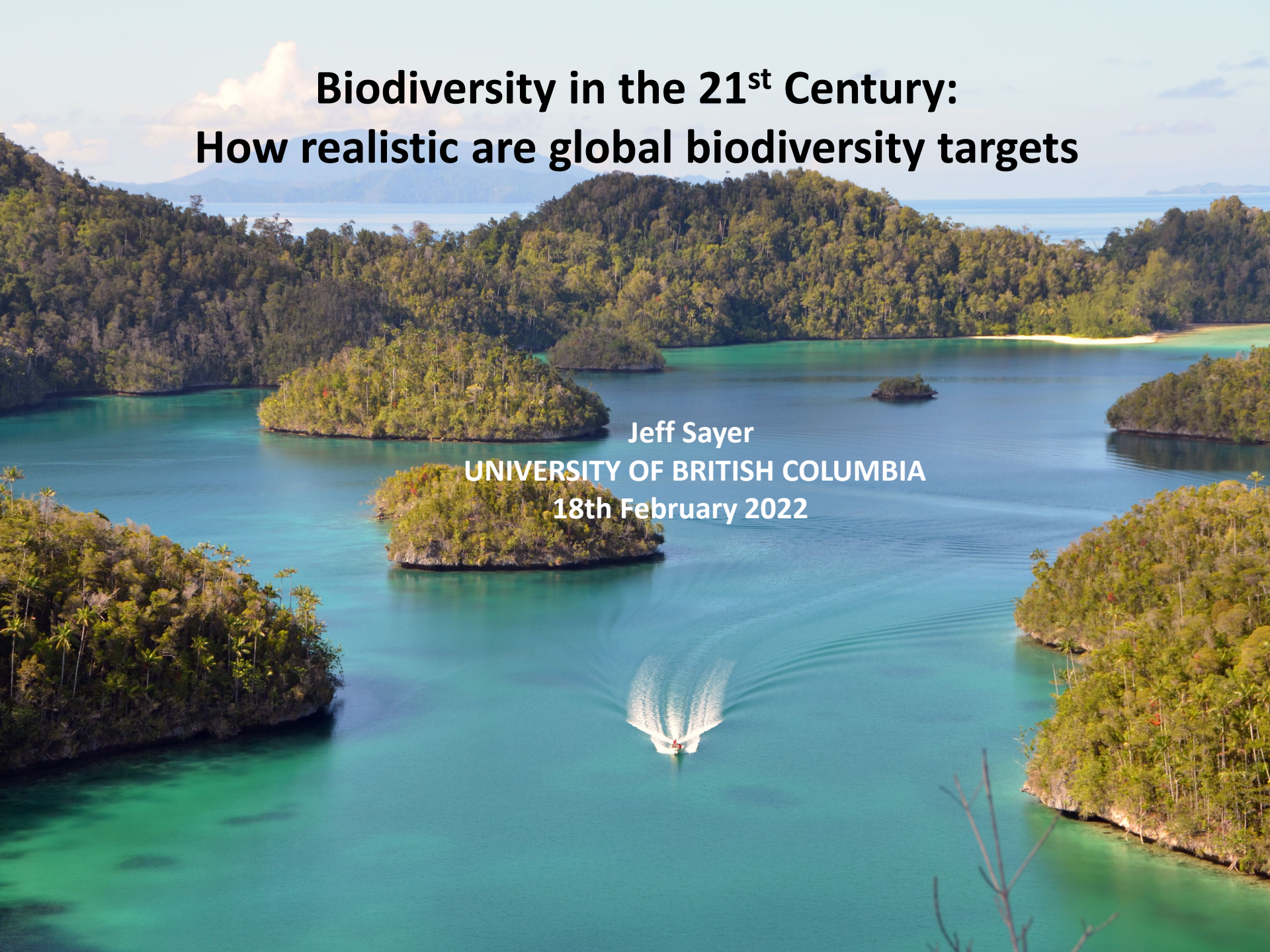
Biodiversity in the 21st Century: How realistic are global biodiversity targets



