Reads

Assessment and management of nature-related impacts, risks and opportunities

December 2024

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Reads

READS is a digital tool for **assessing and managing nature-related impacts, risks and opportunities**.

READS adheres to the **Natural Capital Protocol and its biodiversity guidance**, as well as to **ISO 14008:2019** concerning the monetary valuation of environmental impacts. It is a recognized tool designed to help evaluate nature-related issues for the **TNFD's LEAP framework**.

The READS methodology is licensed under a **Creative Commons License**, for public use. The methodology can be downloaded at Repsol's webpage.

READS is powered by Microsoft technology, and it is commercially delivered as **Software-as-a-Service (SaaS).**

Several companies and institutions support the development and commercialization of READS, including:

Microsoft, minsait An Indra company, worley DELIVERING SUSTAINABLE CHANGE, ecoacsa, IDOM, Universidad de Salamanca, UC Universidad de Cantabria, CE Delft

Peer reviewed and endorsed by

UN environment programme WCMC

CAPITALS COALITION

European Business & Biodiversity Platform

TNFD Taskforce on Nature-related Financial Disclosures

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The valuation method follows a tiered approach…

Identify

Identify environmental aspects and impacts on

- Ecosystems and biodiversity
- Water resources
- Climate
- Pollution affecting social well-being

Quantify

Quantify impacts in Biophysical Units

- Tons
- Cubic meters
- Decibels
- Hectares
- Number of species

Value

Value gain or loss of natural capital

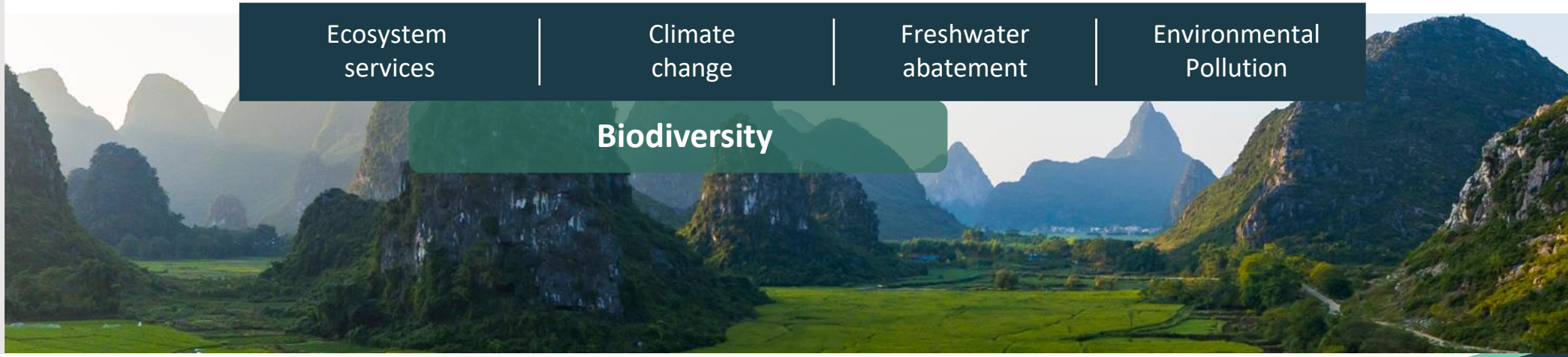
- 2022 USD (EEVs) / IUs
- Custom metrics
  - *IUs vs Economics*
  - *IUs vs Production*

Manage

Manage impacts with Cost-Benefit methods:

- Avoid
- Reduce
- Restore
- Offset

… to value impacts on



Reads

Identify > Quantify > Value > Manage

Valuation of impacts

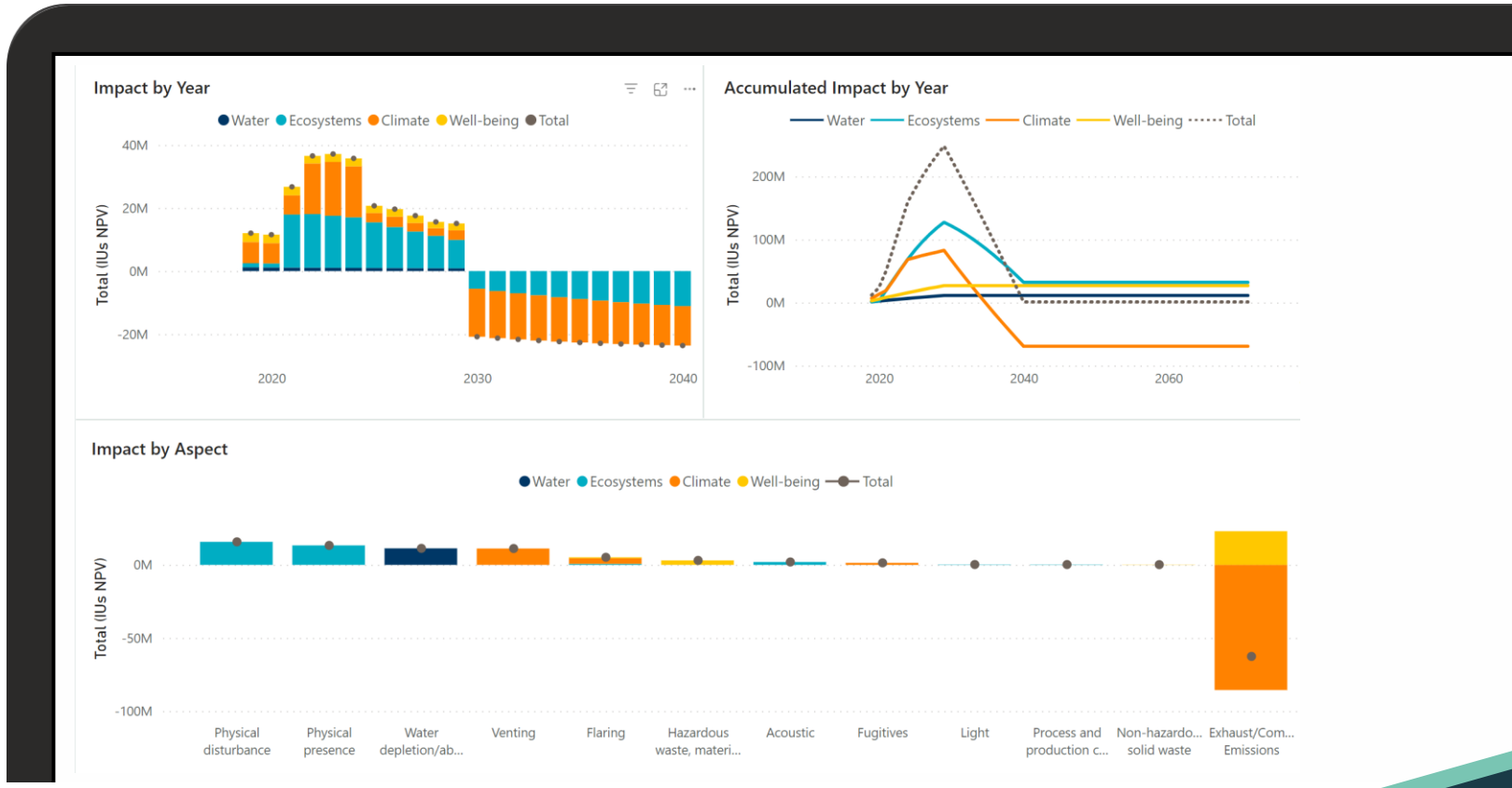
Metrics

Natural capital gain/ loss is measured in:

- **Environmental Economic Values (EEVs)**, monetized as US dollars (2022)
- **Impact Units (IUs),** improve the valuation representativeness by using local adjustments

Metrics are expressed in **Net Present Value.**

Discount rates are defined by the user, with a default of 3% for natural capital assets**.**



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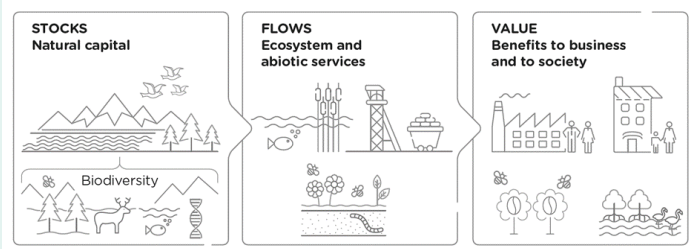
Identify > Quantify > Value > Manage

