



Exploring local perceptions of water quality in the upper Santa River, Peru

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The Santa River basin



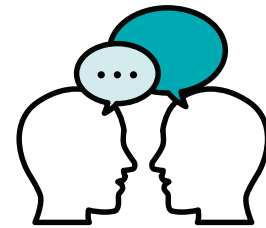
The Santa River is located northeast of Lima, Peru, and lies in a large basin of 12,000 km², fed by multiple tributaries draining from the Cordillera Negra and Blanca (mountain ranges).



1 Why?



High scientific
production in the study
area



Gaps between science
outputs & water
management needs



Traditional water quality
studies do not provide
information on how it integrates
and expresses the human
perspective



Research aims:

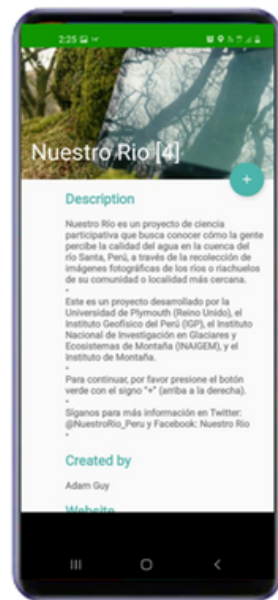
1. Unravel local perspectives on good and poor water quality;
2. Identify some of the key water concerns of the population;
3. Explore the importance of emotions for determining water quality perceptions.



2 How?

Data collection:

Mixing structured questionnaire and interview methods:



Nuestro Rio app
questionnaire



Walking interviews



Data analysis:

Regions of interest: Olleros and Catac communities



152 app related entries
84 interviews

Context in the regions of interest

1. Located on the western slopes of the Cordillera Blanca.
2. Both present problems of acid rock drainage due to glacial retreat.



Coding categories

Environmental indicators

1. **Water quality indicators:** organoleptic indicators.
2. **Causes associated with water quality:** indicators that express a cause for each water quality assessment.

Water quality

Water uses

1. **Water uses:** factors that influence perceptions of water quality.

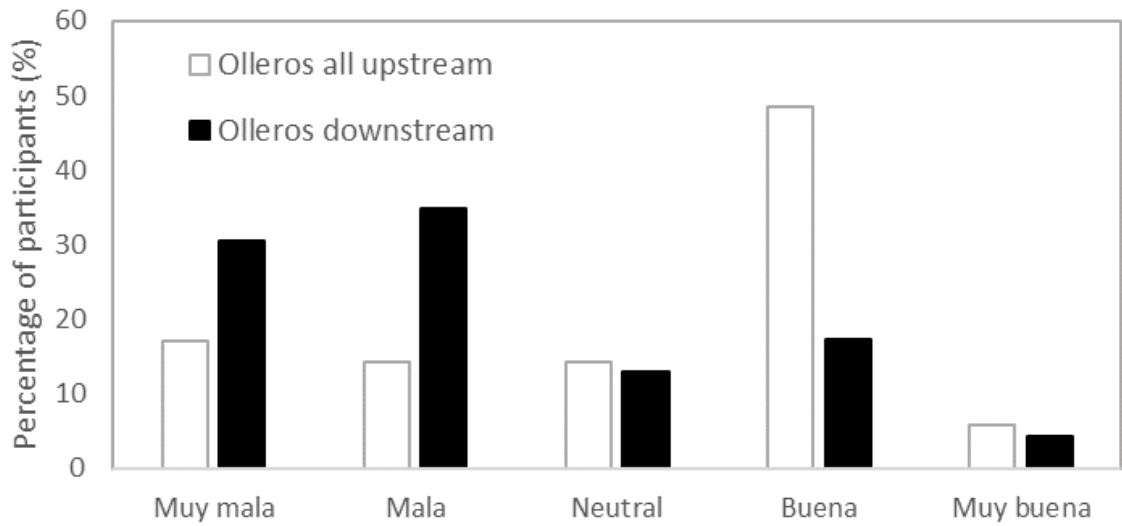
Emotions

1. **Emotions:** express a reason or motive behind each valued emotion or feeling.

