METHODOLOGY GUIDE FOR
COMMUNITY PARTICIPATORY MONITORING

CENTINELAS COMUNITARIOS

COMMUNITY SENTINELS


CENTINELAS
COMUNITARIOS

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PATAGONIA AZUL (BLUE PATAGONIA)
Island
Fjord
Populated area
Cultivation center
Dock
River
Bay
Beach
Reproductive site of sea lions
Birds
Wetland
Fishing boat
Cemetery
Garbage
Rocks
Community
Marine otter
(Lontra felina)
Whale
Sea lion
Diver
Kelp forest
Bank of seafood
Cold waters corals

INTRODUCTION

The Community Sentinels initiative is an experience of citizen and participatory science which aims to make the inhabitants become the first protectors of the territories.

Protecting means establishing and sustaining caring relationships between people and all forms of life that live on the planet. The observation and supervising of the territories is the first step to begin their care, either through the communities' own traditional knowledge, as well as through dialogue with the scientific knowledge provided by scientists.

Community monitoring can be realized in any type of landscape and ecosystem: in marine-coastal areas, in the mountains, in lakes and rivers, and even in big cities. Observations can have ecological, environmental, social, historical, and cultural implications. Likewise, everyone can supervise, without considering gender, age or origin. The important thing is to have a motivated group that knows the territory, is interested in recognizing it, and learning the basic steps of the methodology.

The Sentinel also places us in front of a mirror, where the practices and actions of the communities become explicit, telling us about who we are and how we are inhabiting the place where we live. An act of consciousness that allows us to value our home and understand its development.

Finally, the Community Sentinels is a low-cost initiative, open and adaptable to each situation and context. This allows monitoring of the multiple dangers and socio-environmental problems that territories and maritime communities have, putting citizens in the first line of their conservation.

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KNOW TO CARE, CARE TO KNOW

THIS GUIDE PRESENTS A METHODOLOGY TO DEVELOP PARTICIPATORY AND COMMUNITY MONITORING TO UNDERSTAND TERRITORIES AND COMMUNITIES. THIS TOOL ALLOWS THE GENERATION AND INTEGRATION OF INFORMATION ON THE SOCIAL AND ENVIRONMENTAL SITUATION OF A PLACE, THROUGH THE COLLABORATION AND PARTICIPATION OF ITS INHABITANTS.
THE USE OF THIS METHODOLOGY CAN HELP US FACE THE CHALLENGES OF ORGANIZING OURSELVES TO IMAGINE AND CREATE A FUTURE FOR ALL PEOPLE.

Understanding ecosystems, the cultures, the different ways of inhabiting the territories and the socio-biodiversity, allows us to identify the dangers that put life networks at risk and alert us to look after them.

Climate change, pollution, deforestation and overfishing result in transformations that are perceived, afflicted and alerted by local communities. These changes have revealed the importance of knowing the conditions that exist in the territories to understand the pressures they face. In this context, it is necessary to have tools to get information about our environment and to help us to form questions, generate alliances and act for caring of life networks.

This guide presents a methodology to develop participatory and community monitoring to understand territories and communities. This tool allows the generation and integration of information on the social and environmental situation of a place through the collaboration and participation of its inhabitants. The information that is recorded is key to generating dialogue and solutions to problems that occur in the various territories. And, above all, the use of this methodology can help us face the challenge of organizing ourselves to imagine and create a future for all the people.

The exercise of learning through monitoring is part of the community place, where mutual care is an affective state and activity. Any organized community can carry out participatory monitoring, defining its objectives and adapting the methodology to its own contexts. Monitoring within a community includes recognizing and remembering our connections with the territories to which we belong as well as considering we -constantly- interact interact and coexist on the planet with others. In other words, what happens to other beings and territories has varying consequences and impacts us all.

