



Restoring Landscapes in South-Africa (ReLISA): Nature-based solutions for climate, biodiversity and people

Presentation to South Africa NCA Forum
18-19 October 2022



UNESCO



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Touching lives through innovation



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WILDLIFE TRUST**
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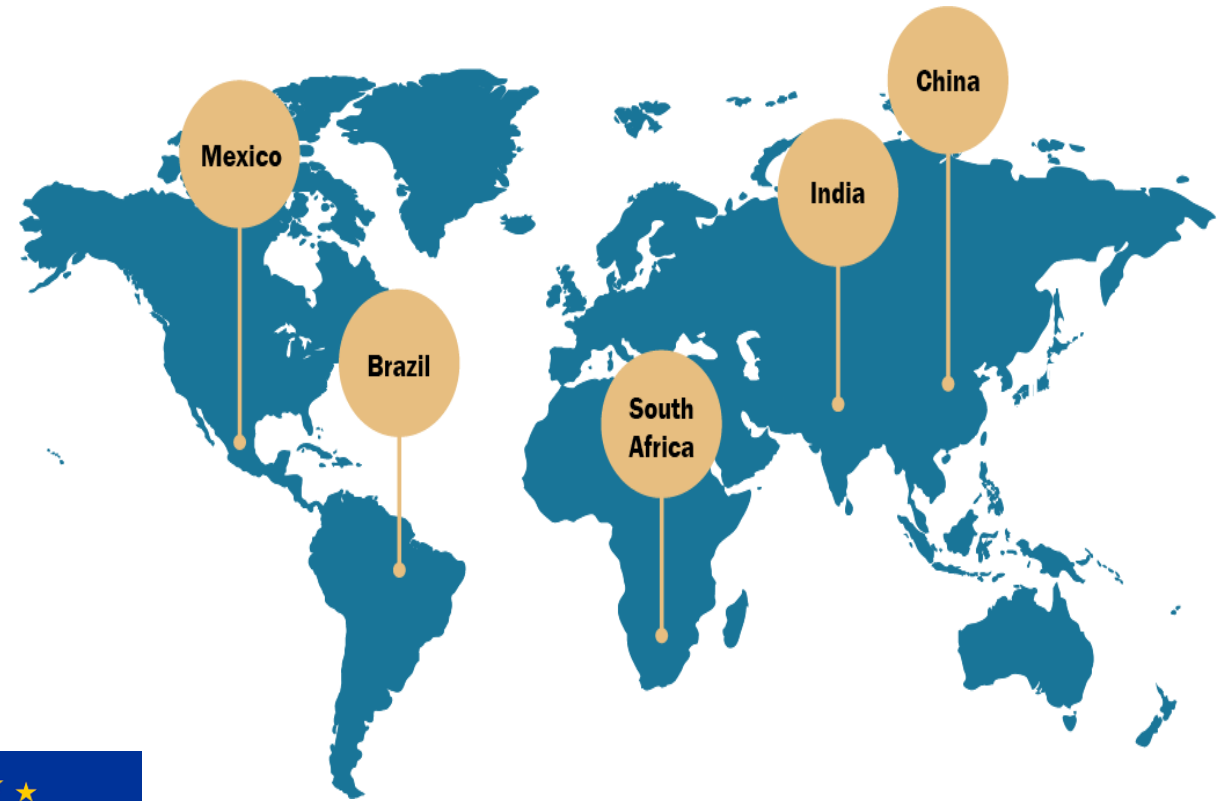
I CONTEXT

(i) NCAVES/SEEA-EA

(ii) TEEB and TEEBAgriFood

Natural Capital Accounting and Valuation of Ecosystem Services (NCAVES)

- Five megabiodiverse countries
- Piloting ecosystem accounts
- European Union (FPI) funded
- Global Implementing partners
 - United Nations Statistics Division
 - UNEP