Jeff Sayer
UNIVERSITY OF BRITISH COLUMBIA
18th February 2022

- Developing, planning and managing NPs in Africa and Asia
- Directing the Forest Conservation Program at IUCN
- Environmental adviser at World Bank
- Directing the Center for International Forestry Research – Global
- Establishing Landscapes and Livelihoods program at IUCN/WWF
- Running program at James Cook University, Australia
- UBC




- The CBD COP – Kunming

- Less area targets and more quality targets
- Human societies diverse views of biodiversity – Rich world views dominate discourse
- Local context is important
- Find local solutions – partnerships - collaboration
- Understanding change processes
- Underlying causes and slow variables




- VIBRANT FOREST LANDSCAPES
https://vibrantforestlandscapes.forestry.ubc.ca/

- Tropical people & nature – achieving conservation impacts
- In depth studies in critical areas – poor people and rich biodiversity – Trans-disciplinary science
- Deep engagement with local actors – long-term
- Drawing out global generalizations and influencing policy.




Landscape Approaches are needed

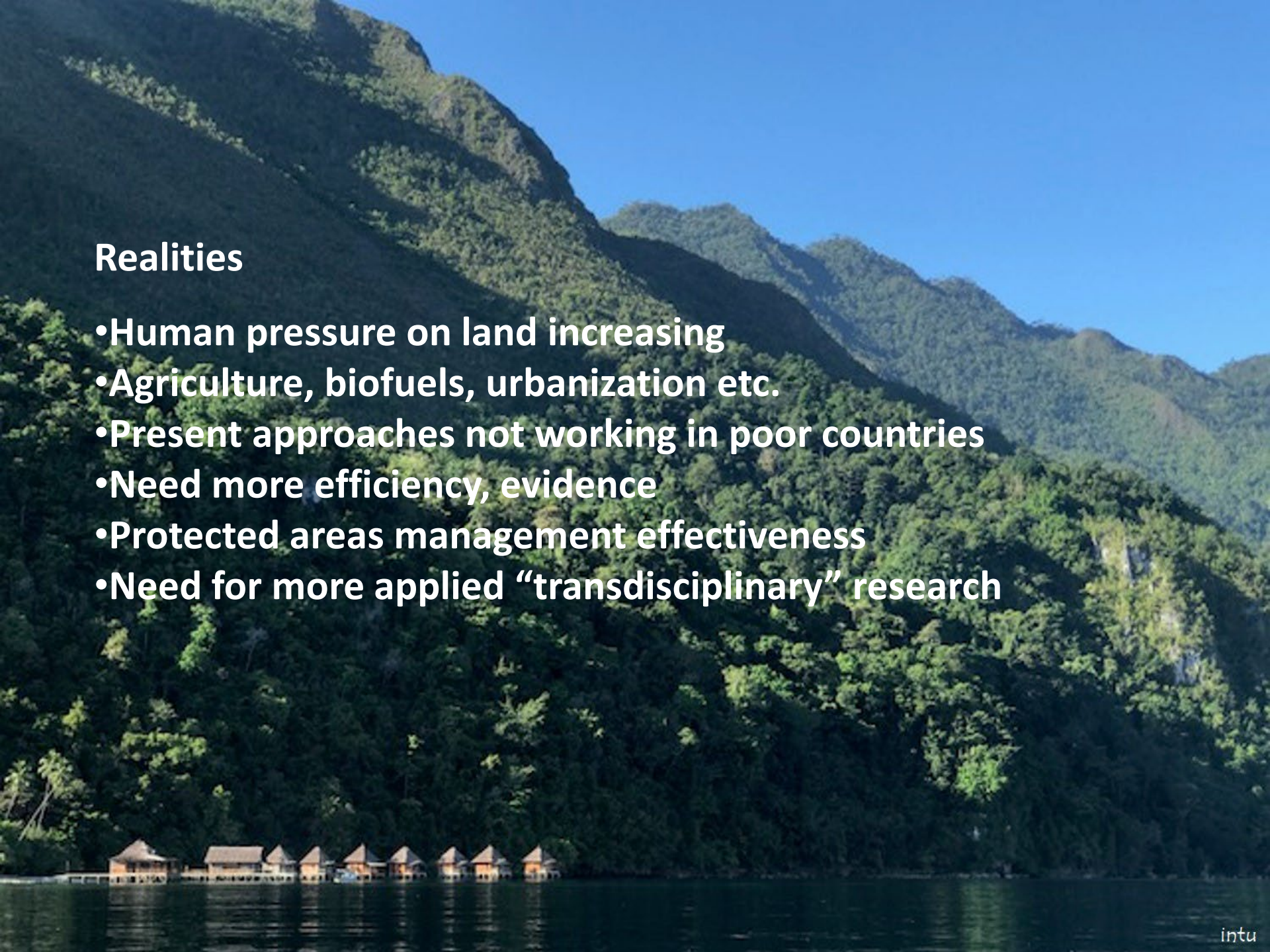
A long-term collaborative process bringing together **diverse stakeholders** aiming to achieve a balance between multiple and sometimes conflicting objectives in a landscape or seascape