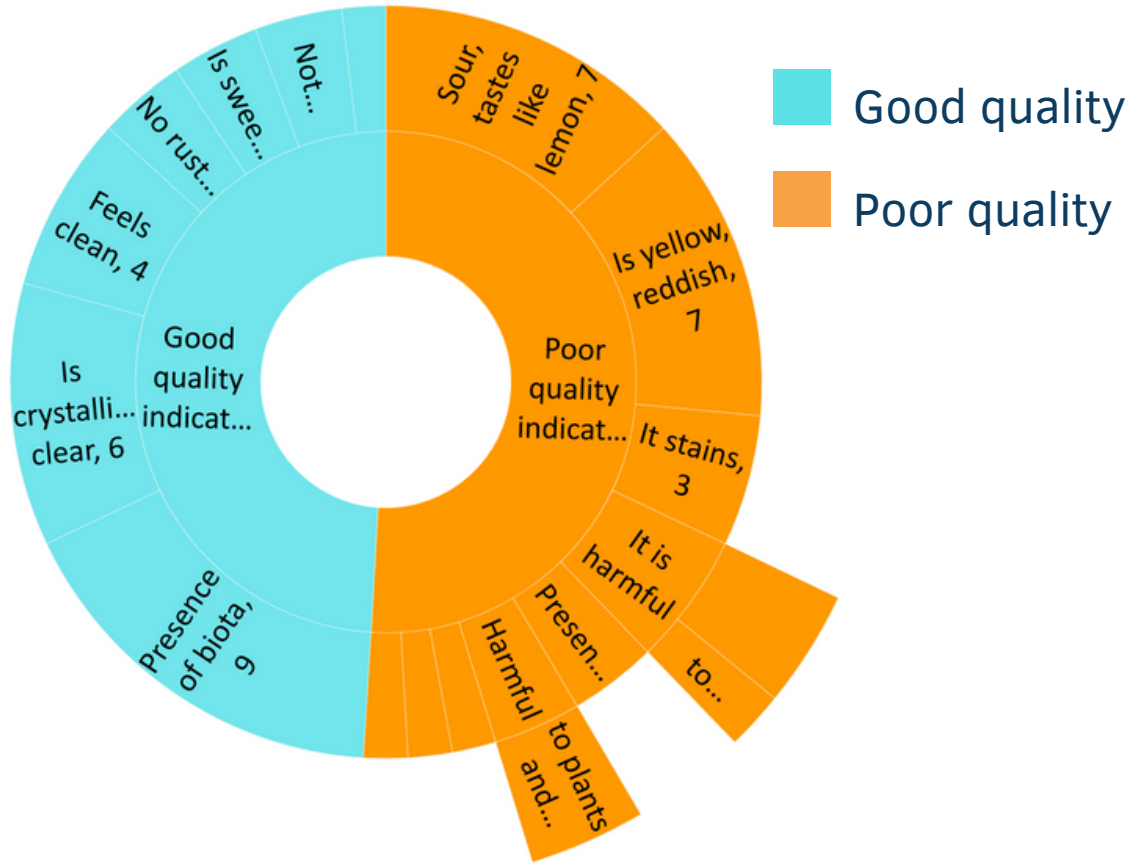


Results

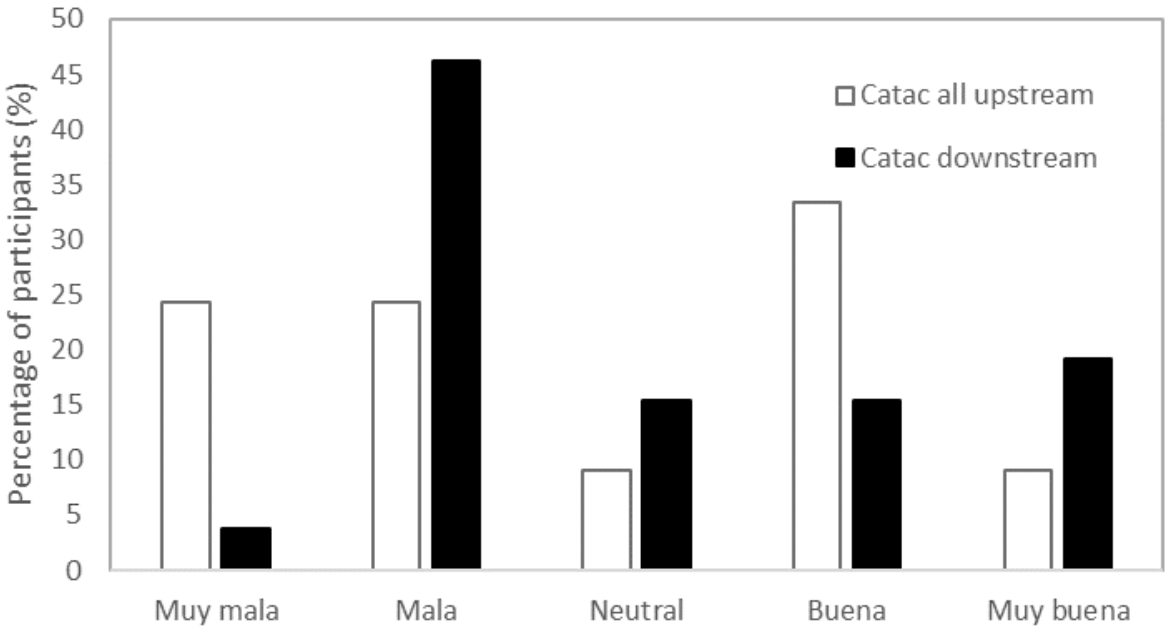
