

Megadams in the Marañon:

status of the Veracruz and Chadín 2 dams

The Veracruz and Chadín 2 hydropower projects have definitive concessions, but have not begun construction work, and the reasons for which they were promoted are no longer valid. **What should the government do?** A report by the Peruvian Society of Environmental Law (SPDA) explains the environmental legal status of these projects.

MARAÑON RIVER: A KEY ROLE

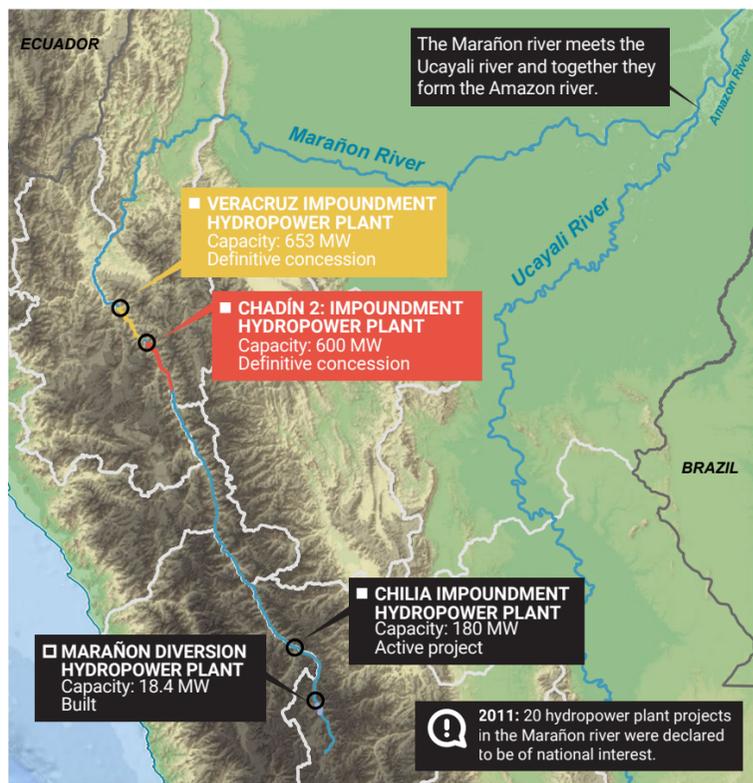
- The Marañon river is one of the major rivers connecting the Andes with the Amazon.
- It is one of the Amazon river's main sources of water.
- It is 1800 km long and connects 6 Peruvian regions: Huanuco, Ancash, La Libertad, San Martin, Cajamarca, Amazonas and Loreto.
- Fishing and agriculture depend on the sediments the river transports to the lower basin.
- The population of the Peruvian Amazon depends on the migration of fish through this river: A WCS (2015) study showed that the Awajun communities near the Rentema canyon consume approximately 500 grams of fish per person per day.



There has been an unprecedented surge in hydropower projects in the Andes-Amazon rivers in recent years.

DAMS THREATEN THE AMAZON BASIN

In 2012, 151 dams were planned to be constructed over the following 20 years in five of the six tributaries to the Amazon River. 60% of the dams would interrupt the connection between the headlands of the Andes and the lower Amazon. Source: Finer and Jenkins (2012)



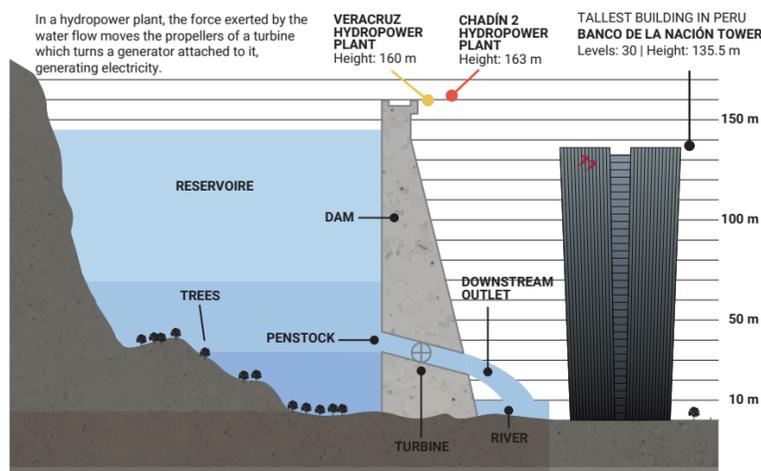
- **VERACRUZ IMPOUNDMENT HYDROPOWER PLANT**
Capacity: 653 MW
Definitive concession
- **CHADÍN 2: IMPOUNDMENT HYDROPOWER PLANT**
Capacity: 600 MW
Definitive concession
- **CHILIA IMPOUNDMENT HYDROPOWER PLANT**
Capacity: 180 MW
Active project
- **MARAÑON DIVERSION HYDROPOWER PLANT**
Capacity: 18.4 MW
Built

2011: 20 hydropower plant projects in the Marañon river were declared to be of national interest.