SDG 15 – life on land

SDG 16

16.6 Develop effective, accountable and transparent institutions at all levels

16.7 Ensure responsive, inclusive, participatory and representative decision-making at all levels



Realities

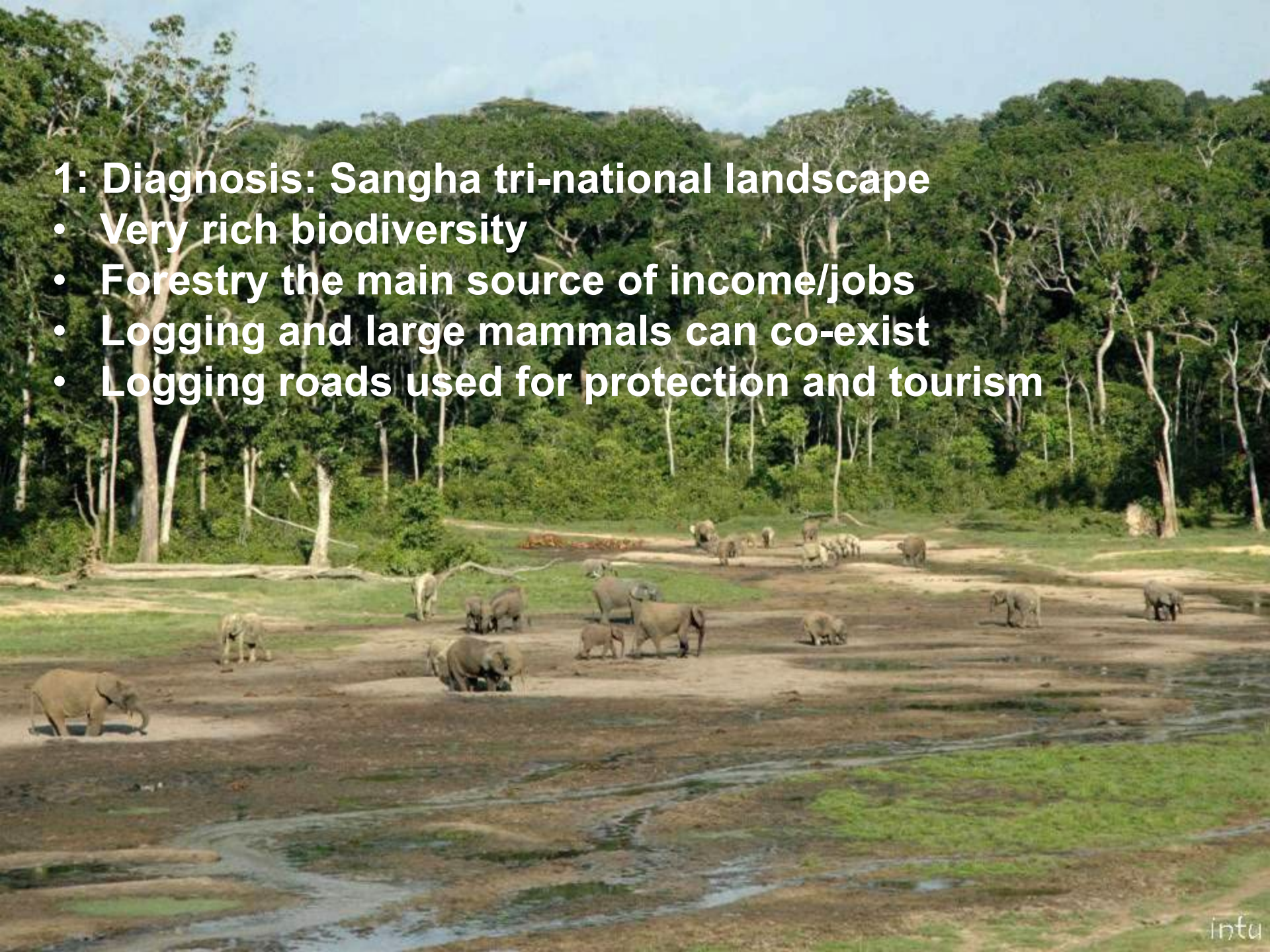
- Human pressure on land increasing
- Agriculture, biofuels, urbanization etc.
- Present approaches not working in poor countries
- Need more efficiency, evidence
- Protected areas management effectiveness
- Need for more applied “transdisciplinary” research

