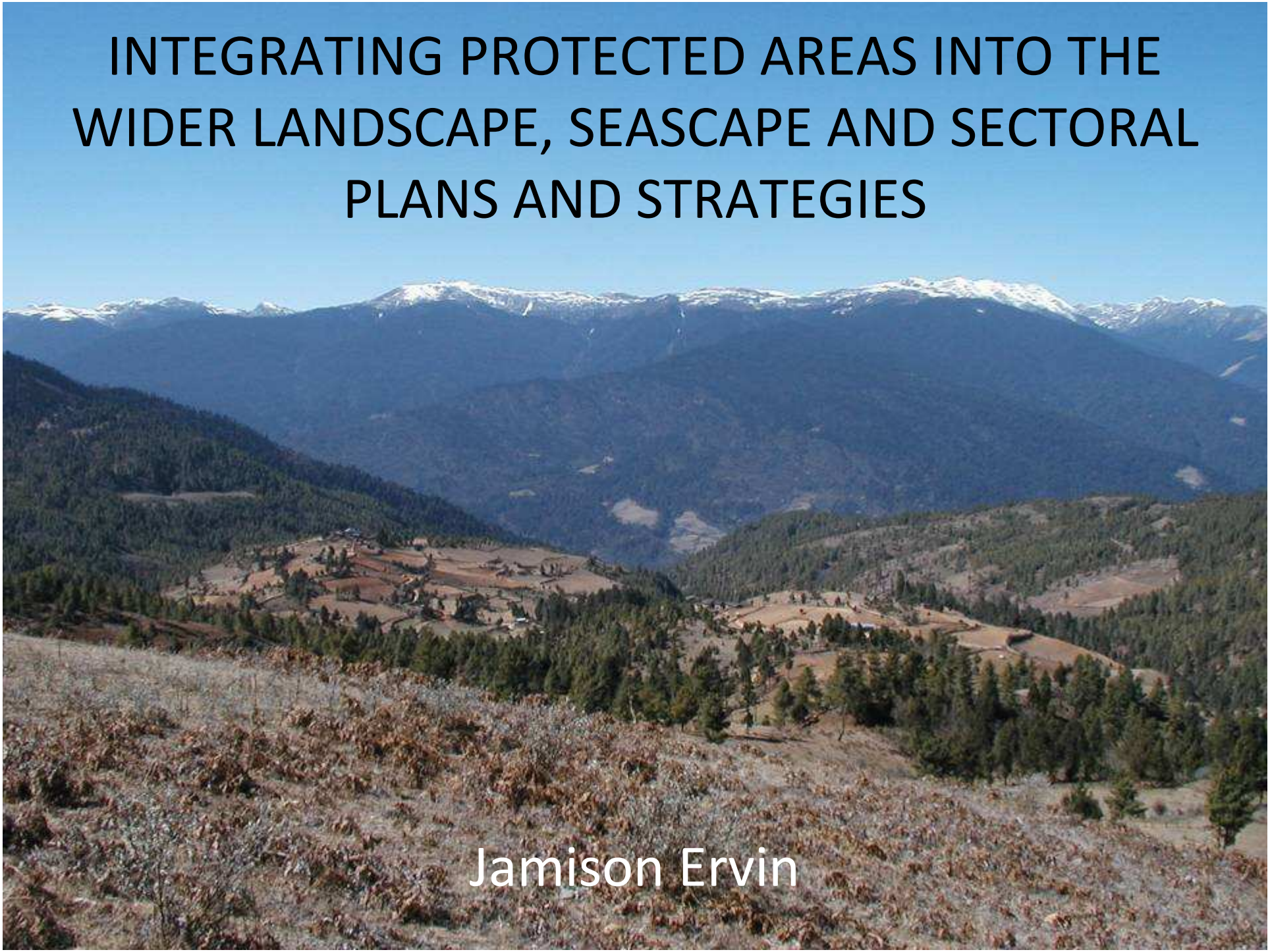
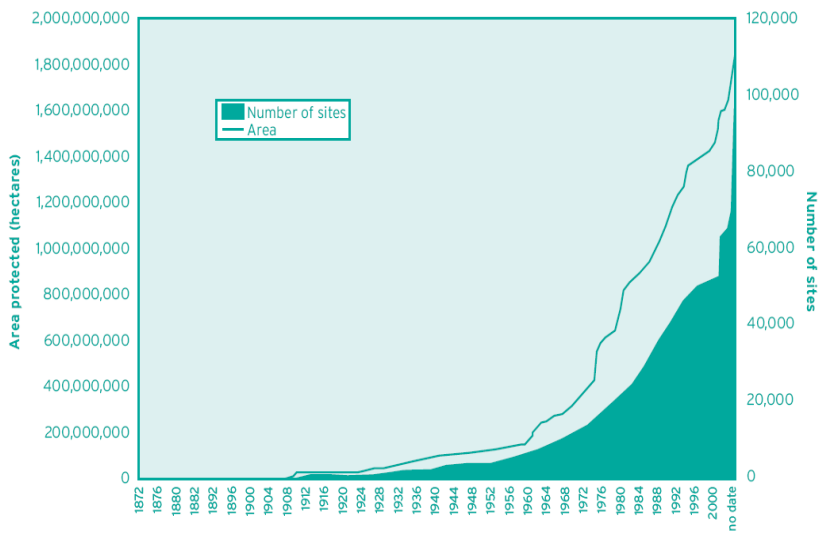
INTEGRATING PROTECTED AREAS INTO THE WIDER LANDSCAPE, SEASCAPE AND SECTORAL PLANS AND STRATEGIES



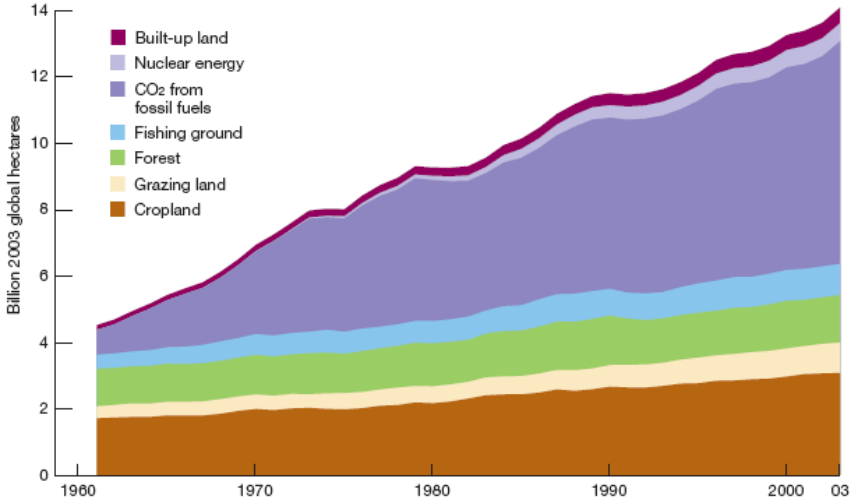
Jamison Ervin

WHY INTEGRATE PROTECTED AREAS?



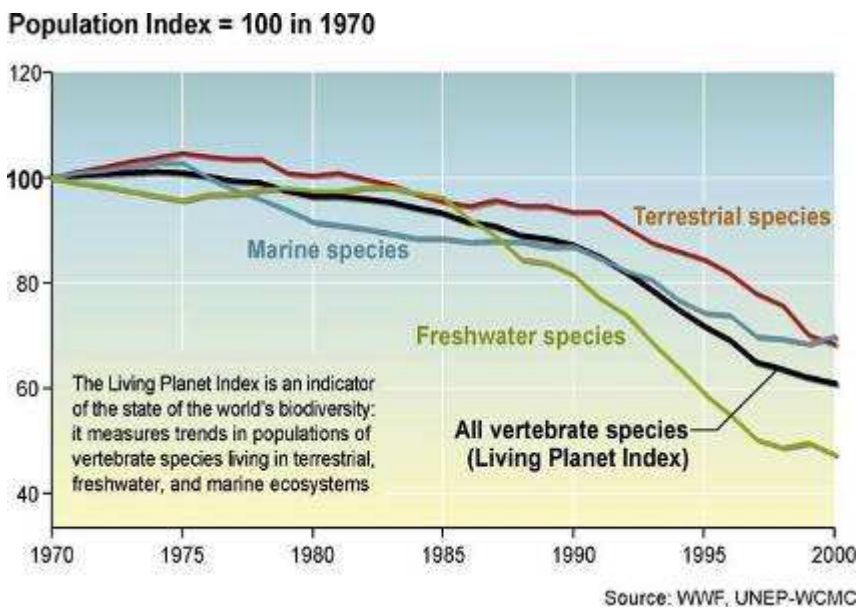
- The growth of protected areas is a huge global conservation success
- More than 13% of earth's terrestrial surface is protected

WHY INTEGRATE PROTECTED AREAS?



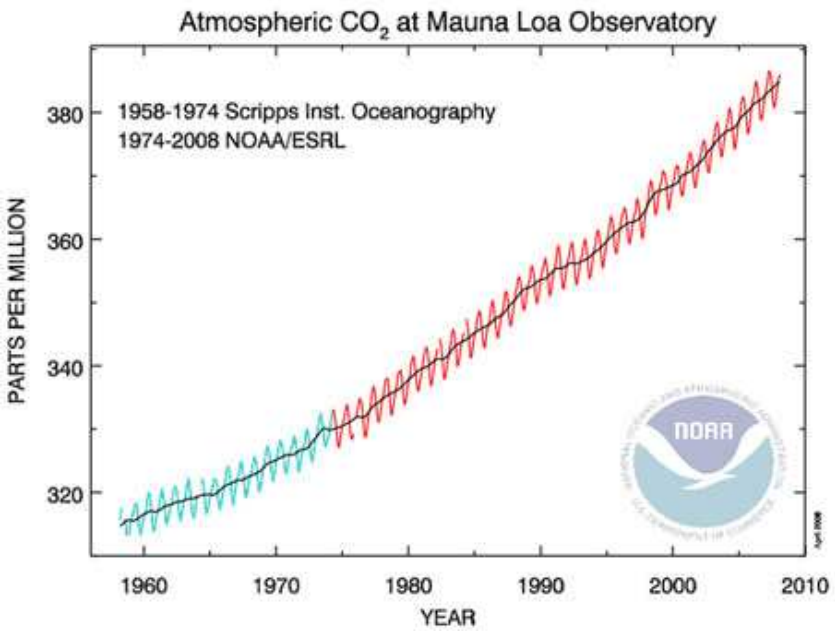
- But the impact from human activities continues unabated
- Our human footprint extends over a huge percentage of the earth

WHY INTEGRATE PROTECTED AREAS?

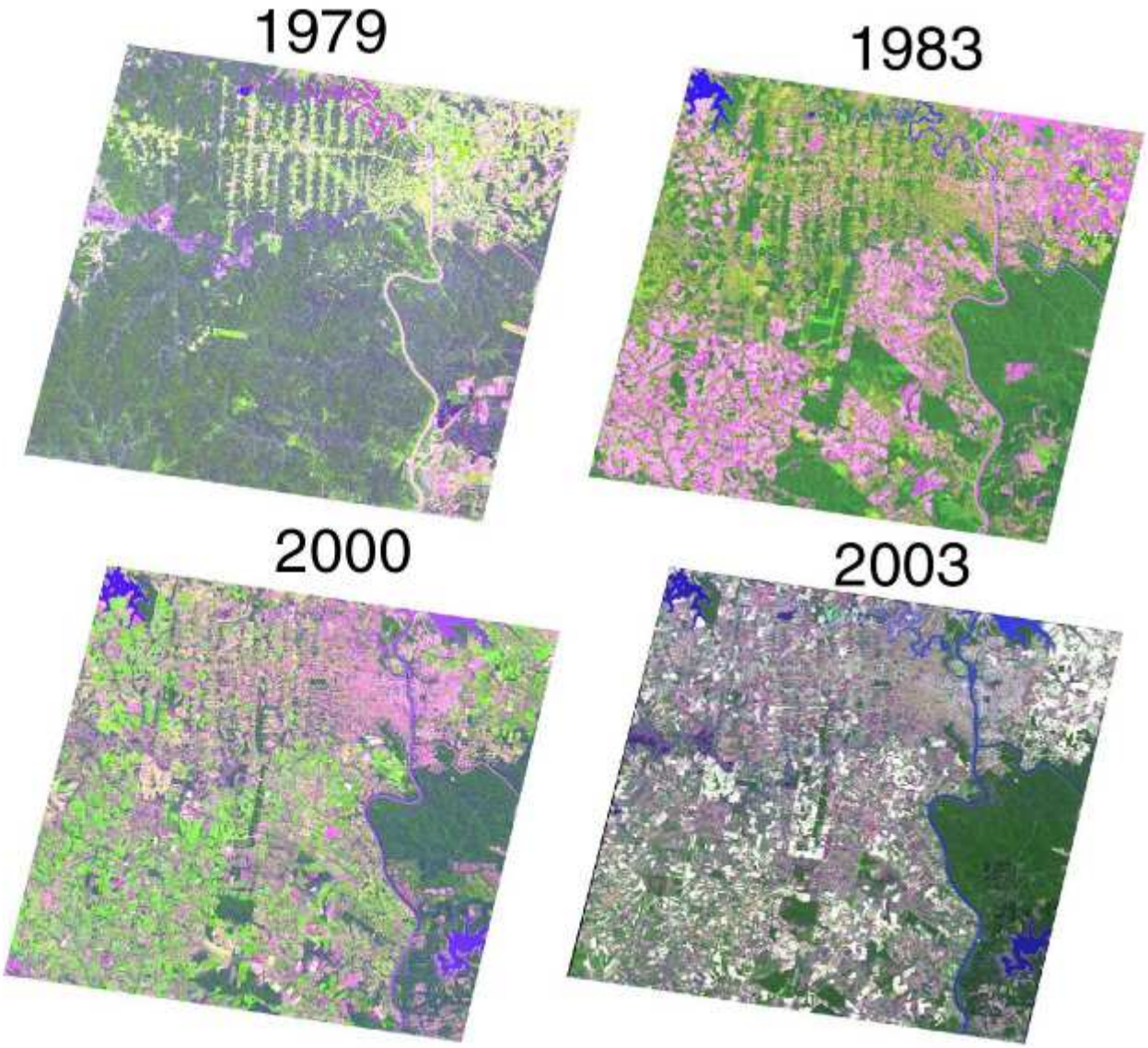


- Despite the dramatic increase in protected areas, human impact **outside** of protected areas has led to unprecedented species declines

WHY INTEGRATE PROTECTED AREAS?



- At the same time, increased CO^2 levels means climate change is having, and will continue to have, increasingly negative impacts on biodiversity


1979
1983
2000
2003

WHY INTEGRATE PROTECTED AREAS?

Because protected areas alone will not be enough to conserve biodiversity into the future

BENEFITS OF PA INTEGRATION

- Help conserve species
- Help in climate change adaptation and resilience
- Manage ecological processes over large scales
- Help secure ecosystem services
- Tackle drivers and root causes of change
- Strengthen relationships with other sectors
- Build wider support for protected areas

CBD POWPA TARGET 1.2

Goal: To integrate protected areas into broader land- and seascapes and sectors so as to maintain ecological structure and function

Target: By 2015, all protected areas and protected area systems are integrated into the wider land- and seascape, and relevant sectors, by applying the ecosystem approach and taking into account ecological connectivity and the concept, where appropriate, of ecological networks.

Suggested activities of the Parties

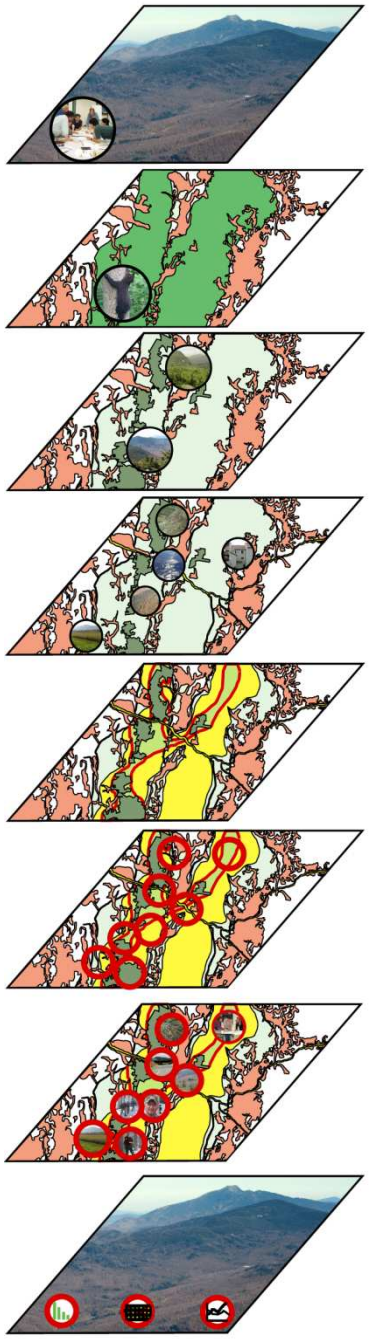
1.2.1. Evaluate national and sub-national experiences and **lessons learned**
1.2.2. Identify and implement **practical policy integration steps**
1.2.3. Establish and manage ecological **networks**, **corridors** and/or **buffer zones**
1.2.4. Develop tools of ecological connectivity, such as **ecological corridors,**
1.2.5.Rehabilitate and **restore** habitats and degraded ecosystems

WHAT IS PA INTEGRATION?

Corridors and connectivity

Policies and sectoral practices

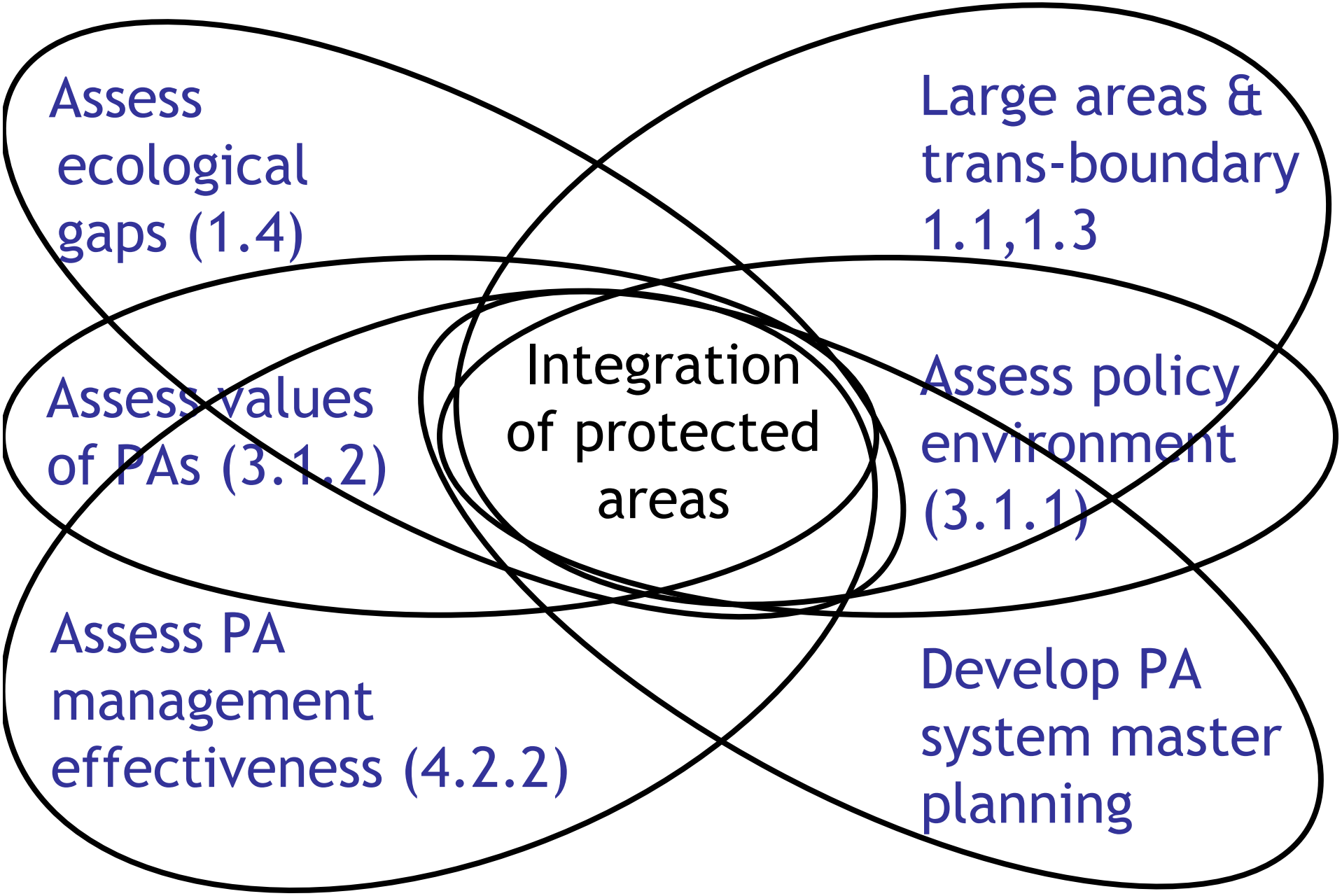
BACKGROUND



STEPS IN PROTECTED AREA INTEGRATION

1. Getting started
2. Assessing the broader context
   a) Ecological
   b) Protection and conservation
   c) Economic and socio-cultural
   d) Policy and sectoral
   e) Putting it all together
3. Developing strategies and actions
4. Implementing strategies
5. Monitoring and adapting

RELATIONSHIP WITH OTHER PROCESSES



STEP 1: GETTING STARTED

Forming a core group

- FONAFIFO: Fondo nacional de financiamiento forestal
- COBODES: Proyecto de Conservación del Bosque y Desarrollo Sostenible
- SINAC: Sistema Nacional de Áreas de Conservación
- INBio: Instituto Nacional de la biodiversidad
- The Nature Conservancy (TNC)
- Conservation International
- CATIE: Central Agronómico Tropical de Investigación y Enseñanza
- SGP: Programa de Pequeñas Donaciones
- Minaet: Ministerio del Ambiente, Energía y Telecomunicaciones

Core skills and knowledge needed:

- Land use planning
- Natural resource issues
- Conservation tools and methods
- Biological trends and patterns
- Economic and business trends
- Political dynamics
- Social and cultural aspects
- Strategic planning
- Communication

Clarifying the mission:

- Summarizes what the initiative is about
- Describes the purpose of the initiative
- Describes the scope and scale of the initiative

Clarifying the mission:

"Our goal is to maintain and sustain this region in a way that allows wilderness, wildlife, native plants, and natural processes to function as an interconnected web of life. This is as much for the benefit of future generations as it is for the land, the wildlife, and the people currently living in the region."