Our methodology aims to become a tool for building community engagement for the protection of places and ways of life. Participatory community monitoring is a strategy we use to supervise, support and facilitate creative collaborations between those who monitor and act. In addition, we expect this methodology to aid in decision-making that is informed by and anchored in the territories and connected with those who live there.

The monitoring proposal that we outline in this guide is inspired by the task of knowing the body's sensitivities and developing observation, recording and dialogue skills that are at the service of the communities.

The main monitoring tool is each Sentinel or people in charge of monitoring. Just as the work in gardens or harvesting involves understanding the whole body, monitoring is also looking, smelling, touching, feeling and being aware of space and time with each process. These exercises help show changes, transformations and movements. In addition, monitoring makes it possible to test the roles that other co-inhabitants play in the transformations, such as insects, birds, mammals, pollinators, among others. In this way, the work of learning in the monitoring process becomes collective and implies sharing care work, generating and strengthening interpersonal relationships between human beings and nature.

Many people from different ages, genders, origins, interests, occupations and perspectives can participate in the monitoring work; and it can be used in different contexts. For example, school communities, environmental education centers, neighborhood organizations, indigenous communities, small producer organizations, among others. It also includes different objectives, such as: raising awareness and valuing natural assets in a school community, promoting the sustainable use of the territory in organizations, solving local problems such as water pollution, contributing to data on species in order to motivate the conservation and protection of biodiversity, making the uses of resources visible, such as a forest. Finally, multiple ecosystems and landscapes can be monitored: marine and coastal, archipelago, estuaries, mountains, lakes and rivers, valleys, forests, wetlands, among others.

MONITORING IS ALSO LOOKING, SMELLING, TOUCHING, FEELING AND BEING AWARE OF SPACE AND TIME OF EACH PROCESS. THESE EXERCISES HELP SHOW CHANGES, TRANSFORMATIONS AND MOVEMENTS. IN ADDITION, IN ADDITION, MONITORING MAKES IT POSSIBLE TO TEST THE ROLES THAT OTHER CO-INHABITANTS PLAY IN THE TRANSFORMATIONS.

Participatory and community monitoring is a place to generate alliances and act jointly to protect the territories and the different ways of life. When the monitoring work becomes collective, the time and the different perspectives of the monitors are shared, contributing to dialogues and cultural exchange, which promote the socio-ecological networks of the territories.

Citizen Science and participatory community monitoring

The relationship between territories and their residents can be understood through citizen science, placing special interest through monitoring the way in which the components and processes of ecosystems are part of daily life. Although the monitoring exercises are related to scientific research, the development of participatory, citizen and community strategies, transforms them into a resource to recognize each other and consider the future for all. We can think of the monitors as a prevention strategy that includes everything we do to keep, supervise and improve our world. It is a way that allows us to check old experiences, remember ways of life through stories and, above all, to recognize the threats of the territories and develop a better future.

Participatory monitoring and Sentinels are connected to science through behaviors and skills such as curiosity, questioning, observation, and feedback. In this way, the Sentinels identify and monitor the present and future problems of the territory, motivating their inclusive governance (1).

Citizen science is a research approach where civil society participants work in the collection, categorization, transcription and analysis of scientific data (2) creating partnerships and collaborations between scientists and non-scientists (3). Therefore, as an innovative method, citizen science can be useful to promote individual and collective action on climate change, development of social participation in environmental issues and the scientific process, give an opportunity to reconnect with the natural world, motivate collective actions related to biodiversity protection and strengthen commitments to participate according to place-based managements (4).

A PREVENTION STRATEGY THAT INCLUDES EVERYTHING WE DO TO KEEP, SUPERVISE AND IMPROVE OUR WORLD. **IT IS A WAY THAT ALLOWS US TO CHECK OLD EXPERIENCES, REMEMBER WAYS OF LIFE THROUGH STORIES AND, ABOVE ALL, TO RECOGNIZE THE THREATS OF THE TERRITORIES AND DEVELOP A BETTER FUTURE.**

It is in the interest of communities to protect their living places against external dangers is expressed in a vision of the future related to the conservation and sustainable use of nature, integrating practices and knowledge from ancients, and promoting various ways of been connected to their environment. Thus, participatory community monitoring can contribute to commitments related to protecting vital processes and regenerating the places where they live.

