

**LIVING
LAKES
2019**



**Naturgy & Natural Capital:
Methodology to evaluate
ecosystem services in wetlands**

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2. Success story: Meirama artificial lake
3. Bolarque hydroelectric power plant
4. Conclusions

Introduction

01

Naturgy: Lakes & Wetlands



- Naturgy is the **largest** vertically integrated **gas & electricity** company in **Spain and Latin America**.
- We are a **leading company in Sustainability Indexes** (DJSI-world leader in the Gas Utilities sector, FTSE4Good-world leader in the Multiutilities sector, CDP18-A List, etc.).
- Hydroelectric power plant **reservoirs**.
- **Water consumption** of thermal power plants.
- Meirama mine environmental restoration project: creation of an artificial lake.

Success story: Meirama artificial lake

02

Success story: Meirama artificial lake



- Water supply for 400,000 people (148 hm³)
- New ecosystem: 1,000ha: 450,000 trees and > 830 animal and plant species
- Economic and tourist development
- Flood regulation
- CO₂ capture
- Others...

173 M€

630 M€

? M€

803 M€

60 M€
(+Xunta 10 M€)

1980 ● Open pit mine starts

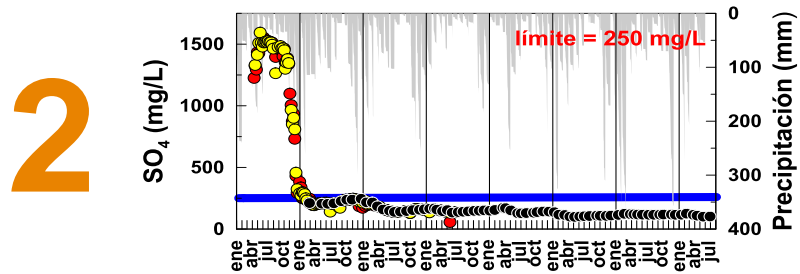
2008 ● Restoration comences

2019 ● One of the largest restored mine lake in Europe

Environmental restoration project



SEALED



FLOOD CONTROLLED & WATER QUALITY

3



ENVIRONMENTAL RESTORATION

4



ENVIRONMENTAL MONITORING



1980



1985



2008



2013



2019

Bolarque: the pilot project of natural capital

03

Innovating in natural capital

BOLARQUE HYDROELECTRIC POWER PLANT

LIVING
LAKES
2019

Naturgy 



TOURISM

Pesca Recreativa