WHAT IS A MEGADAM?

A megadam is an impoundment hydropower plant with a dam structure between 15 to 100 meters tall, with a minimum capacity of 400 MW. It is installed in a river. Large hydropower plants with reservoirs are meeting increasing opposition due to the grave environmental impacts they generate, because they flood towns, forests and agricultural lands, and block the passage of sediments that fulfill key ecological processes. They also generate significant greenhouse gas emission. In Europe, almost 5000 dams have been removed, and in the United States, 1200.

Source: Dam Removal (2018), International Rivers (2020), American Rivers (2020).



CHADÍN 2 HYDROPOWER PLANT
The owner of this project is Odebrecht. Following a corruption scandal, the company began selling assets. Although there has not been progress on the project, Odebrecht is attempting to keep it legally active in order to sell it.



VERACRUZ HYDROPOWER PLANT
Enel, owner of the Veracruz project, is one of the most important power generation companies in the private sector. Veracruz has ceased to be in its portfolio of projects in Peru, but the project remains legally active.



"We stopped investing in large plants, not just coal, but also large hydroelectric plants that take years to be developed. And we have begun to do so since 2014" (2017)

Francesco Starace, CEO of Enel

THE NEGATIVE IMPACTS OF THE VERACRUZ AND CHADÍN 2 MEGADAMS



Over 1500 people would be displaced. These people are against the construction of the dams.



They would affect the main source of protein (fish) of the communities living in the river basin.



They would destroy cave paintings in the area that have not been properly studied by the Ministry of Culture.



The Marañon river canyon is an adventure tourism attraction, but the construction of the dams would hinder its development.

VERACRUZ HYDROPOWER PLANT

9 towns flooded



32.5 km² of forest flooded, the equivalent to 4552 soccer fields



224.8 hectares of agricultural land lost

10.33 million tons of sediment retained yearly

CHADÍN 2 HYDROPOWER PLANT

11 towns flooded



36 km² of forest flooded, the equivalent to 5042 soccer fields



74.37 hectares of agricultural land lost

10.14 million tons of sediment retained yearly

VERACRUZ HYDROPOWER PLANT DATA SHEET	
COMPANY Compañía Energética Veracruz S. A. C. Subsidiary of Enel	CAPACITY 653 MW
DAM HEIGHT 160 m	RESERVOIRE CAPACITY 85 m ³ /s
AREA OF IMPACT	
• Amazonas: Yamón and Lonya Grande districts (Utcubamba) and Camporredondo district (Luya)	
• Cajamarca: Cujillo district (Cutervo) and Pión district (Chota)	
TOTAL INVESTMENT 1443 million USD	

CHADÍN 2 HYDROPOWER PLANT DATA SHEET	
COMPANY AC Energia S. A. Subsidiary of Odebrecht	CAPACITY 600 MW
DAM HEIGHT 163 m	RESERVOIRE CAPACITY 385 m ³ /s
AREA OF IMPACT	
• Amazonas: Ocumal, Pisuquia and Cocabamba districts (Luya) and Balsas district (Chachapoyas)	
• Cajamarca: Celendin, Chumuch and Cortegana district (Celendin)	
TOTAL INVESTMENT 2023 million USD	

Source: Conservation Strategy Fund (2017)

THE PERMITS

Before starting electrical projects, a company must have an electrical concession and an environmental certification, as well as other permits depending on the magnitude or location of the project. Based on our analysis, both projects lack key documents that would allow them to legally commence construction.