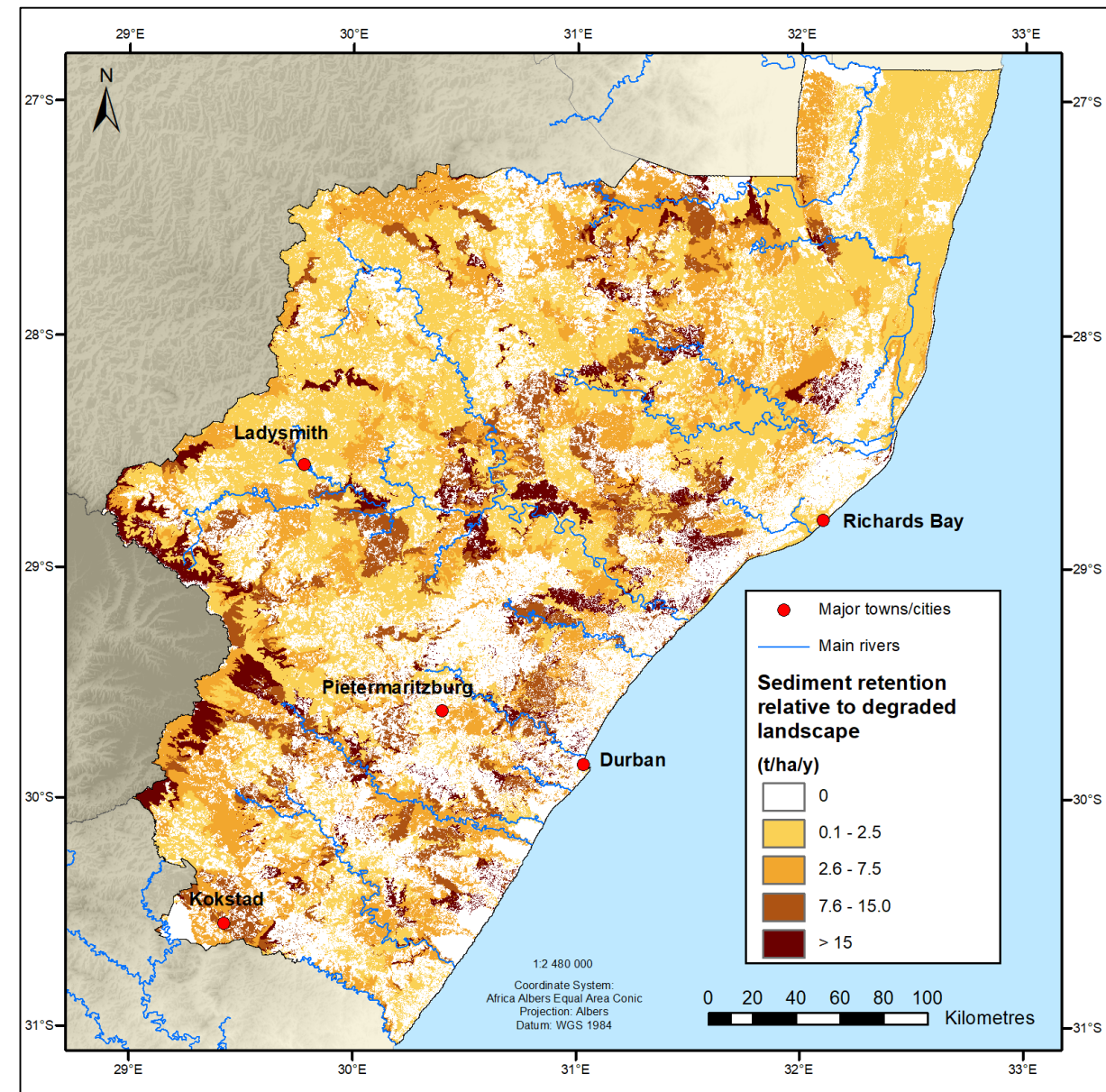
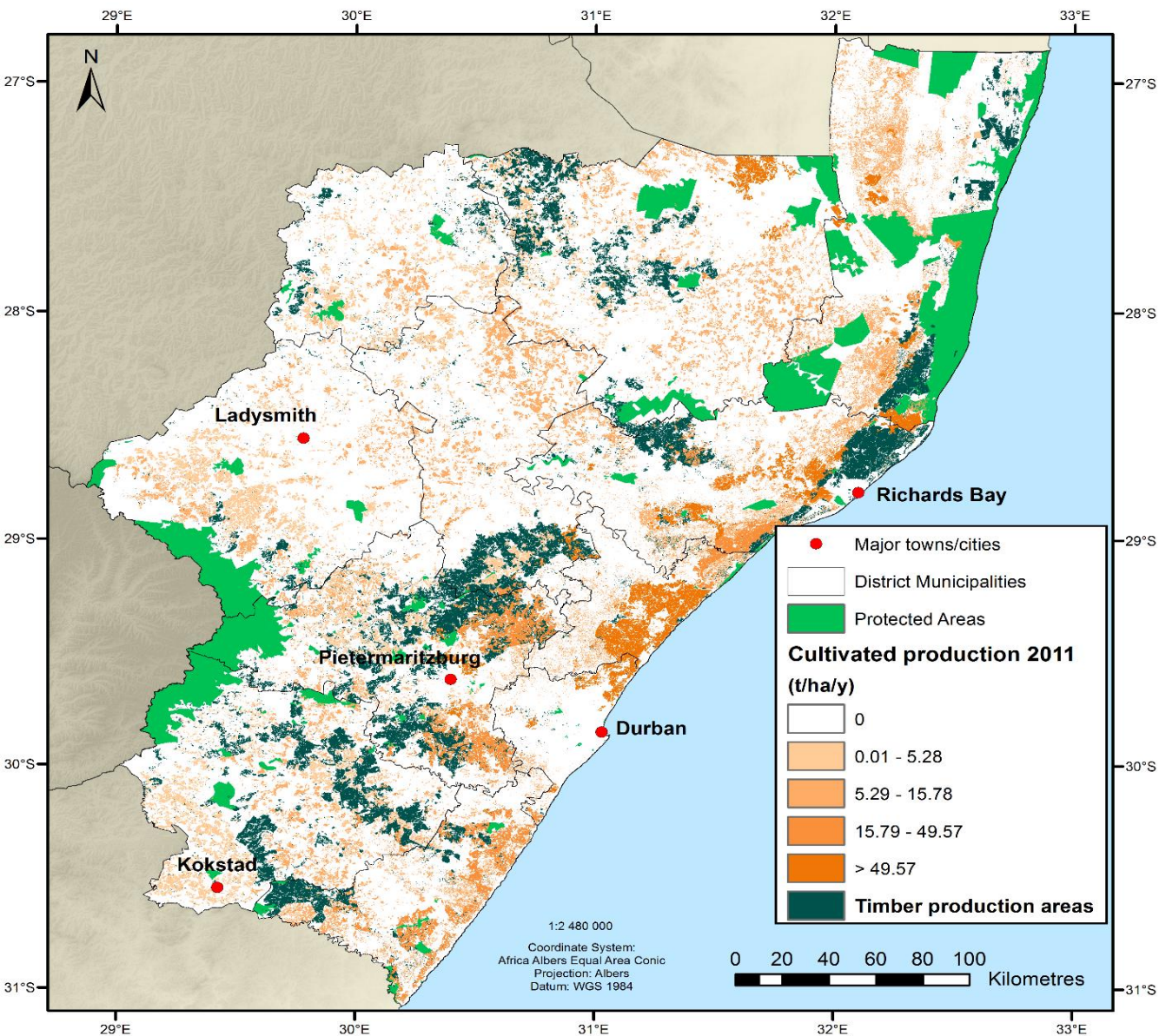
System of
Environmental
Economic
Accounting