€/año
% del VET



TURISMO

Rutas de Senderismo
€/año
% del VET



WATER

Uso Directo del Agua para Abastecimiento del ATS
€/año
% del VET



AGUA

Uso Directo del Agua para Generación Hidroeléctrica
€/año
% del VET



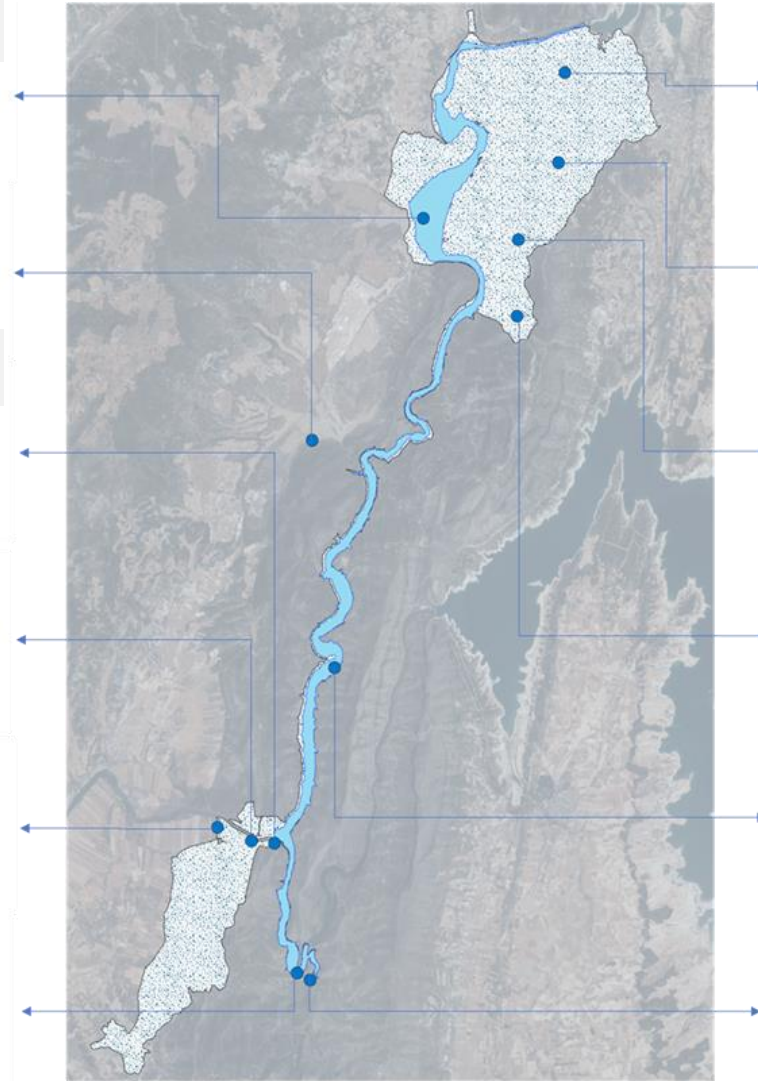
TURISMO

Museo de Bolarque de GNF
€/año
% del VET



TURISMO

Club Náutico de Bolarque
€/año
VET

BIOMASS

Basada en las Plantas: Biomasa Maderable y No Maderable
€/año
% del VET



BIOMASA

Fuente de Energía Basada en las Plantas: Biomasa Maderable
€/año
% del VET



BIOMASA

Fuente de Energía Basada en las Plantas: Biomasa No Maderable
€/año
% del VET



CLIMATE

Sumideros de GEI
€/año
% del VET



CLIMA

Masa de Agua Y Sedimento como Sumidero de GEI
€/año del VET



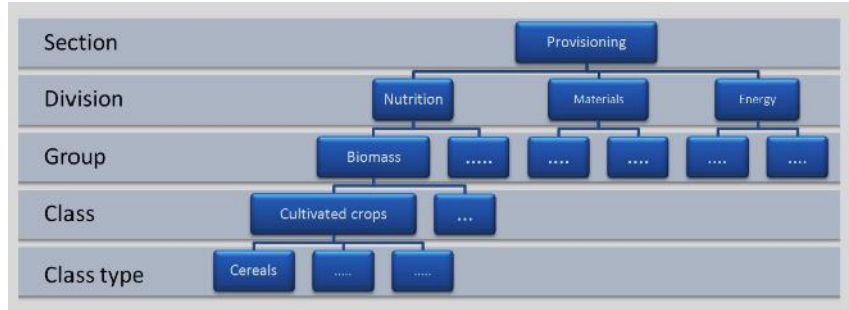
TURISMO

Playa de Bolarque
€/año del VET



Natural Capital pilot project

1



SELECTION OF METHODOLOGIES

2



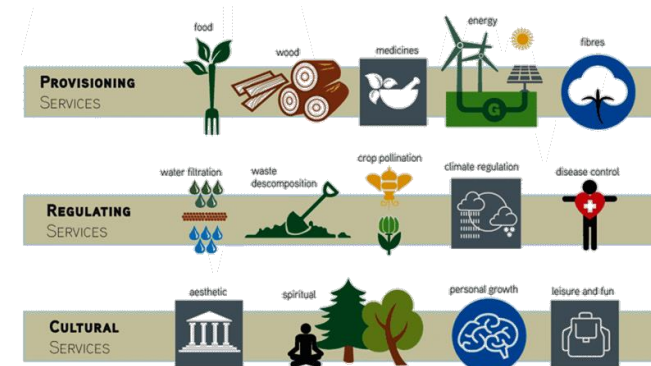
SEARCHS, INTERVIEWS,
DATA ANALYSIS

4



VALIDATION

3



DETERMINATION OF
NATURAL CAPITAL

Conclusions

04

Conclusions

- 1. Natural capital is a fundamental tool** to quantify the economic value of environmental resources.
- 2. Evaluate and quantify ecosystem services is essential for adequate decision making and for strategic environment management and facilitates negotiation** and communication with relevant stakeholders.
- 3. Determining natural capital is a complex process** that requires specialists and active participation of experts from the company (for example Lake Meirama: 6 months of work, 1,200 interviews, etc.)



Thanks

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