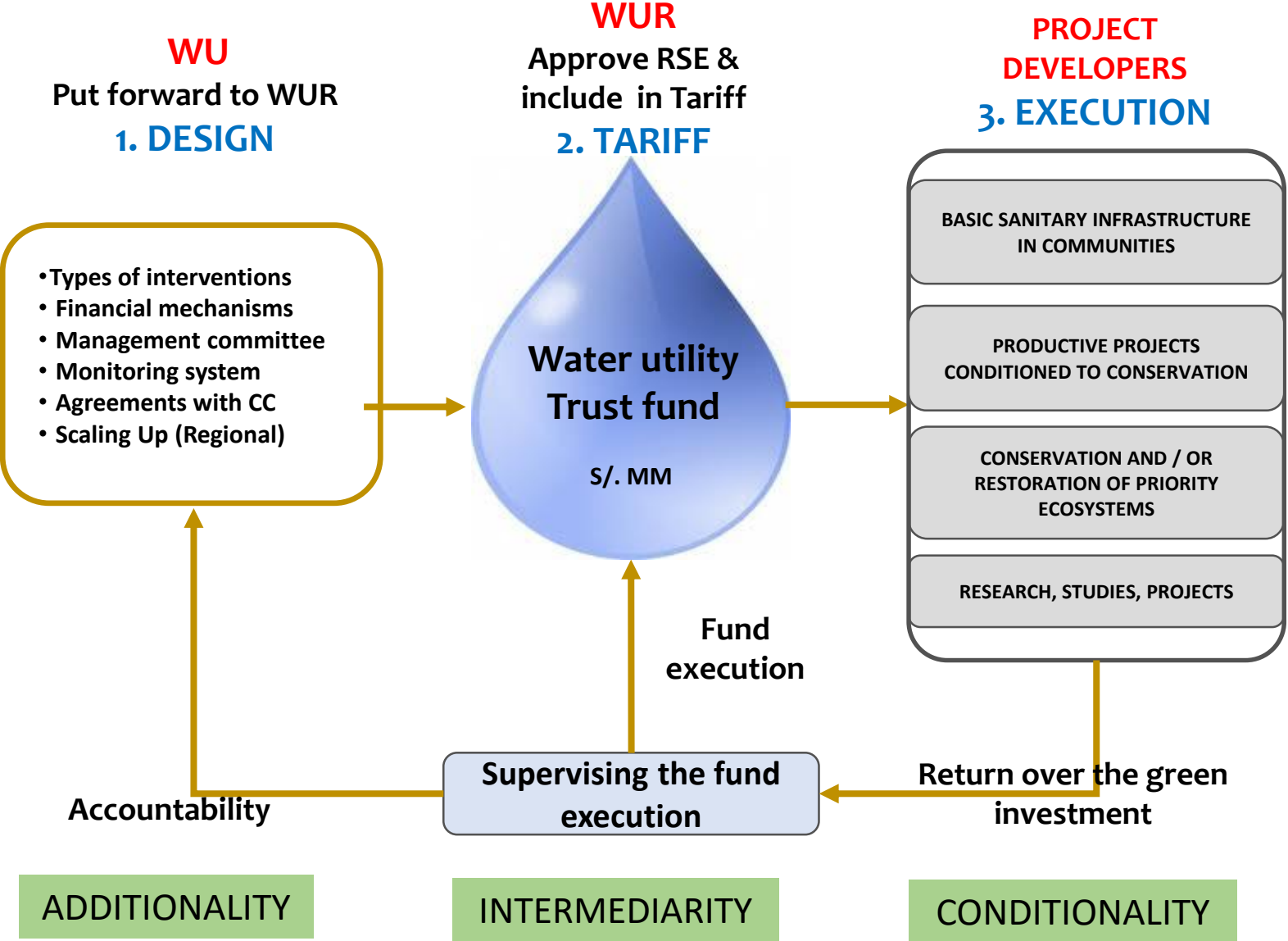


*“Transfer of resources between social actors with the purpose to create incentives to align individual or collective land use decisions with the social interest in the management of natural resources” (Muradian et. al, 2010)*

## Muradian’s elements for PES:

1. Incentives to change the behavior of the supplier's collective action.
2. Intermediaries to reduce the transaction cost: Managing Committee.
3. Acceptance of the additionality by DW users and WU. Accountability.