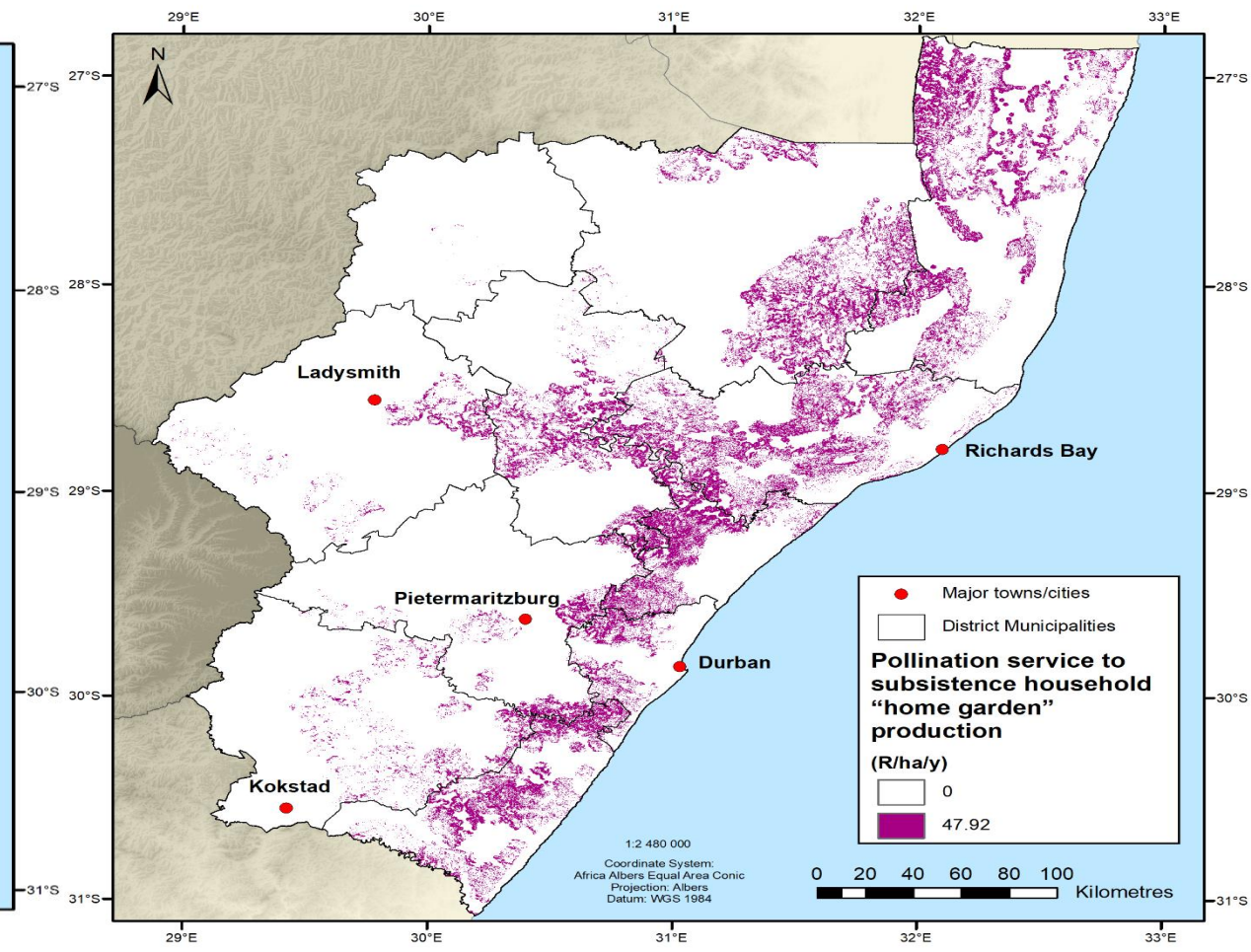
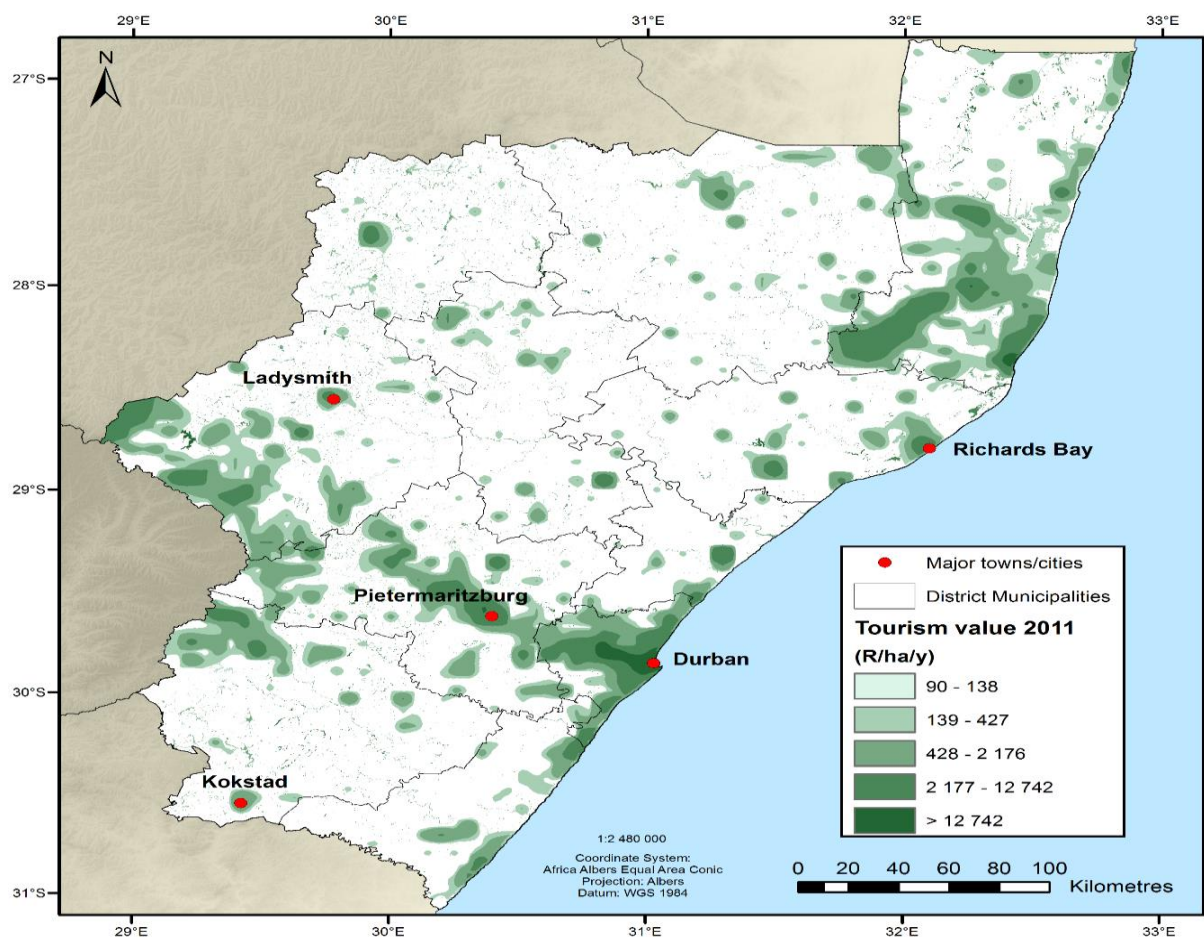
UN
environment
programme



Selected results from ecosystem service flows: physical terms

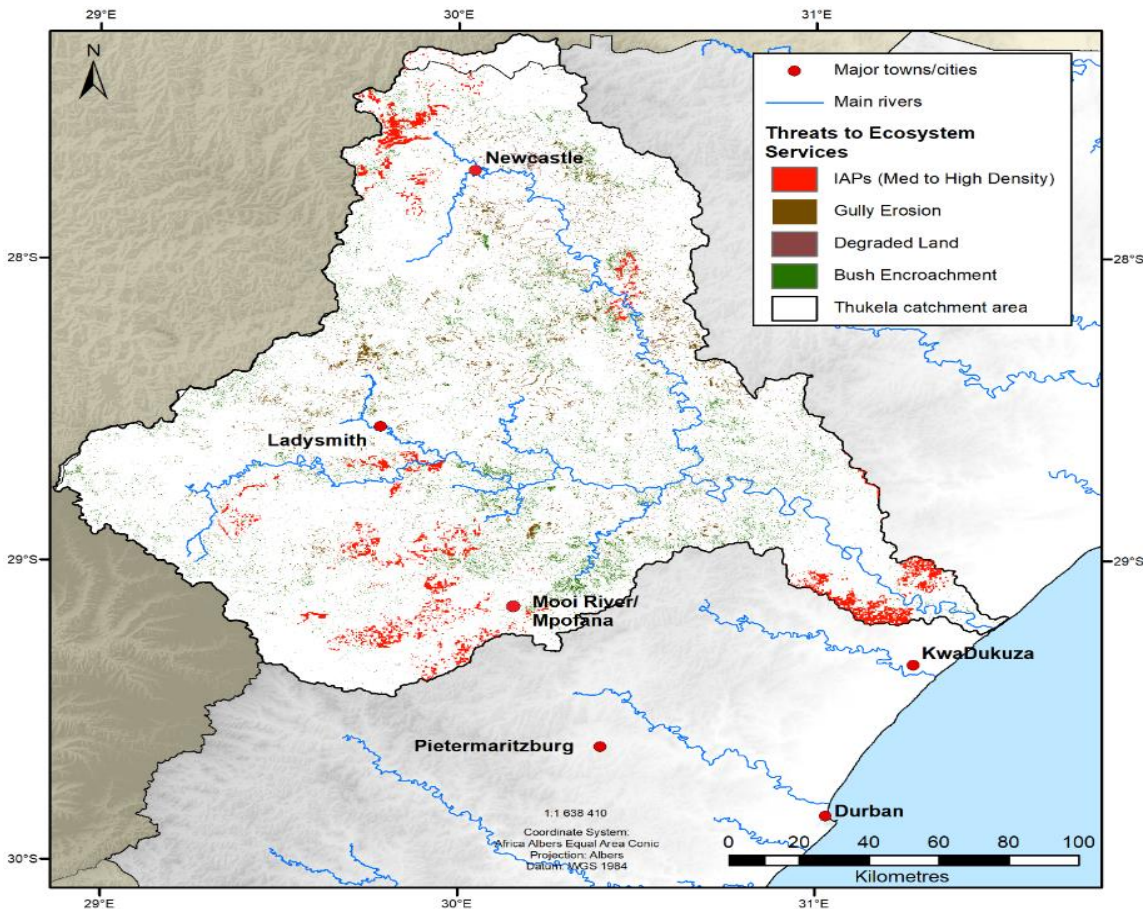


Selected results from ecosystem service: monetary valuation



Policy application : Ecosystem restoration in South Africa – KwaZulu Natal South Africa