Water quality perceived in Olleros



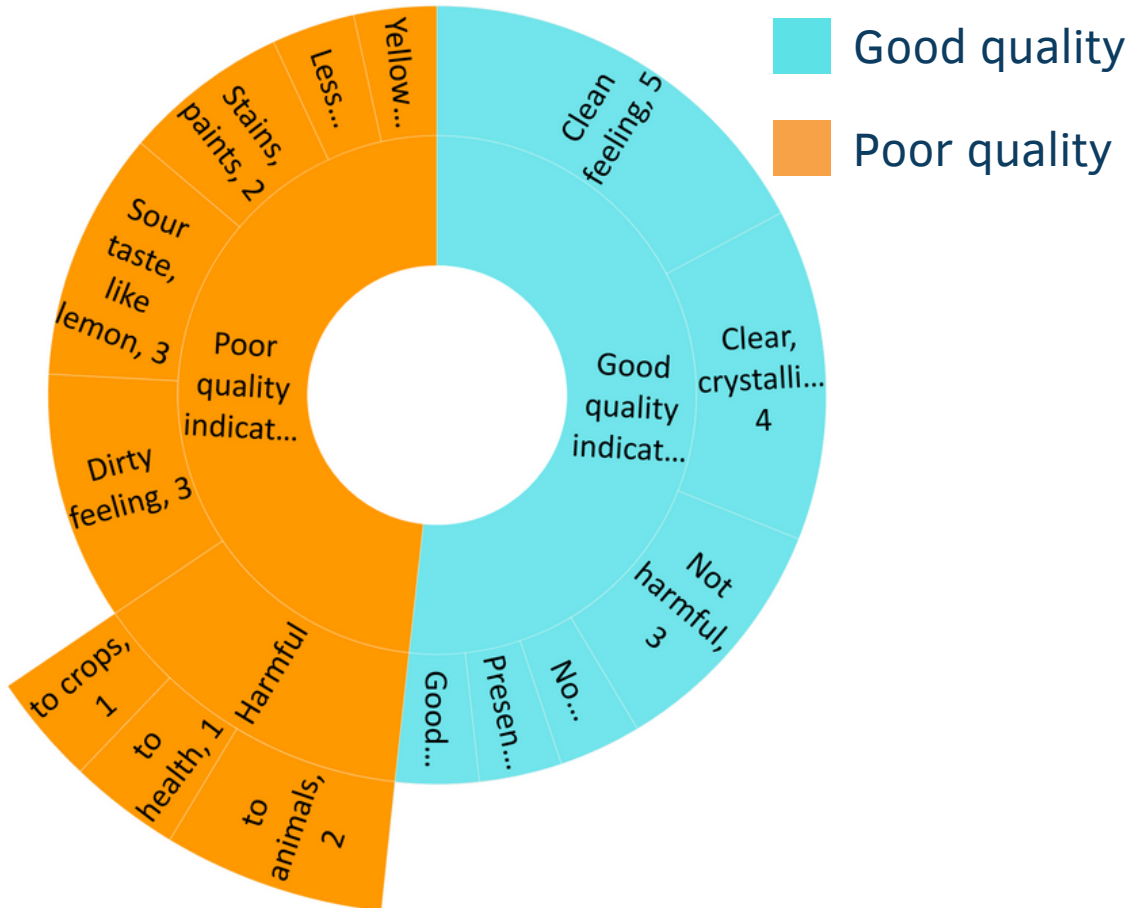
Water quality indicators in Olleros