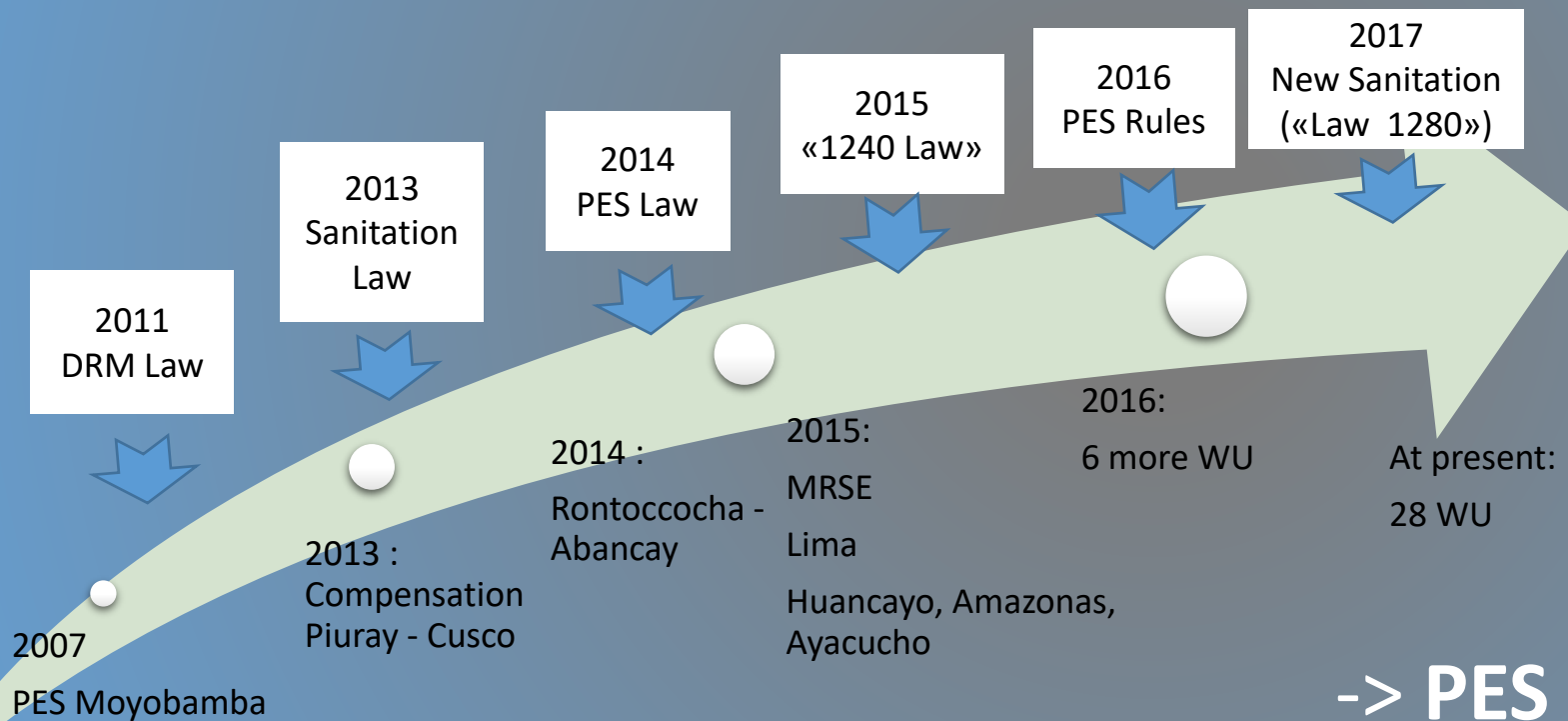
# WU & WUR Roles in the MRSE



# The story of the Tariff Reform



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