The process of Participatory Community Monitoring

The process and stages of participatory community monitoring is simple. It begins with an organized group or community that is interested in collecting data about its territory, which chooses the elements and areas to be monitored. To do this, one group of Sentinels carry out the records, a second group is the technical team in charge of the review. Together they organize the data collected by cell phone, or other technological instruments, to share them on our web platform. *www.centinelascomunitarios.cl*

THE 4 STAGES OF PARTICIPATORY COMMUNITY MONITORING

PREPARATION

The first stage is preparation: **is when the community (s) agree on their interests and objectives of the monitoring**. For this, they create a list of key topics that allow them to make a decision on where the attention of the Sentinels or monitors will be focused.

ORGANIZATION

The second stage is organization: **it begins with the formation of the group of Sentinels**, taking into account the diversity of genders, ages, territories and other characteristics that the organizing group considers important. The methodology is prepared according to the context in which it is developed: identifying the time for data collection (days, weeks, months, etc.), defining the number of records to be made, creating key questions to support the Sentinels' tasks and ensuring that all agreements reached are available to them. At the same time, a messaging group is created where the recorded data is sent and the technical team will work on its review and two people support the data collection. This stage ends with a monitoring test in order to check details and solve unexpected events.

REALIZATION

The third stage corresponds to the **realization of monitoring and sending records by the Sentinel group**. The technical team works on data review with Sentinels, making sure that all reports have locations, visual support (photographs, videos or drawings) and descriptions. In addition, the technical team will go through the registration process with the Sentinels, resolving doubts and collecting more specific data. The realization stage ends when the monitoring time -previously defined- or the agreed number of records is done. The transcriptions of the Sentinels' audios or narrations are copied, the logs containing all the monitoring material are prepared and the locations are identified and saved on the map (e.g. Google Maps, Open Street Maps, ArcGIS or Google Earth).

MEDIA CAMPAIGN

The last and fourth stage consists of the dissemination of the material. The data is **organized and shared on the platform** *www.centinelascomunitarios.cl*, which allows it to be incorporated into the work of the community participatory monitoring network. From here, the free access to the data and its networking with other territories is guaranteed.

Community Sentinels: local people watching their territories

The Sentinels work directly with the collection of participatory monitoring data. They are in charge of observing and communicating about the environmental state of a territory or about some phenomenon of change and/or alteration, since we know that this action is not only assigned to human beings. There are many other species that can also play a part in this role: to alert others of the presence of an invader in their territory or of the any phenomena that is unusual. Their presence, can indicate the state of the ecosystems; for example, the chungungo (Lontra felina) indicates the existence of a benthic diversity in a good state of conservation, the Chilean or southern flamingo (Phoenicopterus chilensis) indicates seasonal changes in climate and productivity of intertidal plains, and the medicinal plants or lhawen (mapuche language) indicate areas of humidity and clean water.

Within the community participatory monitoring initiatives, local people are invited to be part of the Sentinel network in charge of observing the territories. Their experiences as inhabitants are expressed through daily experiences, telling stories that they have heard throughout their lives which support their records. The Sentinels have knowledge associated with the landscapes and develop cultural and spiritual connections with the place where they live. Indeed, they are the local inhabitants who travel and experience the territory on a daily routine, using their ability to perceive changes and movement early and directly as they happen.

The Sentinels' views on the state of their territories allows them to design and apply care practices associated with humans, the environment and biodiversity. In addition, sharing these records is a way to participate, build relationships of affection and understanding with their environment and community.