Water quality perceived in Catac



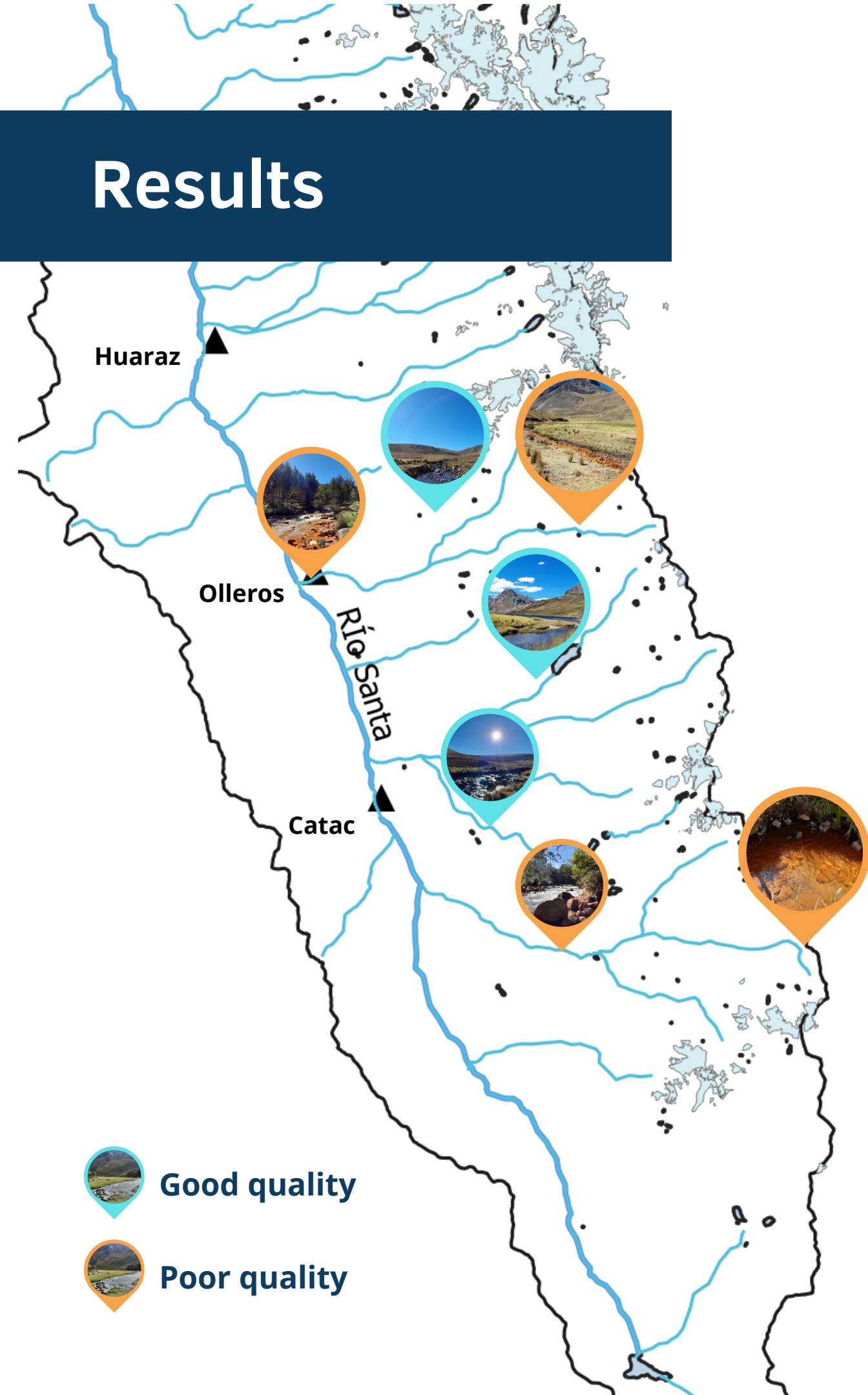
Water quality indicators in Catac