Cost-benefit analysis of ecosystem restoration programmes in Thukela river basin, KwaZulu Natal



Policies:

Extension services

Betterment schemes

Natural Resource Management Programmes

e.g. 'Working for Water'

2030 Land Degradation Neutrality target, UNCCD and SDGs

Policy application : Ecosystem restoration in South Africa – KwaZulu Natal South Africa

	Present value (R millions) base estimate	
Costs	LDN Optimistic	Full restoration
Clearing IAPs	514.4	2 355.2
Addressing Bush Encroachment	237.6	691.1
Active restoration of grasslands, erosion	-	-
Sustainable land management	1 981.02	6 093.62
Total present value of costs	2 733.09	9 139.98
Benefits		
Water supply	2 591.4	10 757.2
Sediment retention	38.9	63.1
Tourism	121.8	243.6
Carbon storage (avoided national cost)	-274.91	597.5
Harvested resources	70.6	2 391.3
Livestock production	620.7	1 476.9
Total present value of benefits	3 168.6	15 529.6
Net Present Value	435.5	6 389.6
BCR	1.2	1.7



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- (i) NCAVES/SEEA-EA
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ZAKIR HOSSAIN CHOWDHURY/ANADOLU AGENCY/GETTY



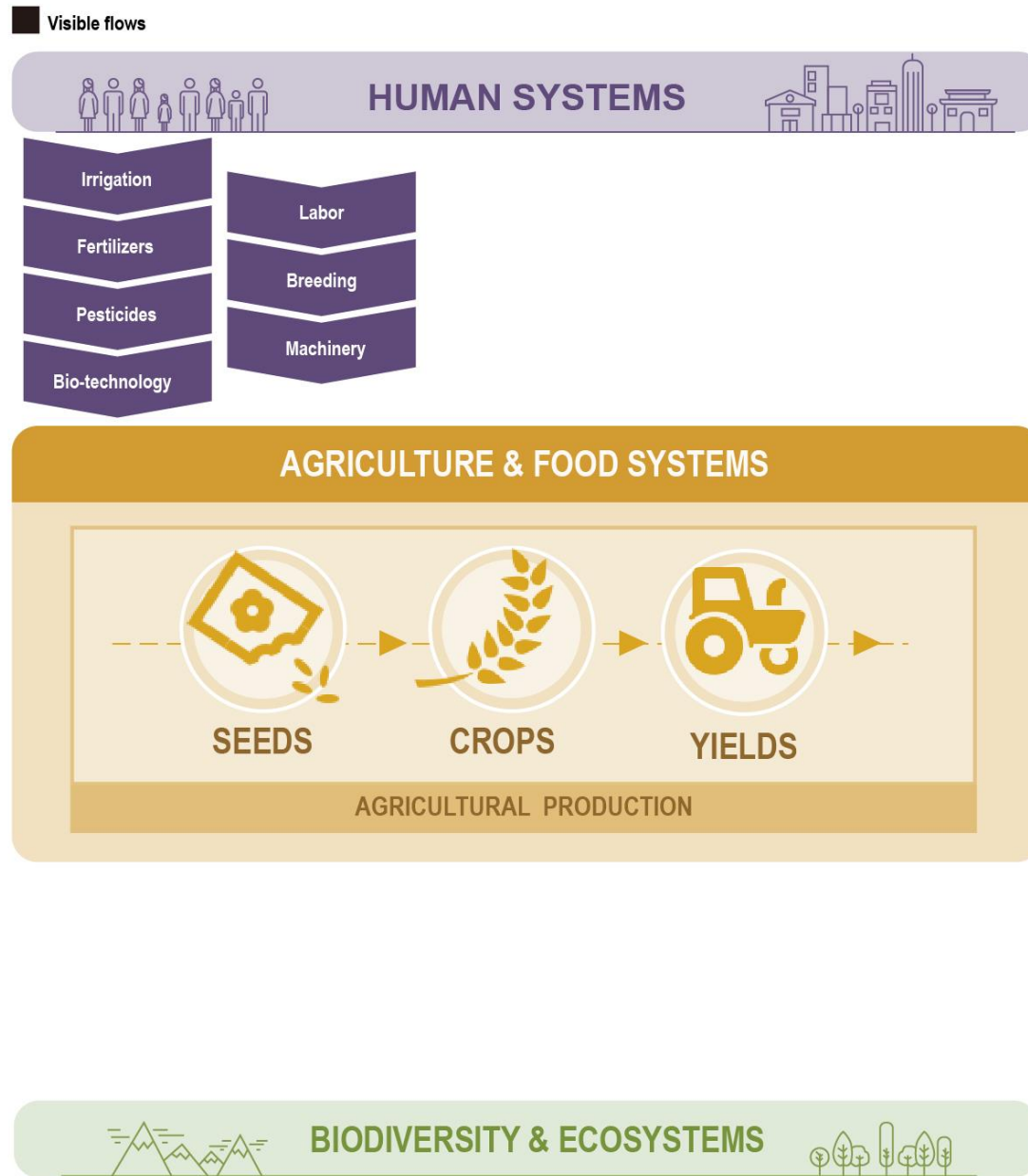
Nature (December 2016)

Drying red chillis under the sun provides one of the few sources of employment for women in an area of Bangladesh.