Permits	Environmental Certificate (Senace)	Definitive concession (Ministry of Energy and Mining)	Water availability study (National Water Authority)	Authorization to carry out water use works (National Water Authority)	Certificate of Non-Existence of Archaeological Remains (Ministry of Culture)	Archaeological Evaluation Project (Ministry of Culture)
Hydropower plant						
VERACRUZ	No longer valid	Active	Expired	Absent	Absent	Absent
CHADÍN 2	No longer valid	Active	Expired	Active	Absent	Absent



Administrative Registry of Environmental Certifications

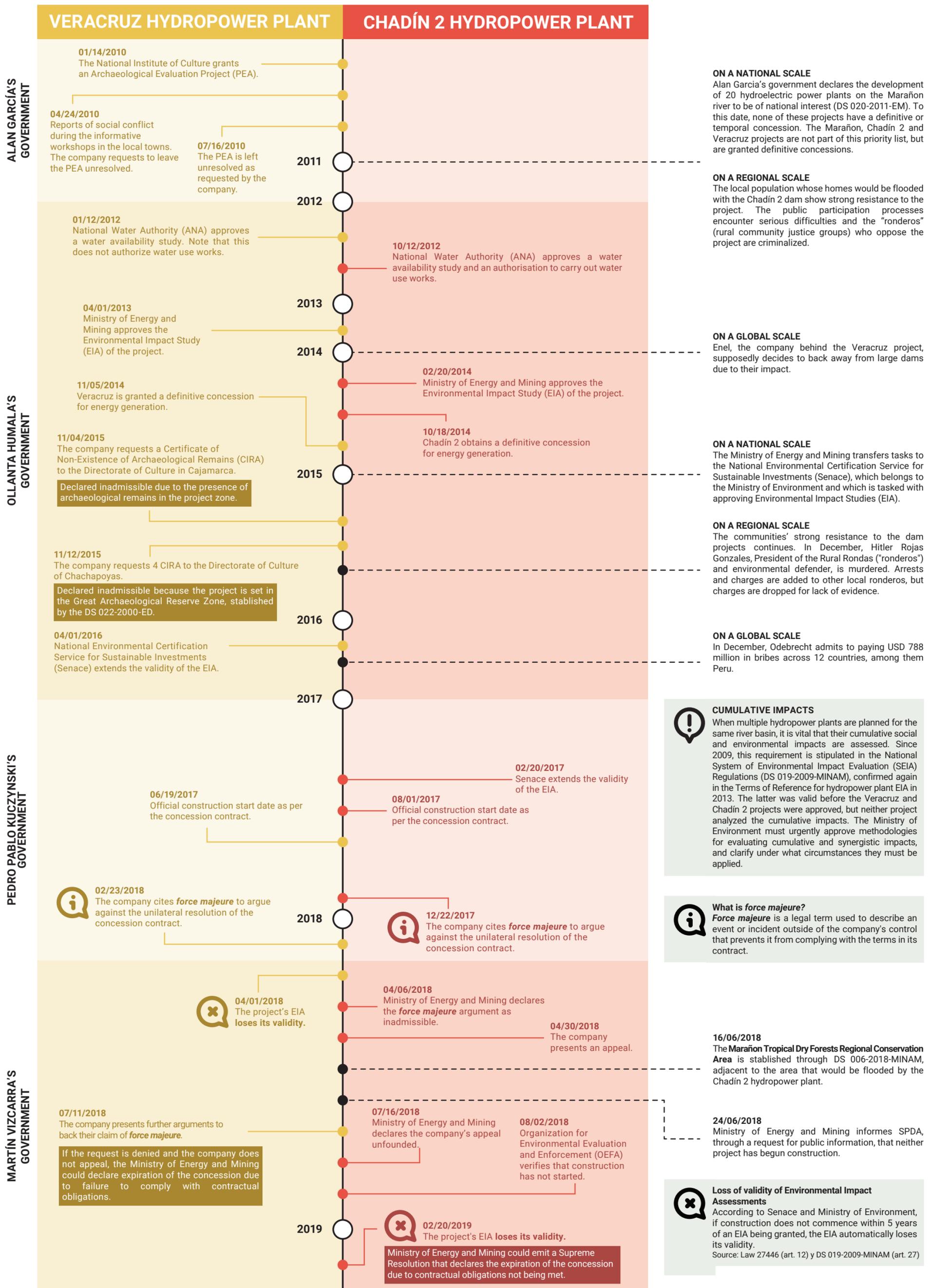
The environmental certifications of the Chadín 2 and Veracruz projects are no longer valid, however the Administrative Registry of Environmental Certifications controlled by the National Environmental Certification Service for Sustainable Investments (Senace) does not specify whether the environmental certifications are valid or not. According to the DS 016-2020-PCM, this year, new search criteria have been added but these do not include the categories "no longer valid" or "validity lost".