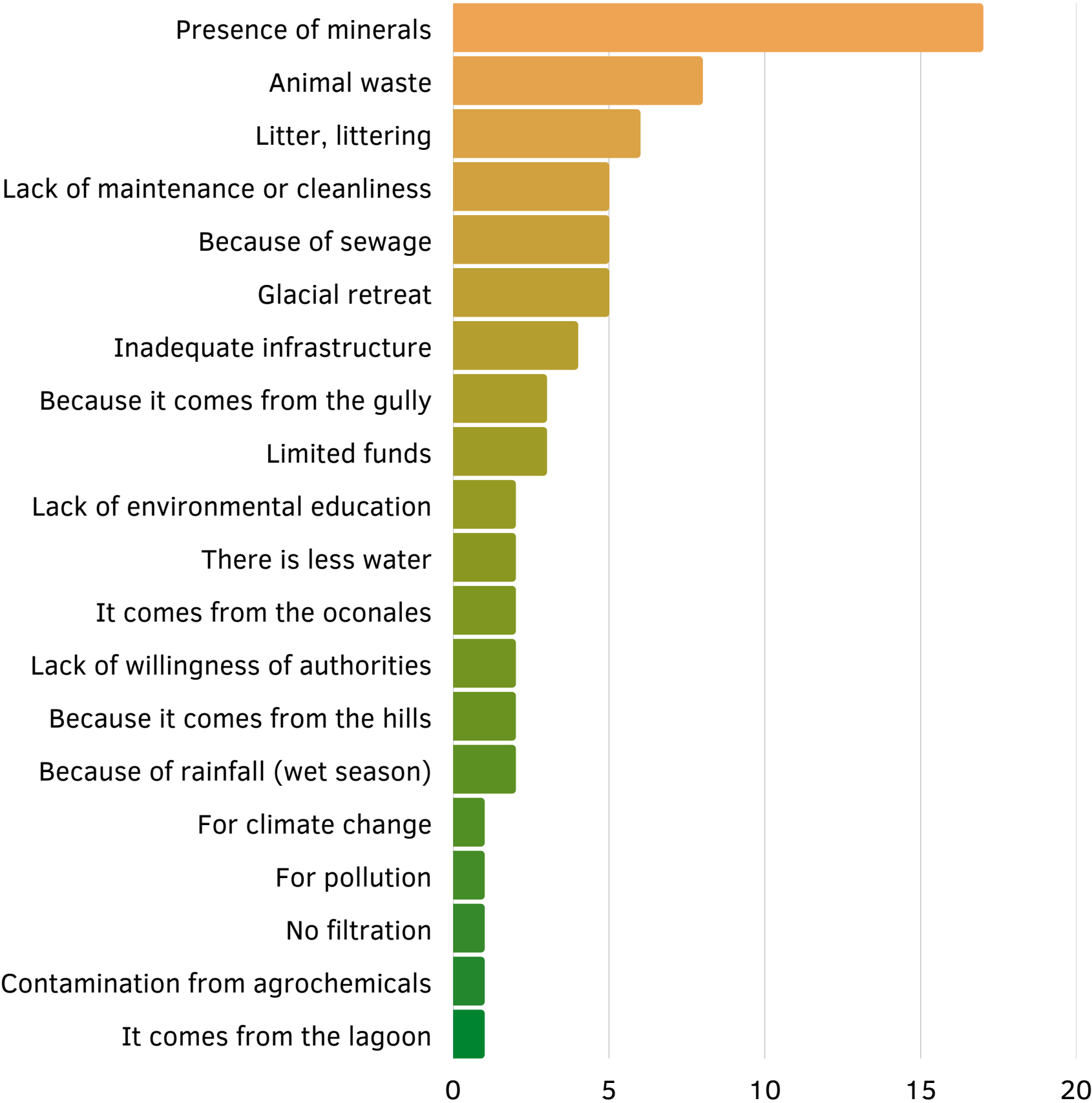
Good quality

Poor quality

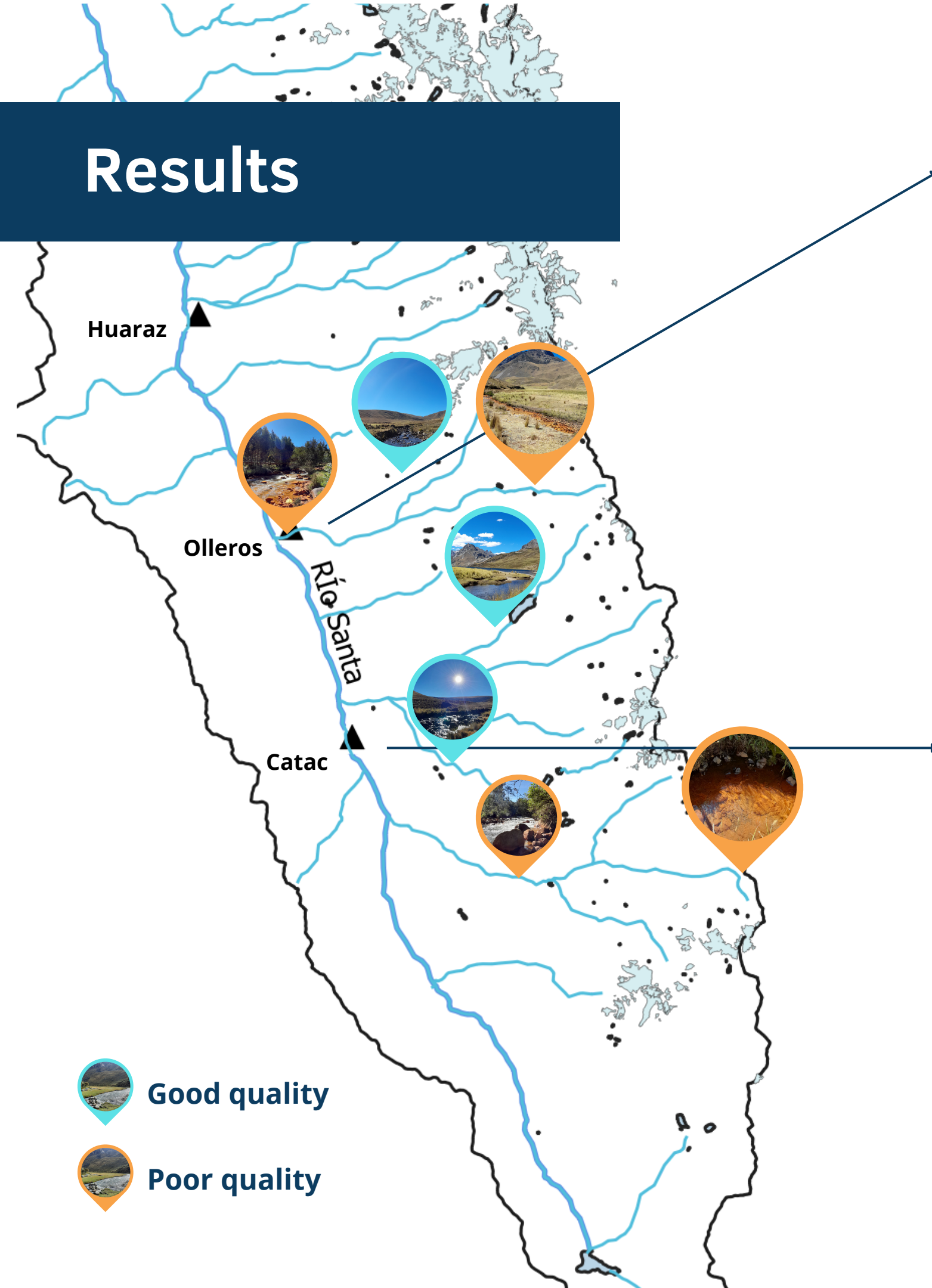