Valuation of impacts

Biodiversity



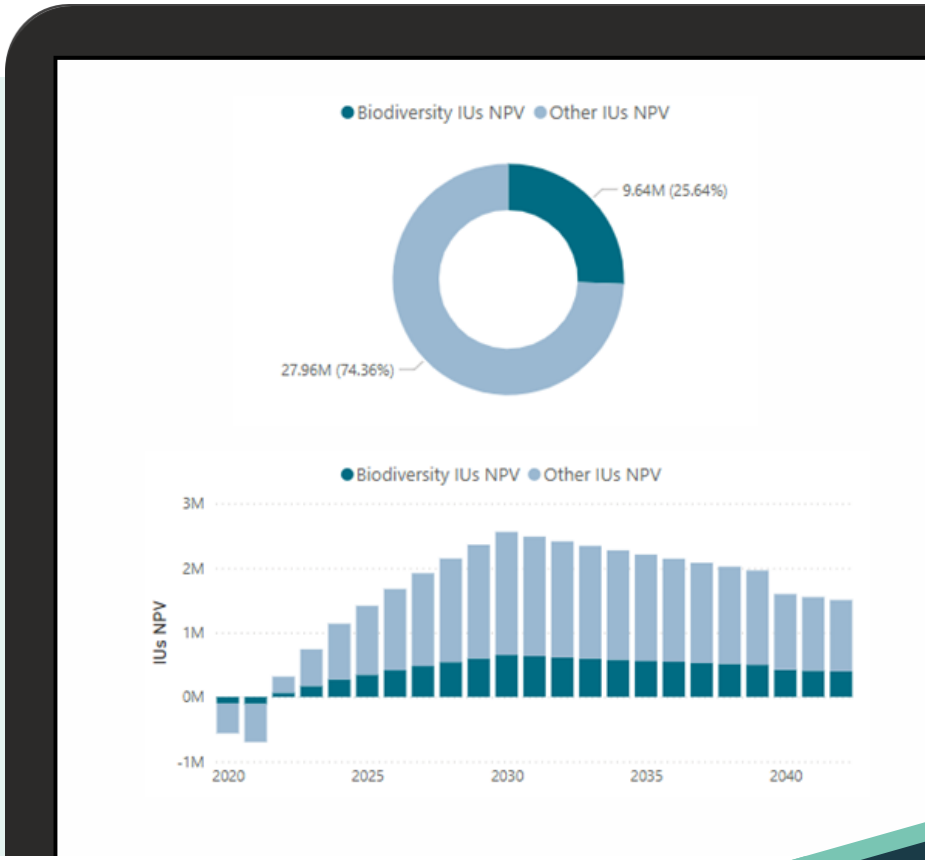
READS produces **biodiversity-inclusive natural capital assessments as follows**:

A direct valuation relationship is established between the impact on ecosystem services, water resources and/or climate.

- **Ecosystem services** for three (3) provisioning and four (4) regulating services. Follows CICES 5.1
- **Water resources**: variable for surface and groundwater resources.
- **Climate**: fixed at global scale

Valuation results are modulated according to

1. Specific biodiversity features such as the Species Threat Abatement and Restoration Metric (STAR), that accounts for the number of species, their extinction risk and their population, presence of protected areas, and presence of key biodiversity areas.
2. Specific freshwater local features such as physical and chemical water risks.



Reads

Identify > Quantify > **Value** > Manage

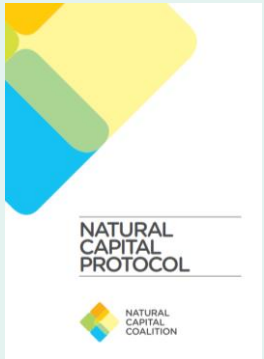
Valuation of impacts

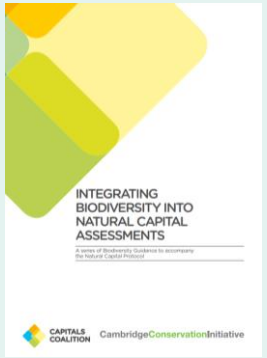
Importance of standardization

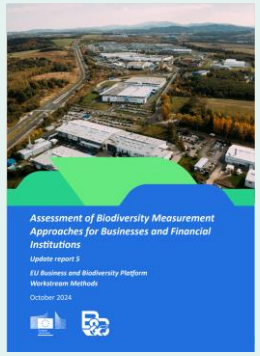
Standardization process is required at levels

- Frameworks and norms
- Ecosystem services classification schemes
- Environmental valuation databases (Ecosystem Services, Water, and Climate)
- Presence of species, protected areas and KBAs

Desktop to fieldwork fine-tunning is key to adjust valuation outputs.







