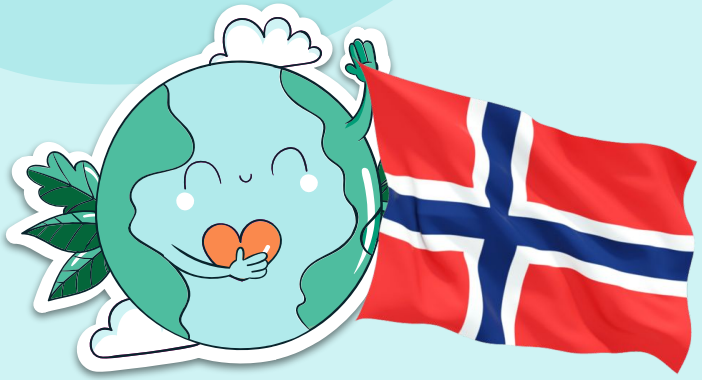

Balancing Resource Extraction and Sustainability in Norway

Our Team Members!

Min Htet Myet

Shwe Sin Phoo

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Introduction

Lithium, cobalt, nickel, other rare earth elements

Critical metal that accelerates its transition to clean energy technologies

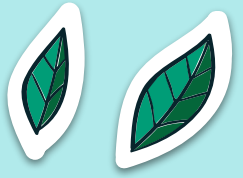
Essential for the production of batteries, wind turbines, and solar panels

The extraction and processing can cause environmental and social challenges

01

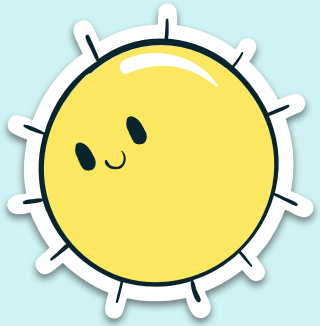
Problem Definition and Requirements for Strategies

A brief explanation on the given problem and requirements that are necessary in a strategy



Problem Definition

1. Managing Norway Country's resources sustainably
2. Working towards a just green transition up until the end of the century



Requirements for Strategies

1. balance between the increasing need for clean energy technologies
2. minimising environmental impacts
3. improving the livelihoods of local communities

02

Strategy 1

Enforcing Strict Environmental Regulations for Deep-Sea Mining with Community Engagement and Economic Upliftment

To ensure that local communities benefit from deep-sea mining

Investing in training program for local workers

Areas of focus

1. Technological operation
2. Environmental monitoring
3. Safety Standards

Public-private partnerships

To provide

1. Job creations
2. Improving infrastructures
3. Enhancing social services within mining regions

Infrastructure Development

1. Improved transportation
2. Access to healthcare

Implement and strengthen existing regulatory measures

Short-term environmental impact assessments (EIAs)

International Seabed Authority (ISA)

Involving local stakeholders in the decision-making processes

Introduce licensing fees for companies seeking mining rights

From new revenue stream

1. fund public services
2. job creation initiatives
3. environmental protection measures

Norway can minimize the long-term risks associated with resource extraction and ensure the sustainability of its coastal economies.

Factors Involved in Implementation:

1. Government Will and International Cooperation
2. Capacity Building
3. Technological Tools

Widespread Effects:

1. Environmental Protection
2. Economic Benefits
3. Equitable Development

03 Solution 2

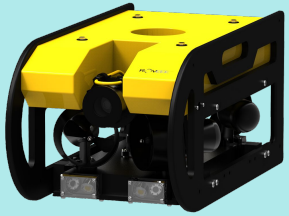
Use of ATEX-Certified equipments, Sustainable,
Low-Impact Mining Technology and Responsible Extraction

Offering tax breaks, subsidies, or grants

Adopting low-impact mining technologies

Implement remotely operated vehicles (ROVs) which are ATEX-Certified for EX-Zones

1. Realistic and scalable
2. Effective
3. Can operate in intrinsically safe environments
4. Ideal for operations in volatile underwater environments
5. Meet both safety and environmental requirements
6. Maintaining operational efficiency



long-term benefits can outweigh initial costs

Advantages

Less disruption

Reducing the risk of harming marine-dependent livelihoods.

