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### Natural Capital Finance Alliance

## Rapid natural capital risk assessments for financial institutions

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## We worked with five financial institutions to explore natural capital risk assessment



## What is natural capital risk?

### Businesses depend on natural capital in a number of ways



## When natural capital is disrupted, the implications for businesses can be severe



## This is because environmental disruption triggers a number of risks for businesses



## These environmental risks are passed on from businesses to financial institutions



### Rapid natural capital risk assessment framework

# The framework developed allows financial institutions to cut through natural capital complexity

Establish why the organisation should conduct the assessment

Understand the portfolio's key sources of natural capital risk



Determine what will be included in the assessment

Take stock of the findings and identify actions to take

### FRAME

1. Become familiar with natural capital concepts

2. Sell the business case within the institution





### SCOPE

- 1. Map coverage of natural capital risk in existing processes
- 2. Define assessment objective
- 3. Scope the assessment



### **ASSESS**

- 1. Identify likely causes of disruption
- Identify material natural capital assets
- Identify important drivers of environmental change

### **ENCORE**

ENCORE (Exploring Natural Capital Opportunities, Risks and Exposure) enables users to visualise how the economy depends on nature and how environmental change creates risks for businesses. Starting from a business sector, ecosystem service, or natural capital asset, ENCORE can be used to start exploring natural capital risks. These risks can be explored further to understand location-specific risks with maps of natural capital assets and drivers of environmental change.





#### Explore Natural Capital Risks

Explore Natural Capital Risks - Select from a Sector, Sub-Industry or Production Process below (based on the Global Industry Classification Standard) to explore natural capital risks.

1. Sector	
Utilities	$\sim$
2. Sub Industry	
Renewable Electricity	$\sim$
3. Production Processes	
Hydropower production, Wind energ	g ^
Biomass energy production	-
Geothermal energy production	n

#### Hydropower production

- Solar energy provision
- Vind energy provision



### ASSESS

### 2. Assess disruption

- Identify geographical areas at risk
- Overlay sectoral exposure in areas of risk





### APPLY

### 1. Take action

- Synthesize and communicate results
- Identify next steps
- 2. Embed natural capital risk management
- Identify entry points for natural capital risk integration
- Train staff on natural capital risk



### Going beyond rapid assessments: an example

## We worked with BCP to trial the quantification of natural capital risk at the transactional level

BCP wanted to gain a better understanding of the link between environmental and credit risk.

The pilot trialled natural capital risk quantification to inform the upcoming integration of natural capital risk in the credit risk model.

A high level quantification of water risk for a mining project in Peru was conducted to assess the impact on the project's financial viability.

## The approach we took for the pilot was focused on the interests and needs of BCP



# Precipitation seasonality: large seasonal changes in rainfall can disrupt hydropower production



Precipitation seasonality in Peru, 1980s-2000s

Precipitation seasonality is high in Peru

- The whiter areas indicate areas which have received little rainfall.
- Sudden and unpredictable changes in rainfall can reduce or increase water flow which disrupts hydropower production.
- This seasonality may increase in the future with climate change.

## Flooding: the central regions in Peru are particularly exposed to flood damage and disruption

Number of flood occurrences in Peru, 1985-2011



Floods occur more frequently in some regions, such as Cuzco, Ucayali and Huanuco

 Flooding can severely disrupt production in mining, potentially resulting in a shutdown.



 Flooding can cause severe damage to infrastructure and construction projects, with long-term implications for these projects.

# We first mapped the water dependency pathway of the mining project BCP selected for the pilot



# We found that disruptions to water ecosystem services can have financial impacts for the project



## Looking ahead

## Financial institutions struggle to systematically assess their environmental risk



The approach can be valuable for any financial institution, regardless of size, geography and existing risk processes



Financial institutions can **improve their foresight** by uncovering risks they were previously unaware of.



Assessments can **expose systemic risks** not detected in individual transaction assessments.

The approach allows institutions to **monitor the evolution** of natural capital risks over time.

### Leading financial institutions embed natural capital thinking at the core of their organisational culture



- Ensure appropriate reporting
  - Include in relevant staff's Terms of Reference
  - Provide training
  - Develop natural capital **expertise** within central risk teams
    - Develop a **policy** or embed in existing policies
    - Enable implementation
    - Improve data collection and storage
      - Determine the role of the **Board**
      - Formalize senior management responsibilities



#### Governance

Disclosure

People

**Policies & Processes** 

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