

Table S1. Description of principles of collective action (PCA)

Ostrom (1990) proposed some PCA ¹ that can be useful to achieve success for CPR management in terms of maintenance and cooperation. Thus, these PCA are:	
1.	<i>Clearly defined boundaries:</i> individuals with rights to extract resource units from the common pool resource (CPR) must be defined clearly as the boundaries of the CPR itself. This is the first step in organizing collective action. Without this principle, Ostrom (1990) argued that local users could find outsiders reaping the benefits without making any contributions. Specifically, the questions included in the survey analyze this principle: whether all communal users know each other, whether non-members also know that they are not members and if limits are respected.
2.	<i>Congruence between appropriation and provision rules and local conditions:</i> the rules of appropriation should be related to the local conditions and to provision rules. Specifically, they make reference to time, place, technology and the quantity of units. Questions included are related to whether rules are appropriate to conserve the resource, whether the community has the right to appeal, whether they are effective and the degree of respect towards local traditions.
3.	<i>Collective-choice arrangements:</i> individuals can participate in the modification of operational rules. Ostrom (1990) clarifies that although good rules may exist, this fact does not guarantee that users will follow them. The question that we include to test the existence of this principle is whether decisions related to forests are taken collectively.
4.	<i>Monitoring:</i> individuals who monitor the CPR are responsible in the presence of appropriators. Thus, questions to analyze are whether there are controls to ensure compliance and if so, whether these are respected.
5.	<i>Graduated sanctions:</i> those who do not comply with the rules should face graduated penalties depending on the degree of non-compliance. First, we asked whether there are penalties for individuals who do not comply and if these vary depending on the offense committed.
6.	<i>Conflict resolution mechanisms:</i> the appropriators and their officials should have reasonable access to resolve conflicts. It is important, when we are dealing with rules expected to be in place for a long period of time, that mechanisms exist that allow the discussion and solution of problems. We asked whether there are quick mechanisms to solve conflicts.

¹ Elinor Ostrom (1990) explained eight PCA. In this study only seven principles were evaluated. The reason is that according to Ostrom the principle number eight “Nested enterprises” only should be taken into account when explaining resources with a higher number of users, which is not this case.

7. *Minimal recognition of rights to organize:* the rights of collective owners are not questioned by external authorities. Users should feel that they are involved in rule design. Ostrom (1990) highlights that when government authorities are the only ones to set rules it is going to be difficult for users to sustain such rules long-term. To examine this issue, we asked their opinion on respecting their rights and decisions.

In our survey and with the aim of testing whether these PCA are functioning in our area of study, we have included several questions as can be seen in Table 1.