

# Current situation and perspectives for water resources and environmental management in Loreto, BCS

## REPORT

December 2023 (revised March 2024)

The contents of this document and the opinions expressed herein are derived from the work of the consulting team and have not been reviewed by the competent governmental agencies. Therefore, they may not coincide with the data and opinions of the government, as well as those of The Ocean Foundation and its stakeholders.

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## 1 Background

### 1.1 **Issues found in 3 areas (Authority in charge and what is the status):**

- **Basin and aquifer management**
  - Are under the jurisdiction of CONAGUA.<sup>1</sup> (Annex 1)
  - According to technical (theoretical estimation) studies, the availability is favorable (on average), but CONAGUA contradicts this finding based on their official calculations.<sup>2</sup>
  - CONAGUA cannot administer the registry and inspect water extractions and wastewater discharges. Nevertheless, they still can apply penalties and fine infractors. In Loreto, there is an issue with the discharge of raw wastewater that can lead to such a penalty, but a remediation plan can be presented to CONAGUA.
  - A negotiated agreement is possible and much better than a litigious approach. (Annex 2)
- **Provision of water and sanitation services**

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<sup>1</sup> Ley de Aguas Nacionales. <https://www.diputados.gob.mx/LeyesBiblio/pdf/LAN.pdf>

<sup>2</sup> See, for example, the CONAGUA study by Lesser y Asociados (2007)

- OOMSAPA Loreto<sup>3</sup> oversees these services on behalf of the Municipality (Annex 3)
- For the operation of the services at the FONATUR touristic development of Nopoló, FONATUR provides financial support and has operated a WWTP through a private firm. (Annex 4)
- **Custody and management of the protected natural area**
  - Depend upon environmental authorities (CONANP) and FONATUR.<sup>4</sup> (Annex 5)
  - The State Government will receive the land that would not be part of the conservation area and would be able to sell it.
  - A proposal has been made to declare an additional area as a reserve.<sup>5</sup> (Annex 6)
  - Via its website and other public announcements, FONATUR has advertised 800 lots for sale in addition to the land donated to CONANP for the two new national parks. This may not be consistent with limited water supplies or wastewater management capacity.

## 1.2 Motivation

- The Ocean Foundation (TOF) is worried about the quality of the water and sanitation services in Loreto overall and, thus, about equitable access to safe drinking water and the efficacy of wastewater disposal to protect human and environmental health throughout the Municipality.
- This also reflects an expression of concern by Loreto Bay residents that with the departure of FONATUR, it is feared that the water and sanitation services in Nopoló will deteriorate.
- TOF would like to clarify the consequences of the departure of FONATUR in the three areas and propose actions to avoid damage or deterioration in Loreto and in Nopoló:
  - How can we support regularizing uses and discharges and promote a sustainable water management model for the basins and aquifers?
  - How can we prevent FONATUR's departure from deteriorating the drinking water supply and wastewater treatment?

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<sup>3</sup> Ley de Aguas del Estado de Baja California Sur. <https://www.cbcs.gob.mx/index.php/cmply/1493-ley-aguas-bcs>

<sup>4</sup> Parque Marino Nacional Bahía de Loreo. Diario Oficial de la Federación (DOF), del 19 de julio de 1996. [https://simec.conanp.gob.mx/pdf\\_decretos/31\\_decreto.pdf](https://simec.conanp.gob.mx/pdf_decretos/31_decreto.pdf)  
Recategorización: Parque Nacional Bahía de Loreo. DOF, 7 de junio de 2000. [https://simec.conanp.gob.mx/pdf\\_recategorizacion/31\\_reca.pdf](https://simec.conanp.gob.mx/pdf_recategorizacion/31_reca.pdf)

<sup>5</sup> Parque Nacional Loreto II. DOF del 15 de agosto de 2023. [https://simec.conanp.gob.mx/pdf\\_decretos/203\\_decreto.pdf](https://simec.conanp.gob.mx/pdf_decretos/203_decreto.pdf)  
Parque Nacional Nopoló. DOF del 15 de agosto de 2023. [https://simec.conanp.gob.mx/pdf\\_decretos/208\\_decreto.pdf](https://simec.conanp.gob.mx/pdf_decretos/208_decreto.pdf)

- What is required to ensure sound management of the protected area? (is there an option for co-management by The Ocean Foundation?)

## 1.3 Scope of the study

- Investigate the situation and upcoming events related to the departure of FONATUR.
  - Position of the State Government
  - Position of the Municipality
  - Position of OOMSAPA Loreto
- Assess how the departure of FONATUR would affect the three management concerns:
  - Basin, aquifer, and sources of supply
  - Quality and reliability of water supply and wastewater sanitation
  - Management of the protected area

## 2 Findings of the visit

### 2.1 Three areas

- Basin and aquifer management
  - The departure of FONATUR will not affect water basin and aquifer management.
  - CONAGUA needs more means to guarantee the registration, custody, and vigilance of water extractions and wastewater discharges (the fragile rule of law) because of budgetary restrictions and a lack of institutional capacities.
- Provision of services
  - The position of OOMSAPA Loreto is very precarious, with areas for improvement in infrastructure, administration, and finance. (Annex 7)
  - The Municipality is subsidizing the lost FONATUR funds to cover energy costs for the provision of services. (Annex 8)
  - They have a “Comprehensive Development Plan” (PDI for its acronym in Spanish), which we reviewed before the visit. (Annex 9)
  - The utility needs more financial support or political will to improve its performance in nearly every operational area.
- Management of the Natural Protected Areas
  - No meetings were held on this question as all aspects of this concern are managed by central offices in SEMARNAT and CONANP directly with FONATUR.<sup>6</sup> (Annex 10)
  - A decision has already been made.