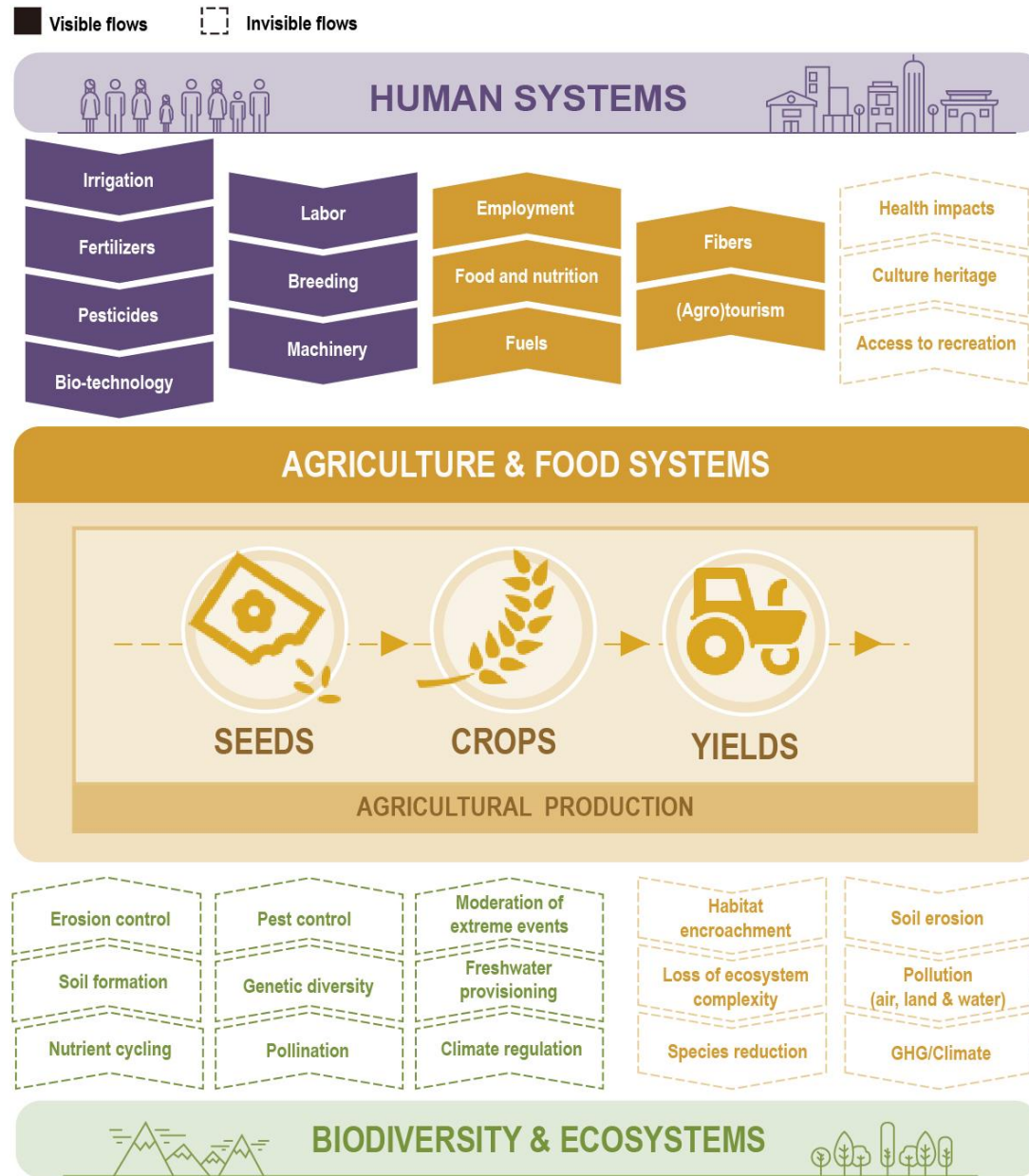
Fix food metrics

For sustainable, equitable nutrition we must count the true global costs and benefits of food production, urge **Pavan Sukhdev**, **Peter May** and **Alexander Müller**.