CICES
European Environment Agency
Hosted on Behalf of the EEA
Towards a common classification of ecosystem services

European Commission
Energy, Climate change, Environment
INCA Platform

ESVD
ECOSYSTEM SERVICES VALUATION DATABASE

IUCN Red List of Threatened Species

World Database on Protected Areas

World Database of Key Biodiversity Areas

The Species Threat Abatement and Restoration Metric

Case studies

Reads

Oil & Gas E&P
Production Onshore - Gas
Execution phase

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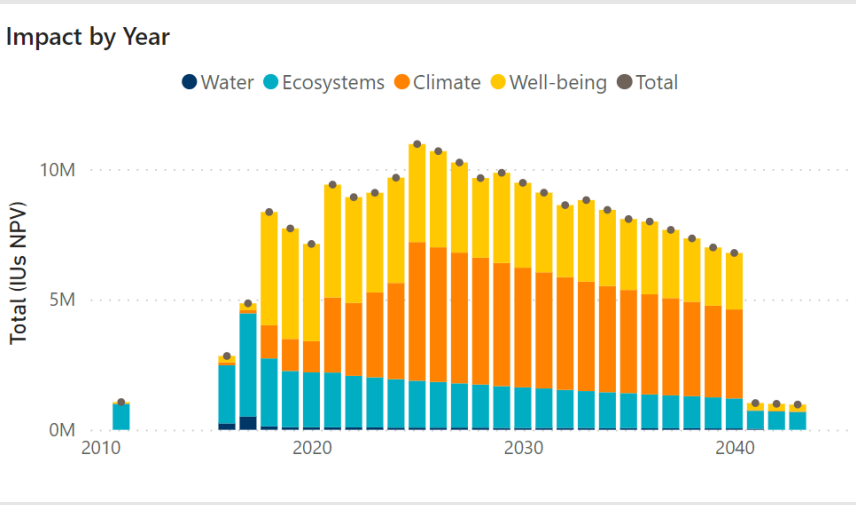
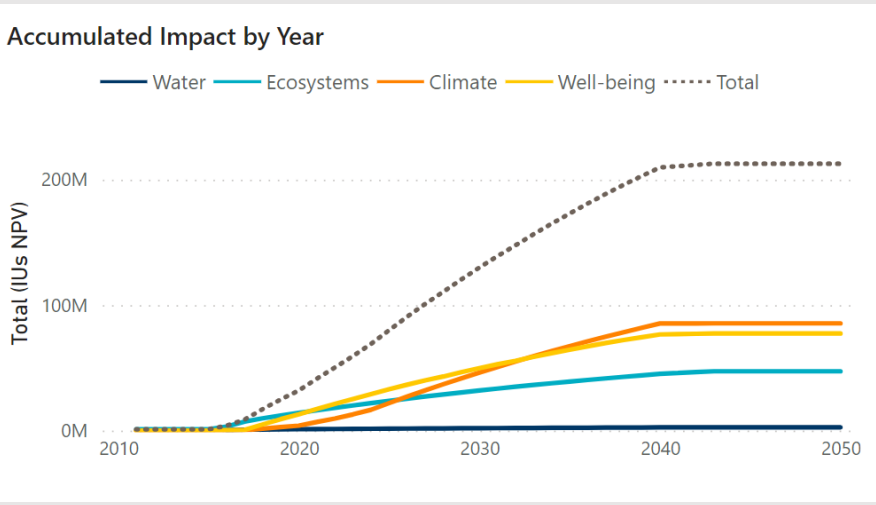


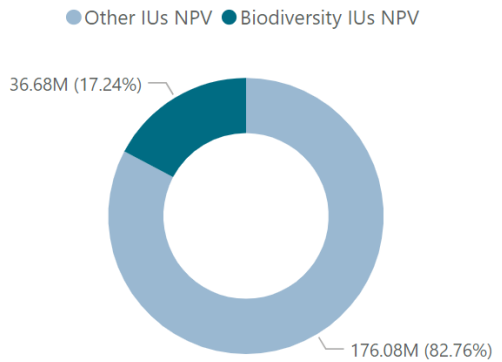


Details

Two production pads (5 wells) connected to a central production facility thought 72 km of above-ground flowlines in Amazonia. Compressed gas in exported. Only fluvial and air logistics.