Yellowstone to Yukon Conservation Initiative, 2008.

Developing a work plan

- Identify and prioritize the many tasks
- Identify who will be responsible for which tasks
- Set timelines and indicators
- Identify costs and budget sources
- Identify how decisions will be made

DETERMINING THE SCALE

- Chittenden County Project -- 500 km^2
- Terai Arc Ecoregion Project -- 12,500 km^2
- Valdivian Corridor -- 46,000 km^2
- Lithuanian Network -- 65,000 km^2
- Mesoamerican Corridor -- 208,000 km^2
- Yellowstone to Yukon -- 1,200,000 km^2
- Coral Triangle Initiative -- 5,200,000 km^2

Forming effective partnerships – Elements of success

- A charismatic, visionary leader
- One or more government champions
- Clear vision and mission
- Local community support
- Agreement on work plan
- Early engagement of stakeholders
- Cohesive, integrated strategies
- Written MOU

Forming effective partnerships – a memorandum of understanding

- Statement of purpose
- List of parties
- Main activities
- Timeline and termination
- Copyright and ownership
- Use of logo and name
- Dispute resolution
- Work plan

Challenges

- Creating innovative partnerships
- Deciding how to decide
- Balancing partnerships, roles and responsibilities
- Inter-agency disagreements

Enabling conditions

- Fostering a culture of civic participation
- Securing strong government commitment
- Demonstrated agency leadership

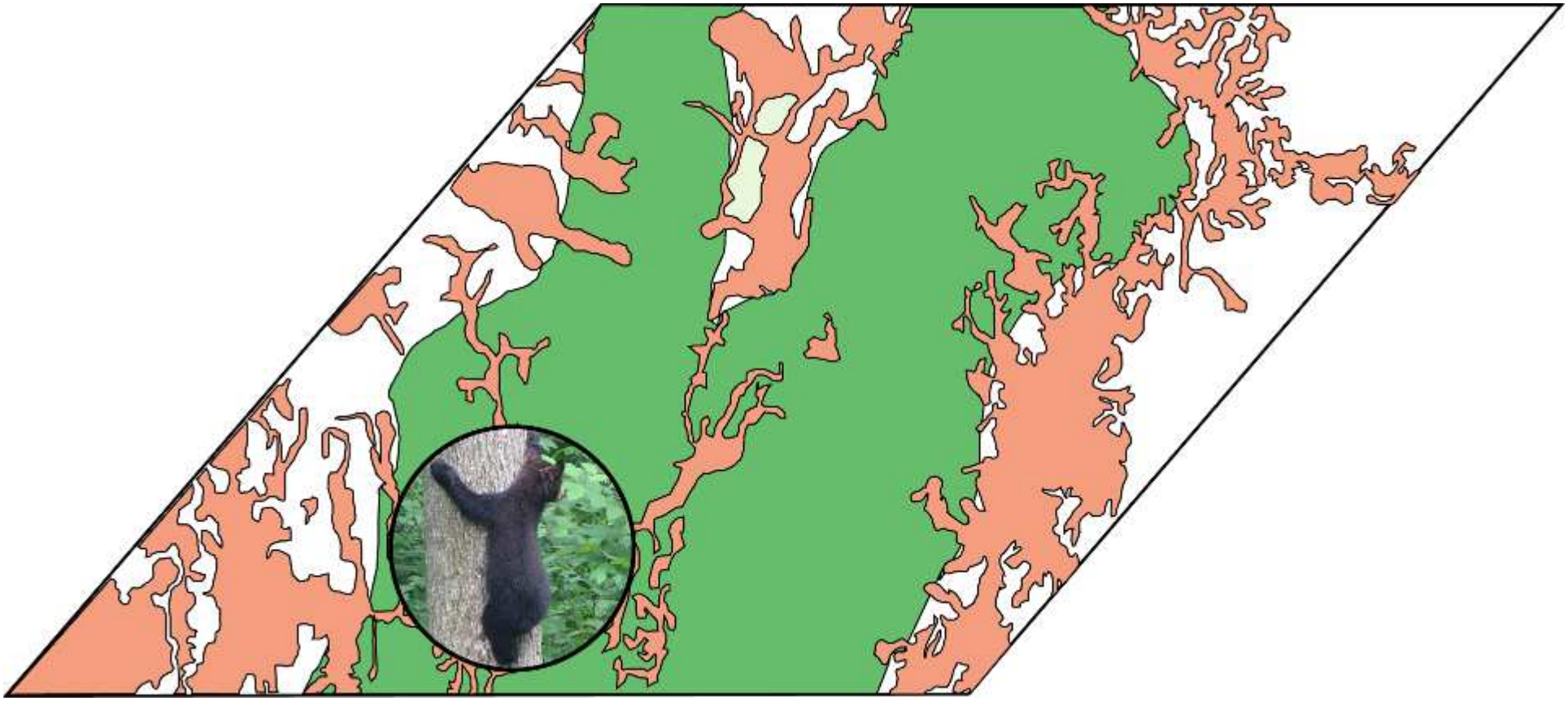
1. GETTING STARTED – Questions?

- Forming a core group
- Basic skills
- Mission statement
- Work plan and scale
- MoU/partners

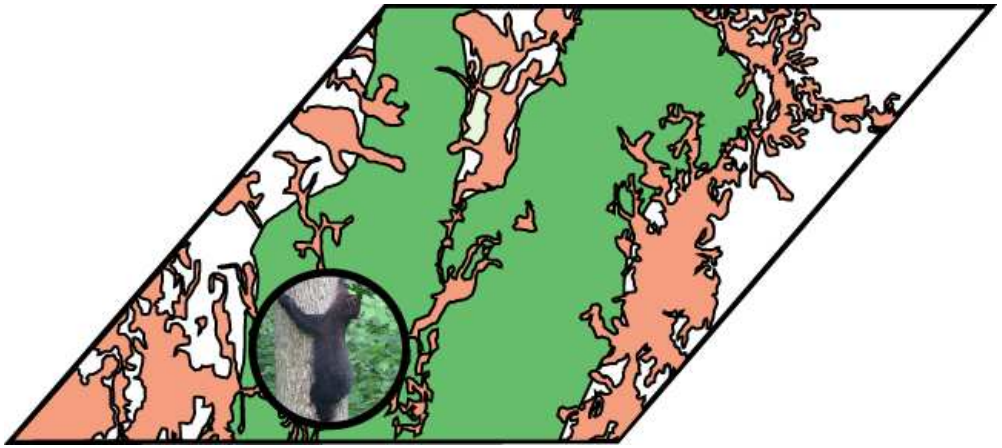
Prioritization criteria matrix

Criteria	Weight factor	Opportunity A	Opportunity B
Expected stand-alone ROI			
Do benefits address specific problem areas? (e.g., reactor product quality, catalyst consistency)			
Implementation time			
Expertise available to implement			
Ability to maintain benefits			
Initial cost			
Requires other implementations for full benefits			
Building block for other optimization opportunities			
Total scores			

STEP 2A: ASSESSING THE ECOLOGICAL CONTEXT

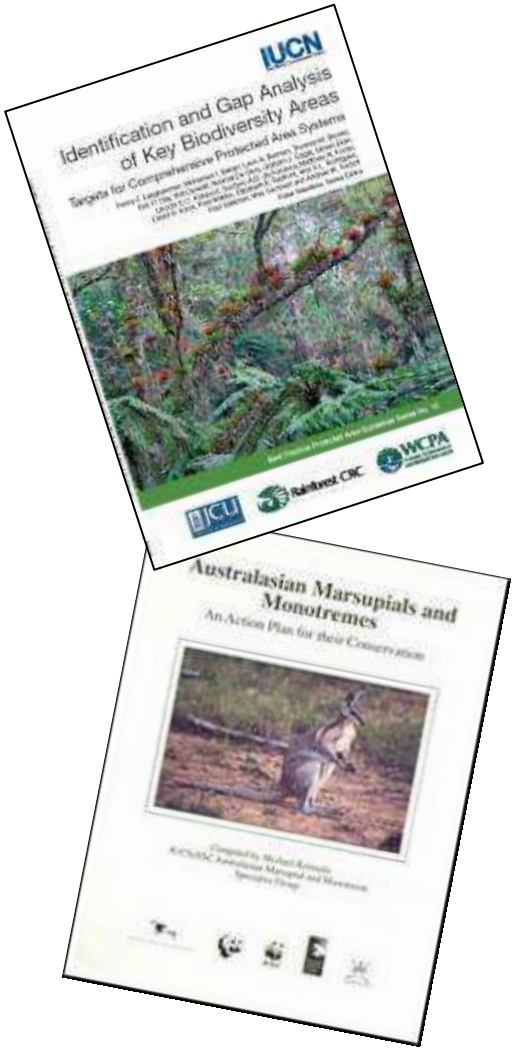


STEP 2A: ASSESSING THE ECOLOGICAL CONTEXT



- Identify focal conservation targets
- Identify connectivity goals
- Assess viability, threats, connectivity
- Optimize network
- Identify barriers