Results



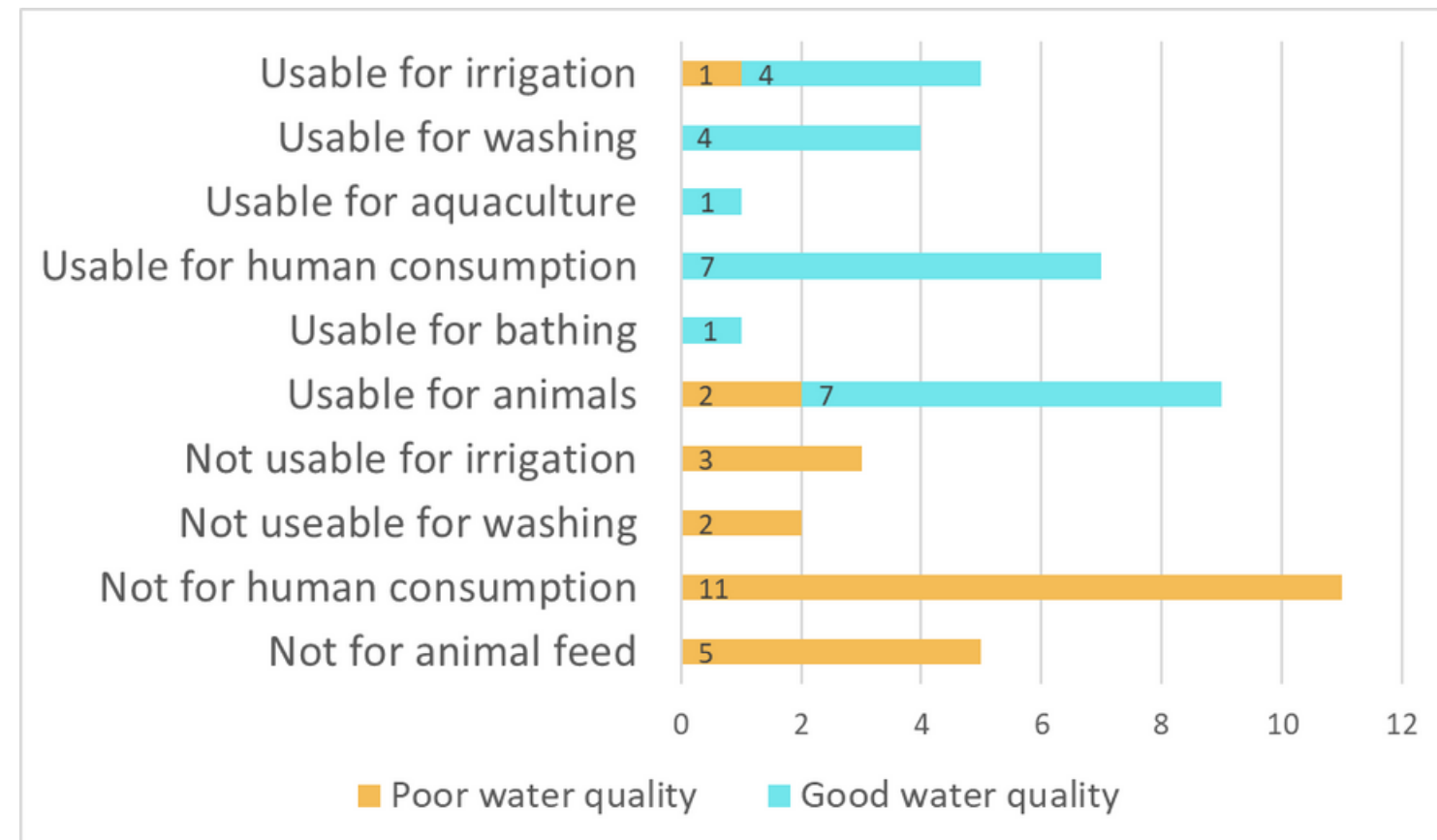
Causes of poor water quality in Olleros and Catac