Area of Influence Impacts:
- 1 Biodiversity Area (KBA)
- 3 protected areas,
- 4 Endangered IUCN Red List
- 27 Vulnerable IUCN Red List

Impact	EEVs NPV	IUs NPV
Flaring	2,249.11	2,198.37
Dust	95,071.35	96,166.51
Non-hazardous solid waste	195,565.19	195,565.19
Physical presence	1,144,155.60	1,315,555.05
Light	2,009,654.08	2,113,219.05
Water depletion/abstraction	3,221,630.32	2,577,304.26
Acoustic	19,980,775.78	20,431,203.20
Physical disturbance	22,692,932.98	23,320,273.69
Hazardous waste, materials and products	73,652,251.43	73,652,251.43
Exhaust/Combustion Emissions	91,072,049.64	89,053,969.84



Oil & Gas E&P
Production Onshore - Gas
Execution phase

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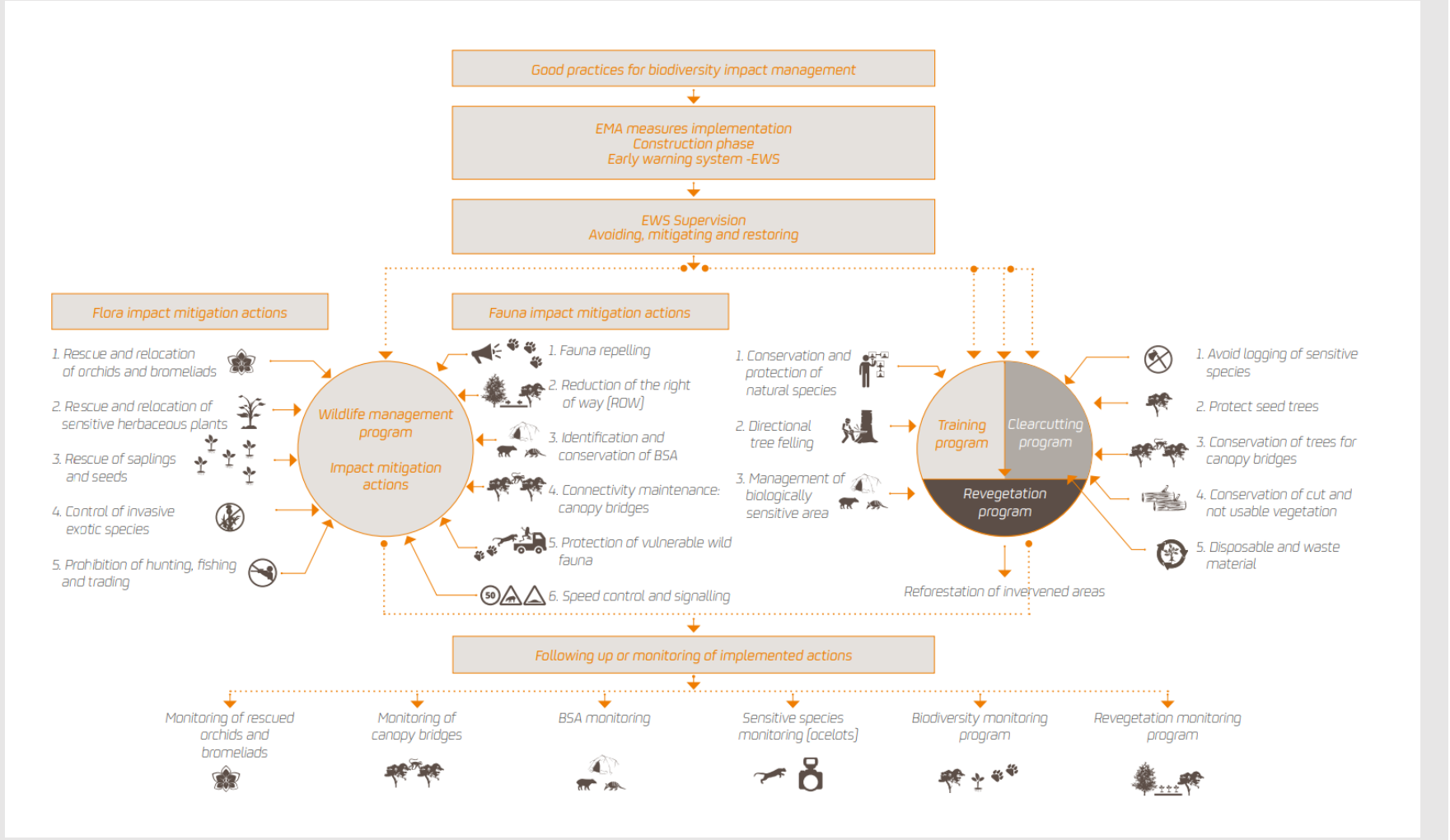