The visible and invisible flows of agricultural production

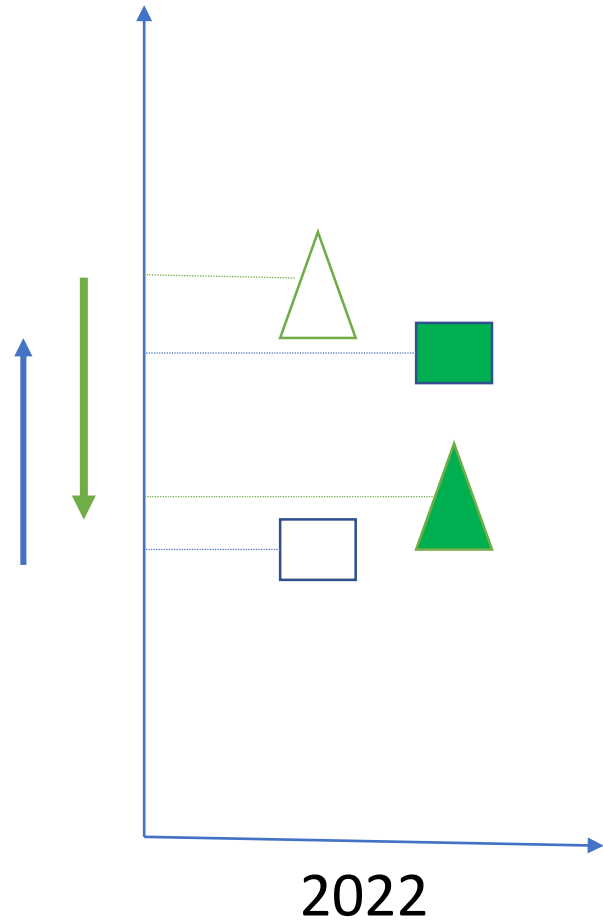






The visible and invisible flows of agricultural production

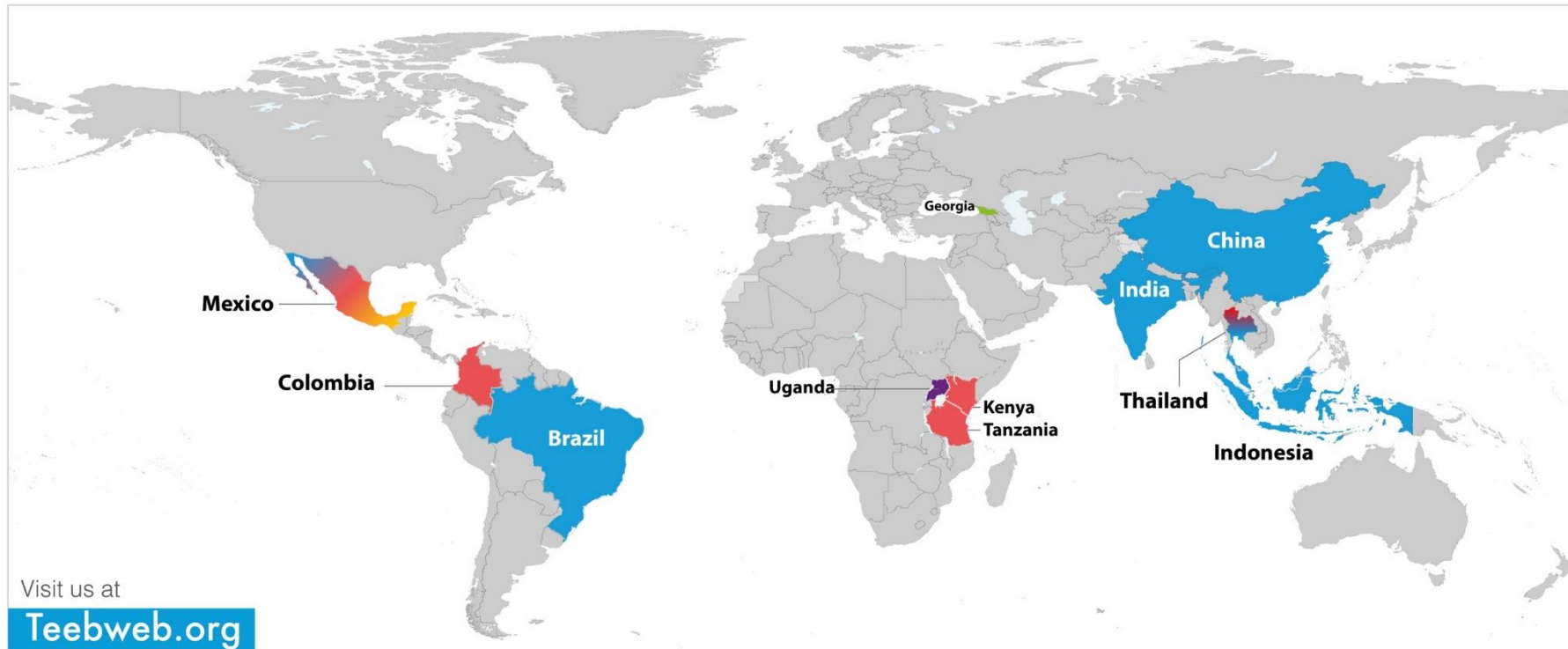


The TEEBAgriFood core proposal

Financial/Economic flows



-  Pro-biodiversity option
-  Monocrop (or an alternative)
-  Pro-biodiversity option with externalities included
-  Monocrop with externalities included



The designations employed and the presentation of material including on any map in this work do not imply the expression of any opinion whatsoever on the part of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

● EU-PI

Brazil i) Degraded Pasture Land Restoration ii) Urban and Periurban Agriculture
China Green Food Production
India Organic Farming and Agroforestry
Indonesia Cacao Agroforestry Production
Mexico Agroforestry Coffee
Thailand Organic Rice Production
Malaysia TBD

● IKI

Colombia Land Use Change
Kenya Cereals and Medicinal Plants
Tanzania Land Use Change; Water Quality & Food Security
Thailand Organic Rice Production
Mexico Conventional & Traditional Maize

● GEF

Georgia Sustainable Land Management Practices

● GIZ

Mexico Conventional & Traditional Maize

● NORAD

Uganda Sustainable Urban and Peri-Urban Agriculture for Wetlands Conservation



II ReLISA

NCA – *measure and/or inform*

ReLISA – the core value proposition: What are we trying to address?

1. There is a **lack of awareness** of commercial impacts and dependencies on ecosystems;
2. The **opportunities for bankable restoration activities are ‘off the radar’** (such as value chain development for sustainably produced goat meat, NTFP and other commodities, and projects for voluntary carbon market projects, which could fund the upscaling of thicket, grassland or savanna restoration); and
3. There are **coordination failures** leading to ‘locked-into’ pathways as the main actors (government, civil society, communities, private sector) need to coordinate effectively towards large-scale restoration

ReLISA – How are we going to address these issues?

1. Develop and apply **biophysical and economic valuation modelling ex ante** to determine where there is the highest returns on investment (ROI) and opportunities to reduce income inequalities;
2. **Consult** with stakeholders (including the business and finance community) on final site selection to gain buy-in and create 'readiness' for restoration interventions;
3. **Develop bankable business investments** for the private sector;
4. **Implement** on-the-ground via restoration activities; and
5. Provide capacity building and knowledge products, to **ensure project sustainability**.

Policy application : Ecosystem restoration in South Africa – KwaZulu Natal South Africa

Directly bankable

Bankable through international markets

Bankable through Payments for Ecosystem Services/other mechanisms

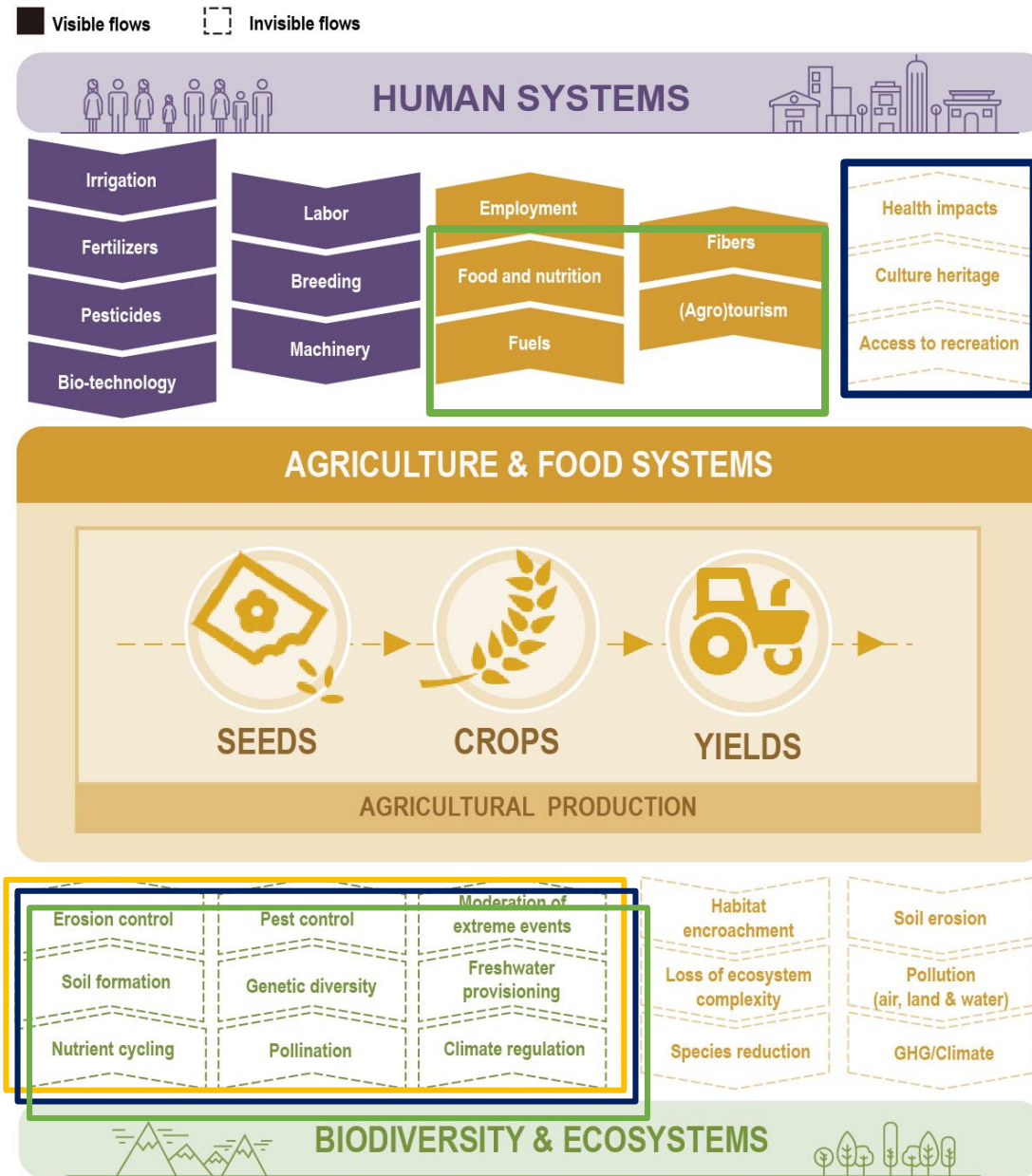
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The visible and invisible flows of agricultural production