3 Examples of Approaches



Landscape species approach

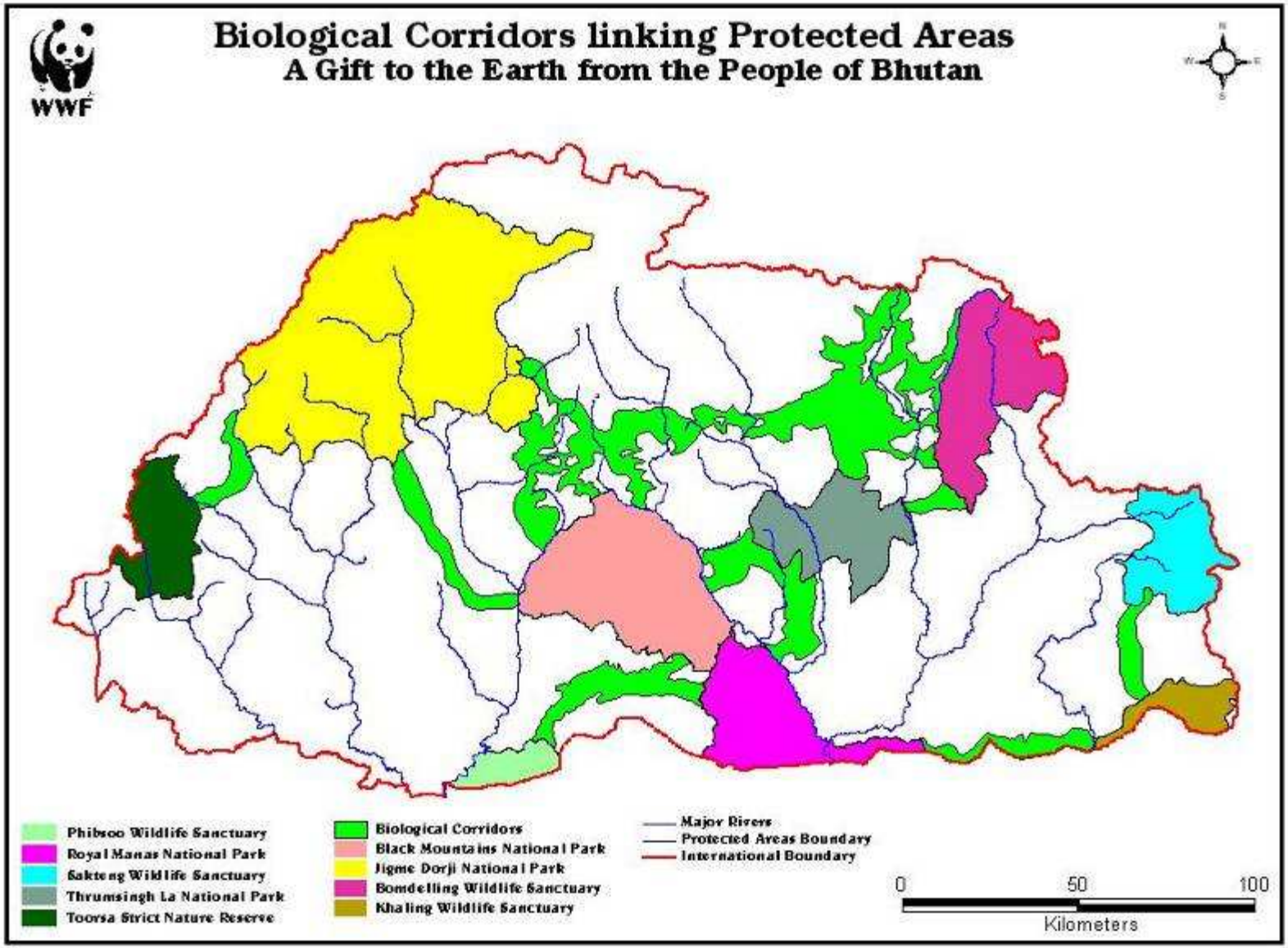
Key biodiversity area approach

Vulnerable species approach

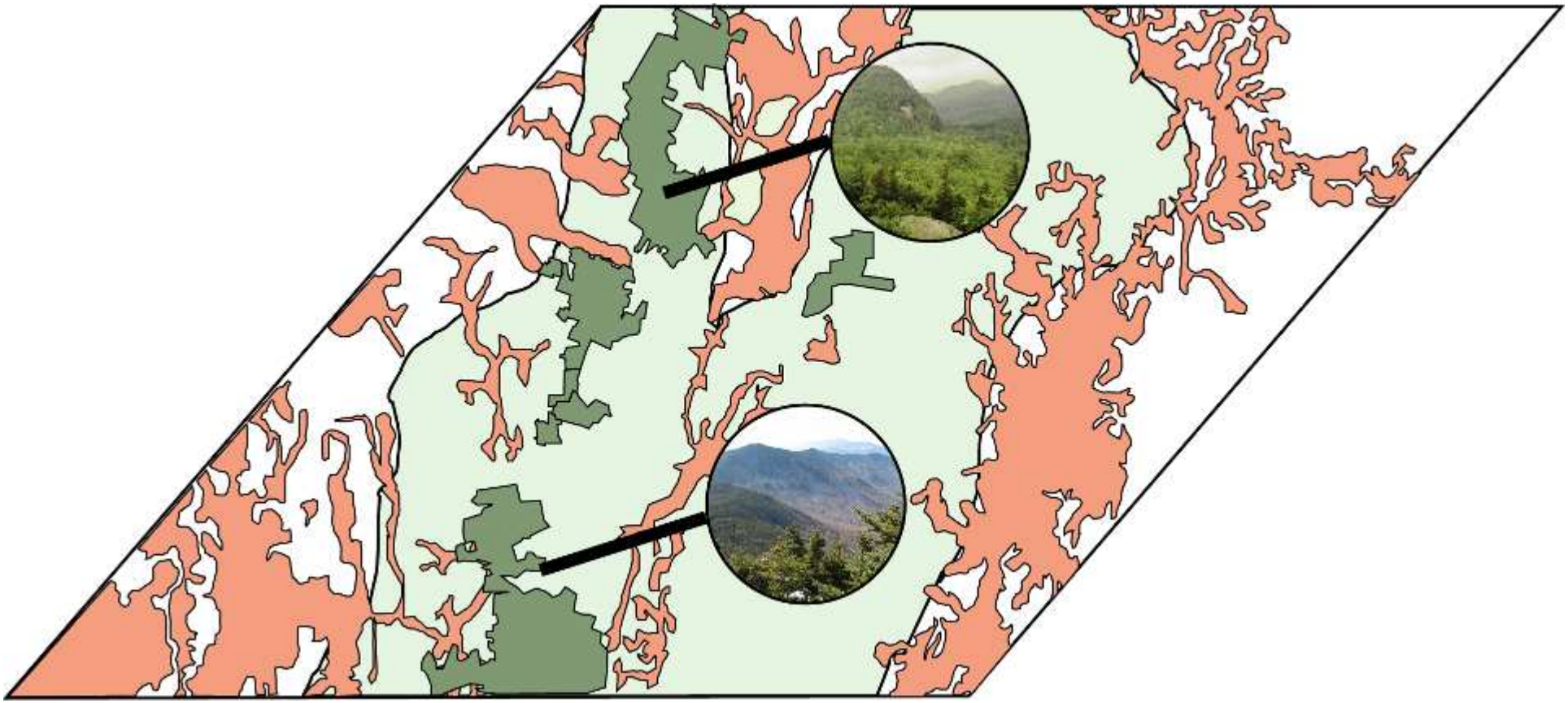
Migratory paths: from Khram Island

Identifying priorities and optimal networks

Creating corridors

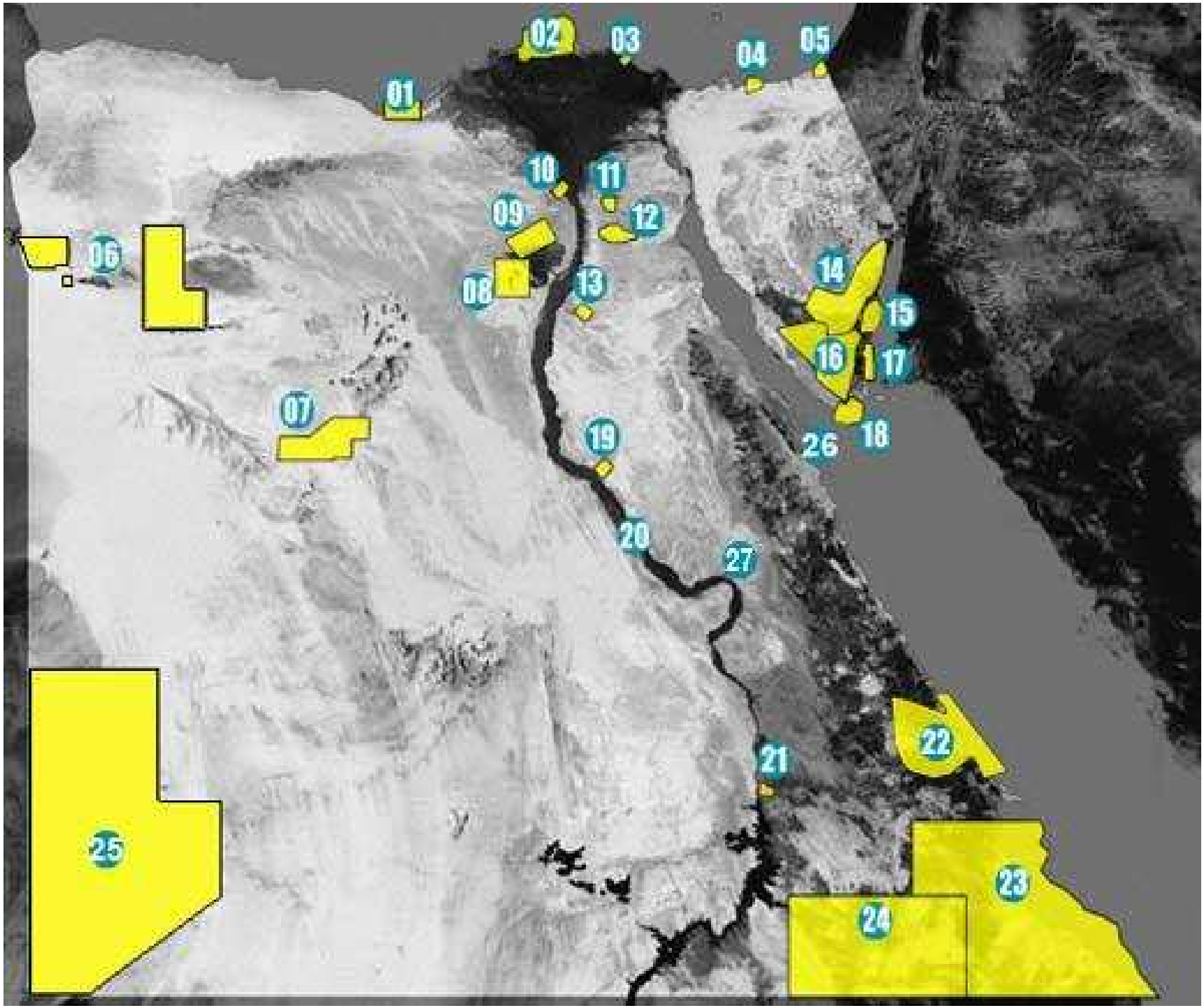


STEP 2B: ASSESSING THE PROTECTION AND CONSERVATION STATUS



STEP 2B: ASSESSING PROTECTION AND CONSERVATION STATUS

- Assess coverage, status and effectiveness of protected areas
- Assess other conserved areas
- Identify protection gaps, constraints and opportunities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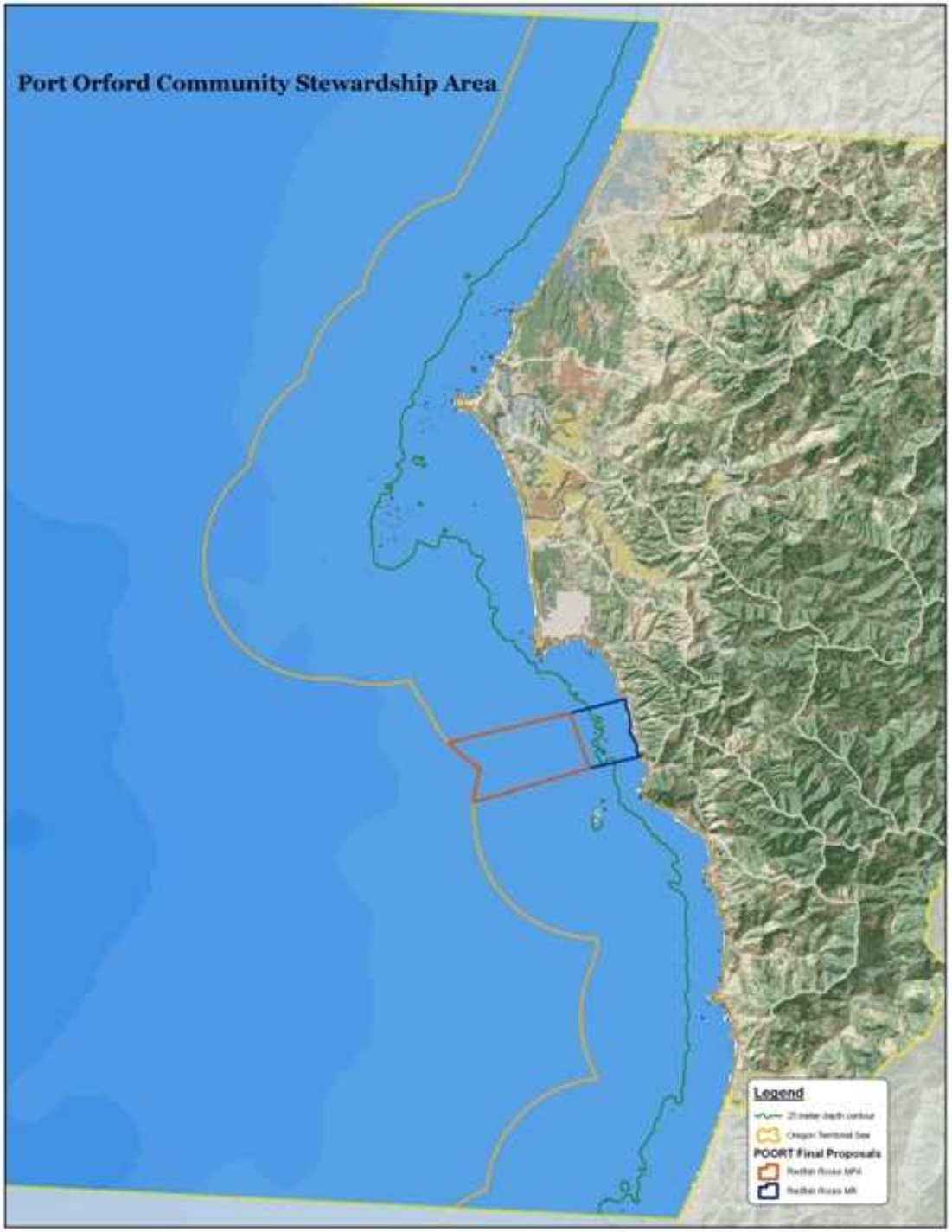
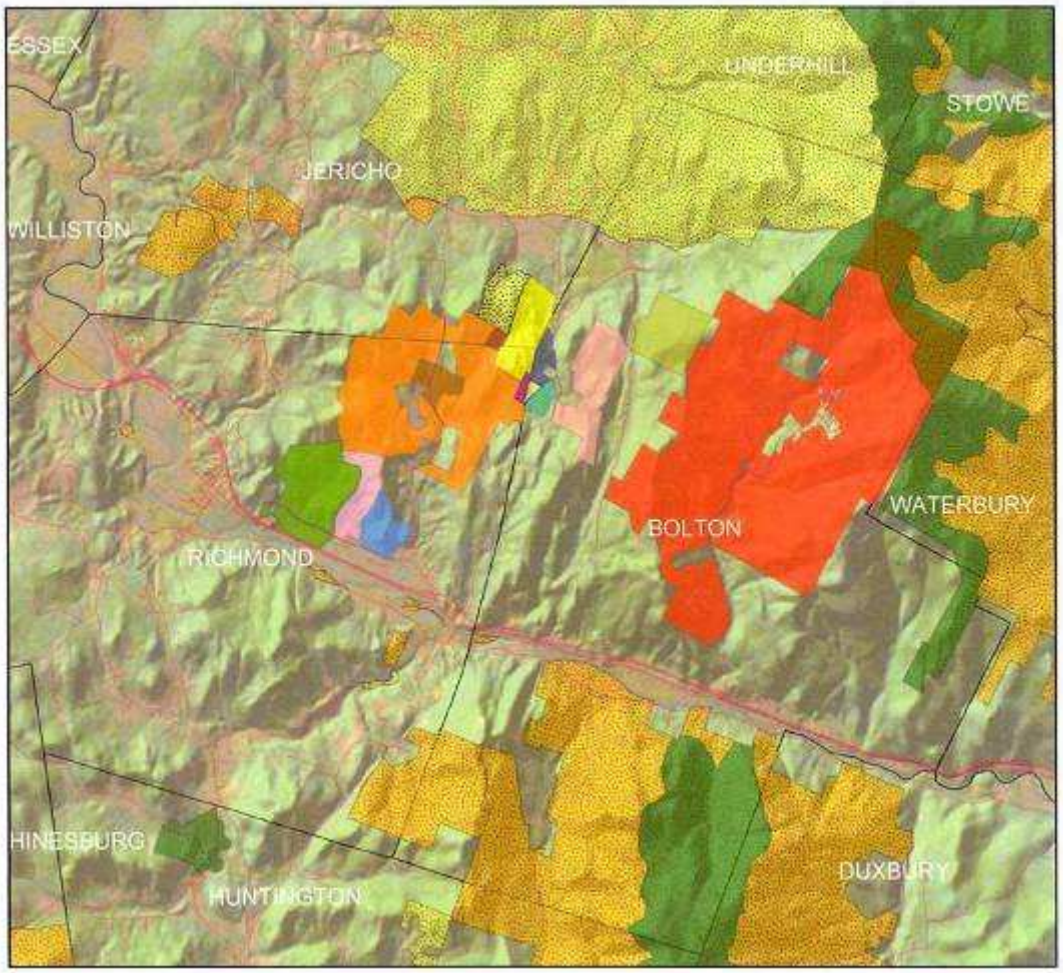

Port Orford Community Stewardship Area
Legend
POORT Final Proposals

A matrix of different protected areas



Private easements

Town forests

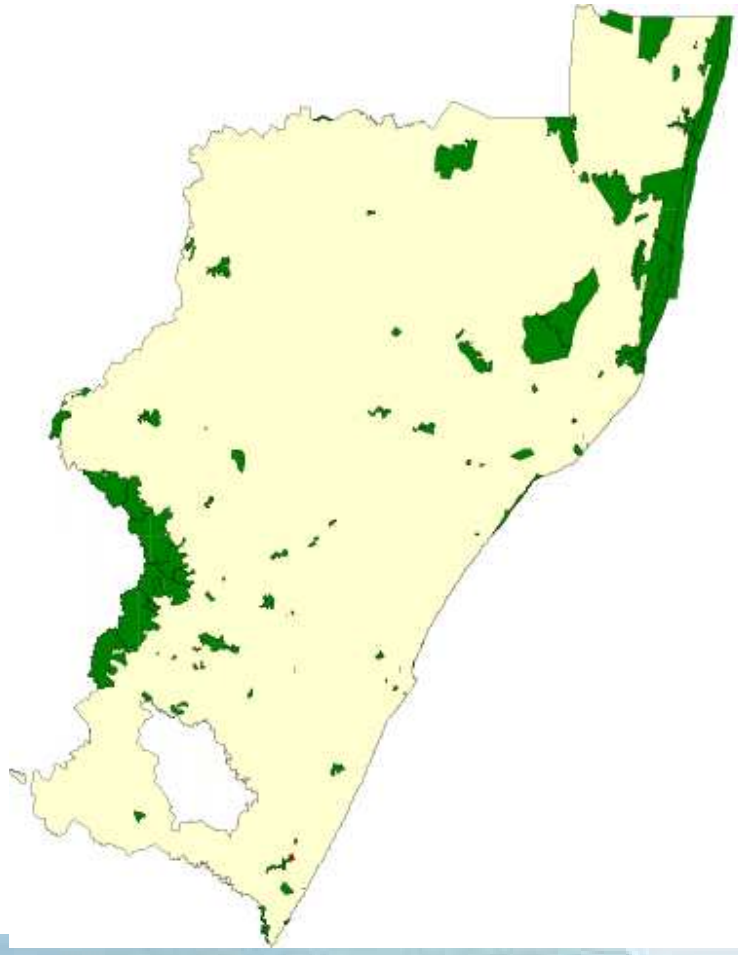
Recreation lands

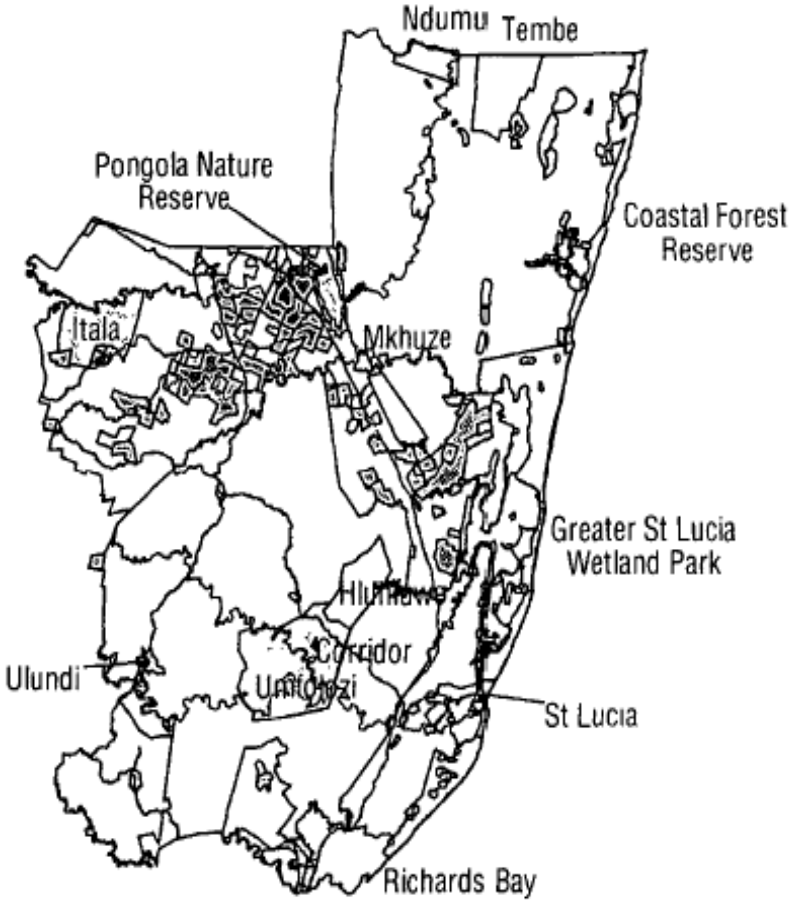
Military reserves

Private hunting reserves

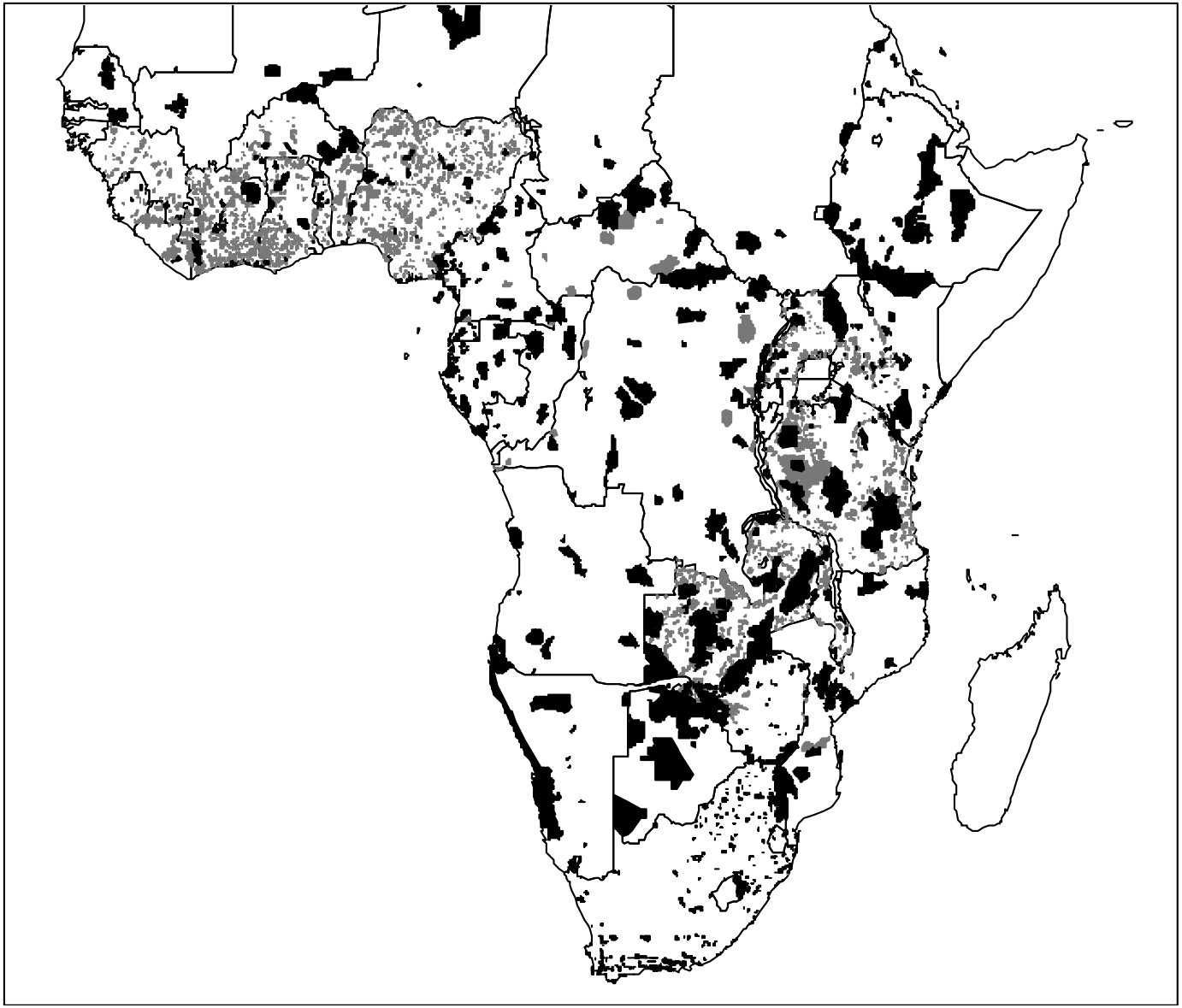
Wildlife management areas

Protected areas and other conserved areas

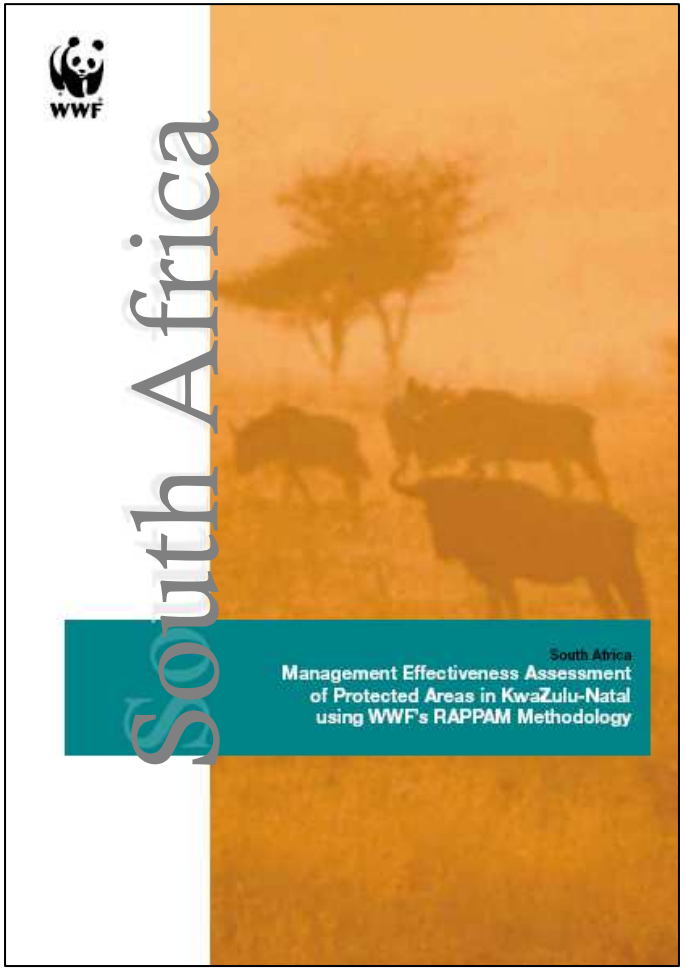




Protected areas and forest reserves

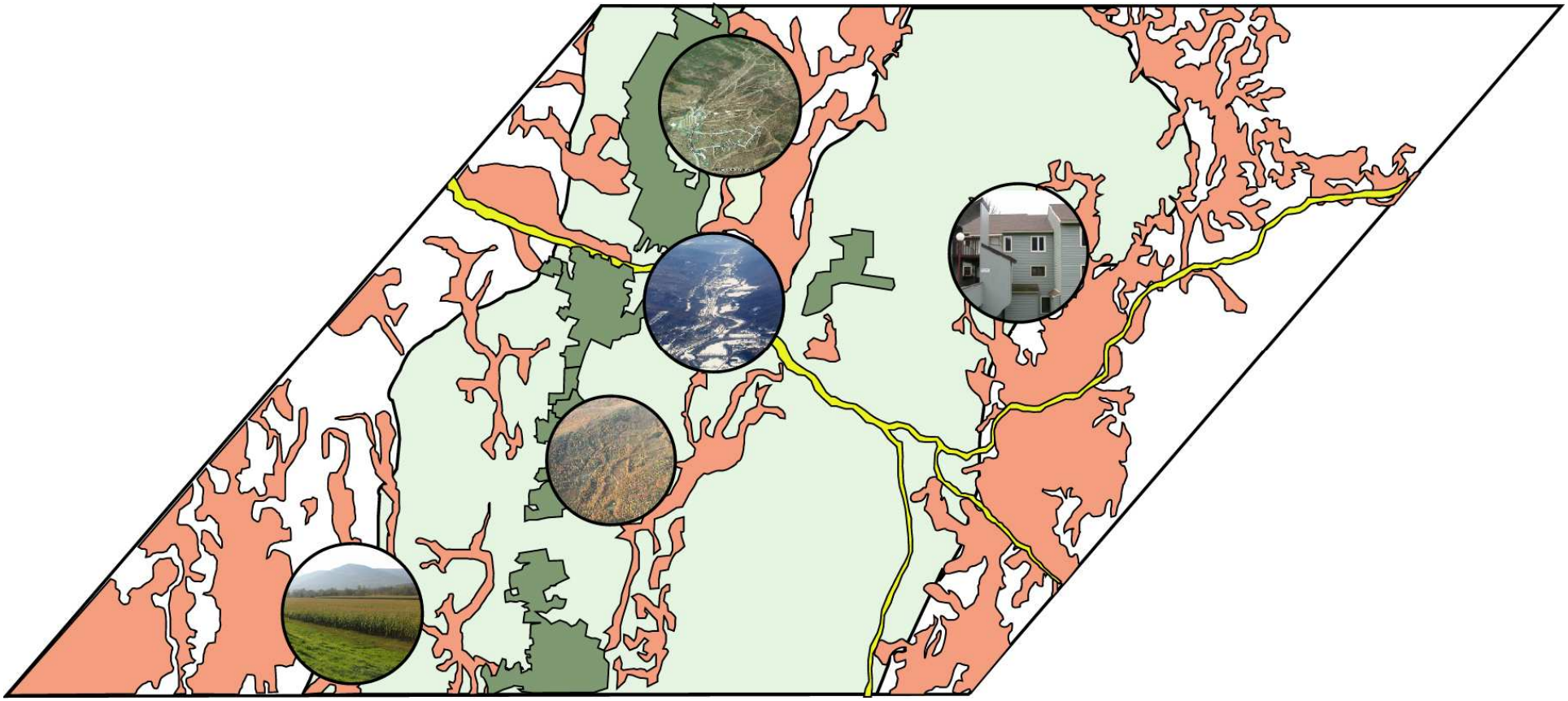


Assessing protected area management effectiveness



- How well are key connectivity areas managed?
- How ecologically intact are key connectivity areas?
- Are biodiversity corridors functioning?

