

Eastern Cape Biodiversity Sector Plan and BSAP

BIODIVERSITY PLANNING FORUM

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EASTERN CAPE
ECONOMIC DEVELOPMENT,
ENVIRONMENTAL AFFAIRS AND TOURISM

EOH



- **Introduction and Background**
- Reviewed ECBCP to include:
 - Rivers and wetlands
 - Estuaries
 - Coastline
 - Alien invasion
- Use and seek alignment with bioregional plans

Strategic Approach

- EC: human and financial resources are not abundant. Therefore essential to adopt approach where conservation is prioritised in terms of:
 - **Areas of greatest opportunity for linking biodiversity and socio-economic development**
 - **Areas where biodiversity and ecosystems are under the greatest pressure**

Terms of Reference



- Biodiversity Sector Plan: Review ECBCP
 - Output = Critical Biodiversity Plan.
 - Indicate future threats
 - Plan to provide basis for identifying special geographic areas or sensitive areas in terms of the new EIA regulations
 - Provide basis for publishing bioregional plans
- BSAP:
 - Output = Strategy Objectives and Action Plans associated with defined thematic and spatial issues that are:
 - Informed by spatial priorities in BSP
 - Aligned with NBSAP
 - Consistent with PGDP and NDP
 - In keeping with principles for sustainable use to promote socio-economic upliftment and development
- Systematic Landuse Management Tool (web-based)
- BSAP Monitoring and Evaluation Framework

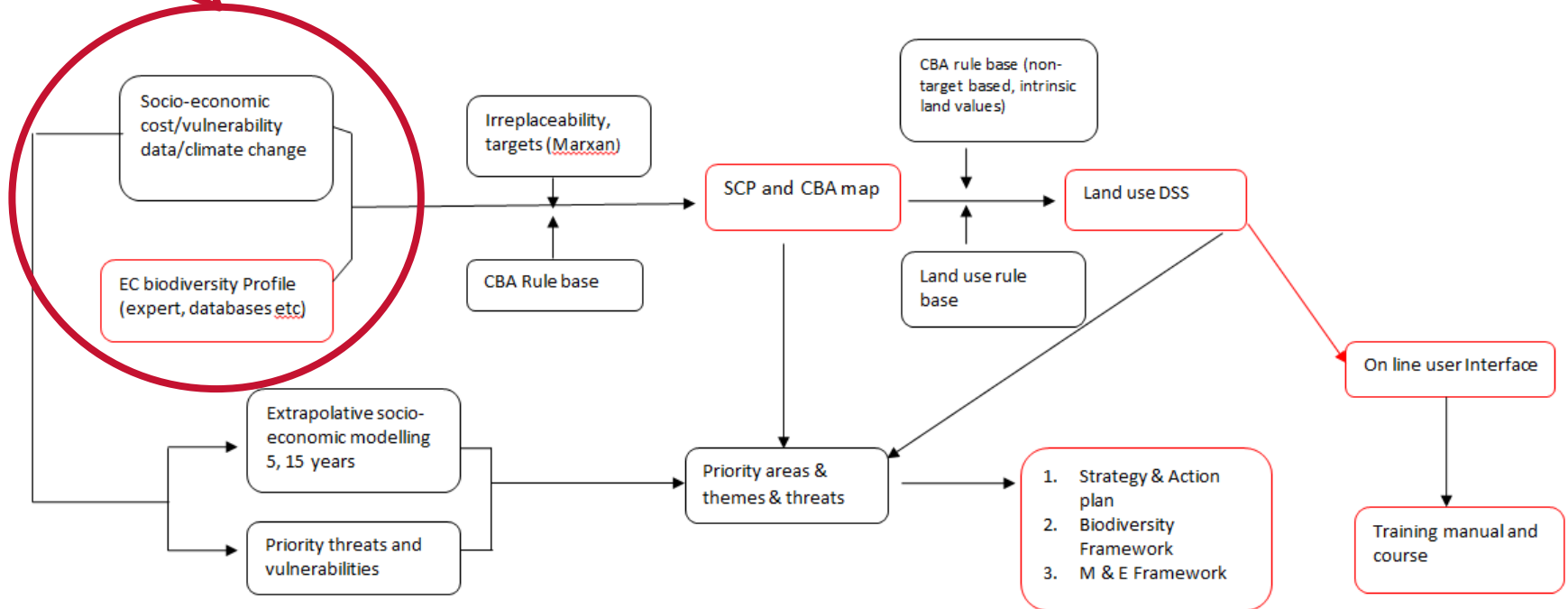
Key Outputs:

The project has been broken down into single components:

1. Biodiversity Profile/Assessment
2. Systematic Biodiversity Conservation Plan
3. Strategic Land use decision support system
4. Integrated Systematic Tool (web-based)
5. Biodiversity Strategy and Action Plan
6. Biodiversity Framework (potentially included into BSAP)
7. Monitoring and Evaluation Framework
8. Training and roll-out

Output flow-diagram: status

We are here



The team

Eastern Cape Biodiversity Conservation Plan, Biodiversity Strategy & Action Plan and Framework

EOH Coastal & Environmental Services

**Biodiversity
Assessment/Profile**



**EOH CES
Team of experts (15)**

**Conservation/Biodiversity
Planning**



**Derek Berliner
Philip Desmet
Linda Harris**

**Biodiversity Strategy
and Action Plan**



**EOH CES
Derek Berliner**

Engagement structure

DEDEAT



Technical Reference Group:

- ECPTA: Kagiso Mangwale
- SANBI: Fahiema Daniels
- TEAM: Derek Berliner, Phil Desmet, Greer Hawley



Project Steering Committee



Stakeholder Engagement



Systematic Conservation Plan



Key inputs into SCP or Biodiversity Sector Plan

1. Biodiversity Profile
2. Protected areas Profile
3. Cost Profile (Threats/Pressures/Conflicting landuse, degradation)
4. Landcover Profile
5. Land planning units

Biodiversity Profile & Features



Developing the Biodiversity Profile

Biodiversity fields

- Birds
- Bats
- Herpetofauna (Reptiles + Amphibians)
- Fauna
- Plants
- Vegetation
- Estuaries (potentially – micro-estuaries)
- Wetlands
- Rivers
- Fish
- Coastline
- Butterflies and other invertebrates

Species level assessment:

- Revision of Biodiversity Profile using most up-to-date published data sources + expert mapping.
- Threatened species (&SSC) with limited ranges + breeding/roost sites.

Realm level assessment:

- **Freshwater** (including water courses, wetlands and fish): using NFEPA and PES/EIS data, supplemented with recent literature updates in fish species information.
- NGI wetlands data
- Nacelle Collins has started the wetland modelling for EC.
- **Coastline** data: Using Harris (Date of PhD)
- **Estuaries:** NBA Estuary priorities (potentially including micro-estuaries)
- **Vegetation:** SANBI veg map, Forest inventory

Protected areas: Features



Developing the Protected Areas map

- Latest version of SAPAD **plus**
- Updated with Eastern Cape official submissions
- Include map of formal and informal conservation areas

Landcover: Features

Developing the Integrated Landcover

- Use recent 2013/2014 landcover map
- Incorporate historical landcover maps (e.g 1990) spatial extent of secondary vegetation (degraded or different??)



- Develop a “degraded” layer: include soil erosion, alien invasion, bush encroachment