Knowledge for advanced technologies

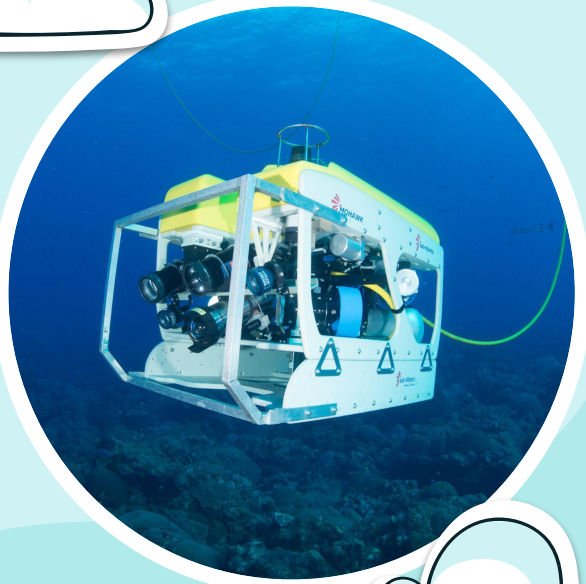
Employment opportunities.

Factors Involved in Implementation:

1. Research and Development
2. Training Programs
3. Government Incentives

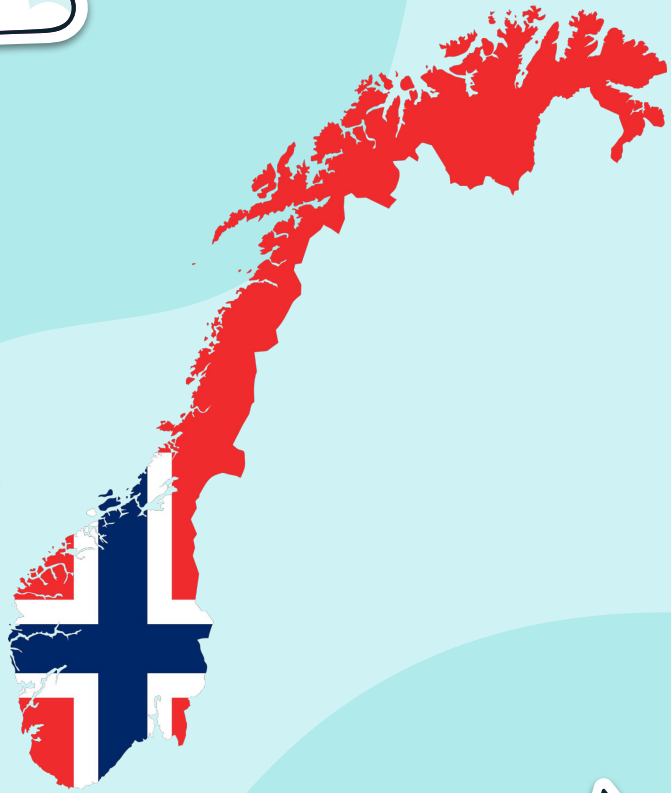
Widespread Effects:

1. Reduced Ecological Footprint
2. Job Creation and Skill Development

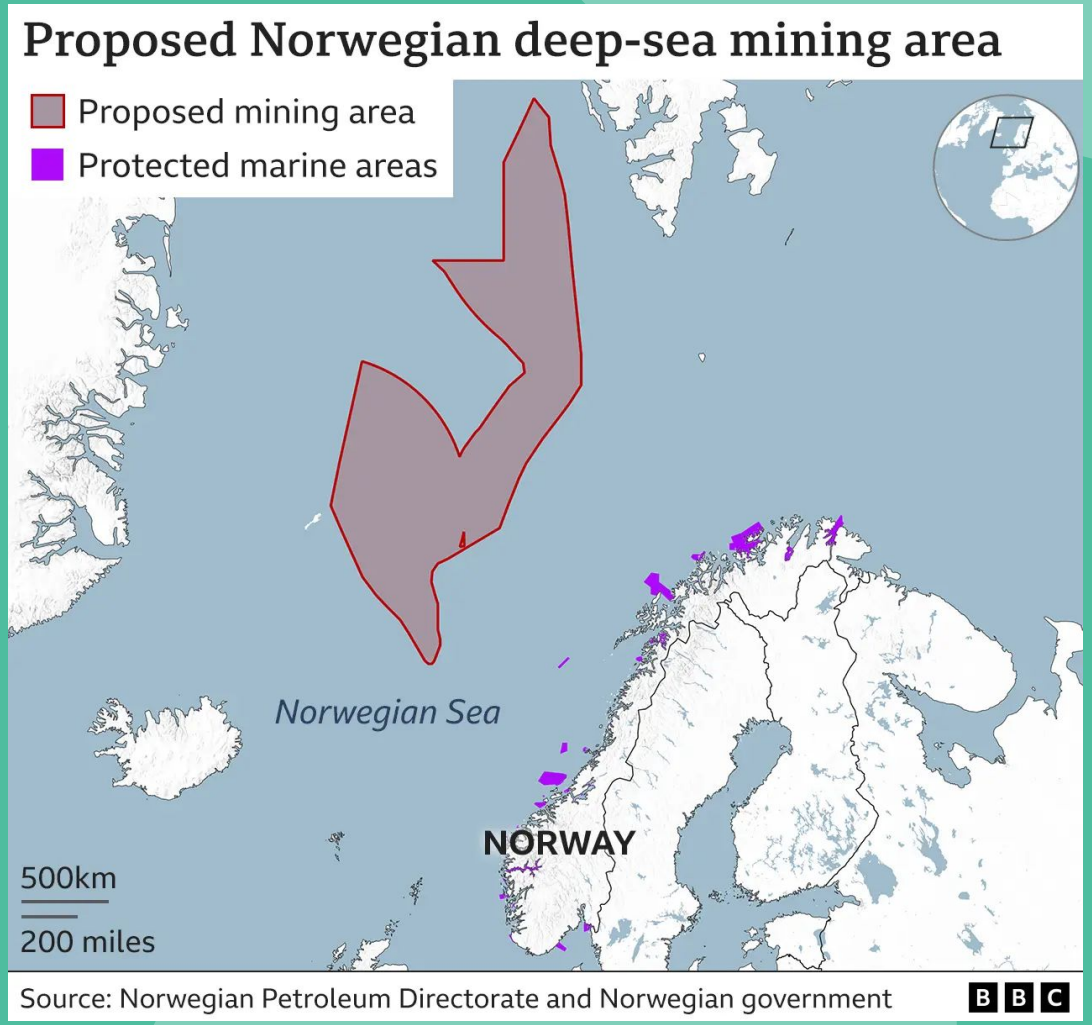


04 Solution 3

Establishing No-Mining Zones to Protect Key Ecosystems



- The creation of no-mining zones
  - Protecting critical ecosystems
  - Allowing operation in areas with lower environmental sensitivity
- Involving local communities in the consultation process
- Actions involved in creation of no-mining zones
  - Marine Protected Areas (MPAs)
  - Leverage existing research and mapping tools to quickly identify regions that require protection
  - By using scientific assessments of biodiversity hotspots



https://www.bbc.com/news/science-environment-67893808

Factors Involved in Implementation:

1. Scientific Research and Mapping
2. Legal Frameworks
3. Community Engagement

Widespread Effects:

1. Biodiversity Conservation
2. Global Environmental Benefits

05

Plan of Action

Risks and Issues

1. Environmental Risks
2. Social and Political Implications
3. Technological and Economic Risks
4. Political and Regulatory Hurdles

Contextual Factors

1. Global Market Demand
2. Climate Change Commitments

Mitigation Strategies

1. Environmental Monitoring and Response
2. Community Engagement and Benefit-Sharing
3. Incentivizing Technological Adoption
4. International Collaboration and Legal Frameworks

Implementation Timeline (Short-Term to Long-Term)

Year 1-3:

1. Develop a Legal Framework for Sustainable Mining Practices
2. Train Local Communities in Sustainable Mining and Technology Operations
3. Collaborate with International Scientific Bodies to Identify No-Mining Zones

Year 3-5:

1. Begin Regulated Mining in Approved Zones Using Sustainable technologies
2. Establish Ongoing Environmental Monitoring and Review Systems

Year 5-10:

1. Scale Up Sustainable Mining Operations
2. Periodically Reassess Environmental and Community Impacts, Adjusting Policies as Needed

Stakeholders Involved

- Government Agencies
- Private Sector
- Local Communities
- Environmental NGOs

Necessary Resources and Desired outcomes

Technological investments	• Sustainable Mining Technologies • Environmental Monitoring Systems • Research and Development (R&D)
Financial Capital	• Government Subsidies • Public-Private Partnerships • International Climate Funds Human Capital: • Skilled Labor Force • Environmental Experts • Technologists
Intellectual Capital	• Research Partnerships
Social Capital	• Community Engagement • Public Support

Desired Outcomes

1. Sustainable Critical Metal Extraction
2. Job Creation and Economic Growth
3. Reduction in Carbon Emissions
4. Global Leadership in Green Mining Technology

Thank You Very Much!

Does anyone have any questions?