- Other Effective Conservation measures OECM
- Integrating land uses – forestry and conservation
- Multi-functional land use – industry partnerships
- Meeting human needs first – sustainable development


• 30% total protection is not possible in densely populated developing
• Strategically located small protected areas
• Multiple use landscapes – and forests
• Landscape mosaics
• Community managed areas
intu


• Long-term engagement
• Trans-disciplinary science to impact change
• Learning together with local partners
• Traditional knolwedge
• Negotiating approaches suited to local context
• Nudging
TAB/intu

PORTUGAL
SPAIN
ITALY
TURKEY
Madeira Island
Canary Islands
Mediterranean Sea
Tyrrhenian Sea
Ionian Sea
Aegean Sea
Sicily
MALTA
Crete
CYPRUS
Atlas Mountains
MOROCCO
Grand Erg Occidental
Grand Erg Oriental
ALGERIA
TUNISIA
LIBYA
EGYPT
Libyan Desert
Qattara Depression
Sahara Desert
WESTERN SAHARA
MAURITANIA
MALI
NIGER
CHAD
SUDAN
Nubian Desert
Red Sea
SAUDI ARABIA
Arabian Peninsula
IRAQ
YEMEN
Gulf of Aden
Ahaggar Mtns.
Tibesti Mtns.
Erg du Tenere
SENEGAL
GAMBIA
GUINEA BISSAU
GUINEA
SIERRA LEONE
LIBERIA
COTE D'IVOIRE
BURKINA FASO
GHANA
BENIN
NIGERIA
CAMEROON
CENTRAL AFRICAN REPUBLIC
EQUATORIAL GUINEA
GABON
CONGO
Congo Basin
DEM. REP. OF CONGO
Ethiopian Highlands
ETHIOPIA
SOMALIA
DJIBOUTI
KENYA
UGANDA
RWANDA
BURUNDI
TANZANIA
Lake Victoria
ANGOLA
ZAMBIA
Katanga Plateau
MOZAMBIQUE
ZIMBABWE
NAMIBIA
Namib Desert
BOTSWANA
Kalahari Desert
SOUTH AFRICA
SWAZILAND
LESOTHO
MADAGASCAR
Mozambique Channel
Comoros
Zanzibar Island
Sao Tome
Gulf of Guinea
ATLANTIC OCEAN
INDIAN OCEAN
Cape of Good Hope
Cape Town
Casablanca
Alexandria
Cairo
Khartoum
Addis Ababa
Mogadishu
Kinshasa
Brazzaville
Mbandaka
Douala
Yaounde
Ibadan
Accra
Dakar
Walvis Bay
Durban
Johannesburg
Huambo
Matadi
Luanda
Lubumbashi
Mombasa
0 500 Miles
0 500 KM
Parallel scale at 0û 0û