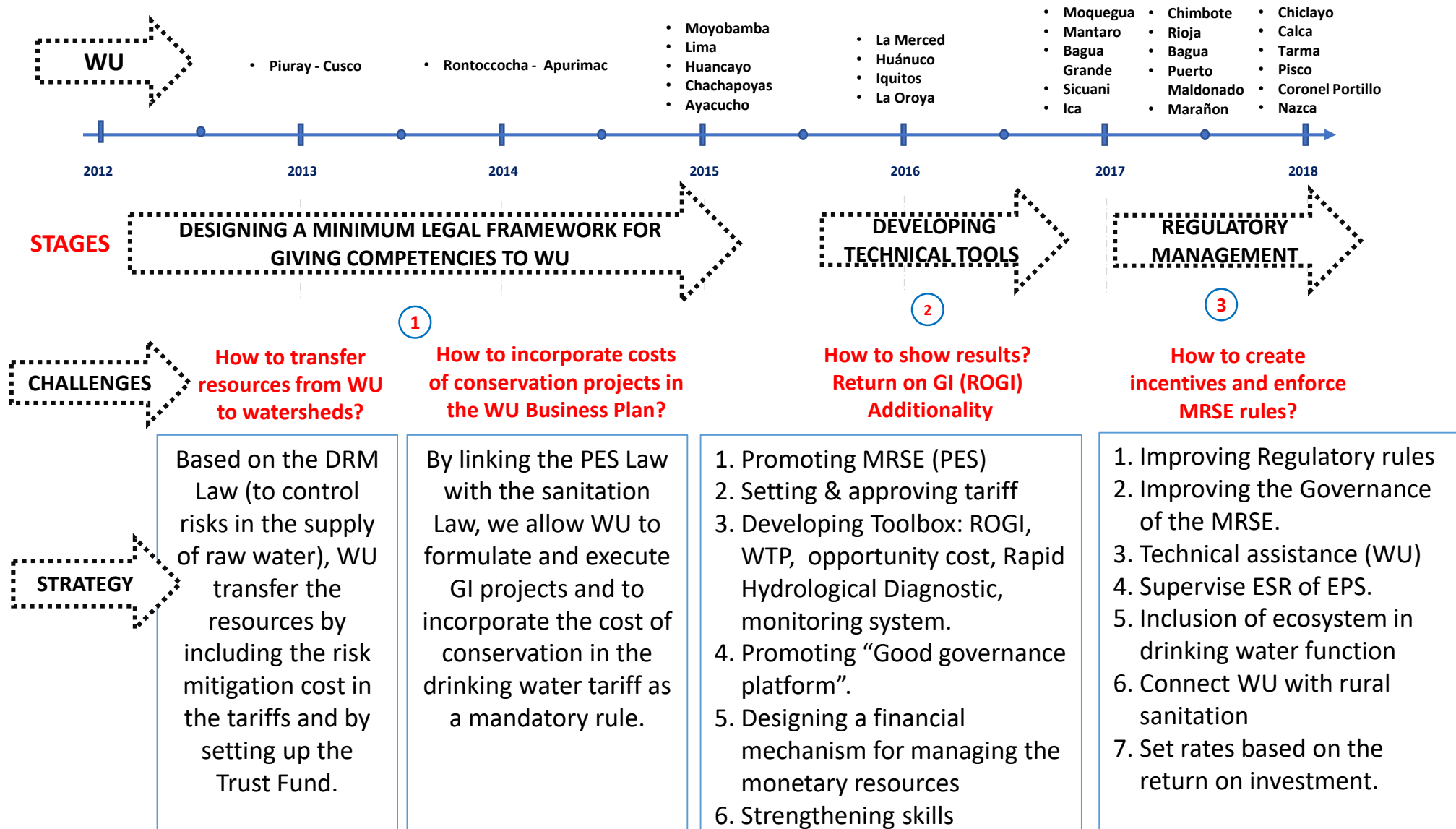
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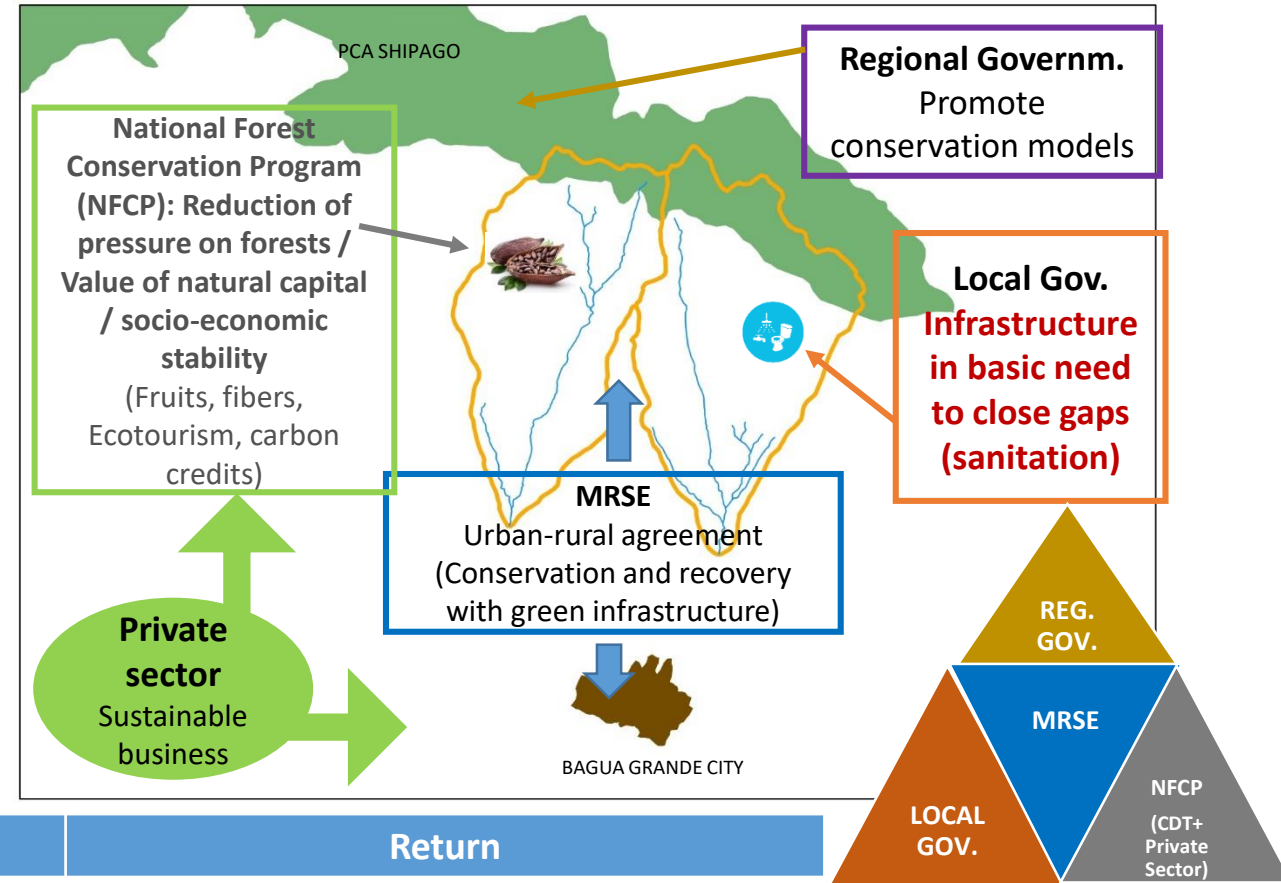