STEP 2C: ASSESSING THE ECONOMIC AND SOCIO-CULTURAL CONTEXT



Assess economic and socio-cultural context

Population patterns and trends

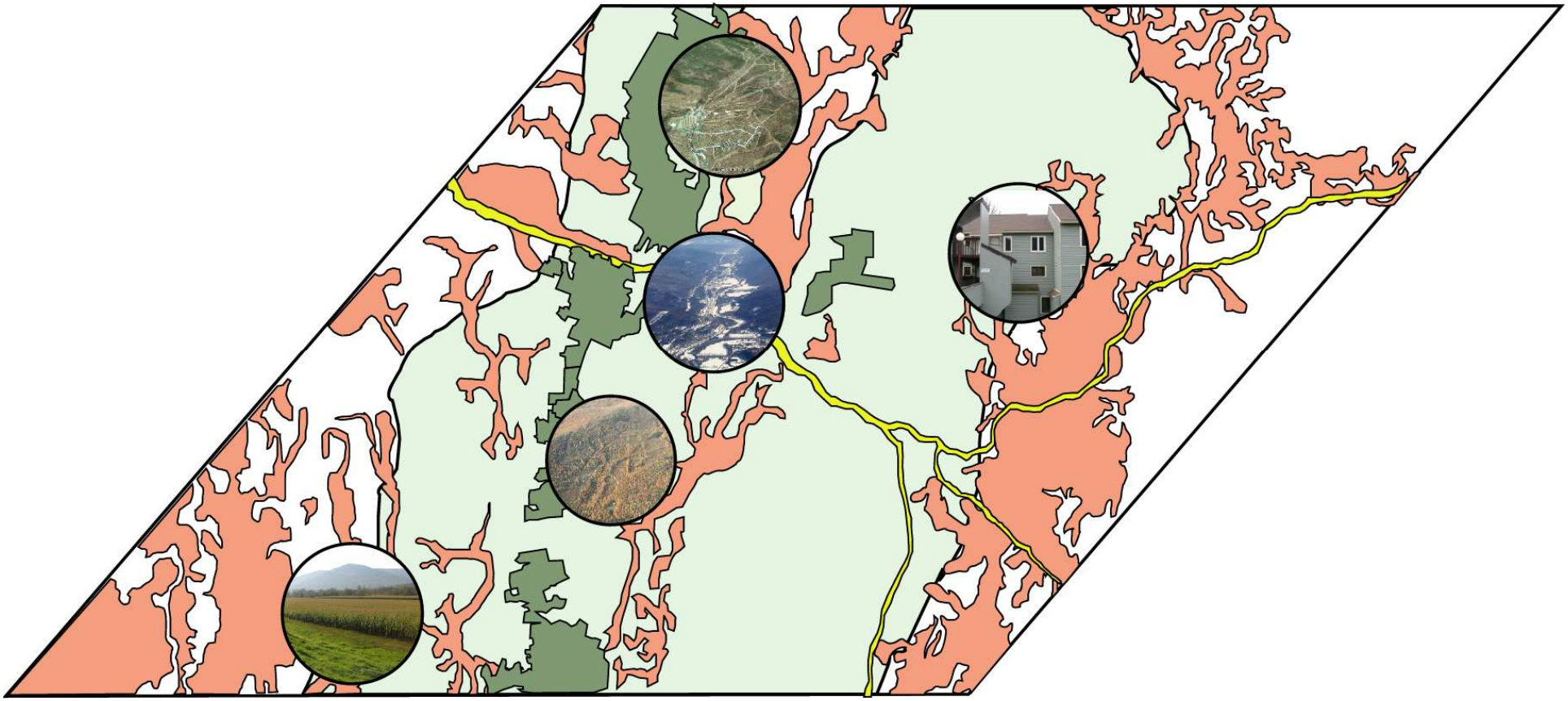
Cultural values, norms

Market constraints and opportunities

Assess economic and socio-cultural context

- Who are the main players in each industry?
- What are the future plans for resource use?
- How will land and resource prices affect opportunities?
- What are the main land tenure patterns?
- Which areas provide key ecosystem services?
- What is the size and distribution of the population? How is this likely to change?
- What are the main livelihood sources?
- What are community attitudes toward conservation?

STEP 2D: ASSESSING NATURAL RESOURCE SECTORS AND POLICIES

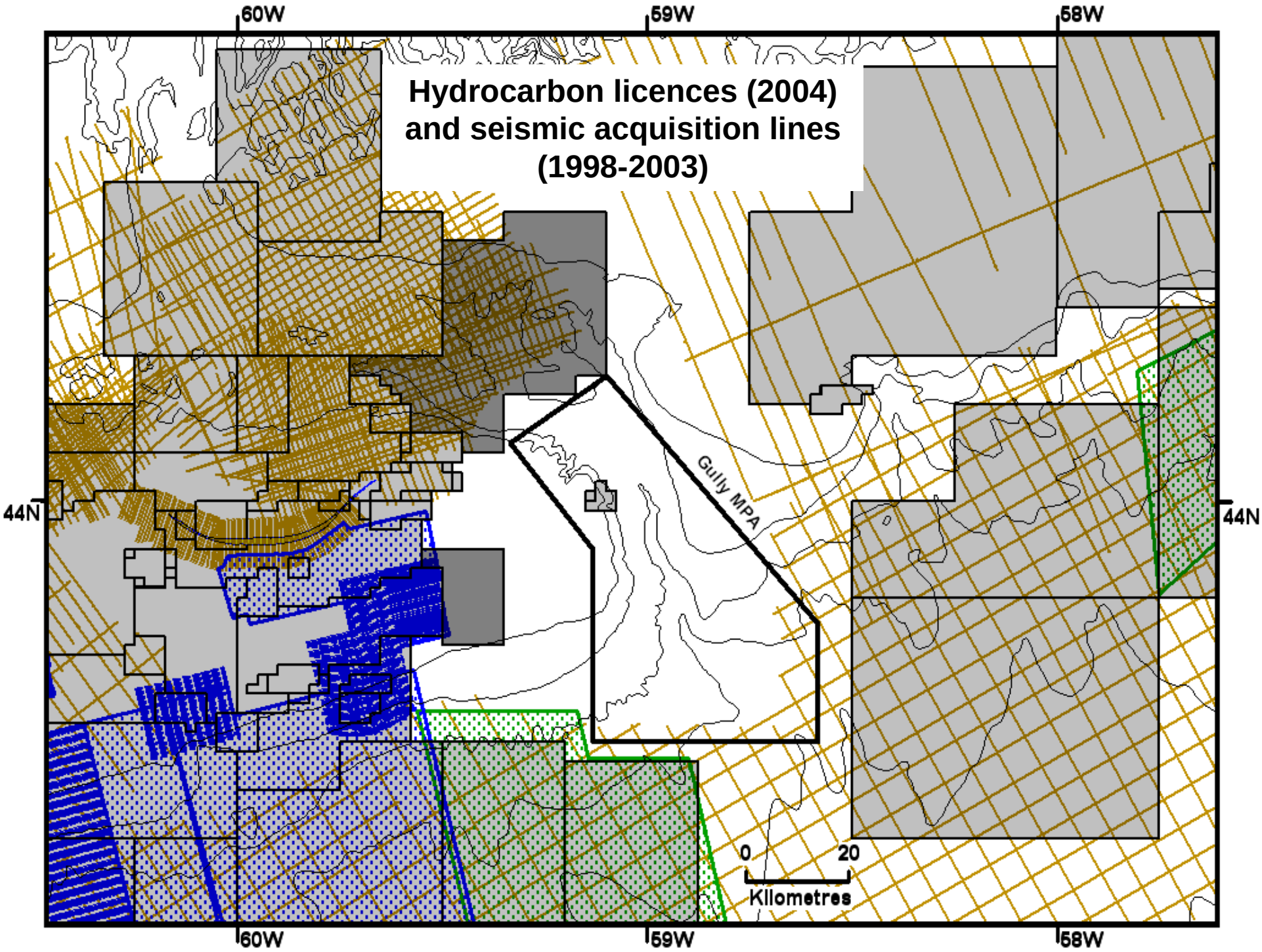


Assess natural resource sectors, policies

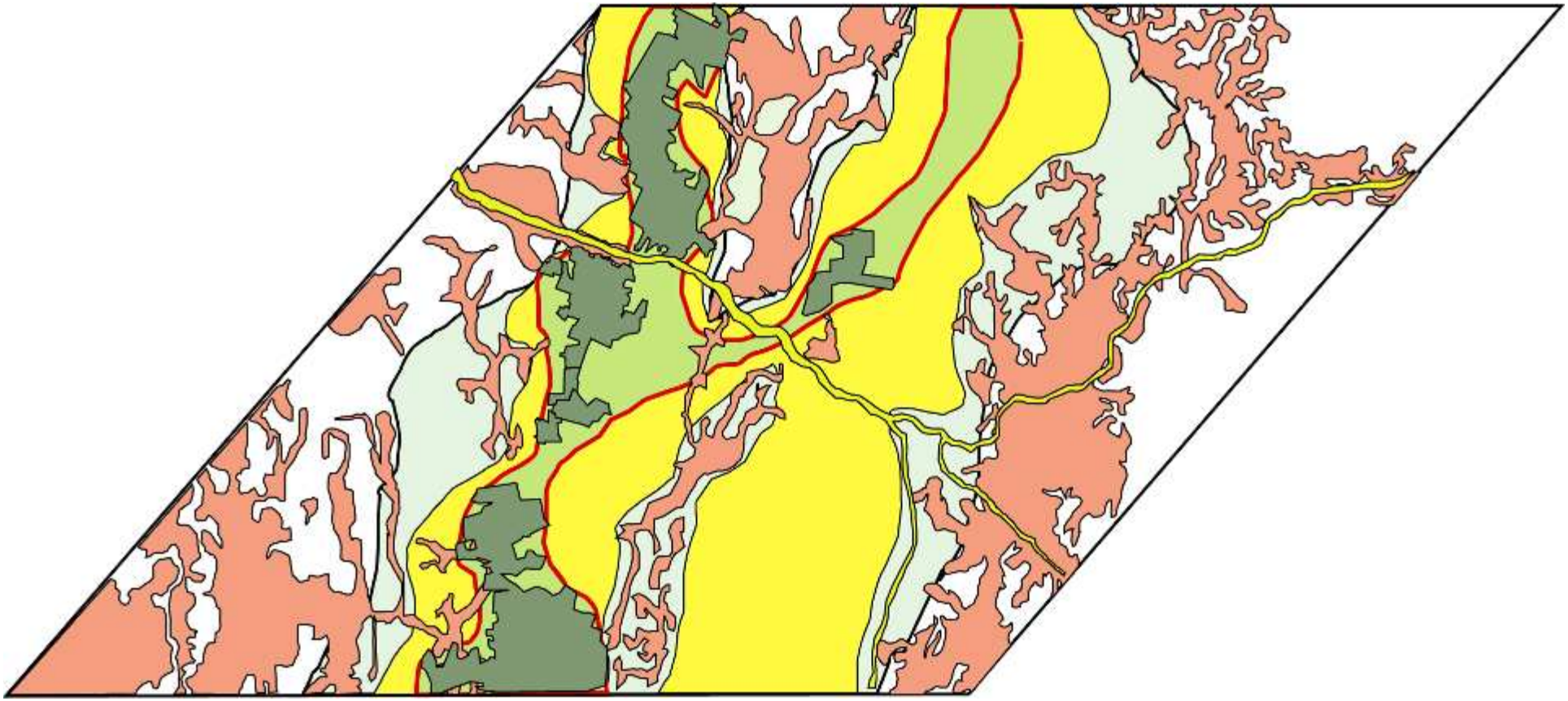
Land use planning	Agriculture	Waste management
Transportation	Grazing	Invasive species policies
Energy	Forestry	Legal environment
Tourism	Agroforestry	Climate change policies
Wildlife policies	Fisheries	Intersectoral coordination

Assessing the policy environment in The Bahamas – tourism and protected areas

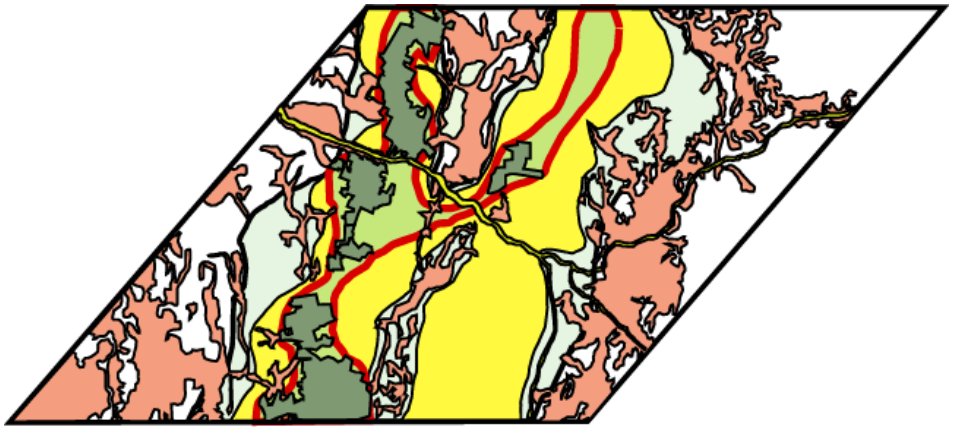
The Gully MPA
Largest submarine canyon in eastern North America


Hydrocarbon licences (2004)
and seismic acquisition lines
(1998-2003)
60W
59W
58W
44N
Gully MPA
0
20
Kilometres

STEP 2E: PUTTING IT ALL TOGETHER

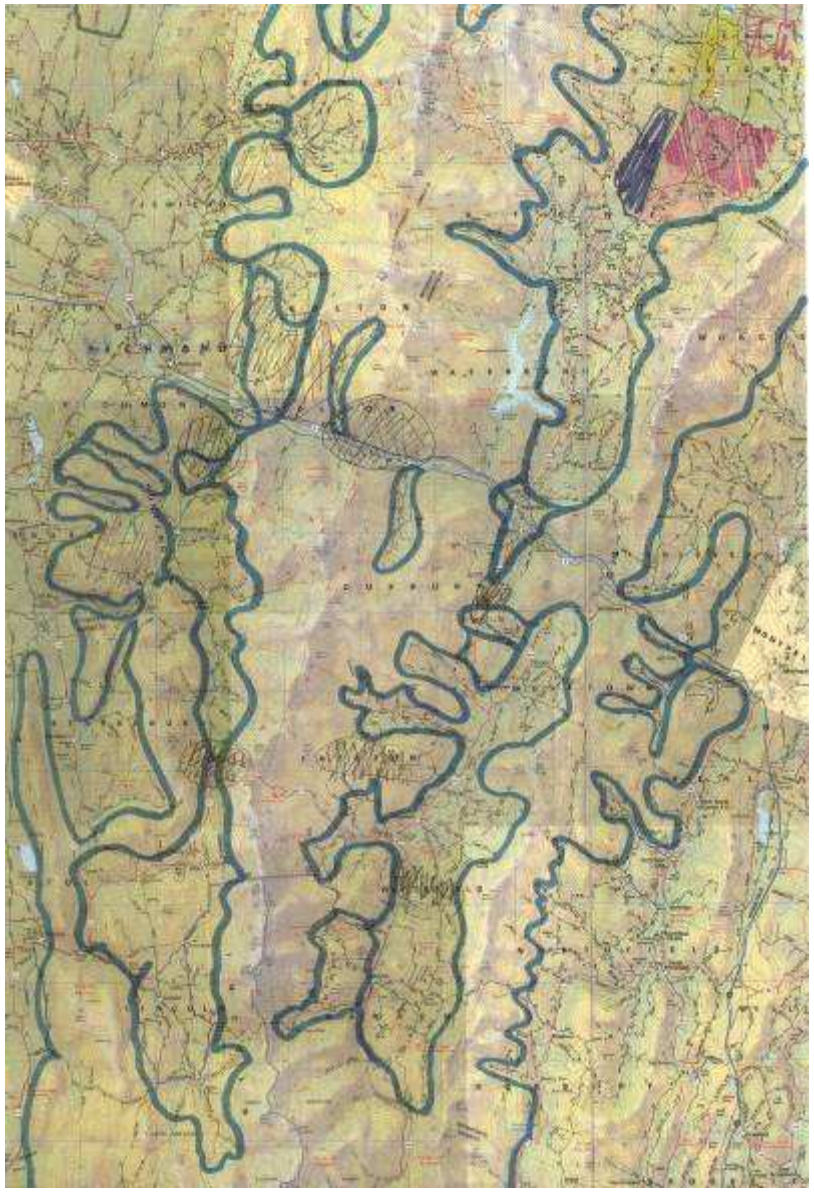


STEP 2E: PUTTING IT ALL TOGETHER



- Identify where connectivity gaps align with opportunities and constraints
- Identify where policies align with opportunities and constraints
- Design the network

STEP 2E: PUTTING IT ALL TOGETHER



COSTA RICA

MINISTERIO DEL AMBIENTE Y ENERGÍA
SISTEMA NACIONAL DE ÁREAS DE CONSERVACIÓN
PROGRAMA NACIONAL CORREDOR BIOLÓGICO

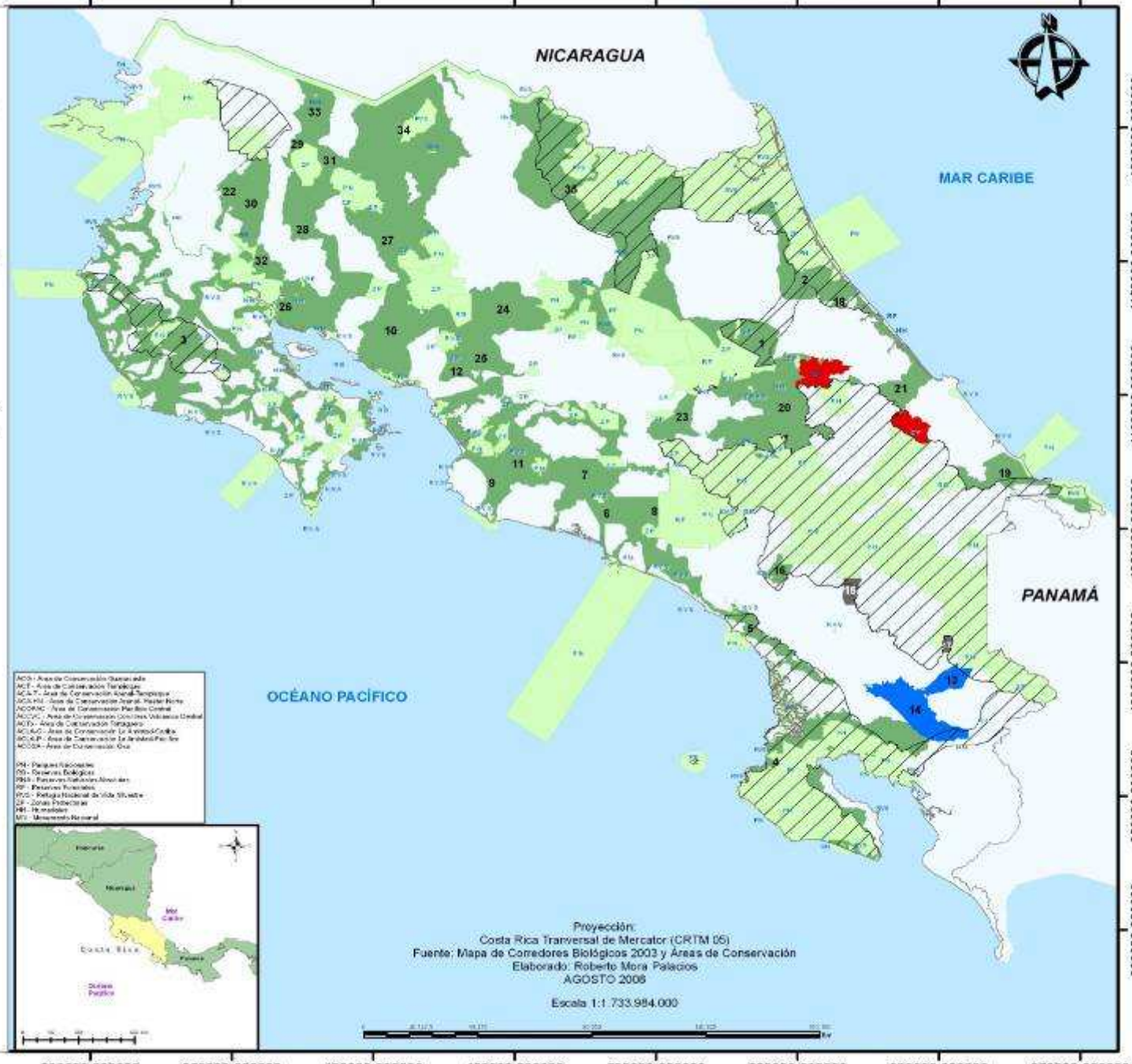
MINAET

MAPA DE GEOGRAFÍAS CANJE DEUDA CR - EUA Y CONECTIVIDAD

- UBICACION DE GEOGRAFÍAS
- AREAS SILVESTRES PROTEGIDAS
- CONECTIVIDAD GEOGRAFÍA DE TALAMANCA Y GEOGRAFÍA OSA
- PARTE DE GEOGRAFÍA TALAMANCA (CORRECCION DE DIBUJO)
- AMPLIACION DE GEOGRAFÍA TALAMANCA