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ReLISA Components and Work Packages

I. Biophysical/economic assessments & planning for restoration (30%)

Work Package 1 (lead **UNEP**): ex ante assessment of landscape restoration opportunities – 20%

Work Package 2 (lead **CSIR**): MRV & impact monitoring – 10%

II. Leveraging private sector investments (15%)

Work Package 3 Business models & investment incubation – 15%

III. Direct Landscape-level interventions & on-the ground implementation (45%)

Work Package 4 (lead **EWT**): Restoration of proposed and established Biosphere Reserves – 20%

Work Package 5 (lead **UNESCO**): Water Funds, Payments for Ecosystem Services, GCF concept – 15%

Work Package 6 (lead **UNDP**): COVID-19 / Green Recovery – 10%

IV. Dissemination and communication (10%)

Work Package 7 (lead **UNEP**): Restoration knowledge hub, education and dissemination – 10%

WP 1 – UNEP led

Ex ante assessment of landscape restoration opportunities – 20%

- WP 1 establishes **where** restoration will be most cost efficient, thereby **making the economic case for restoration** through a combination of information from:

- 1) biophysical modelling and economic valuation of ecosystem services, using SEEA EA;
- 2) existing SA government priority areas and mapping exercises e.g. DFFE EbA hotspots;
- 3) other criteria such as state of degradation; and
- 4) lessons from previous restoration interventions

Rationale of Work Package 2 (Lead: the CSIR)



- Improved terrestrial carbon management offers tremendous opportunities for South Africa's climate change response:
 - Mitigation: Maximizing terrestrial carbon sequestration while minimizing GHG emissions.
 - Adaptation: Increased productivity, climate resilience and biodiversity management.
 - Reporting: Coherent, integrated information base across a wide range of geographic scales and land classes for effective land management practices.
- Rewarding outcomes: Participation in international carbon market.
- The strategic relevance: supporting sustainable development, informing national policies and compliance with international reporting commitments.

Quantification of the impact of the project

- Carbon stocks
- GHG emissions
- Adaptation (climate resilience)
- SDGs



Supporting national reporting to:

- UNFCCC
- GHG inventory (land-use and land-use change)
- BTR
- CBD
- UNCCD
- SDGs



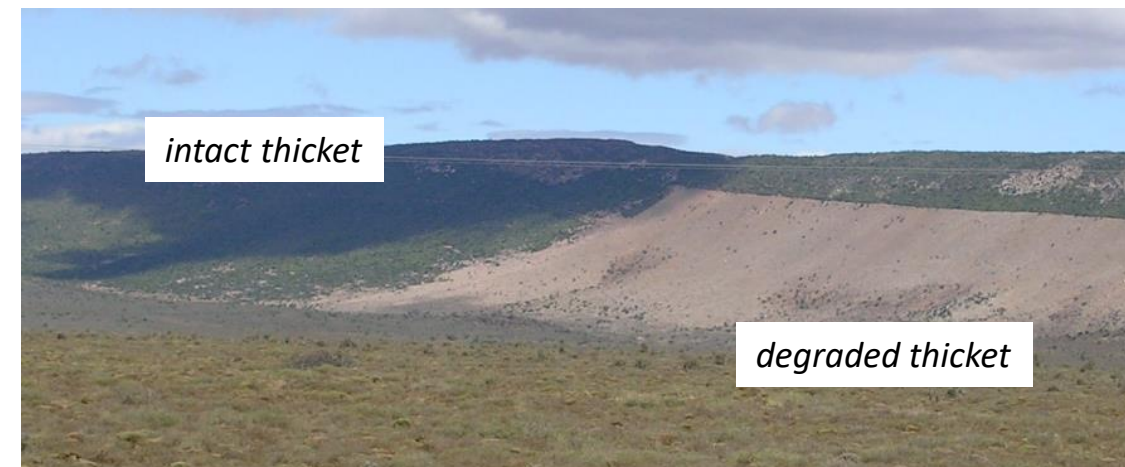
Development and piloting of an impact monitoring tool

WP3: Leveraging private sector investments for ecosystem restoration

Rationale

- Restoration of thicket, grasslands and savannahs at the scale needed requires massive private sector investments
- WP3: “catalytic funding” to leverage significant private sector investments
- Project exit strategy: upscaling during & beyond IKI project lifetime.

Our aim: we make ecological restoration in South Africa INVESTIBLE.

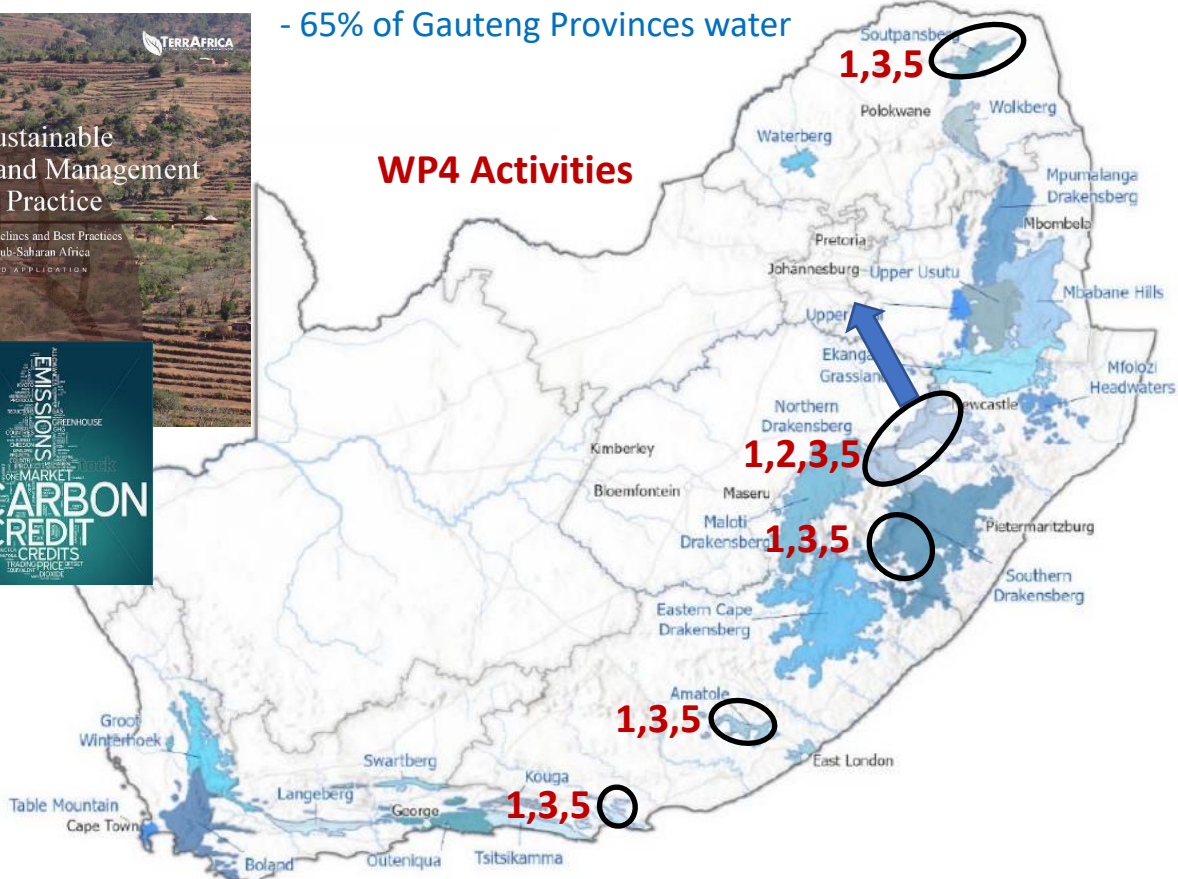


Work Package 4 (lead EWT): Restoration of proposed and established Biosphere Reserves