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<sup>6</sup> Programa de Manejo del Parque Nacional Bahía de Loreto. Diario Oficial de la Federación, 23 de abril de 2019. [https://simec.conanp.gob.mx/pdf\\_pcym/31\\_DOF.pdf](https://simec.conanp.gob.mx/pdf_pcym/31_DOF.pdf)

## 2.2 Consultations

We interviewed experts in other fields aligned or complementary to this work and gained some noteworthy comments:

- The operation of water services in Loreto must be improved regardless of FONATUR's departure.
- OOMSAPA Loreto has ample opportunities for improvement.
- There must be a strategy to measure, for example, the largest of consumers.
- It is strongly recommended that OOMPSAPA's performance indicators be improved.
- We need to highlight a delicate problem of the treatment plant and the requirements for preventing sewage discharge.

## 3 Perspectives

### 3.1 Water resource management

- Because the departure of FONATUR will not affect water basin and aquifer management, no relevant modification of this management is currently expected.
- Nevertheless, there is a need to improve the monitoring, evaluation, and assessment of surface and groundwater availability, variability, and quality.
- A model “from source to sea” could be proposed for Loreto.
- The most pressing issue is the lack of wastewater treatment (a responsibility of the water utility, but treated water discharge vigilance is under CONAGUA's jurisdiction) (Annex 11)

### 3.2 Water supply and sanitation

- OOMSAPA has a lot of areas in need of improvement.
- The legal status of the wells must be regularized. (Annex 12)
- FONATUR's departure has forced the municipality to subsidize the water utility by paying part of the electric bill. (Annex 13)
- There seems to be no clarity regarding who will take charge of (or keep on paying for) the operation of FONATUR's wastewater treatment plant for Nopoló.<sup>7</sup>
- Although some problems will inevitably arise, local authorities are not worried about FONATUR's departure; they even seem relieved.

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<sup>7</sup> David Gracia (Head of FONATUR Loreto) and Getzemani Lopez (Technical Director of OOMSAPAL) have told our local volunteer that FONATUR transferred the management of Nopoló's water supply and sewage to OOMSAPAL as of 1 January 2024. In an inconsistent statement, Gracia also told our local volunteer that sewage treatment for Nopoló has been operated from the beginning by OOMSAPAL Loreto, not FONATUR.

### 3.3 Protected Natural Area

- The NPA handles the property management of the new area that would be part of the Loreto National Park. FONATUR would donate the land to SEMARNAT and SEDATU, and then CONANP can administer it. (Annex 14)
- Once this process is finished, they can give the administration to an NGO or the STATE.
- No problem is envisaged in this regard.

## 4 Proposal

### 4.1 Water Plan for Loreto

- “From the source to the sea,” water resource management:
  - Studies of availability and quality of surface and groundwater.
  - Support to manage resources for monitoring quality, extractions, and potentiometric levels to allow aquifer modeling and continuous monitoring.
  - Ecological, territorial, and urban planning studies.
- **Ecological preservation** - sea, wetlands, aquifers and watersheds:
  - Natural Protected Areas Management Plan.
- **Water and sanitation for all - new OOMSAPA** – See annex for content and budget. It would be a short-term plan while a complete diagnosis and action program is negotiated with CONAGUA and BANOBRAS if that path is adopted (promoting a public-private partnership). (Annex 15)

### 4.2 We propose that the Loreto Bay Homeowners Association or Loreto Bay residents can offer:

- Support the recruitment of specialists.
- Manage collaboration with North American water systems or specialists (retirees?)

### 4.3 What can The Ocean Foundation offer?

- Study support
- Promote the creation of a marine studies unit.

## 5 Roadmap - next steps suggested.

- a) Discuss with the HOA the different scenarios, making clear that:
  - i) No critical situation is on the horizon because of the departure of FONATUR, as local authorities agree to take charge of its functions and responsibilities, even though there are significant opportunities for improvement.
  - ii) **The wastewater treatment issue must be solved** soon and in this case.
  - iii) We recommend **adopting a collaborative position** to help local authorities get to a negotiated agreement with CONAGUA.

- b) The HOA should immediately send a letter requesting a Water Advisory Council seat.
- c) The HOA should **invite OOMSAPA's Director to Nopoló** for a friendly talk regarding HOA's concerns.
- d) Once a positive relationship is achieved with OOMSAPA and the municipality, explore the possibility of offering support to create an agenda for the three areas of interest by **financing the elaboration of a "Loreto water plan"**:
  - i) surface and groundwater integrated resource management from source to sea,
  - ii) water utility's integral improvement, and
  - iii) legal regularization and assistance in the custody and management of the natural protected area.
- e) Regarding the extension or substitution of the municipal **wastewater treatment plant**, TOF (with stakeholder input) should decide if they support CANACINTRA's offer to mediate with the federal authorities in the municipality's name to get financial support for the construction and operation of the facilities, possibly through a public-private partnership. Solving the wastewater treatment problem is a necessary initiative, but it's expensive and complex, and many parties would be involved.<sup>8</sup>

Activity	Month						
	1	2	3	4	5	6	7
Present this reports conclusion	x						
Ask for a seat at the advisory council	x						
Present directly to OOMSAPA's director the concerns and support proposals	x						
Develop the Loreto Water Plan*		x	x	x	x	x	x

\*If the municipality agrees.

<sup>8</sup> Getzemani Lopez (Technical Director of OOMSAPAL) has told our local volunteer that the Municipality of Loreto now plans to redo the Sewage Treatment Plant with a 10 million peso investment from the municipal treasury to prevent water from entering the illegal north end of town sewage lagoons.