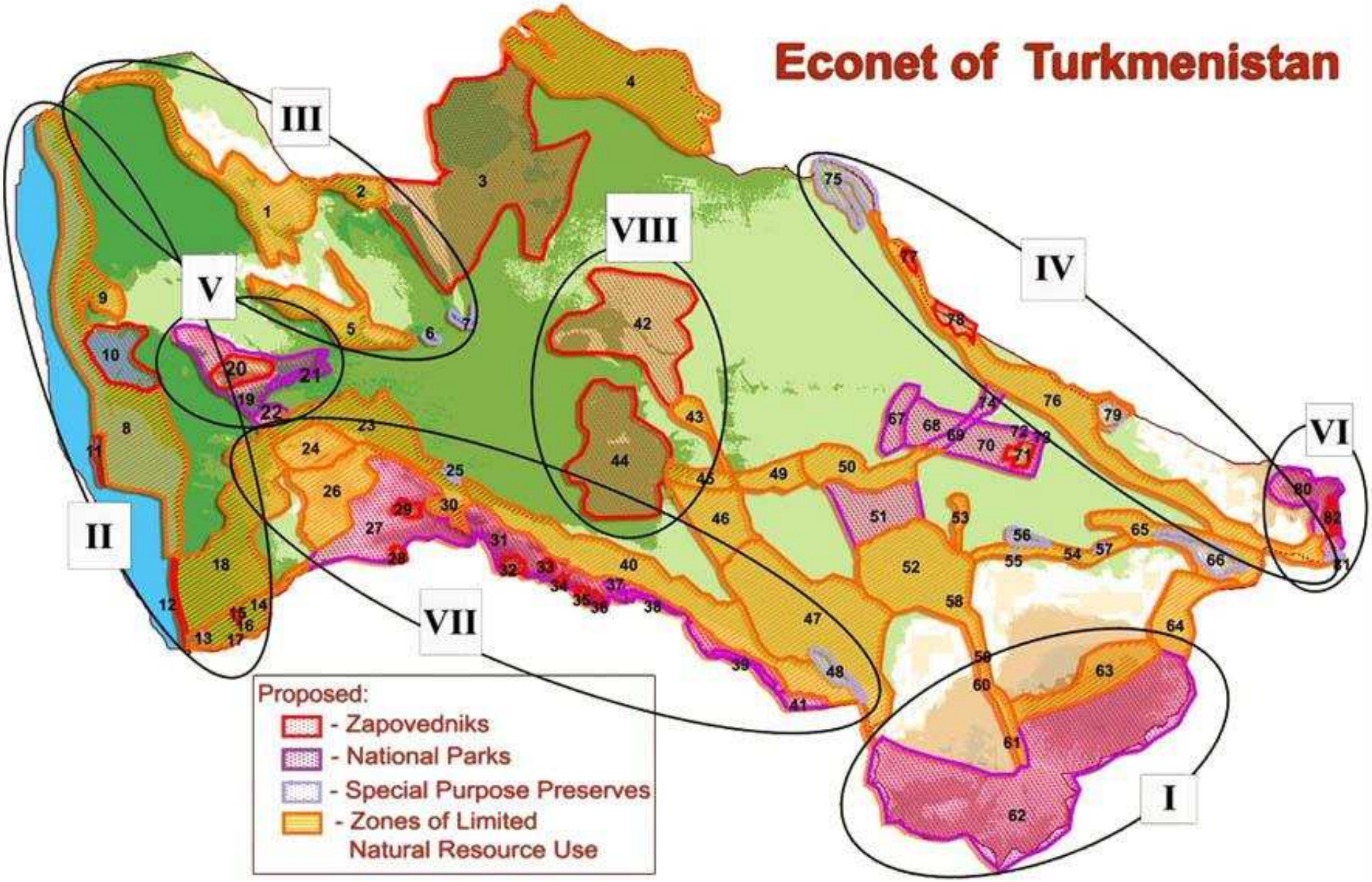
CORREDORES BIOLÓGICOS

1 ACUIFEROS (ACTo)
2 COLORADO-TORTUGUERO (ACTo)
3 GHORTEGA (ACT)
4 OSA (ACOSA)
5 PASO DE LA DANTA (ACOSA) (ACLA-P) (ACOPAC)
6 AGUIRRE (ACOPAC)
7 PARRIS (ACOPAC)
8 SANTOS (ACOPAC)
9 PLAYA HERMOSA (ACOPAC)
10 PAJARO CAMPANA (ACOPAC) (ACA-T)
11 ESCAZU-LAPAS (ACOPAC)
12 DOBEO (ACOPAC)
13 FUENTES DE VIDA (ACLA-P)
14 FILA LANGUSTANIA (ACLA-P)
15 RIO CARIBE (ACLA-P)
16 ALEXANDER SKUTCH (ACLA-P)
17 EL QUETZAL-TRES COLINAS (ACLA-P)
18 MOIN-TORTUGUERO (ACLA-C)
19 TALAMANCA-CARIBE (ACLA-C)
20 VOLCANICA CENTRAL - TALAMANCA (ACCVC) (ACLA-C)
21 CORDILLERA A CORDILLERA (ACLA-C)
22 MONDOCHAS (ACG)
23 CERRI SURAC (ACCVC)
24 PASO DE LAS NUBES (ACCVC) (ACA-HN)
25 MONTES DE AGUACATE (ACCVC)
26 FILA ZAPOTAL (ACA-T)
27 ARENAL-TENORIO (ACA-T)
28 MIRAVALLES-SANTA ROSA (ACA-T)
29 MIRAVALLES-RINCON DE LA VIEJA (ACA-T)
30 RINCON - BARBUDAL (ACA-T)
31 TENORIO - MIRAVALLES (ACA-T)
32 FILA NAMBRAL (ACA-T)
33 LAS CAMELIAS (ACA-HN)
34 RUTA LOS MALEKUS-MEDIO QUESO (ACA-HN) (ACA-T)
35 SAN JUAN LA SELVA (ACA-HN) (ACCVC)



Proyección:
Costa Rica Tranversal de Mercator (CRTM 05)
Fuente: Mapa de Corredores Biológicos 2003 y Áreas de Conservación
Elaborado: Roberto Mora Palacios
AGOSTO 2006

Escala 1:1.733.984.000


Econet of Turkmenistan
I
II
III
IV
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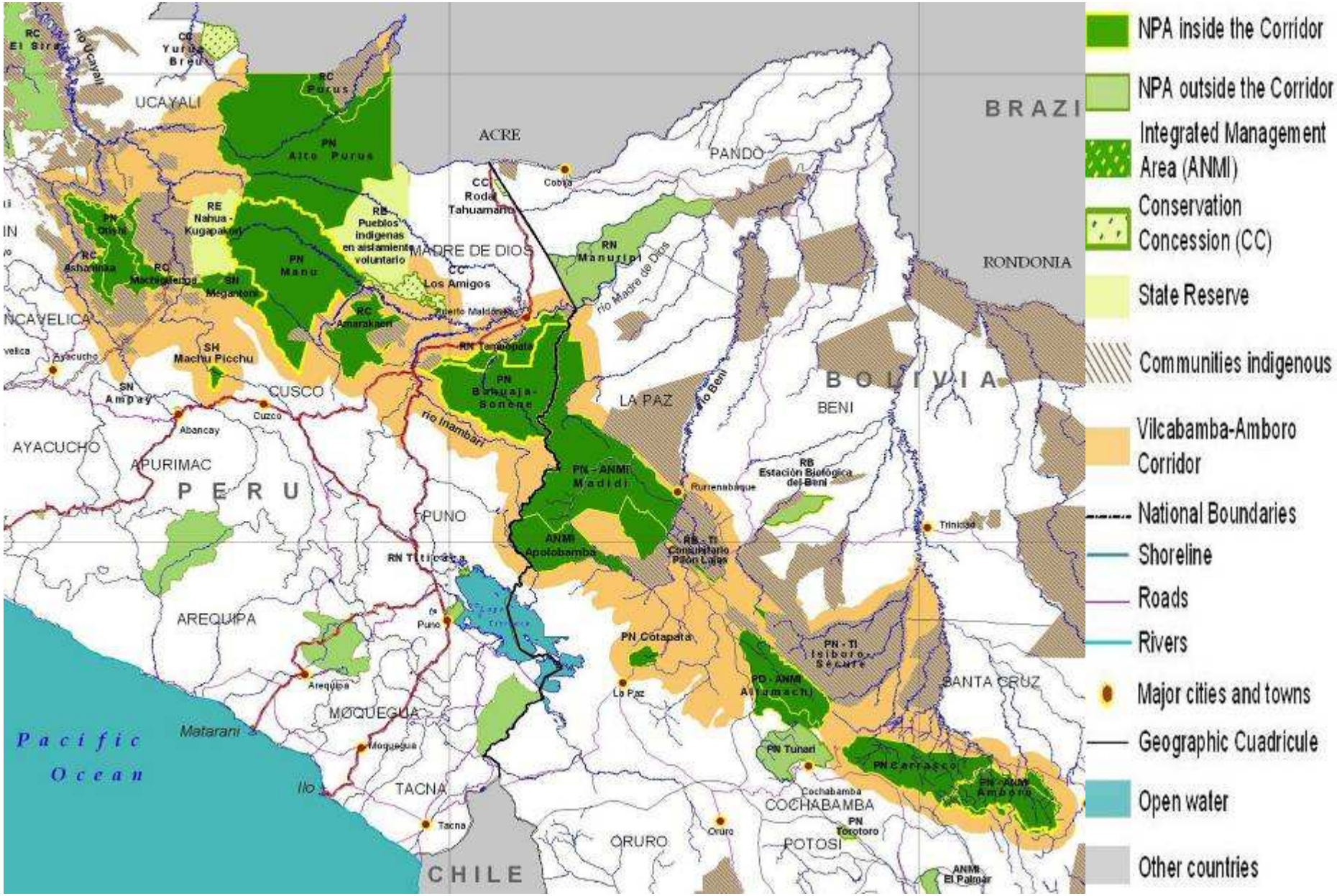
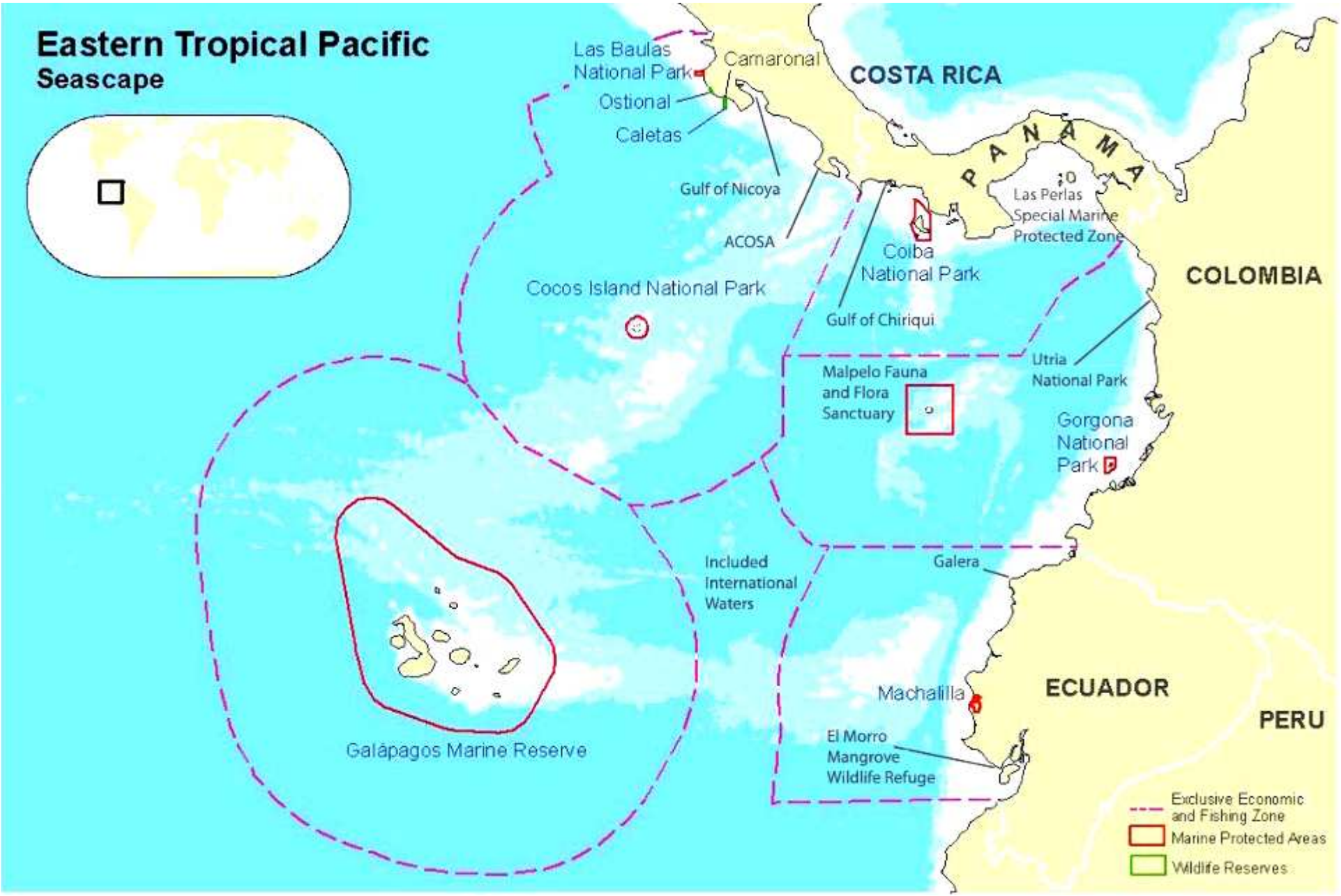
VII
VIII
Proposed:
- Zapovedniks
- National Parks
- Special Purpose Preserves
- Zones of Limited Natural Resource Use

Vilcabamba Amboro Conservation Corridor



Eastern Tropical Pacific Seascape



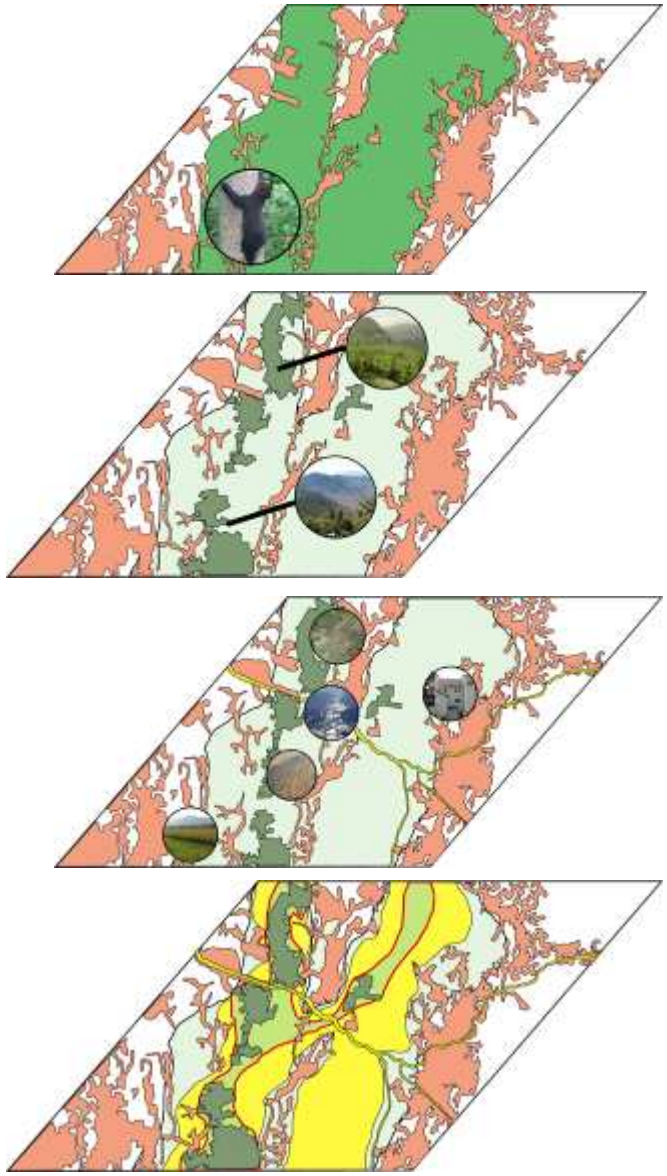
Challenges

- Securing sufficient data
- Limiting the number of biodiversity features
- Setting goals, assessing viability
- Difficulty on agreeing upon scenarios

Enabling conditions

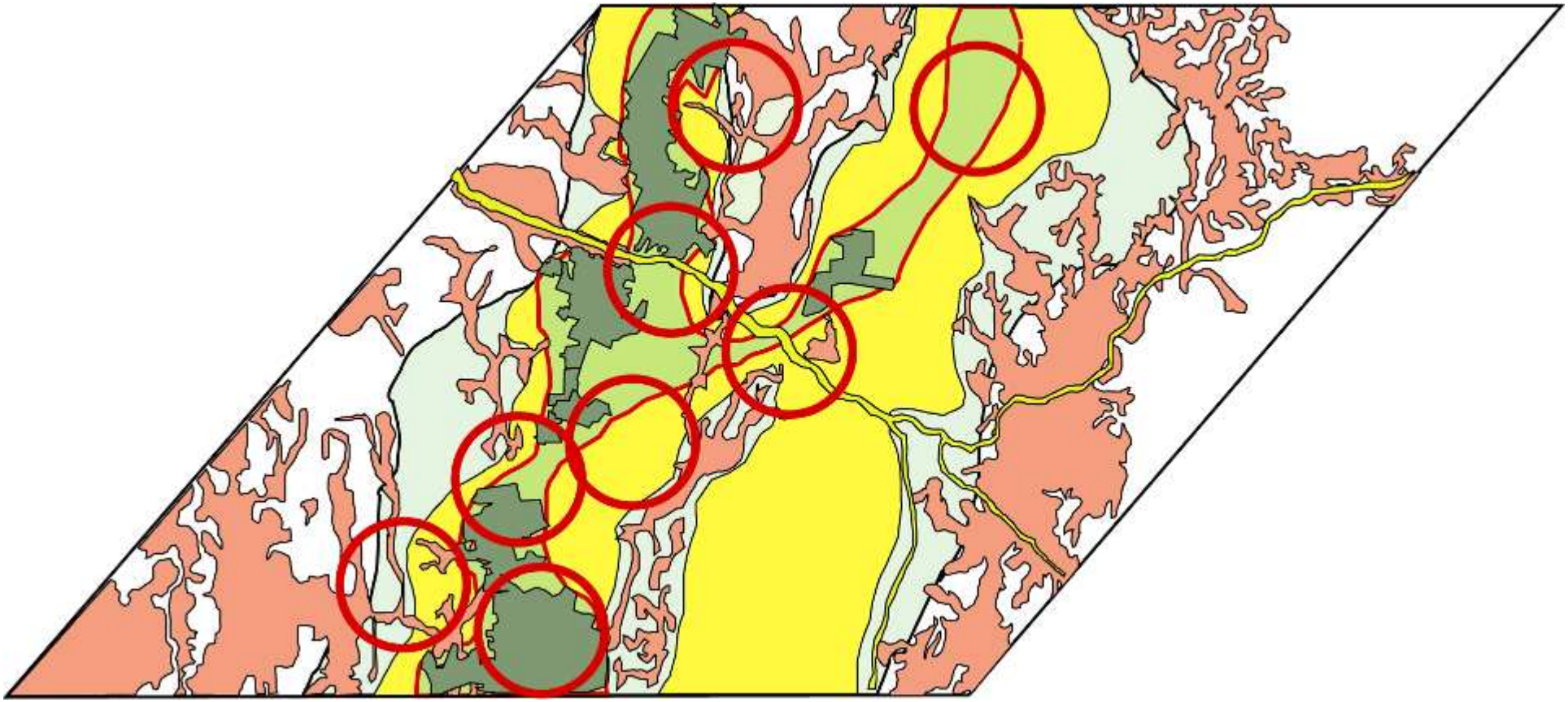
- Solid GIS capacity
- Expertise in optimization software
- Diversity of participants

STEP 2: ASSESSING CONTEXT – Questions?