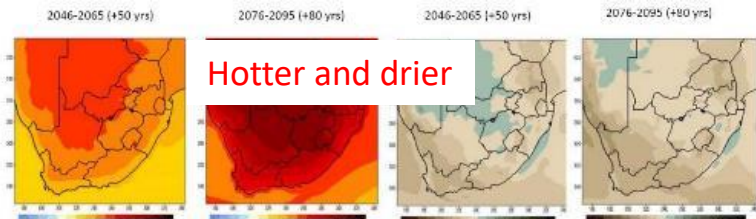
Strategic Water Source Areas – 10% land surface, 60% water supply

- 65% of Gauteng Provinces water

WP4 Activities



Activities 1 & 2 contribute to 300,000ha enhanced
Activities 1, 3 & 5 contribute to 100,000ha restored
Activities 1,3 & 5 are scalable across all regions



Hotter and drier

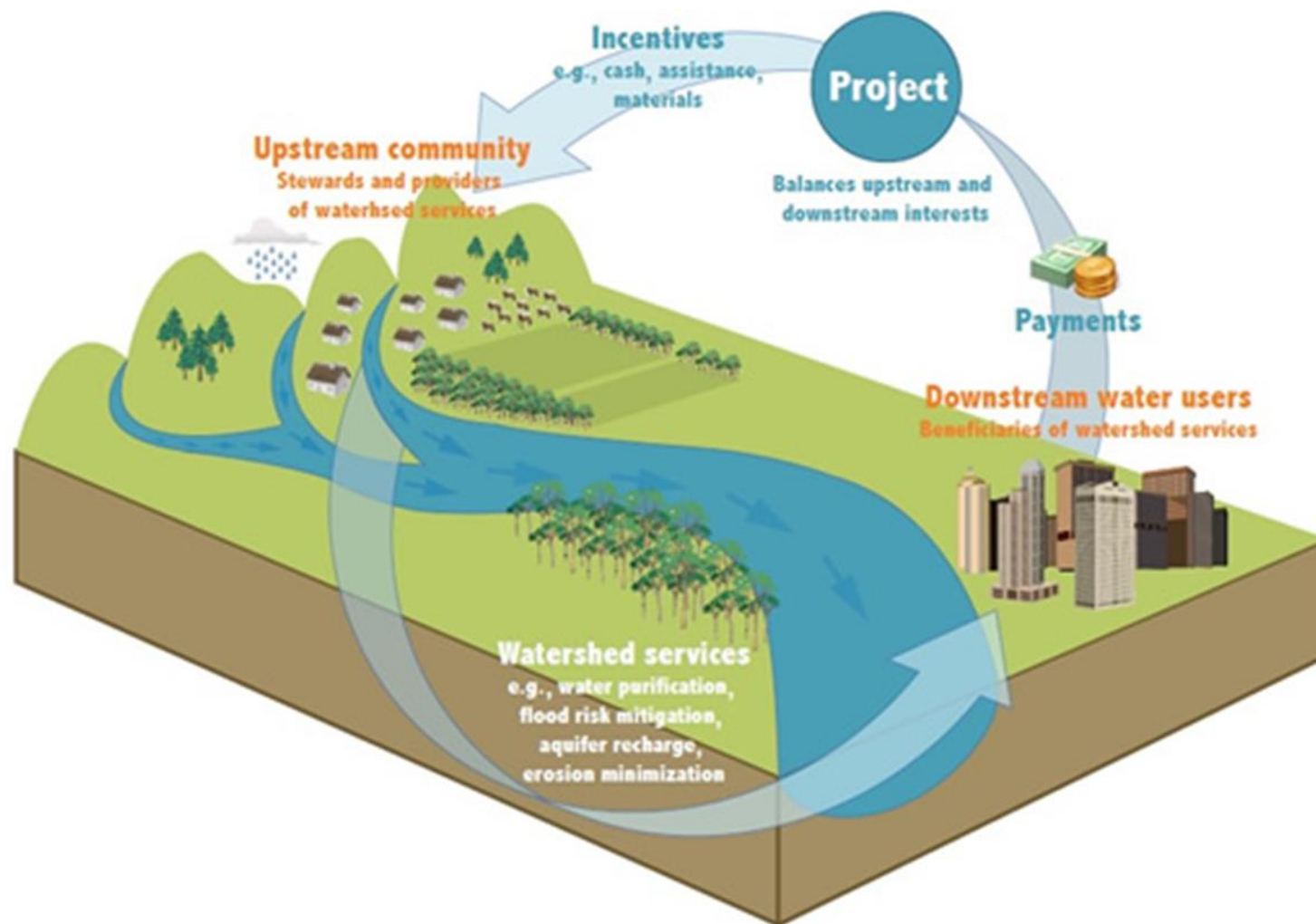
Protected area expansion actions:

- Initiate new protected area proclamation
- Strategic management planning
- Establish new biosphere reserve

Restoration actions:

- Strategic restoration planning
- IAP clearing (WP4&5)
- IAP wood by-products (WP4&5)
- Meat Naturally – sustainable grazing (WP3&4)
- Sustainable Land Management – integrated farm management training (WP4)
- Accessing carbon market (WP3)
- Water funds (WP5)
- IAP wood by-products (WP4&5)
- EPWP (WP4&5)
- Leverage govt programmes
- Job creation
- Leverage SMMEs
- Climate resilience





Water funds and its benefits:

- ☐ Climate resilience
- ☐ Improve water security
- ☐ Protect Biodiversity
- ☐ Support Ecosystem health and functioning
- ☐ Create Job opportunities

WORK PACKAGE 6 (lead UNDP): Covid-19 Green Recovery– 10%

Covid-19 Green Recovery- General approach



“We must insert the DNA of a green recovery into all recovery efforts- this is crucial not only to protect ecosystems & biodiversity & restore nature, but it will also...create new green jobs, reduce inequalities & foster more resilient communities” – Achim Steiner

- Partnerships: UNDP convening power and global expertise e.g UN-PAGE (Partnerships for Action on the Green Economy); BIOFIN.
- Leveraging off current and working initiatives & outscaling
- Enhancing access to the green economy and upskilling
- Informing decision-making

WP 7 – UNEP led

Restoration knowledge hub, education and dissemination – 10%

- WP 7 will ***contribute to upscaling of restoration*** by disseminating lessons for the implementation of restoration in South Africa and globally through workshops, websites, training resources, a restoration knowledge hub, and online training courses.

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