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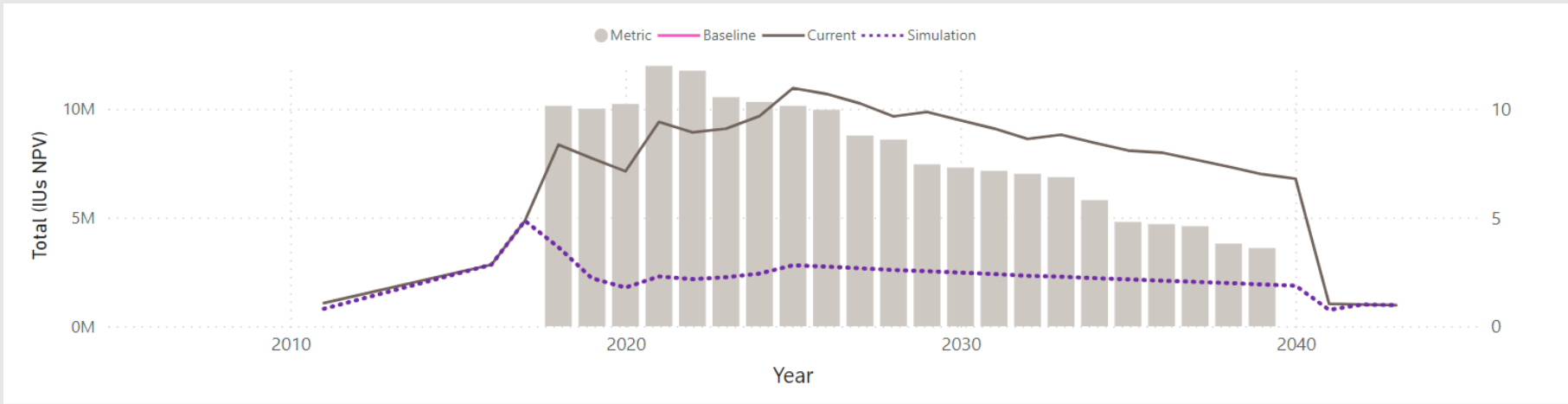
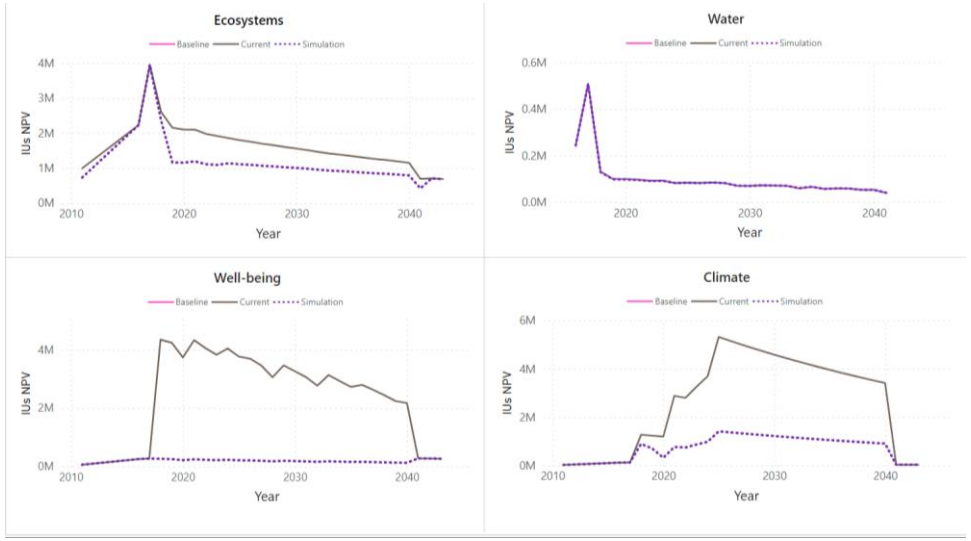


