

# Climate change & VULNERABILITY

High level of uncertainty regarding climate trends and future scenarios for the Reserve.

- Temperatures will increase between 0.61°C and 1.12°C between 2011 and 2030
- Precipitation: trends indicate no changes in annual rainfall, but changes in patterns will occur, as well as a reduction in surface water runoff.
- Potential scenarios for the NYCLR suggest changes in hydrological patterns that may affect grassland and water resources, which are vital for livestock-dependent communities.

#### Other important drivers of change:

- Social and organizational issues, mining activities.
- Poor grassland conditions.
- Shortage of water in drought period.



## **No-regret MEASURES**

Community-based native grassland management and improvement of ancestral hydrological infrastructure.

Each no-regret measure is composed of three pillars:

# 1) INSTITUTIONAL STRENGTHENING AND COMMUNITY ORGANIZATION

- Implementation of a community water and grassland management plan.
- Creation of natural resources management committees.
- Implement a pilot community grazing area on community lands.

# 2) CAPACITY BUILDING TO ENHANCE LOCAL AND TRADITIONAL KNOWLEDGE

Seeks to create capacities and awareness for the implementation of the community management plans.

### 3) GREEN-GREY INFRASTRUCTURE

A natural water reservoir dam was restored to reduce water filtration and ensure its storage during the dry season (Nov. 2014). Also, an underground pipe was restored to transport water from the upper part of the watershed (near Chacara Lake) to the community farm (Jutupuqio).

### **RESULTS**

Environmental benefits (short and long-term):

- Hydrological regulation including water storage, groundwater recharges and regulation services enhanced.
- Fire prevention since the occurrence of natural fires during the dry season can be lowered if grasslands are watered.
- Extreme events like frost and high temperatures impacts can be minimized.
- Biodiversity conservation and enhancement of carbon storage.

Expected socio-economic benefits:

- Better institutional and governance arrangements and capacities for grasslands, water and livestock management at community and family level
- Improved grasslands management and productivity at community and family level
- Improved community management of water, grasslands and other shared resources.
- Increased resilience and adaptive capacities of local communities.

The community of **Canchayllo** is located in the Jauja Province, Junín Region. Founded in 1942, the community has around 800 inhabitants; it has an area of 7,650 ha and it is located at 3,610 m above sea level. The community is part of the Cochas- Pachacayo watershed, which drains into the Mantaro River. Canchayllo works with the Mt. EbA project and the Nor Yauyos Cochas Landscape Reserve, which is under the administration of SERNANP.