WITHIN THE COMMUNITY PARTICIPATORY MONITORING INITIATIVES, **LOCAL PEOPLE ARE INVITED TO BE PART OF THE SENTINEL NETWORK IN CHARGE OF OBSERVING THE TERRITORIES.**

Methodologic guide to realize Community Participatory Monitoring

WHAT IS MONITORING?

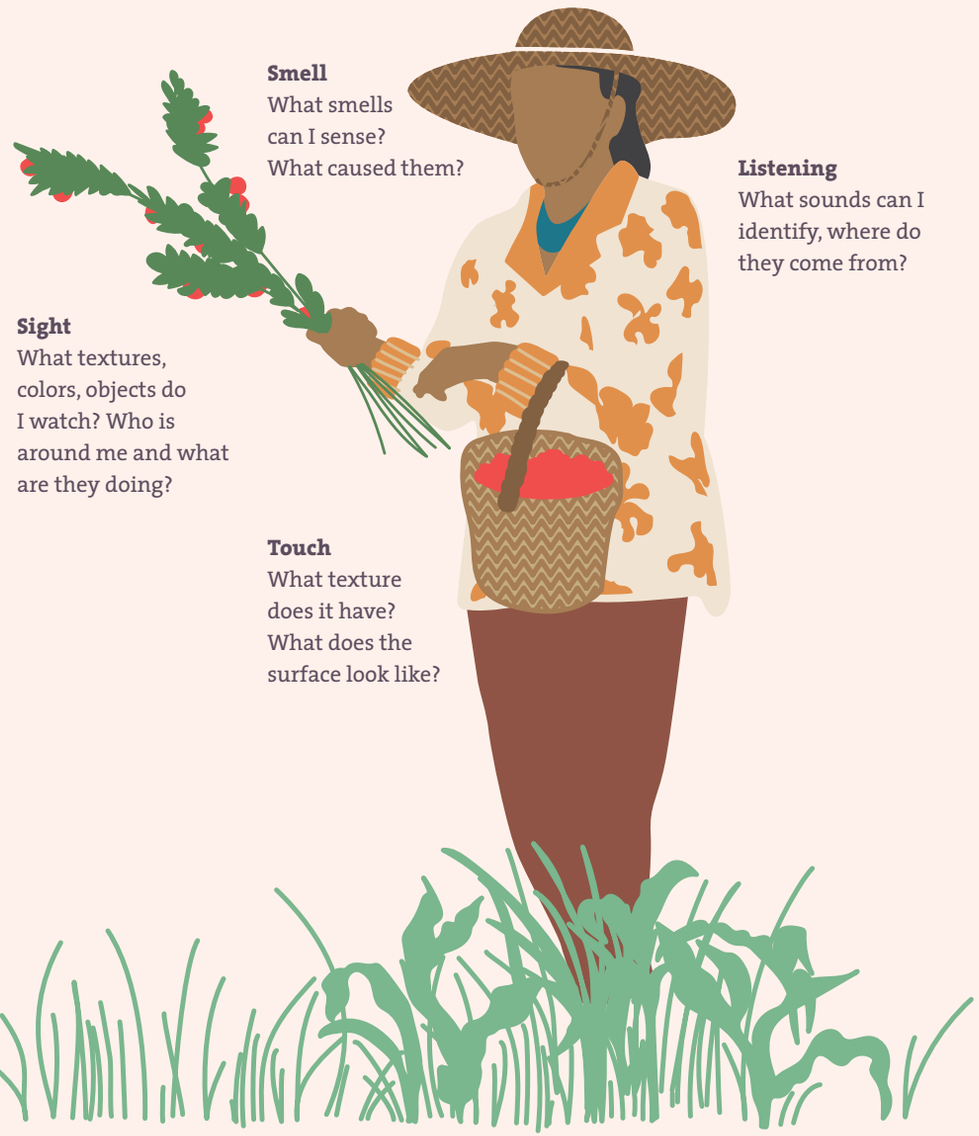
To watch carefully within a given time (minutes, days, weeks, seasons, etc.), different elements and/or conditions that are present in a specific place in order to collect data about their characteristics and behaviors. Monitoring is collecting data on different elements and supporting them with photographs, videos, written notes or audios that help us to understand and express what we see. When we monitor, we can perceive smells, sounds, textures and realize what is going on around us. The observations we get are what we see at the moment, we can also add what we know about it; in addition, we can include memories and stories about what we are monitoring. In this way, we connect the characteristics observed to the place's memory.