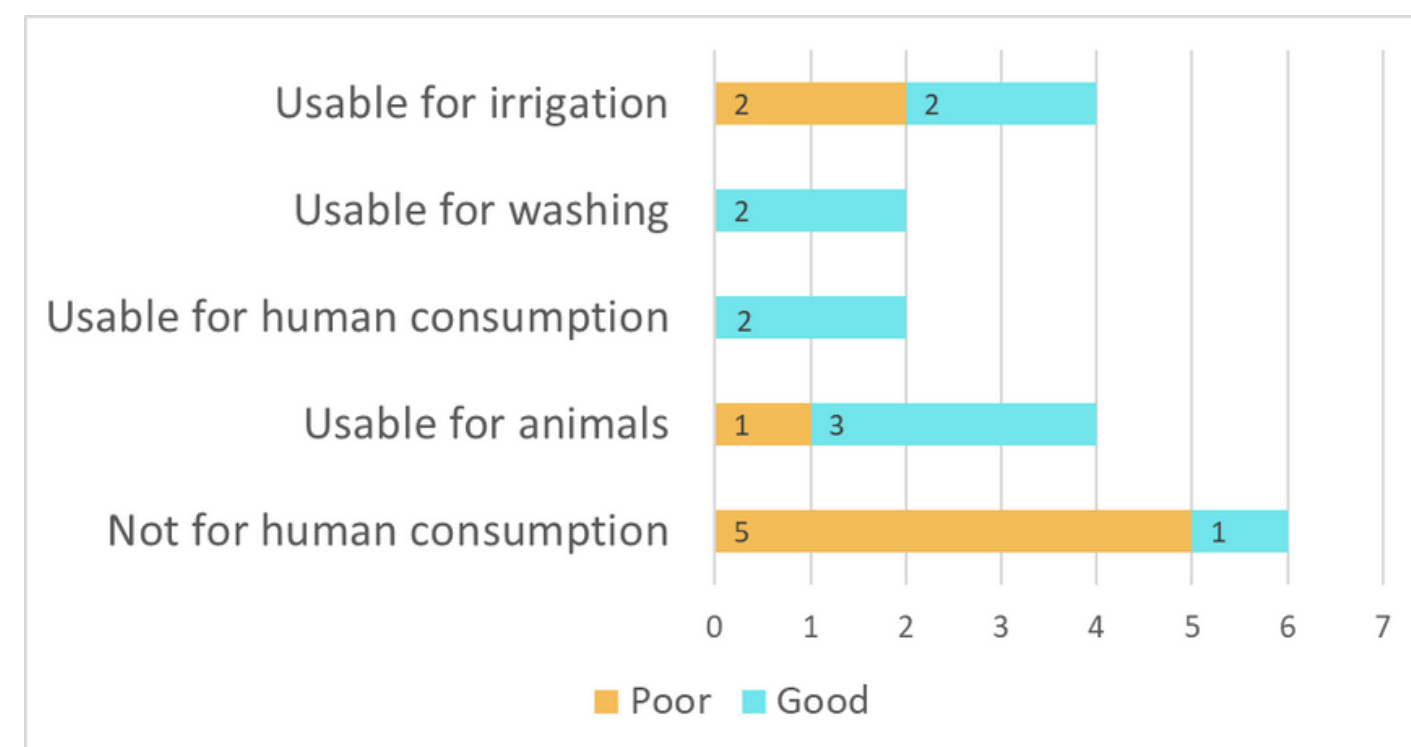
Results



Water uses vs water quality assessment in Olleros



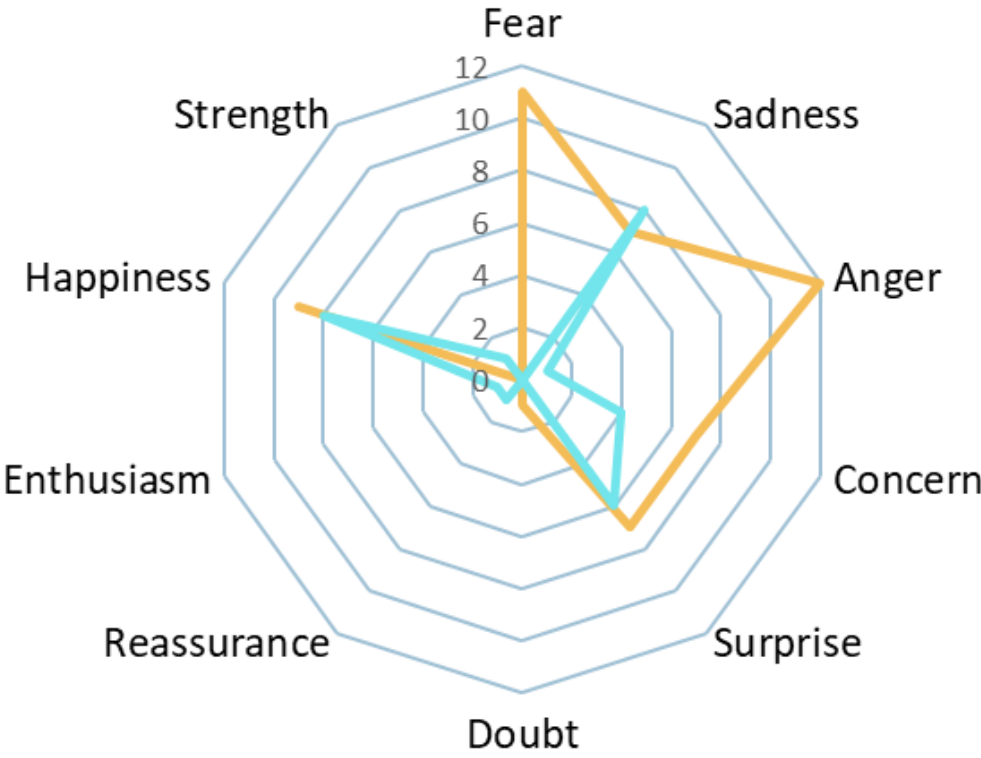
Water uses vs water quality assessment in Catac



Results

Emotions

Water quality vs emotions in Ollereros



— Poor quality assessment — Good quality assessment



"Because the amount of water is decreasing, the glaciers are retreating and people are not taking care".



"Because it is dirty, because the population does not take care of the water and the authorities do nothing".

Water quality vs emotions in Catac



— Poor quality assessment — Good quality assessment



"Because it is changing over the years, it is becoming more and more polluted".



"Because at least we have water, it's for different uses, it's life and it's clean".

 Good quality

 Poor quality

Insights

1. Water quality perception fluctuates greatly within the same territory.
2. Water quality perception has a close relationship between the main livelihoods of the population.
3. A relationship can be observed between "negative" emotions and a poor evaluation of water quality and vice versa.

Overall outlook

1. Water quality itself is complex, it express the intrinsic relationships between humans and water.
2. In research design the local context matters.
3. In research outputs, local knowledge matters.
4. Giving information back to participants is key to the development of collaborative and inclusive science.





¡Many thanks!

Find more information about the project on:



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