Appendix 2. Example of human well-being data collection instrument for fishers.

HWB Indicator topics for fishers
- Use estimate of the Sanctuary: # days/year/season
- Satisfaction with fishing opportunities in the Sanctuary
- Sense of Place
- Spirituality
- Governance perceptions

Data collection methodology

1) Field observations for use estimates

Choose sampling sites. We recommend sites that represent different types of fishing (net vs. pole) and a variation of potential impacts relevant to conservation. Visit these sites during the fishing season. It is not necessary to visit the sites yearly, but one could. Every 3-4 años is sufficient. Use the same sites every time data is collected to be able to compare over time.

We suggest visiting each site on 3-5 randomly selected days during the sampling year, with a mix of days that are sunny and cloudy, warm and cool, and a mix of days of the week, including weekends, weekdays, and holidays. This way the data will better represent the habits of the fishing population. With this information collected across a variety of weather types, days, and places, the monitoring team can run a statistical model to estimate annual fishing use for each type of fishing. (see Biedenweg et. al 2012 for an example of tourism use estimation)

2) Surveys for sense of place, spirituality, and governance participation

During the observations, or with a randomly selected sample of recreational and artisanal fishers who live in the villages, surveys can be used to collect subjective data around satisfaction, sense of place, spirituality and participation. Since observations are already on randomly selected days that represent variation in climatic and use behaviors, the monitoring team could interview all fishers they encounter during observations. The following section provides an example survey.

Surveys can be printed and handed to individual fishers to complete, or they can be read out loud during a conversation with fishers. We recommend the latter. When reading the questions, it is a good idea to read all the potential answers before collecting the response.

To convert survey responses to indicator metrics, simply take the average survey responses of all respondents for each question forming the indicator. For example, Sense of Place is an index, so you would want to create an average across all four questions for each person, creating their individual sense of place score. Then average those responses to get the population average. Spirituality, however, is based on a single question so it only requires the mean response of the entire population.

1. USE. **Approximately how many days per month during the season this past year did you fish in the Salinas de Pullally Wetland-Longotoma Dunes? Please circle <u>a number</u> for each activity.**

Fishing activity	I don't do this	Less than 1 day per month	1-4 days per month	5-10 days per month	11-20 days per month	More than 20 days per month	I don't know
Artisanal net fishing	1	2	3	4	5	6	
Artisanal pole fishing	1	2	3	4	5	6	
Recreational net fishing	1	2	3	4	5	6	
Recreational pole fishing	1	2	3	4	5	6	

2. USE. **Approximately how many other people fish with you when you go fishing?**
_____

3. SATISFACTION. **In the past year, how satisfied were you with your opportunities to fish the way you want to fish in the Sanctuary? Please circle <u>one number</u>:**

Unsatisfied	Partially dissatisfied	Neither satisfied nor dissatisfied	Partially satisfied	Satisfied	I don't know
1	2	3	4	5	

4. SPIRITUALITY. **In the past year, approximately how often did you feel spiritually inspired when spending time in the Salinas de Pullally Wetlands-Longotoma Dunes? Please circle <u>one number</u>:**

Never	Rarely (1 time I went)	Occasionally (a third of the times I went)	Regularly (More than half the times I went)	Frequently (Almost every time I went)	I don't know

	1	2	3	4	5	

5. SENSE OF PLACE. **To what extent do you agree or disagree with the following statements about the Salinas de Pullally Wetlands - Longotoma Dunes? Please circle <u>one number</u> for each statement.**

Statement	Strongly disagree	Disagree	Partially disagree	Neutral	Partially agree	Agree	Very much agree	I don't know
I feel attached to the Salinas de Pullally Wetlands and Longotoma Dunes	1	2	3	4	5	6	7	
The Salinas de Pullally Wetlands and Longotoma Dunes contribute to my personal identity	1	2	3	4	5	6	7	
Living or visiting Salinas de Pullally Wetlands and Longotoma Dunes says a lot about who I am	1	2	3	4	5	6	7	
I could be satisfied living or visiting places other than Salinas de Pullally Wetlands and Longotoma Dunes	1	2	3	4	5	6	7	

6. PARTICIPATION. **To what extent do you agree or disagree with the following statements about the governance of the Salinas de Pullally Wetlands - Longotoma Dunes? Please circle <u>one number </u>for each statement.**

Statement	Strongly disagree	Disagree	Partially disagree	Neutral	Partially agree	Agree	Very much agree	I don't know
I have a lot of opportunities to influence decisions about the Sanctuary if I want to	1	2	3	4	5	6	7	
There is transparency in the Sanctuary's management	1	2	3	4	5	6	7	
I trust the Sanctuary managers to protect the natural resources of the area	1	2	3	4	5	6	7	
I feel that my interests are represented in the Sanctuary's management plan	1	2	3	4	5	6	7	
I have access to sufficient information about the regulatory aspects of the Sanctuary	1	2	3	4	5	6	7	

7.   Do you live near the Salinas de Pullally Wetlands - Longotoma Dunes?   Yes   No
   a.   **If yes, how long have you lived in the area? _____**
   b.   **If no, how many years have you been visiting the area? _____**

8.   What is your sex?
            Man   Woman   Other   Prefer not to answer

9. **Which of the following options describe the area where you live? Please circle one number.**

Urban		Suburban		Rural
1	2	3	4	5

10. **What is the highest level of education you have completed? Please circle one number.**

Escuela Primaria y Secundaria												Universidad o Escuela Técnica				Escuela de Posgrado o Profesional							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24+

11. **What is your monthly income? Circle one range.**

Menos de 200,000clp   200,000-400,000clp   400,000-600,000clp   600,000-800,000clp

800,000-1,000,000clp   1,000,000-1,500,000clp   1,500,000-2,000,000clp   Mas de 2,000,000clp

12. **What is your age? _____**

Thank you for your time. If you have another comment about your human wellbeing related to the Sanctuary, please feel free to share now.