THE HUMAN BODY IS THE MAIN MONITORING TOOL THAT ALLOWS US TO GENERATE DIFFERENT CONNECTIONS WITH THE OBSERVED ENVIRONMENT

KNOWLEDGE
We live and know our territories. What do I know about what am I monitoring?

MEMORIES
Are our observations connected to our memories? Which memories do I have while monitoring?

STORIES
Our territory is full of stories. What have I heard about what I am monitoring?



Smell
What smells can I sense? What caused them?

Listening
What sounds can I identify, where do they come from?

Sight
What textures, colors, objects do I watch? Who is around me and what are they doing?

Touch
What texture does it have? What does the surface look like?

WHY MONITORING?

Monitoring allows us to gather information directly about the territory, place, species or specific activity. It places value on what is observed and helps to track changes that helps us understand the cause of these transformations.

As a community or group, we can agree on a topic of interest and participate in the organization of a community observation exercise. The data we obtain from monitoring is used as an invitation to discuss the findings and perspectives of each Sentinel.

WHEN IS A REGISTRATION MADE?

Records are taken when any of the elements of interest defined by the community or organized group are observed. This can be done when we walk through the area with the purpose of recording. For example, when we go for a walk to begin the monitoring exercise. Records are also made when other daily activities are carried out and some event of interest to the Sentinels appears suddenly, for example, when we see that something affects the ecosystem and individuals or when we watch species.

HOW ARE THE RECORDS MADE?

Before beginning the monitoring and making records, it is necessary to meet with the interested community and establish agreements on the objectives of the monitoring, that is, to choose what is going to be observed and what elements or situations the Sentinels will focus their attention. This exercise can be carried out through workshops where each member has the opportunity to express themselves and then establish together the focus of the monitoring.

Then, the records are made by writing down each observation to keep a record of what we hear or see, thus saving the information to communicate the results. The records are made with a cell phone by sharing the location of our observation place, sending audio or written messages describing what we observed and sending photographs or videos to support the stories. If a cell phone is not available, we suggest to take notes of what is observed and record territorial references that will help to find the location of the record later.

THE 5 MONITORING STEPS

1. **WALK NAVIGATE**
2. **OBSERVE THE DIMENSIONS OF THE TERRITORY**
3. **SENDING THE LOCATION OF THE OBSERVATION SITE**
4. **SEND PHOTOGRAPHS AND VIDEOS OF THE OBSERVATIONS**
5. **SEND AUDIOS DESCRIBING WHAT IS OBSERVED**

WHAT CAN BE OBSERVED AND RECORDED?

Every participatory monitoring experience is unique and different from others, depending on the previously defined objectives. It is possible to observe and record elements such as environmental dangers, the uses of a given place, activities realized, the presence of animals or plants, among others. This methodology can also be applied to various elements that can be monitored, such as organizational forms, cultural activities and biodiversity. These are some examples of what can be recorded:

BIODIVERSITY

Components of the environment such as animals (birds, cetaceans, fish, rodents, amphibians, mollusks, insects, etc.), plants (native, introduced, edible, with or without flowers, etc.), algae, medicinal herbs, fungi, ecosystems (marine, wetlands, estuaries, lakes, rivers, forests, mountains, etc.), among others.

ENVIRONMENTAL RISKS

Water, soil and air pollution events, also can be productive activities that are harmful or dangerous for the community and the environment, pollution situations and risk events for health.

