

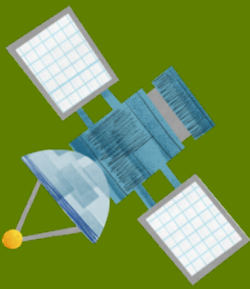
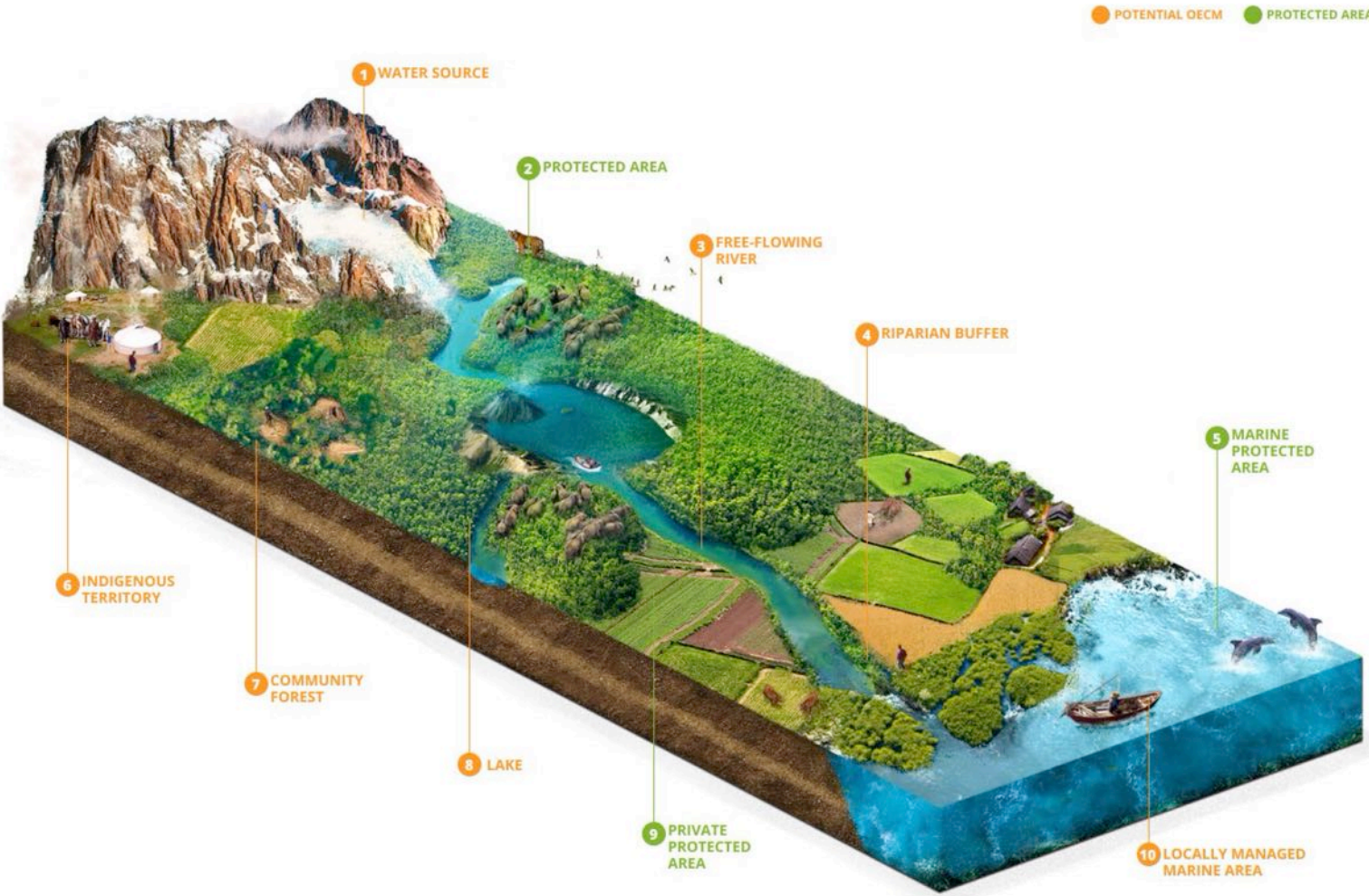
DIGITISATION AND GEOGRAPHICAL TECHNOLOGIES FOR SUSTAINABILITY: A COMPARATIVE ANALYSIS OF OECMS IN MEXICO AND ITALY

Exploring the role of digital and geographical technologies in advancing Other Effective Area-Based Conservation Measures (OECMs) in biodiversity conservation

OECMS: A FLEXIBLE APPROACH TO CONSERVATION

OECMs provide an innovative alternative to traditional Protected Areas by recognising areas where biodiversity conservation is achieved as a secondary outcome of sustainable management practices

These areas include Indigenous territories, private lands, and community areas, demonstrating the potential for diverse governance models to contribute toward the Kunming-Montreal Global Biodiversity Framework’s 30x30 target for conservation