Cost Profile & Features



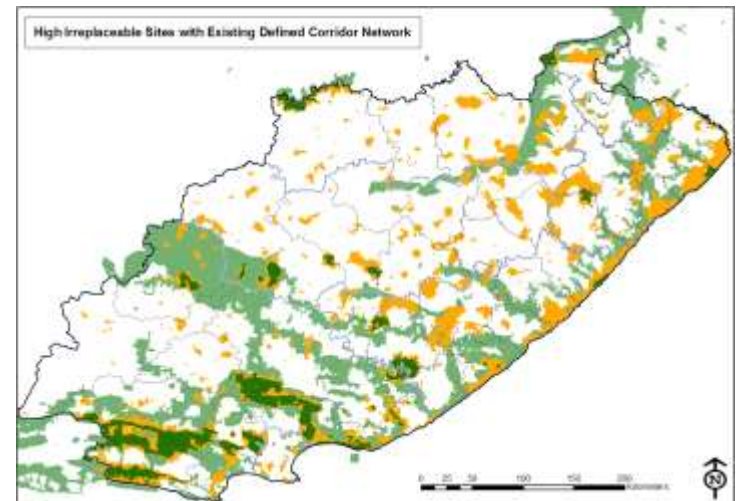
Developing the Cost +/- layers

Data included into “cost” layer: for both SCP and BSAP

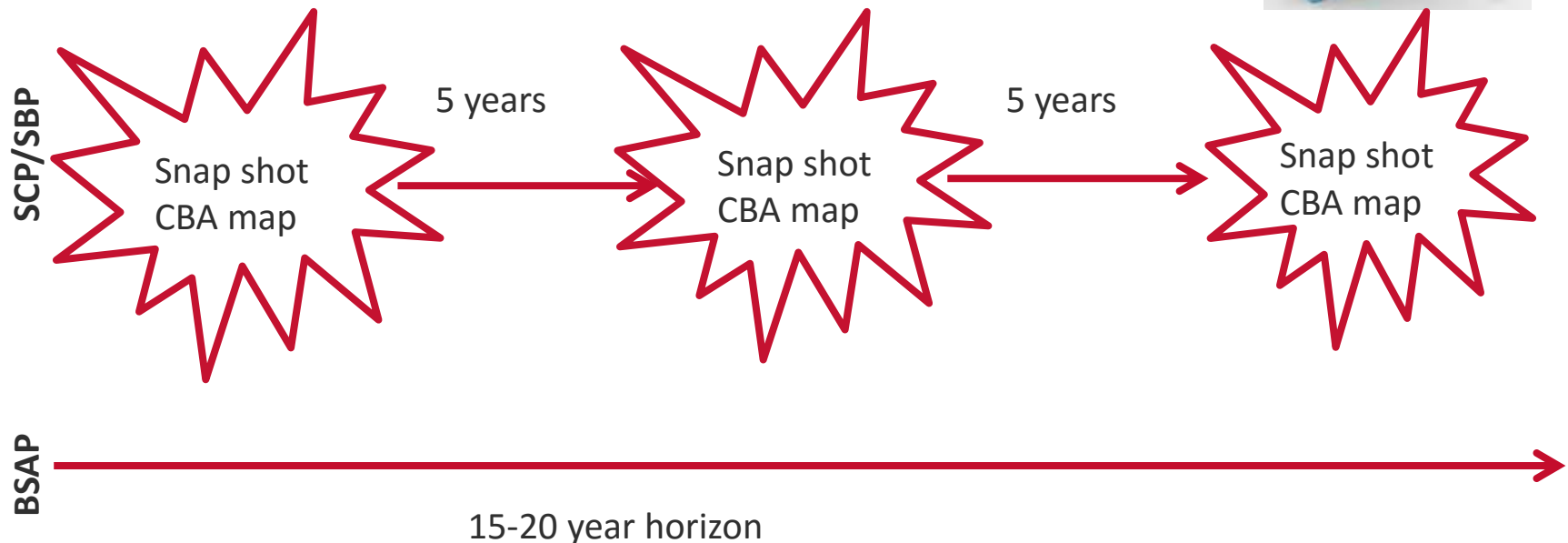
- SIPS
- EC Renewable Energy SEA
- EC Biofuel SEA
- Settlement patterns: Pressure
- Degradation: alien invasive organisms, bush encroachment, Erosion
- Agricultural potential and irrigated crops
- Afforestation potential
- Mining potential
- Additional infrastructure: dams, roads, power stations, power lines etc
- Priority carbon sink areas (+)
- Settlement patterns: Opportunities (+)

Rule-base for CBA classification and associated land use guidelines

- Irreplaceability (MARXAN) outputs are integrated into rule base with additional criteria to determine CBA classification.
- Criteria such as: important biodiversity corridors, expert mapping of key habitats, threatened ecosystems, EIA trigger areas
- Land use guidelines for each CBA category



EC Biodiversity Strategy and Action Plan



BSAP – In addition to NBSAP, we see this as mechanism to:

- Identify long-term threats/pressures
- Prioritise interventions (not limited to conservation or landuse)
- Monitor spatial trends and action plan implementation from one snap-shot to another