Details

Simulated measures:
- Avoid sensitive areas
- Install canopy bridges
- Rescue and relocation of flora
- Fauna repelling
- Drilling waste injection
- Accelerated restoration
- Helicopter routes change
- Change diesel for produced gas
- LDAR programs

Net impact reduction of 149 MMIUs (abatement of 70%) for 22 years of operation (at a discount rate of 3%). Class 3 Cost Estimate (Level of Accuracy of +30% to-20%)



Impact IUs (NPV)	**Simulation**
	65,066,126
Impact IUs saving (NPV)	**Simulation vs Baseline**
	149,000,210
Measures Investment (NPV)	**Total (k$)**
	22,701,457.55
Measures Efficiency (%)	**Simulation vs Baseline**
	69.60 %
Measures ROI (IUs vs k$)	**Simulation vs Baseline**
	6.56

Case studies

Reads

Oil & Gas E&P
Drilling Offshore
Execution phase

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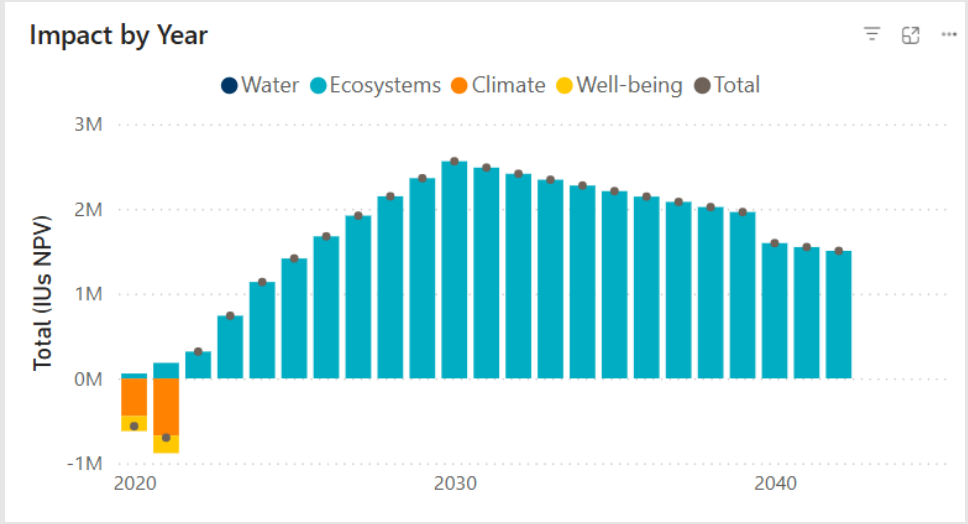


Details

5 wells deep offshore

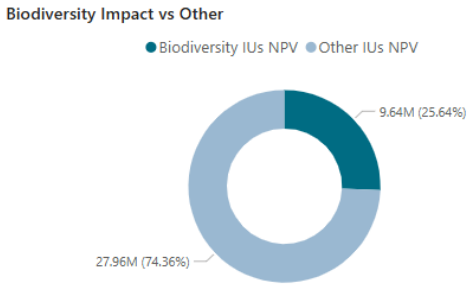
Compensation program in RAMSAR areas and National Parks
- Corals (3 Ha)
- Mangroves (150 Ha)

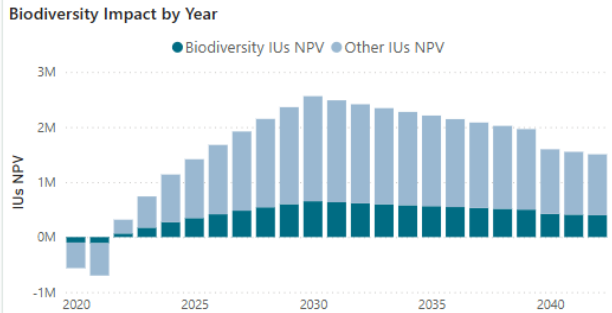
Net positive impact of 37.6 MMIUs over 20 years.