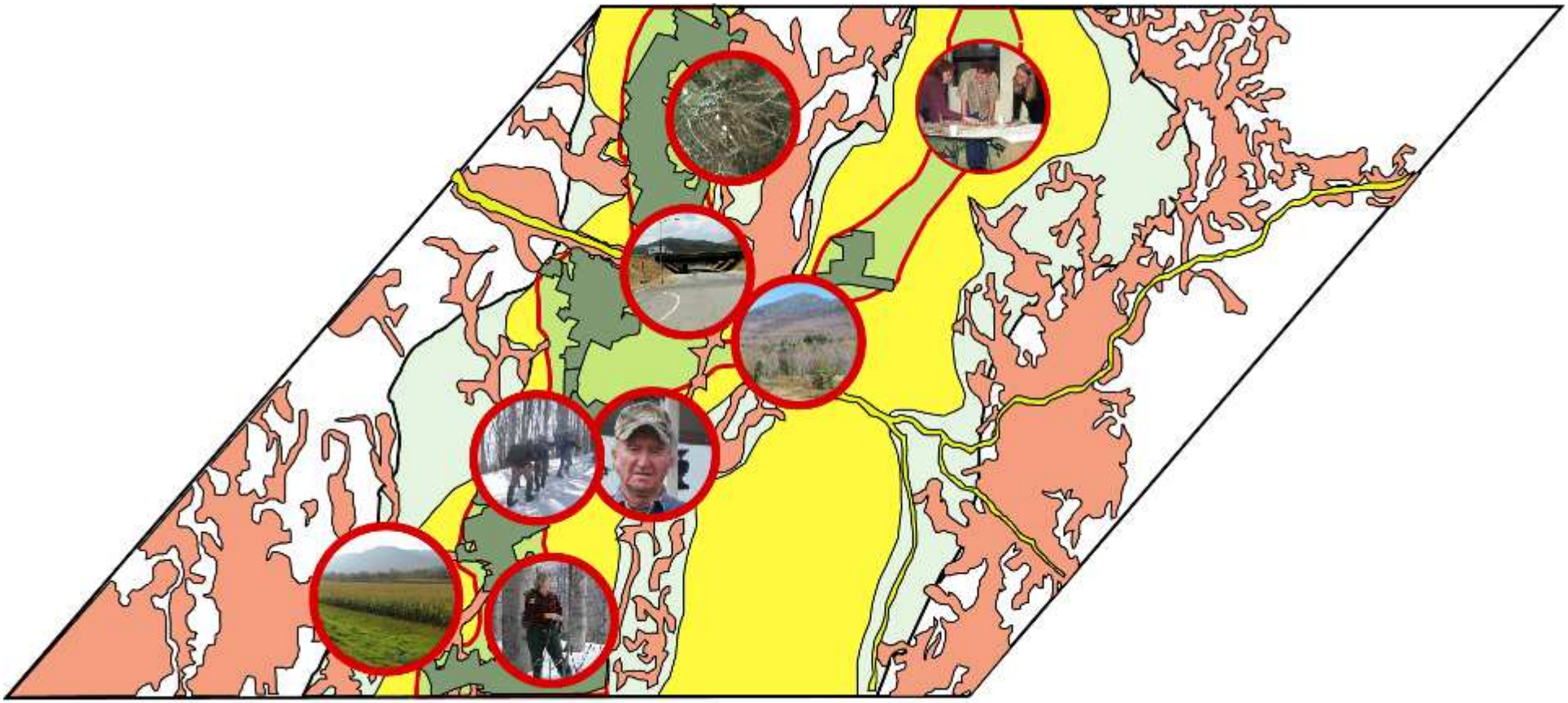


- Assessing ecological context
- Assessing protection & conservation context
- Assessing socio-cultural context
- Assessing political context
- Putting it all together

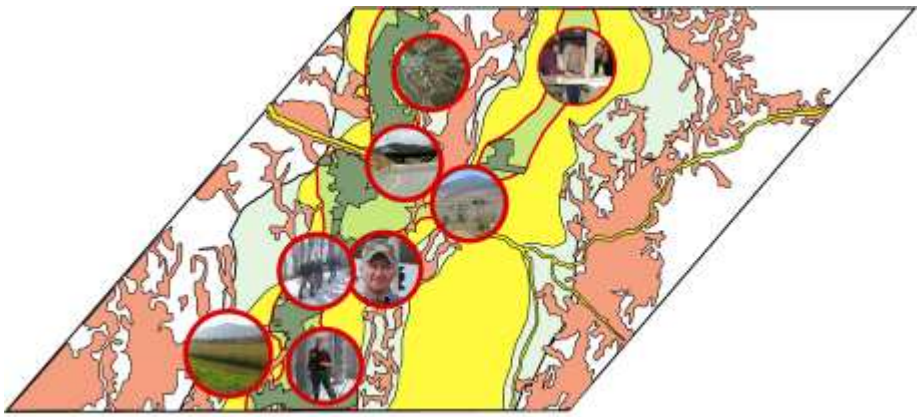
STEP 3: DEVELOPING, PRIORITIZING AND IMPLEMENTING STRATEGIES



STEP 3: IMPLEMENTING STRATEGIES



STEP 3: DEVELOPING PRIORITIZING AND IMPLEMENTING STRATEGIES

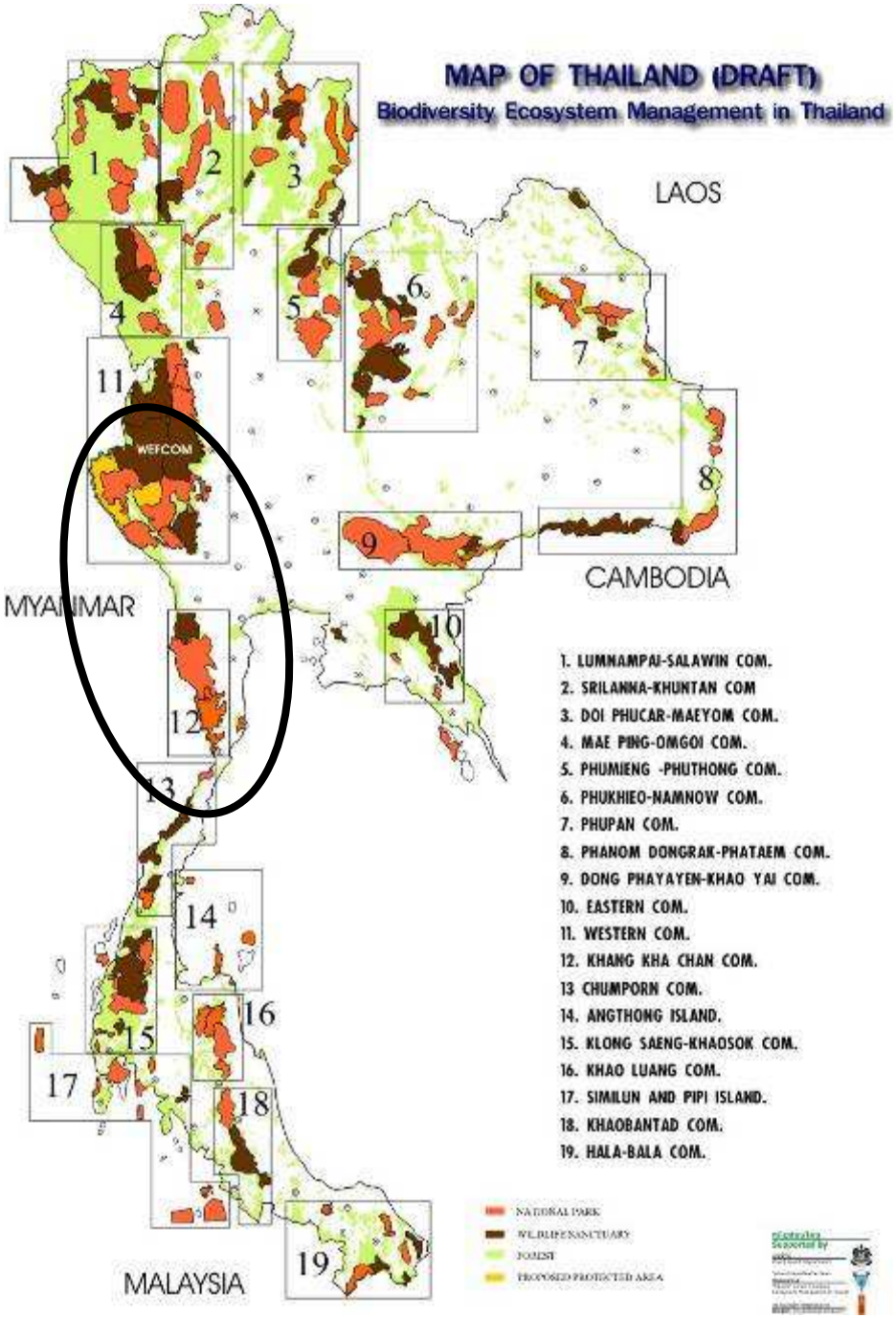


- Protection status
- Management practices
- Laws and policies
- Incentives and markets
- Sectoral practices
- Enabling environment
- Physical environment

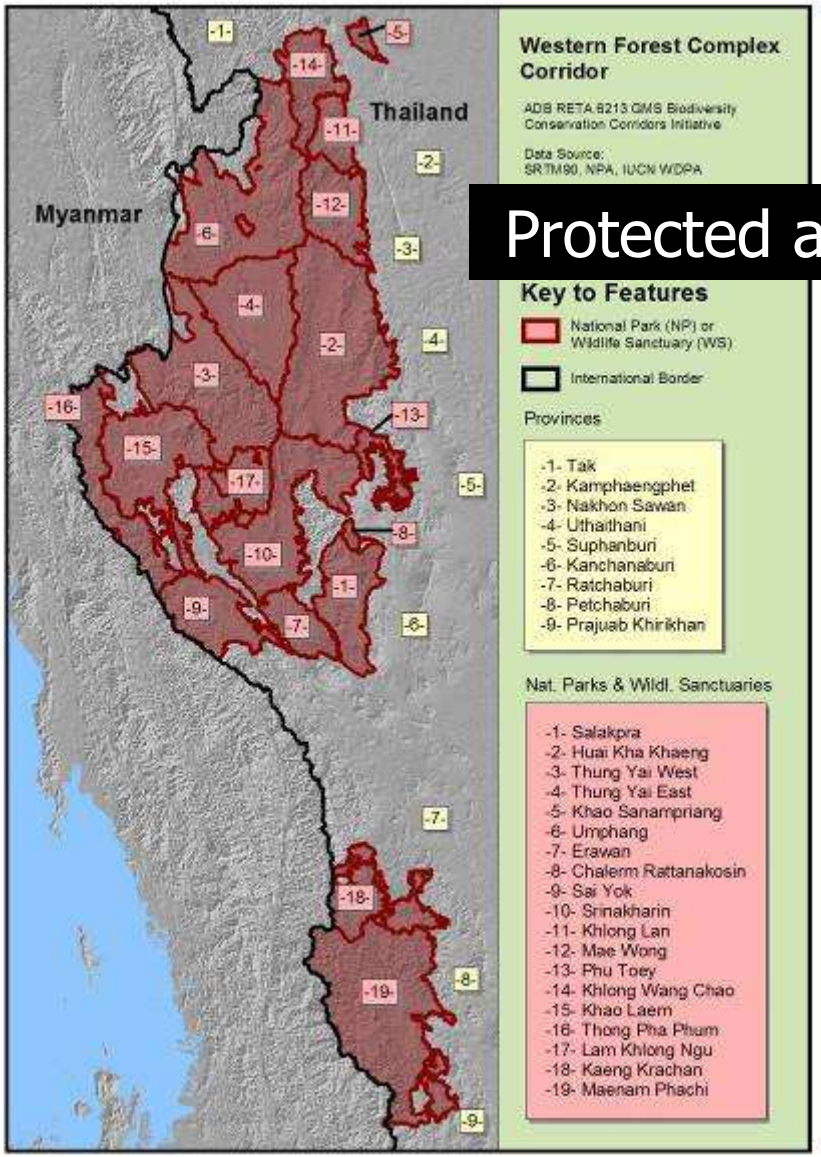
Screening and prioritizing strategies

- Effectiveness
- Efficiency
- Feasibility
- Affordability
- Momentum
- Innovation
- Socio-economic impacts
- Replicability
- Importance
- Public support
- Likelihood of success
- Risk