MEANS & METHODS



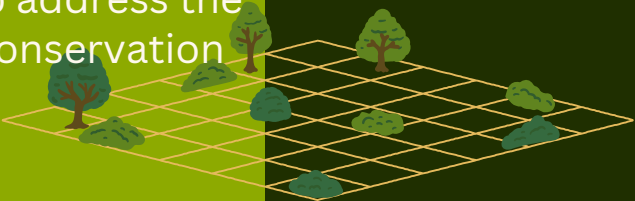
Technological Integration

Geographic Information Systems (GIS)
Remote sensing technologies
Citizen science

These technologies enhance data collection, spatial analysis, and community engagement to address the complexities of modern conservation

Comparative Analysis

Governance frameworks, ecosystem focus, and conservation approaches to evaluate the pathways of Mexico and Italy towards sustainability goals



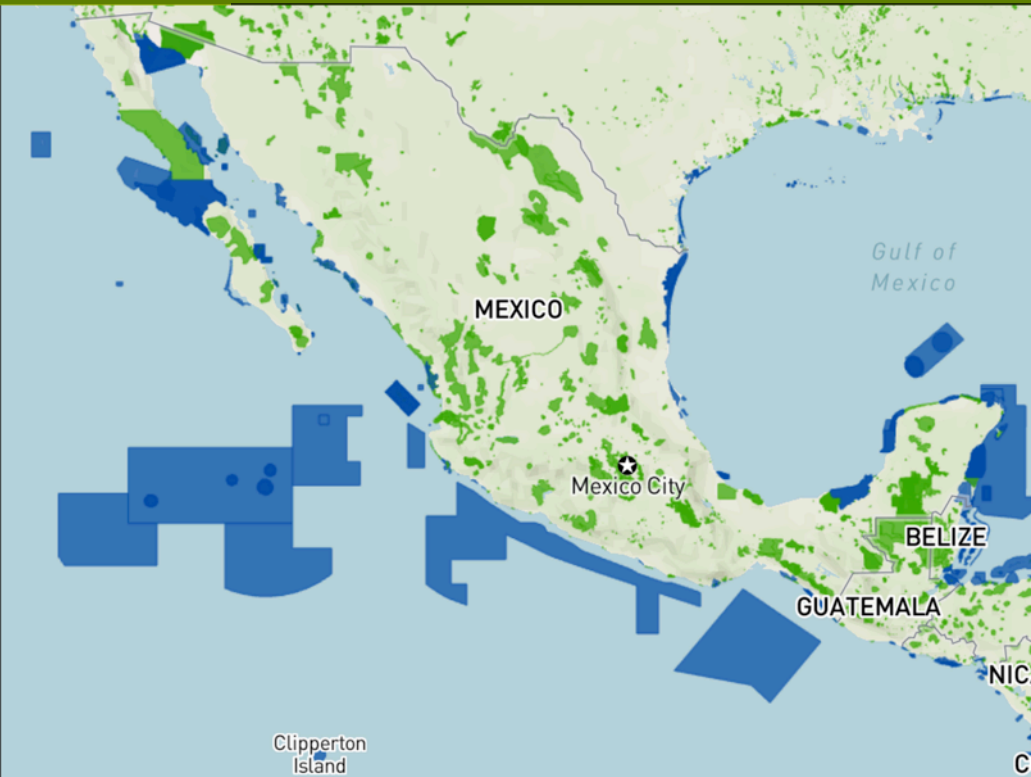
MEXICO



1425
Total Protected Areas *i*
133 With management effectiveness evaluations

- Terrestrial and Inland Waters Protected Areas
- Marine Protected Areas
- Other effective area-based conservation measures

0
Total Other effective area-based conservation measures *i*



Strengths

Advanced in community-led conservation and technological adoption

Progress in identifying OECM-eligible areas: 1,029 terrestrial and 1,320 marine zones

Use of digital platforms for monitoring

Challenges

Formal recognition and reporting of OECMs to the World Database on Protected Areas (WDPA)

Limited stakeholder engagement in some conservation efforts

ITALY



3955
Total Protected Areas *i*
26 With management effectiveness evaluations

- Terrestrial and Inland Waters Protected Areas
- Marine Protected Areas
- Other effective area-based conservation measures

0
Total Other effective area-based conservation measures *i*



Strengths

Extensive protected area network (Natura 2000 sites)

Utilisation of GIS and remote sensing in environmental monitoring and disaster risk management

Citizen science initiatives for biodiversity monitoring

Challenges

Delays in integrating OECMs into national policies

Need for updated cartography and diversified conservation governance

FINDINGS



OECMs as a Complementary Tool

Flexibility in conservation governance alongside traditional Protected Areas



Technology's Role

Enhanced spatial planning, adaptive management, and participatory engagement



Policy Implications

Mexico: Improve reporting and leverage community-based models for OECM recognition
Italy: Expand conservation frameworks and governance models

FUTURE DIRECTIONS



To fully realize the potential of OECMs, key challenges must be addressed



Policy Integration

National and international frameworks must explicitly incorporate OECMs, providing clear criteria for recognition and governance



Technological Accessibility

Bridging the digital divide is essential to ensure equitable access to tools like GIS and remote sensing



Community Engagement

Conservation strategies must prioritise inclusive governance, integrating local and Indigenous knowledge systems with technological innovations