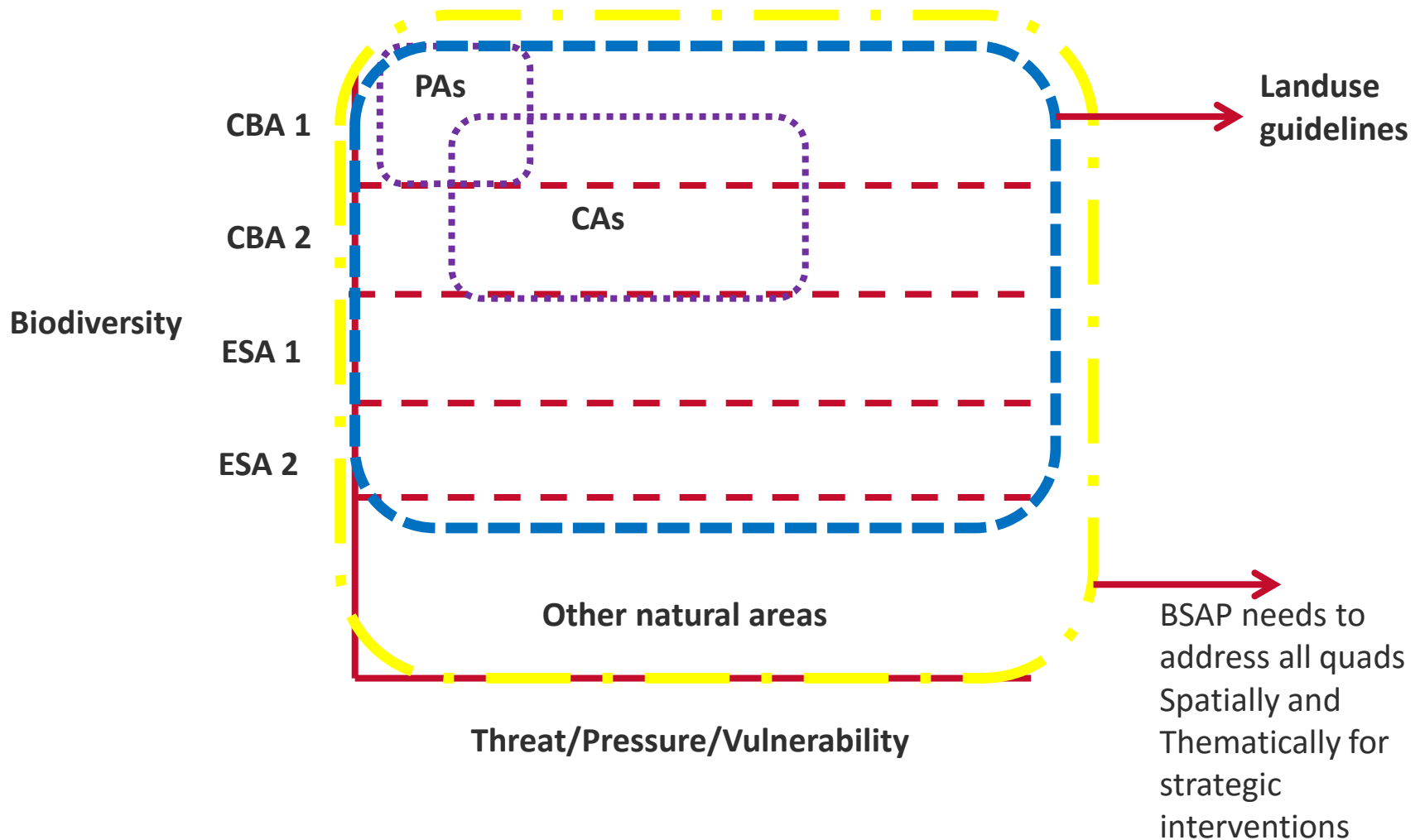
Biodiversity Sector Plan &

BSAP

The link



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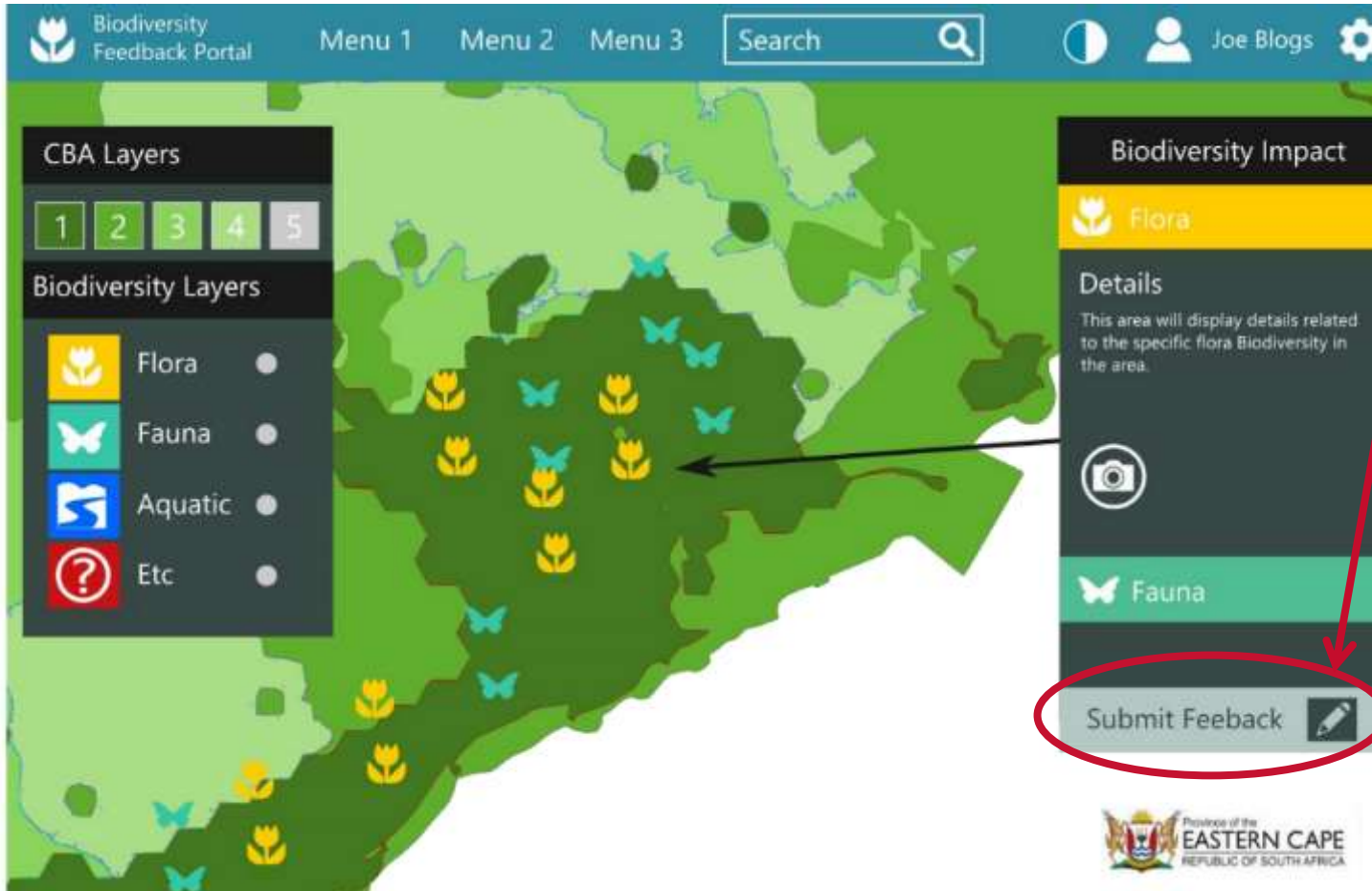
In addition to other BSAP SOs

- Approach: overlay CBA map with Threat/Vulnerability (medium to long-term modelled/predicted) map
 - Climate change
 - Changes in settlement patterns (indices)
 - Future economic growth/development (generated from SIP, SEAs, SDFs)
- These “Stress” areas will:
 - Provide the spatial context for thematic/spatial issues that require intervention
 - Identify areas of opportunity to link biodiversity management with socio-economic development (ToR)



Integrated Systematic Conservation Tool

BGIS host, plus links to additional functions: STILL UNDER NEGOTIATION



Biodiversity Feedback Portal

Menu 1 Menu 2 Menu 3 Search

Joe Blogs

CBA Layers

1 2 3 4 5

Biodiversity Layers

- Flora
- Fauna
- Aquatic
- Etc

Biodiversity Impact


Flora

Details

This area will display details related to the specific flora Biodiversity in the area.

Fauna

Submit Feedback



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Used to update info: biodiversity, degraded land and development (EAs), conservation achievements on an ongoing basis,

Input into BSAP monitoring indicators.

Biodiversity Monitoring and Evaluation Framework



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- Develop an M&E indicator framework for the BSAP

Types of indicators that will be used:

- **process-based** (i.e. indicators for monitoring the development of strategies and actions)
- **outcome-based** (i.e. indicators for measuring the effectiveness of actions)

Still resolving:

Planning Units

- Traditional hexagons or more “organic” units using biophysical and cadastral features



Still resolving:

How to include Climate Change

Strategic planning for 20 year horizons, makes climate change a critical driving factor. Approach (still under design) may include :

- Identify climate change resilient areas (well defined in NBA 2011)
- Identify areas of high vulnerability to climate change impacts. A broad approximation of this can be obtained from: inverse of climate resilient areas
- Vulnerability ranking of planning units can be further prioritised /refined according to degree of expected 'climatic shift' and 'landscape isolation' .
For this we will consider using the following data sets:

- WORLDCLIM data sets (1km resolution) predicting 50/70 year temperature /rainfall changes under different scenarios
- Modelling products developed for DEA on National Carbon Sinks assessment (2015). Including land cover predictions for 2020, vulnerability and land use predictions for 2020

Thank you!

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