Forest Complex And Protected Areas in Thailand



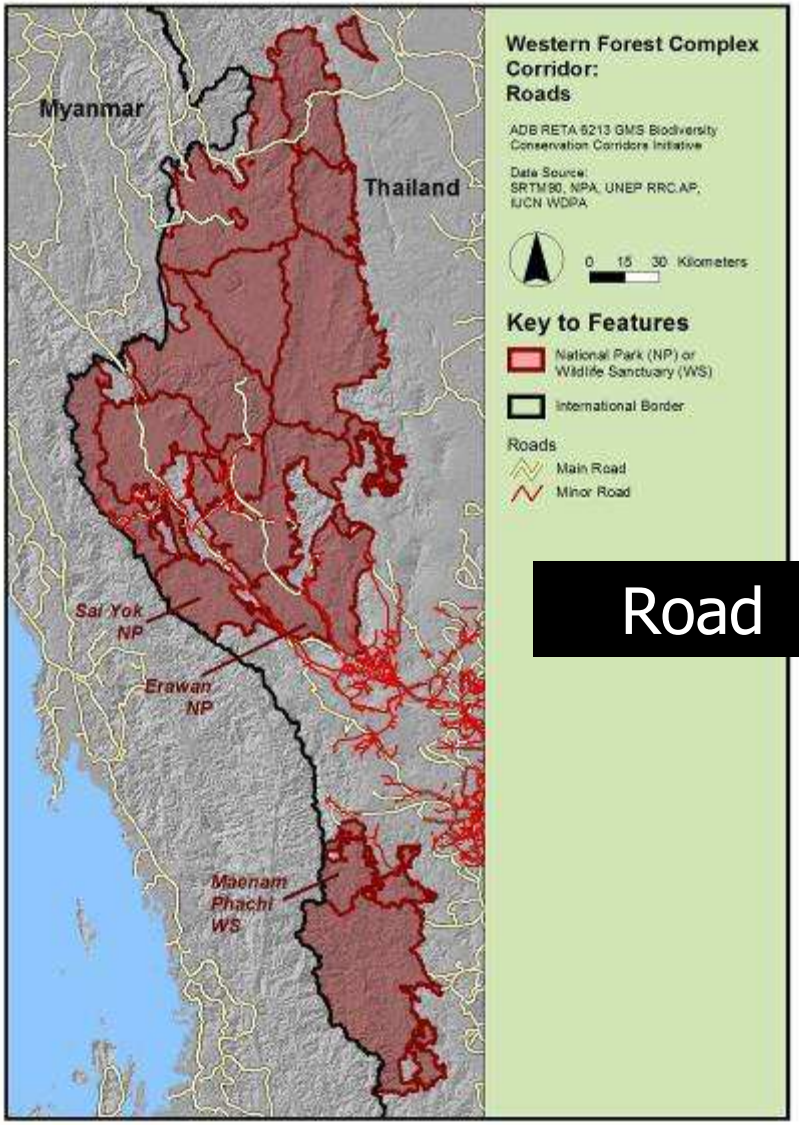
Tenasserim – Western Forest Complex



Protected areas

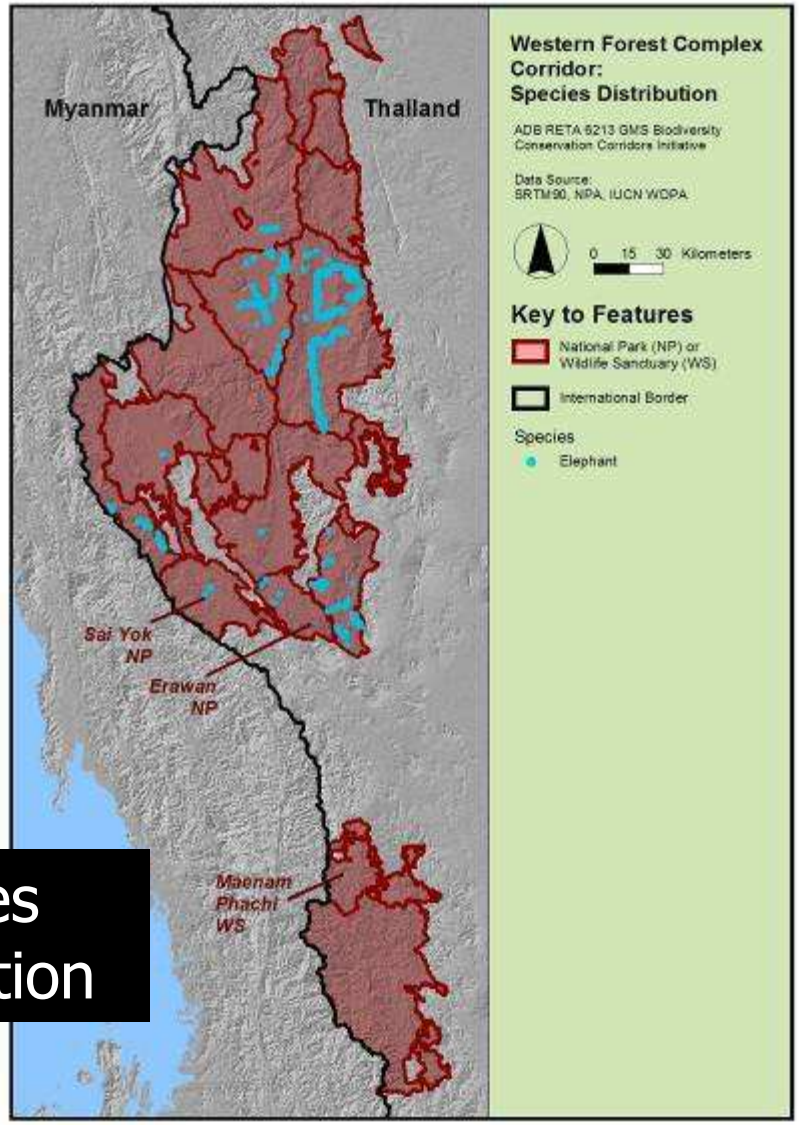
Land Cover

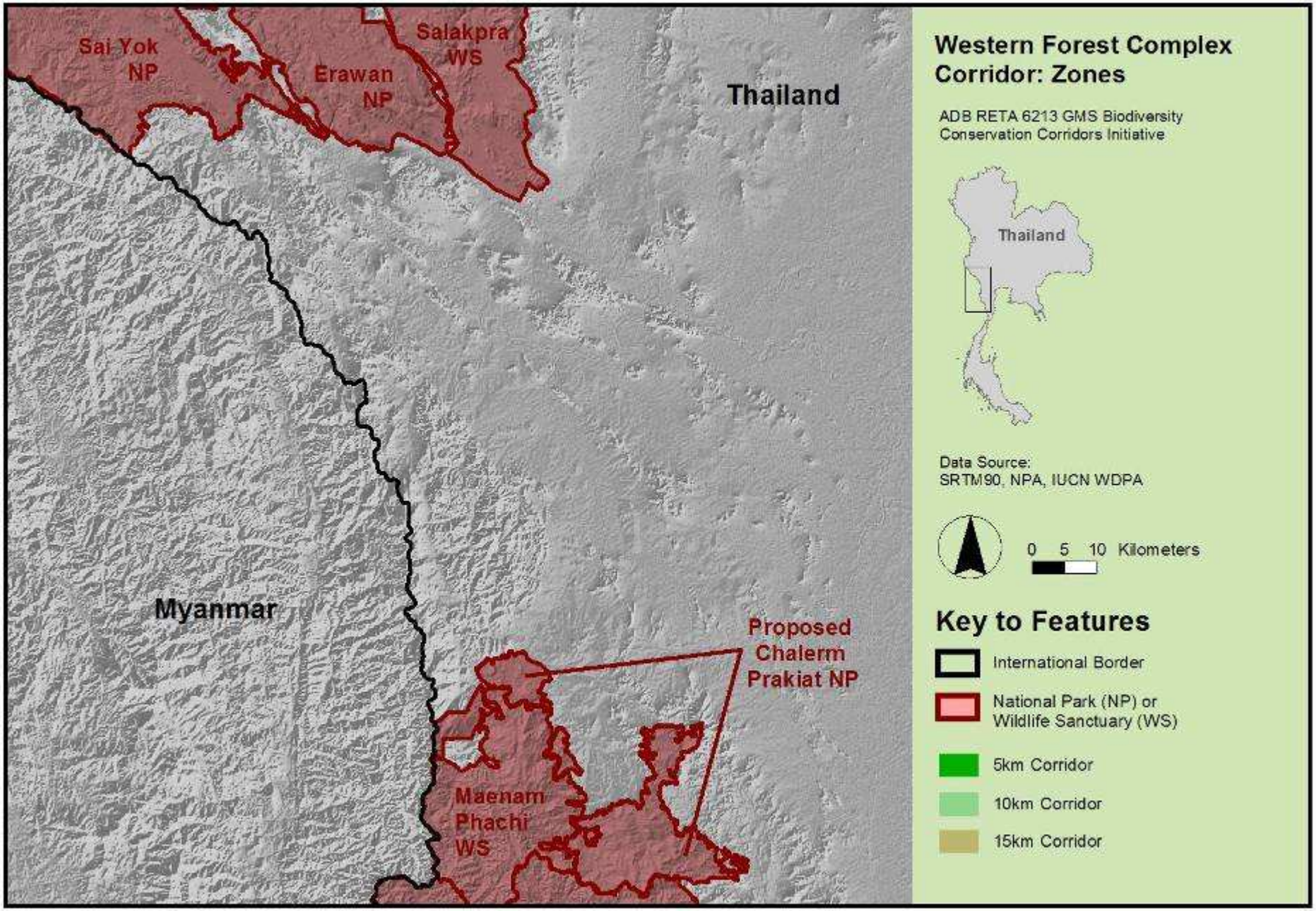
Tenasserim – Western Forest Complex



Road

Species Distribution




Sai Yok NP
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Salakpra WS
Thailand
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Maenam Phachi WS
Western Forest Complex Corridor: Zones
ADB RETA 6213 GMS Biodiversity Conservation Corridors Initiative
Thailand
Data Source:
SRTM90, NPA, IUCN WDPA
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Key to Features
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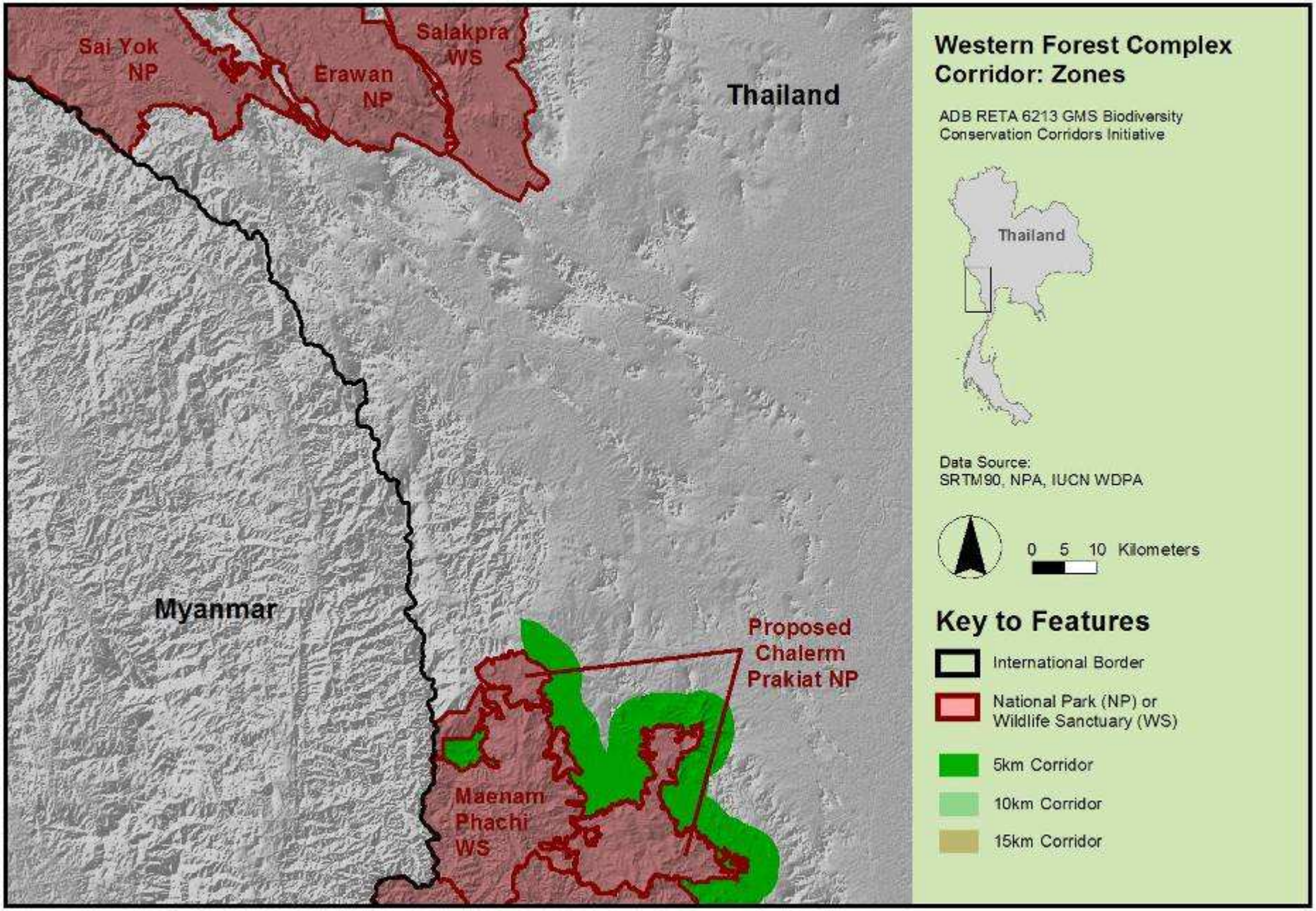
5km Corridor
10km Corridor
15km Corridor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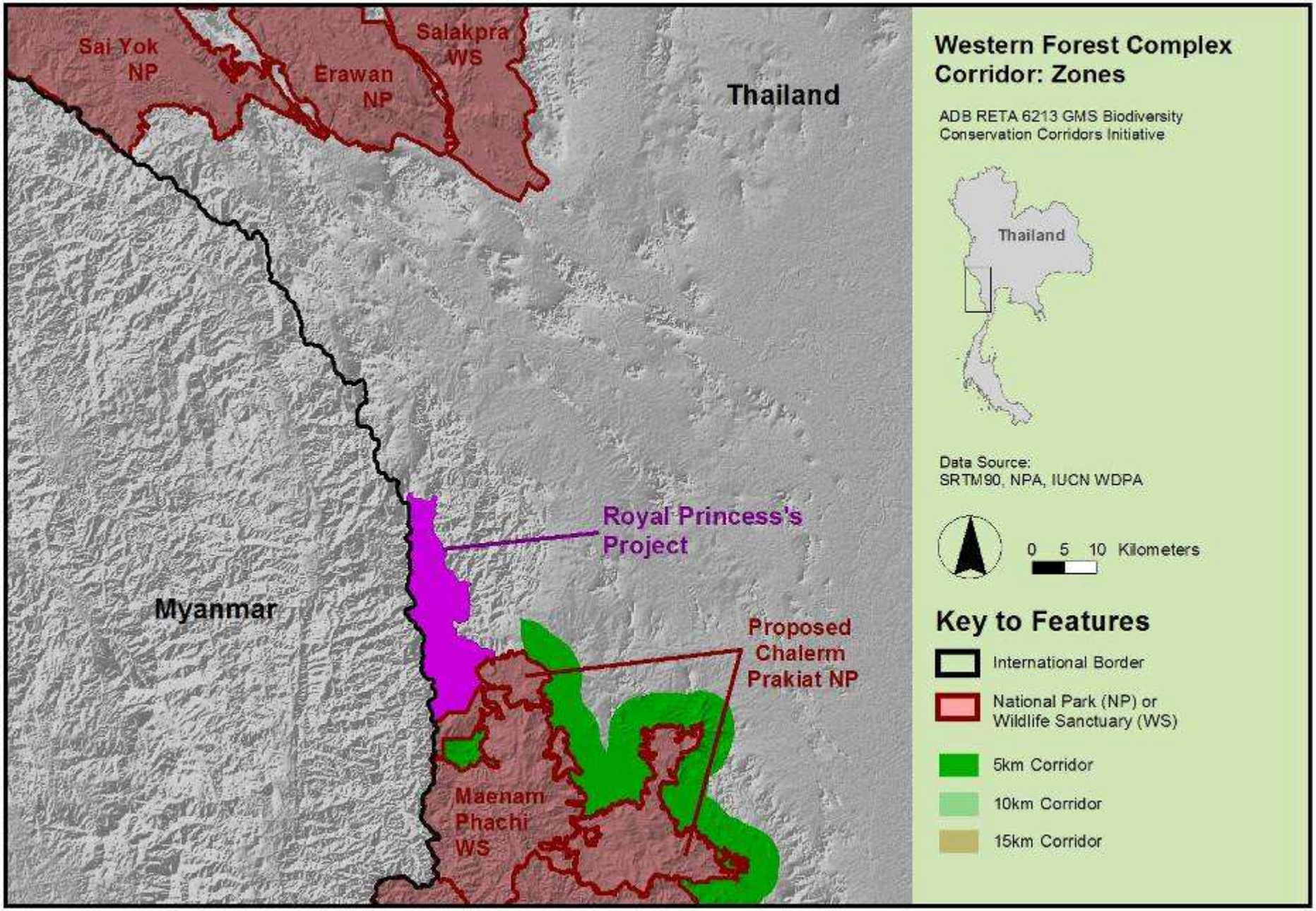
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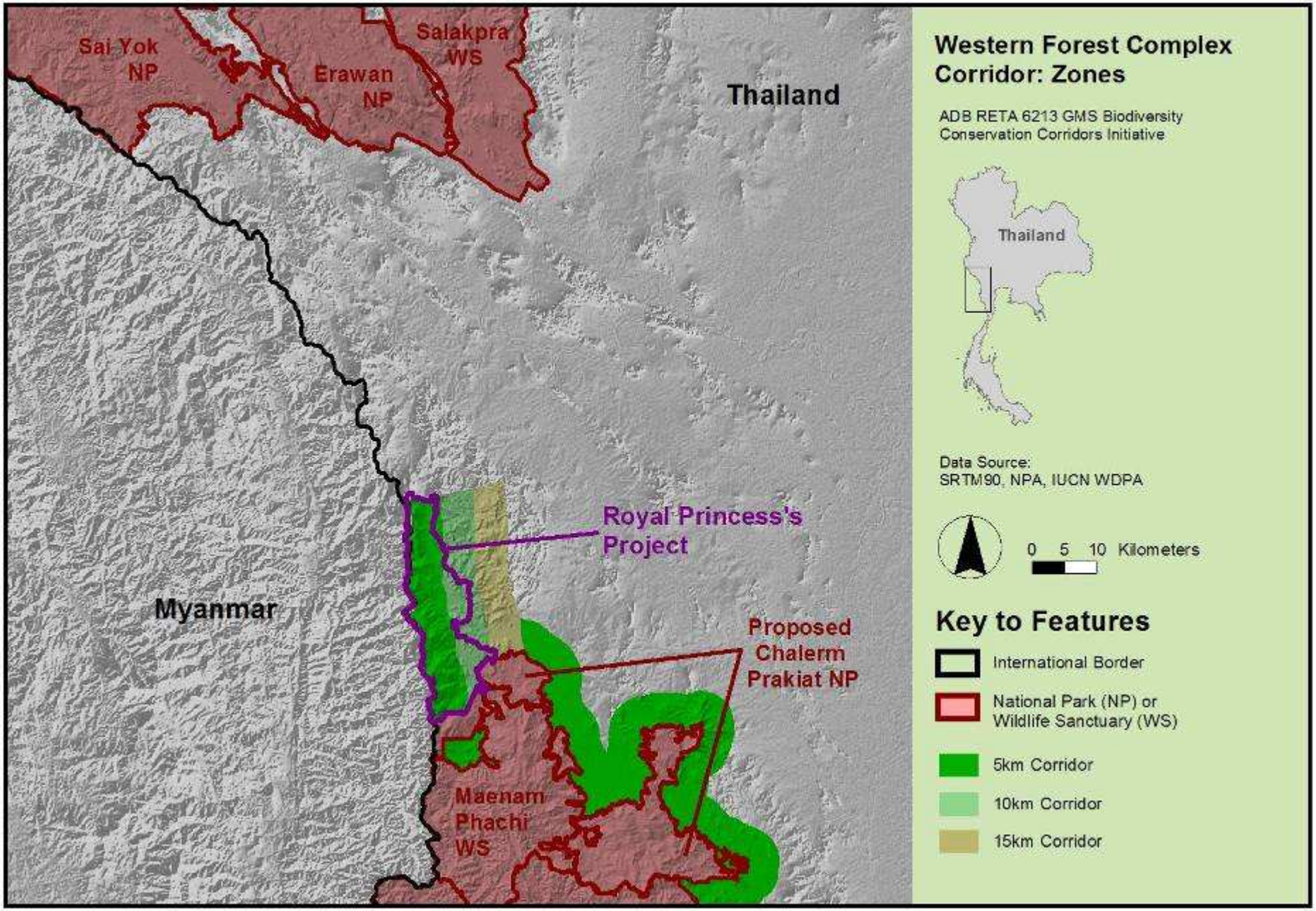
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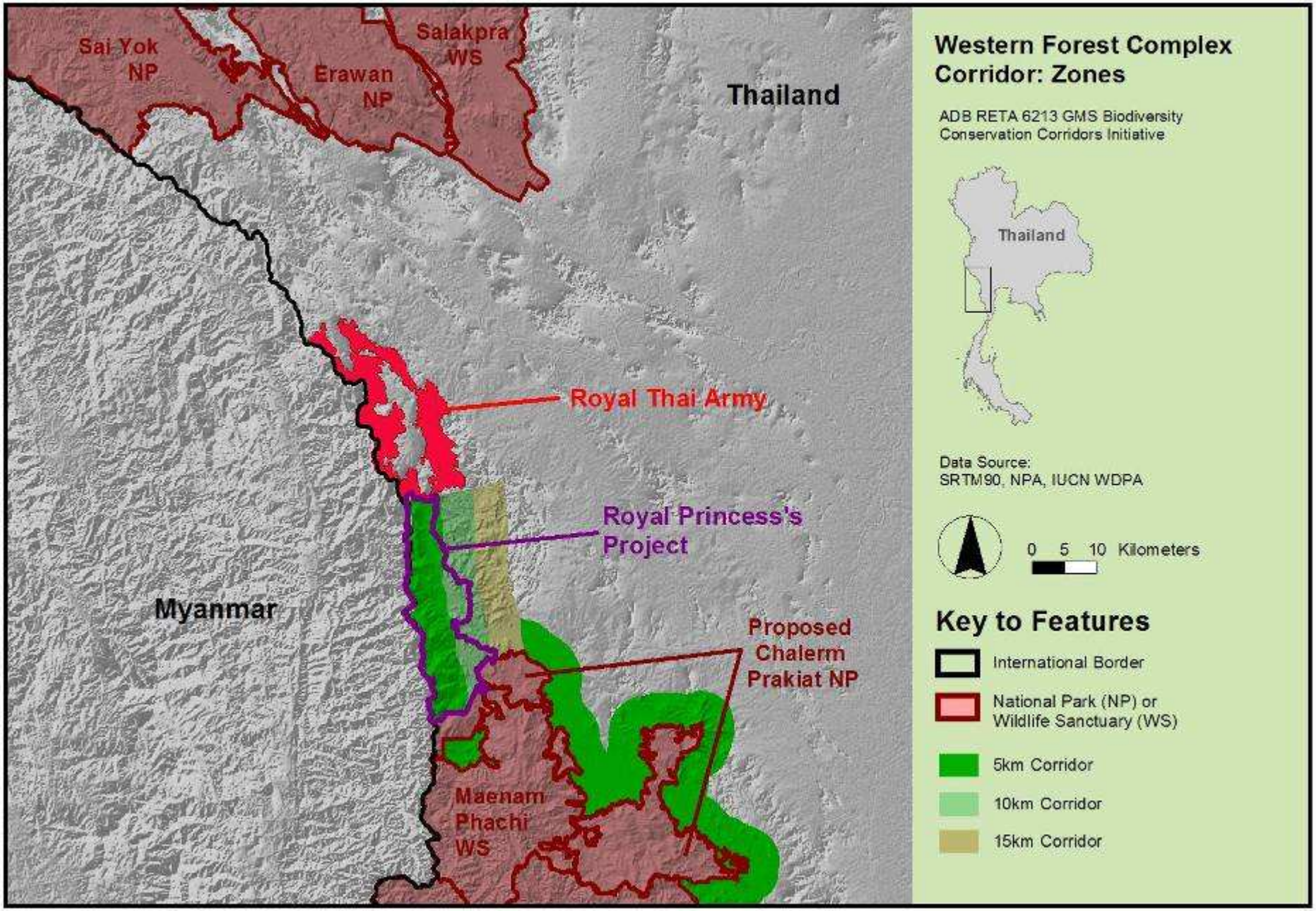
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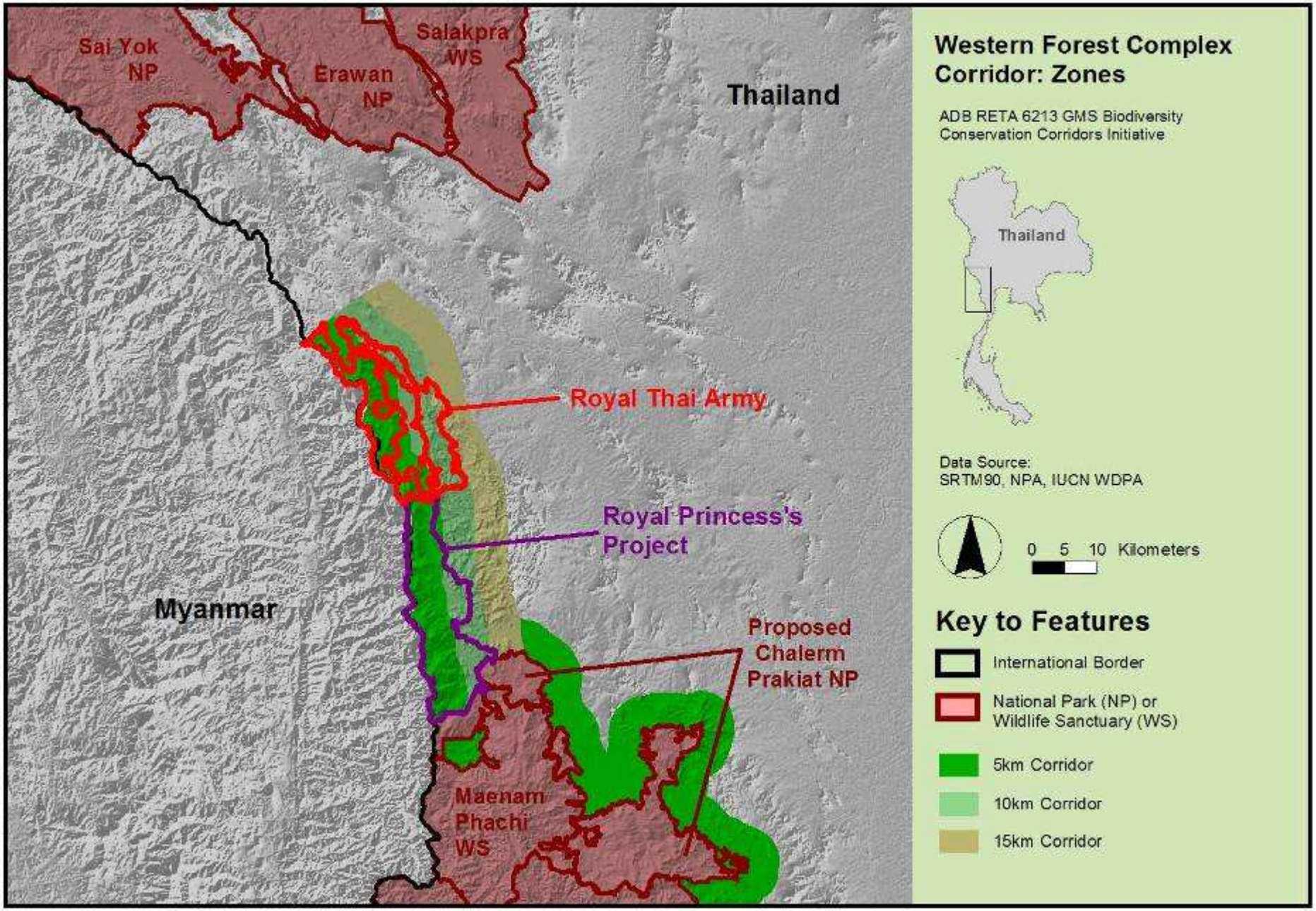
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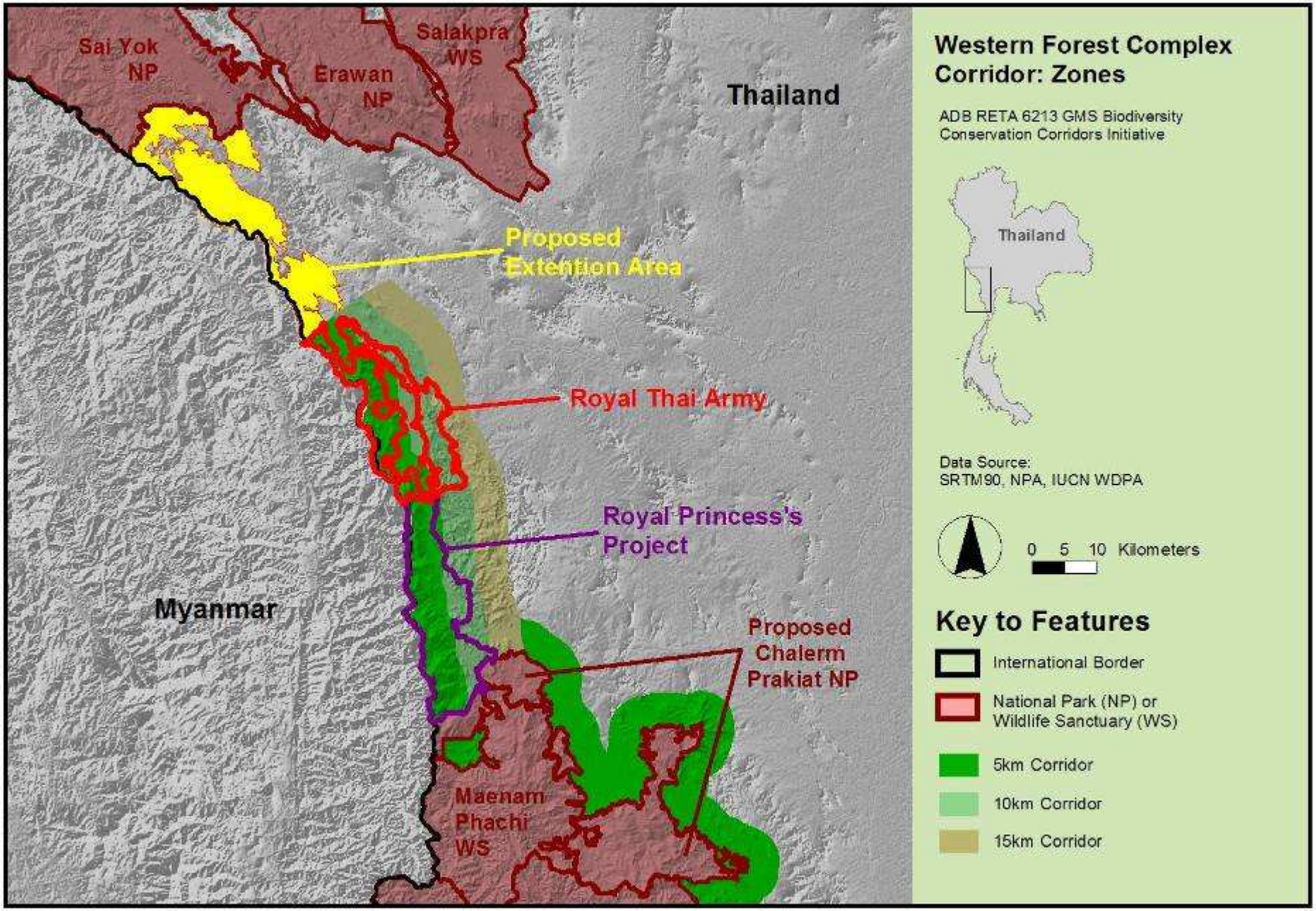
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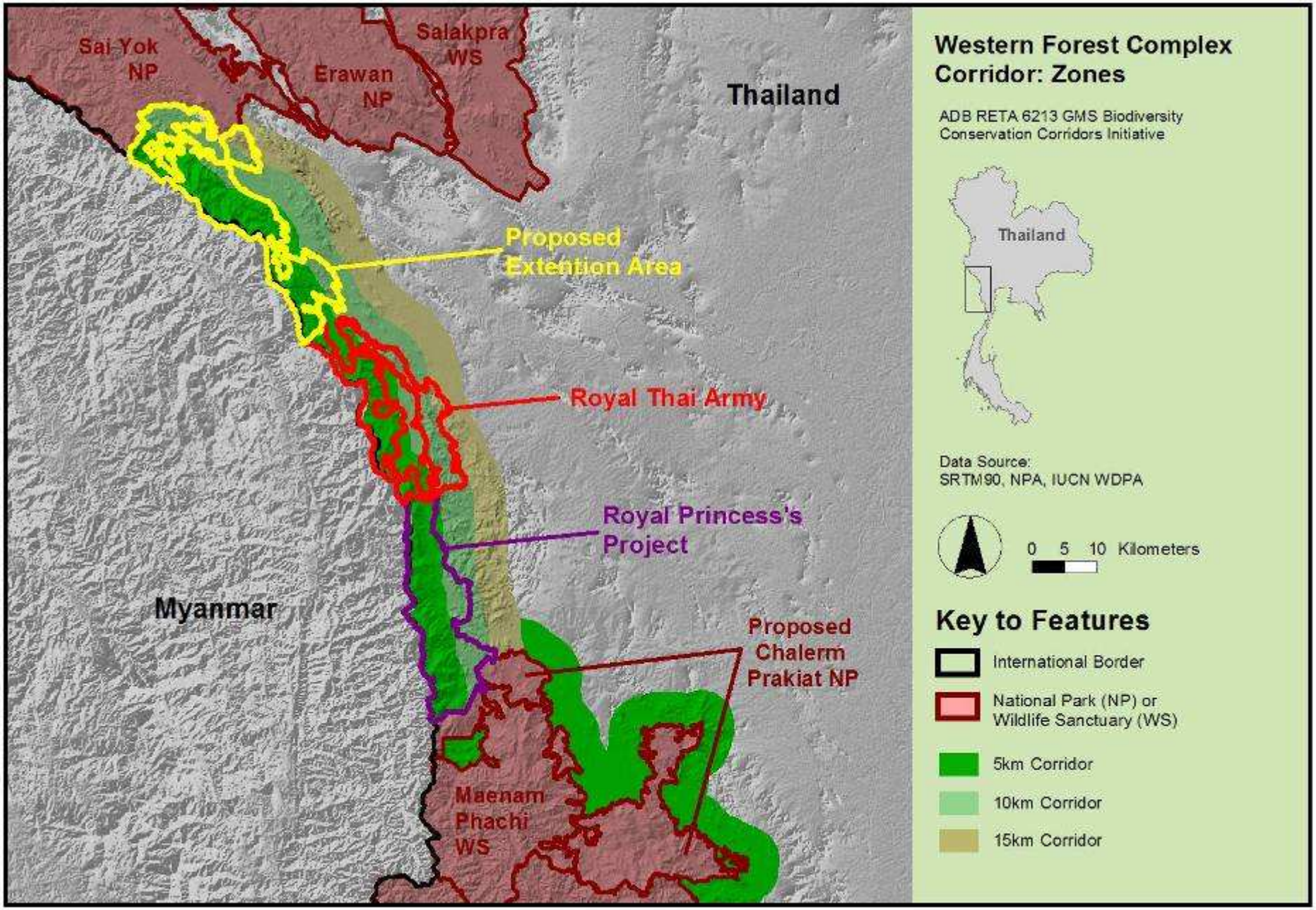
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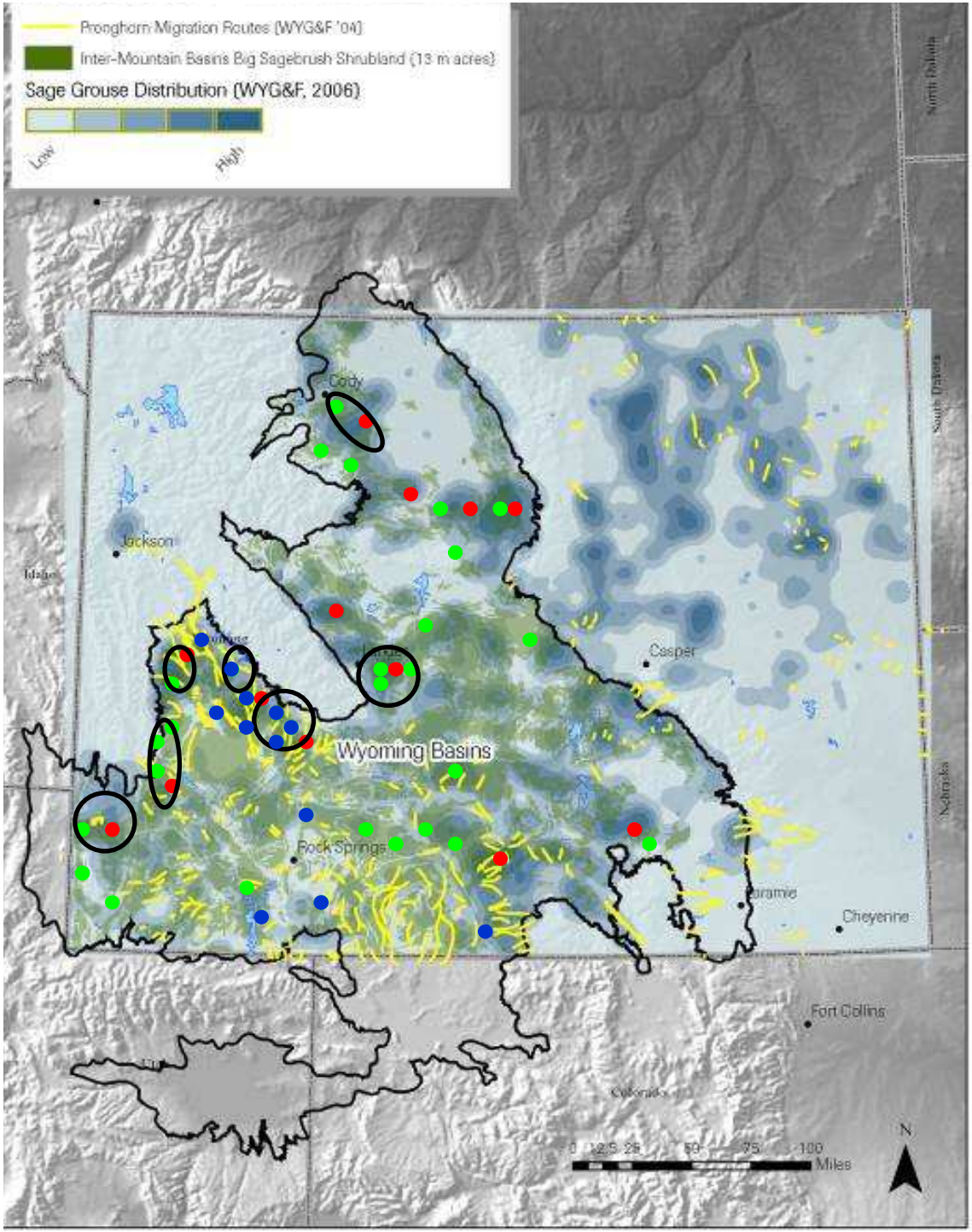
Mainstreaming strategies