Discount rate of 3%. Class 3 Cost Estimate (Level of Accuracy of +30% to-20%)

Impact	EEVs NPV	IUs NPV
Physical presence	39,154,627.13	39,155,958.49
Physical disturbance	-2,144.28	-2,125.78
Water depletion/abstraction	-4,969.82	-3,975.86
Non-hazardous solid waste	-12,973.87	-12,973.87
Acoustic	-51,632.31	-49,828.57
Hazardous waste, materials and	-343,583.35	-343,583.35
Exhaust/Combustion Emissions	-1,160,785.54	-1,143,968.32

Impact by Ecosystem Service	EEVs NPV	IUs NPV
Regulating Services	28,565,369.69	28,565,369.69
Cultural Services	7,997,802.20	7,997,802.20
Provisioning Services	2,537,678.66	2,540,832.27





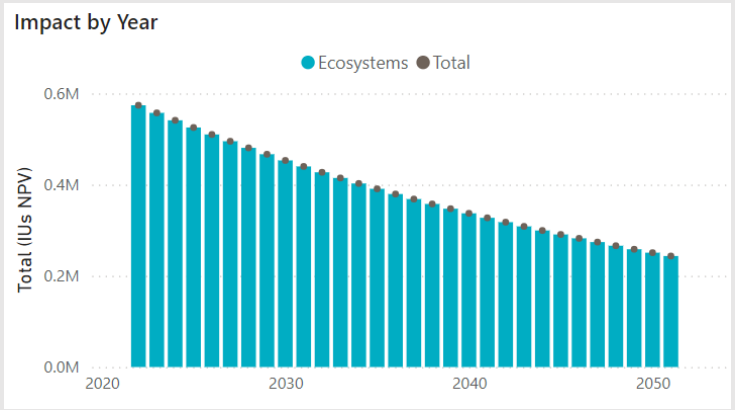
Reads

Conservation Project
Offshore and Coastal
Conservation project for olive ridley turtle in Rancho Nuevo (GOM)

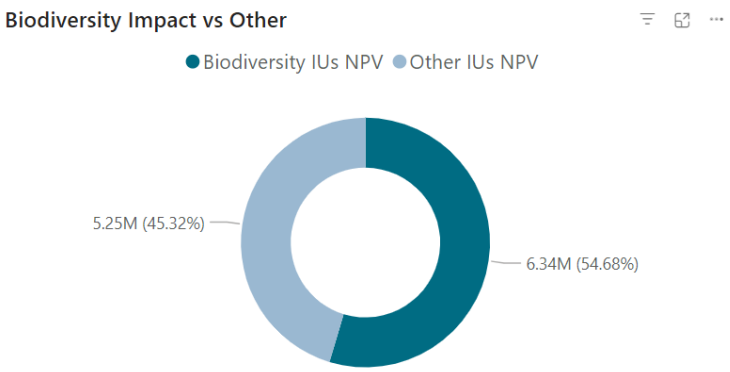
GOBIERNO DE MÉXICO

ASEA
AGENCIA DE SEGURIDAD, ENERGÍA Y AMBIENTE

The estimated benefits generated by the presence of the olive ridley turtle on Rancho Nuevo beach is USD 11.6 million over a 30-year period (adjusted for a 3% NPV). The cost estimate is classified as Class 4, with an expected accuracy range of +50% to -30%.



Impact by Ecosystem Service	EEVs NPV	IUs NPV
Cultural Services	6,683,682.72	6,683,682.72
Regulating Services	4,902,979.95	4,902,979.95
Provisioning Services	0.00	0.00



Details

It is estimated that the presence of turtles contributes 20% to the improvement of regulatory services (such as food chains, beach dune stabilization, and control of extreme events) and existence (non-use) on Rancho Nuevo beach.

Additionally, their contribution to gene pool services, species dispersal, and trophic chains in the sea is smaller, at 0.01%, 0.1%, and 1%, respectively, based on their probability of presence (medium, high, and very high).