# Stages in the Tariff Reform for the PES implementation



# MRSE as an instrument to attract more resources

- Ecosystems: multiple goods and services.
- Investment generates positive externalities.
- Water utility should invest in:
  - 1) conservation / restoration projects
  - 2) opportunity cost (poverty reduction-rural sanitation)
  - 3) Disaster Risk Management based in ecosystems



**Link the MRSE with different processes**

Agents	Use of resources	Return
Water utility	Conservation or restoration, opportunity cost	Water availability; cost reduction, risk and disaster reduction.
Local and regional government	Rural sanitation	Communal participation Improve livelihood
Private Company	Sanitation, corporate social responsibility.	Tax reduction, avoid social conflict, reputation.
International Donors	Bundling goods and services	Programs, projects, partnerships

# MRSE scaling up – SEDA Cusco case



Piuray-Ccorimarca's Micro-Basin Management Committee

**\$US 17,005,203**

EPS SEDA Cusco

**PNSR – Ministry of Housing and Sanitation**  
Rate-setting Study 2018 - 2023

\$ 4,411,123 approximate.

**BCP and Backus**

Taxes per Project  
\$ 4,527,470

Taxes per Project  
\$ 5,406,869

EPS SEDA Cusco

Rate-setting Study 2013 - 2018  
\$ 2,659,741

Estimated budget based on PMO where 7 new projects are being mapped in Piuray Ccorimarcca's micro-basin.

**Projects:**

- Rural sanitation system for Piuray community
- Operation and maintenance of Plant wastewater treatment
- Organic agriculture
- Reforestation
- Research, studies, projects

Total: **\$ 2,659,741**

**RS Issuance: August 2013**

**Project: Phase 1**

Installation of sewage network and wastewater treatment in Piuray Ccorimarca's micro-basin (Code: 258494).

**Start date of execution:**

December **2014**

**Project: Phase 2**

Improvement and extension of drinking water and sewerage services in the Piuray Ccorimarca's micro-basin. (Code: 343733).

**Project's viability:**

October **2016.**

The first "seed capital" (collected in 5 years)  
Approved between 2013-2015

EPS	Users	Δ% Tariffs ESR + CC	Investment (US\$)
SEDACUSCO Cusco	73,000	9%	2,659,741
MOYOBAMBA San Martin	13,000	4.4%	389,492
EMUSAP Amazonas	90,000	11 %	208,967
EMUSAP Apurímac	12,300	15%	400,000
SEDAM Junín	68,000	4%	1,000,000
SEDAPAL Lima	1,500,000	4.8%	112,000,000

# Enabling conditions to the scaling up of the financing of ecosystem services in other sites. The Challenges

- Incorporate ecosystem in the production function of “water delivery system”: G&G
- Show profitability and additionality.
- Define governance of the MRSE.
- Ensuring “the cash flow” of the conservation projects for a large horizon.
- Linking sanitation-MRSE with other sectors and at a government level (CAPEX & OPEX).
- Development of the DRM based in ecosystems.
- Linking MRSE with other instruments through Environmental Funds.

## Recomendations

1. First, design a minimum legal framework in order to allow the WU to invest in conservation projects in the watershed.
2. After, promote the mechanism, set tariffs, and develop a toolbox for measuring & monitoring because drinking water users demand a return on GI.
3. At the end, with several experiences in course, improve your regulation to attract more resources. Focus in the governance. This stage allows consolidation and sustainability.



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