"The internalization of biodiversity conservation goals into economic and development policies and programs, so that they become an integral part of the functioning of these sectors"

Steps to Mainstreaming strategies

- Form partnerships between biodiversity and sectoral stakeholders
- Explicitly identify stakeholders' interests
- Identify mutually beneficial outcomes
- Identify conflicts and tradeoffs, and work toward mutually acceptable solutions
- Identify win-win strategies and embed into policies, agreements, programs



Mainstreaming biodiversity in Wyoming

Example 1: Wyoming

- TNC shared information with BP on areas of high conservation value
- Company developed voluntary biodiversity offset program
- Company incorporated connectivity and biodiversity issues into environmental assessments, standard operating procedures
- Paired with TNC to measure and mitigate impacts

Mainstreaming biodiversity in South Africa

Example 2: KwazuluNatal

- Develop game ranchers' association
- Create legal framework to support private ownership of land and wildlife
- Provide technical support to ranchers
- Provide financial incentives for private game ranches
- Use sales from ranches to fund protected areas
- Remove physical barriers between reserves

Challenges

- Evaluating costs and benefits
- Accepting a realistic timeframe
- Balancing different screening criteria
- Creating trust
- Managing the implementation process

Enabling conditions

- Diversity of practical experience
- Nuanced understanding
- Flexible approach
- Effective implementation plan
- Broad support

STEP 4: MONITORING STATUS AND EFFECTIVENESS

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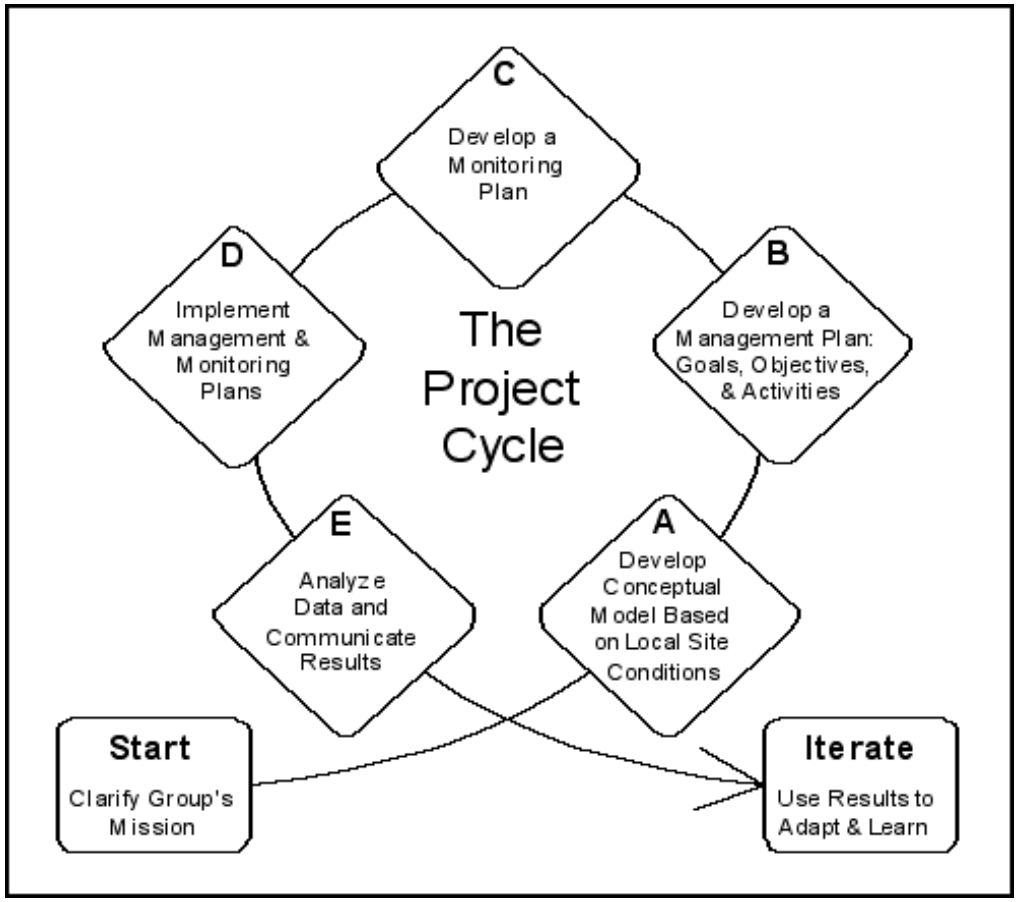
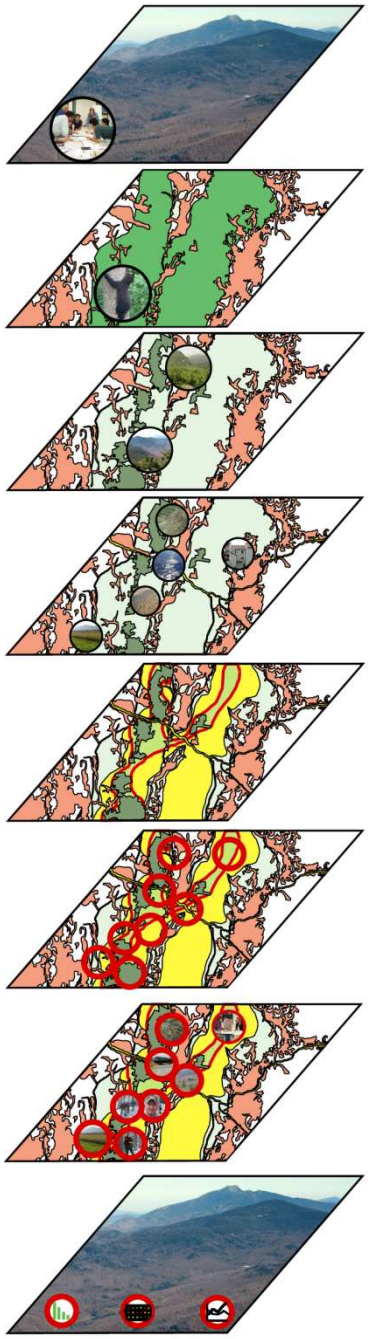


- Develop effective monitoring plan
- Monitor status and trends in connectivity
- Monitor effectiveness of actions



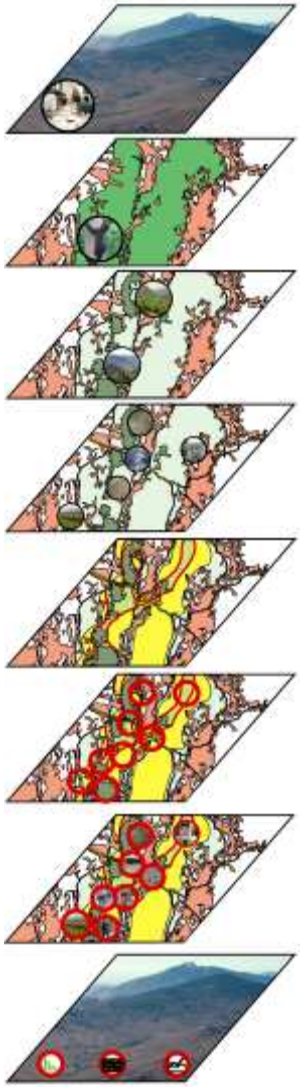
STEPS IN PROTECTED AREA INTEGRATION

1. Getting started
2. Assessing the broader context
   a) Ecological
   b) Protection and conservation
   c) Economic and socio-cultural
   d) Policy and sectoral
   e) Putting it all together
3. Developing strategies and actions
4. Implementing strategies
5. Monitoring and adapting

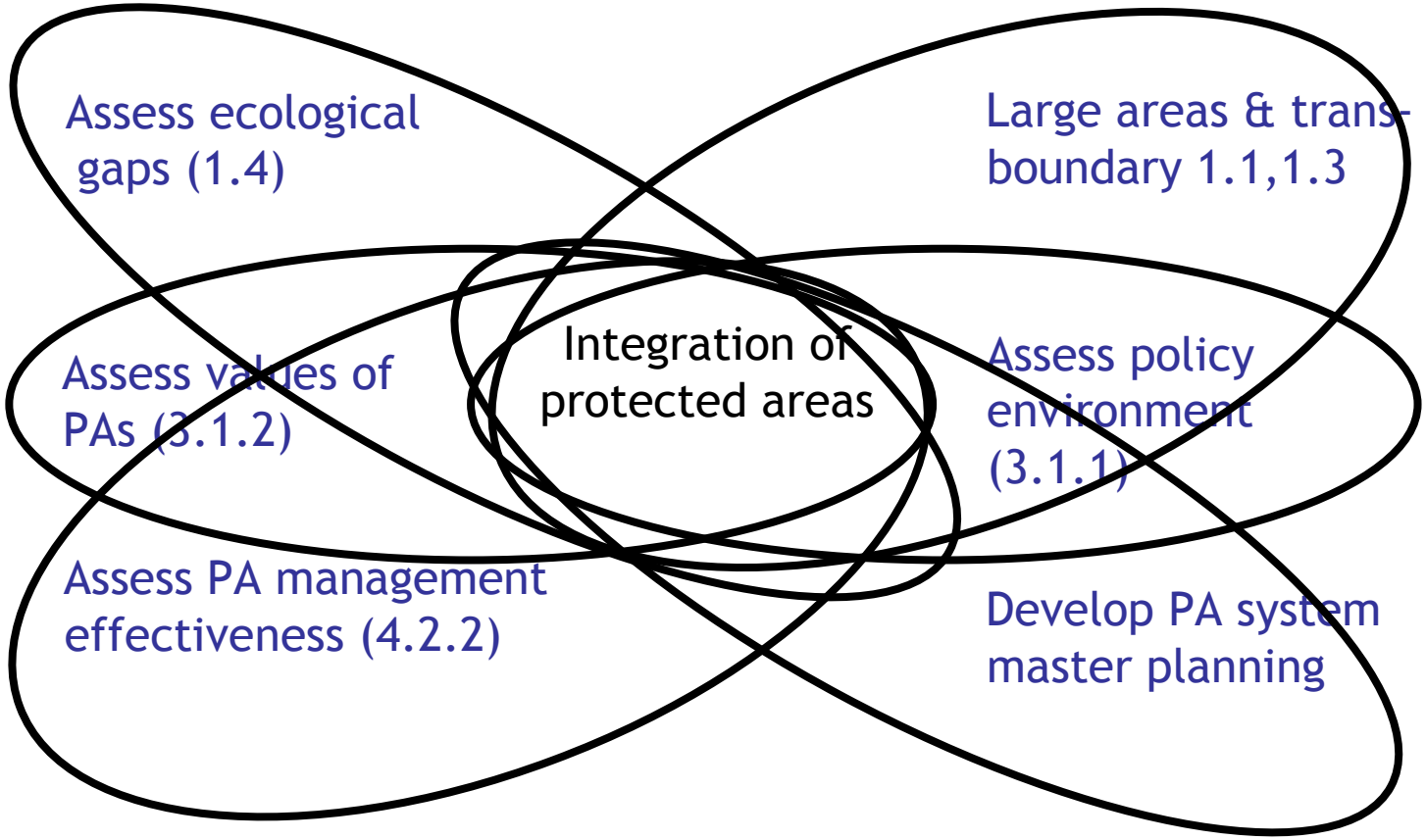
5 QUESTIONS FOR BREAK OUT GROUPS

- Where are you in the process of integrating protected areas?
- What other assessments can contribute to assessing protected area integration?
- What are the most important sectors to work with?
- What are the most feasible strategies?
- What are the most important opportunities and constraints?

1. WHERE ARE YOU IN THE PROCESS?



2. What other assessments can contribute?



3. Main sectors

Land use planning
Transportation
Energy
Tourism
Wildlife policies
Agriculture
Grazing
Forestry
Agroforestry
Fisheries
Waste management
Invasive species policies
Legal environment
Climate change policies
Intersectoral coordination

4. Main strategies

Protection status
Management practices
Laws and policies
Incentives and markets
Sectoral practices
Enabling environment
Physical environment

5. Constraints and opportunities

Top strategies ► Top Sectors ▼	Creating new PAs	Creating buffer areas	Creating corridors	Improving management within PAs
Transportation				
Energy				
Waste management				

Constraints and opportunities

Top strategies ► Top Sectors ▼	Creating new PAs	Creating buffer areas	Creating corridors	Improving management within PAs
Transportation			**Planned road will cause blockage**	**Road crews located in protected areas**
Energy	**Drilling in important areas**			
Waste management				**Solid waste dump is leaching into water**

Constraints and opportunities

Top strategies ► Top Sectors ▼	Creating new PAs	Creating buffer areas	Creating corridors	Improving management within PAs
Transportation			**Create wildlife overpass**	**Relocate road crew stations**
Energy	**Create biodiversity offsets**			
Waste management				**Solid waste mitigation and clean up**

Examples of constraints from N. Africa

	Changing the physical environment	Changing sectoral practices	Change market incentives, distortions and externalities
Energy	Ministries of Energy is much stronger than the Ministry of Environment	Mining is the top priority of the government.	Energy subsidies by governments
Tourism	Loss of habitats with no offset .	Associated huge unplanned infrastructures	Absence of policies for sustainable tourism
Laws and legal framework	Lack of policies on offsets and protection of key habitats	Lack of enforcement for the environmental laws.	* Biodiversity services are not fully valued in market term.

Examples of opportunities from N. Africa

	Changing the physical environment	Changing sectoral practices	Change market incentives, distortions and externalities
Energy	Ministries of Energy & Petroleum should compensate for the biodiversity loss.	Promotion of best practices of power production to donors.	Energy subsidies the protection of environment through taxation
Tourism	Promotion of Ecotourism	Applying EIA restrictions	Global growing demands for ecotourism (Rwanda – Costa Rica)
Laws and legal framework	Implementation of mechanisms on offsets and protection of key habitats	* Capacity building for law enforcement. * Implementation of proper land use..	* Develop methods for valuation of biodiversity.

BREAK OUT GROUPS

1. INDIA -- **Porta Cabin**
2. PACIFIC (Fiji, Marshall Islands, FSM, Kiribati, Nauru, Niue, Palau, PNG, Philippines, Samoa, Solomon Islands, Timor Leste, Tonga, Tuvalu, Vanuatu) – **Board Room**
3. SOUTH and SOUTHEAST ASIA (Maldives, Nepal, Cambodia, Lao PDR, Malaysia, Thailand, Vietnam) – **Main Hall Left**
4. CENTRAL, NORTH AND WEST ASIA (China, Iraq, Kyrgyzstan, Kuwait, Saudi Arabia, Syria, Tajikistan, Yemen, Pakistan) – **Main Hall Right**