CLIMATE CHANGE

Environmental events or phenomena related to climate change, ecosystem changes, population changes of some species, extreme weather events (droughts, floods, fires), impacts caused by these events (landslides, migration, etc.).

CULTURAL LANDSCAPE

Places or sites of importance to the inhabitants, spaces where they carry out their daily activities, sites related to cultural and spiritual practices, heritage and archaeological sites, and tourist places (natural and/or cultural).

ACTIVITIES

Practices that are part of people's daily life, their communities or groups of people, such as productive activities, fishing, diving, horticulture, harvesting, religious celebrations, recreational, tourism, educational activities, among others.

STORIES AND MEMORIES

Stories or narratives about past events, such as the origins or arrival of a group to the territory, past events that happened in the territory, relationships between communities and their surroundings, memories, experiences, anecdotes or stories.

WHO REGISTER?

The people in charge of the records are Sentinels, local actors who are interested in observing and communicating the characteristics of their environments. They are volunteers that contribute in the planning stages (they agree on the monitoring objectives), co-creation of the methodology (according to the characteristics of their territory) and data collection (observing and recording information). The number of Sentinels will be determined by the area or territory to be monitored, in other words, the more Sentinels in action, the more data will be collected. We also recommend that participants bring a diversity of genders, ages, interests, perspectives, etc.

What time and day of the week am I observing?

What is the name of the place where I am?

What activities are done in that place?

Why is this place important?

What species do I watch?

What are their names?

How many specimens can I watch?

Is it common to watch them there?

Are there any changes in the abundance of these species?

EXAMPLES OF SUPPORTING QUESTIONS FOR SUPPORTING OBSERVATIONS IN COMMUNITY-BASED PARTICIPATORY MONITORING

What environmental problems are there?

What is causing these problems?

What species are affected by these problems?

Is it a permanent danger?

How often does it occur?

Is it a new danger?

In which way are they affected?

What makes this site or place attractive?

What is it name and why?

What stories I know about this place?

Who visits it?

At what time of the year does it receive the most visitors?

Are there any tourist services related to the place?

What cultural or spiritual ceremonies are practiced there?

WHAT IS NEEDED TO MAKE A REGISTRATION?

To make a record, it is necessary to use a notebook or cell phone to write down the observations made in the place or record an audio note with the observations. If we use the notebook, we can take a picture of our notes and send them through the cell phone to the messaging group, sending also pictures or videos of the place and the geographic location.

For the pilot case presented in this manual, the registry was carried out by cell phone, which allowed the Sentinels to be connected via instant messaging applications (e.g., WhatsApp, Telegram or text message) with the technical team reviewing and systematizing the data. For this purpose, a messaging group was used where the locations, photographs, videos, audios and written notes of the records were sent. This made it possible to maintain direct communication between the Sentinels and the technical team and, sometimes, to go deeper into some elements of the records, such as names and details of activities observed.

When it is not possible for the Sentinels to send their location, landmarks can be noted in a notebook of the place of registration that later help to recognize and locate it on the map. The subsequent review of each location is done together with the technical team, either through a printed or drawn map or directly in applications such as Google Maps or Google Earth.

WHAT TO DO WITH THE INFORMATION?

The data recorded by Sentinels has a review process by the technical team, where the audios are transcribed and the texts are copied to a document with all the information collected. Photographs or videos are also saved, indicating the date of the recording and the sentinel who did it. The locations are also saved, either manually by typing the coordinates in the database or by saving the points through Google Maps or Google Earth.

When the time period for data collection is completed, the database is reviewed to confirm that all records (locations, observations, photographs and videos) have been saved. These data will be shared on the web platform (www.centinelascomunitarios.cl) that gathers the different records with free and open access for users who are committed to the proper use of the data. Community Sentinels promotes local and decentralized governance of the data, with standards of respect for the communities that provide them.

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