We, the Peruvian Society of Environmental Law (SPDA) consider that Senace should include the categories "valid", "non valid", or "validity lost" in its Administrative Registry of Environmental Certifications, in order to provide the public with transparent information about the state of different projects.

TIMELINE:

LEGAL STATUS OF THE CHADÍN 2 AND VERACRUZ MEGADAMS

In 2011, Peru projected a level of growth that would have required an amplification of its electrical matrix. To cover this necessity, the Peruvian government declared hydropower plant projects in the Marañon river to be of national interest (DS 020-2011-EM). In 2014, definitive concession contracts were granted to the Chadín 2 and Veracruz hydropower plant projects, which are currently active. However, Peru currently has surplus of energy, which has led the government to cancel its official call for energy through large hydropower plants. The government's decision and the lack of market-based demand has left both hydropower projects commercially nonviable. The timeline below shows the processes both projects have undergone to acquire the permits they need for construction, and their current status.



ON A NATIONAL SCALE
Alan Garcia's government declares the development of 20 hydroelectric power plants on the Marañon river to be of national interest (DS 020-2011-EM). To this date, none of these projects have a definitive or temporal concession. The Marañon, Chadín 2 and Veracruz projects are not part of this priority list, but are granted definitive concessions.

ON A REGIONAL SCALE
The local population whose homes would be flooded with the Chadín 2 dam show strong resistance to the project. The public participation processes encounter serious difficulties and the "ronderos" (rural community justice groups) who oppose the project are criminalized.

ON A GLOBAL SCALE
Enel, the company behind the Veracruz project, supposedly decides to back away from large dams due to their impact.

ON A NATIONAL SCALE
The Ministry of Energy and Mining transfers tasks to the National Environmental Certification Service for Sustainable Investments (Senace), which belongs to the Ministry of Environment and which is tasked with approving Environmental Impact Studies (EIA).

ON A REGIONAL SCALE
The communities' strong resistance to the dam projects continues. In December, Hitler Rojas Gonzales, President of the Rural Rondas ("ronderos") and environmental defender, is murdered. Arrests and charges are added to other local ronderos, but charges are dropped for lack of evidence.

ON A GLOBAL SCALE
In December, Odebrecht admits to paying USD 788 million in bribes across 12 countries, among them Peru.

CUMULATIVE IMPACTS
When multiple hydropower plants are planned for the same river basin, it is vital that their cumulative social and environmental impacts are assessed. Since 2009, this requirement is stipulated in the National System of Environmental Impact Evaluation (SEIA) Regulations (DS 019-2009-MINAM), confirmed again in the Terms of Reference for hydropower plant EIA in 2013. The latter was valid before the Veracruz and Chadín 2 projects were approved, but neither project analyzed the cumulative impacts. The Ministry of Environment must urgently approve methodologies for evaluating cumulative and synergistic impacts, and clarify under what circumstances they must be applied.

What is force majeure?
Force majeure is a legal term used to describe an event or incident outside of the company's control that prevents it from complying with the terms in its contract.

16/06/2018
The Marañon Tropical Dry Forests Regional Conservation Area is established through DS 006-2018-MINAM, adjacent to the area that would be flooded by the Chadín 2 hydropower plant.

24/06/2018
Ministry of Energy and Mining informs SPDA, through a request for public information, that neither project has begun construction.

Loss of validity of Environmental Impact Assessments
According to Senace and Ministry of Environment, if construction does not commence within 5 years of an EIA being granted, the EIA automatically loses its validity.
Source: Law 27446 (art. 12) y DS 019-2009-MINAM (art. 27)

The Environmental Impact Assessments of Chadín 2 and Veracruz were valid for 5 years, but neither company has commenced construction, and the deadline has passed. This means that their EIA are no longer valid, and should they wish to commence works, they would have to conduct new EIA and public participation processes, in addition to acquiring the necessary permits from the Ministry of Culture. Veracruz also requires permits from the National Water Authority (ANA), and is still waiting for a response to its argument of *force majeure* at having discovered cave paintings in the reservoir area. This could be used to arrive at a mutual agreement to resolve the concession contract. For both megadam projects, by not having commenced construction on time, the Peruvian Government could rescind the concession contracts.