1: Diagnosis: Sangha tri-national landscape
• Very rich biodiversity
• Forestry the main source of income/jobs
• Logging and large mammals can co-exist
• Logging roads used for protection and tourism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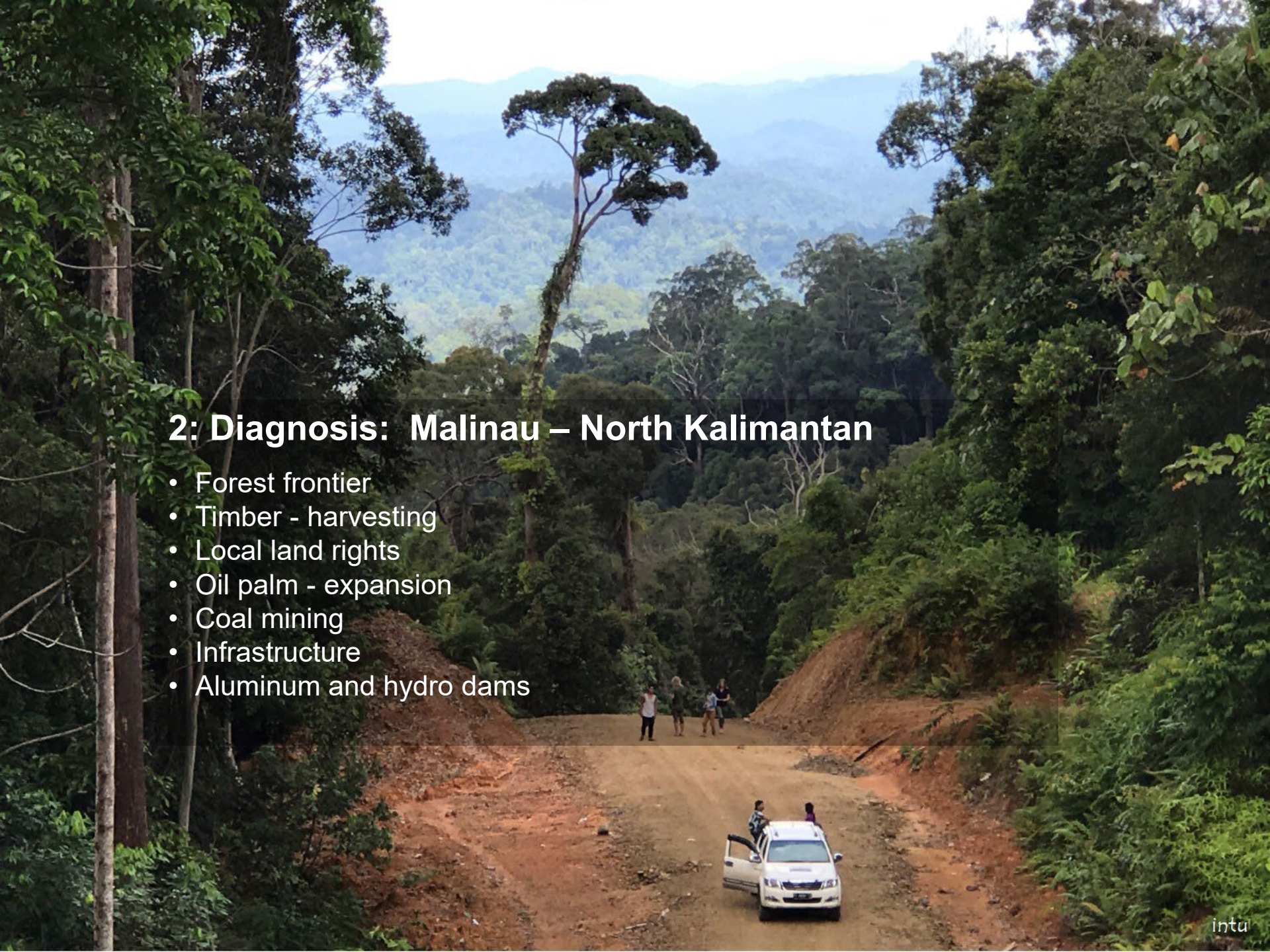
1: Solution:
Multiple use forests

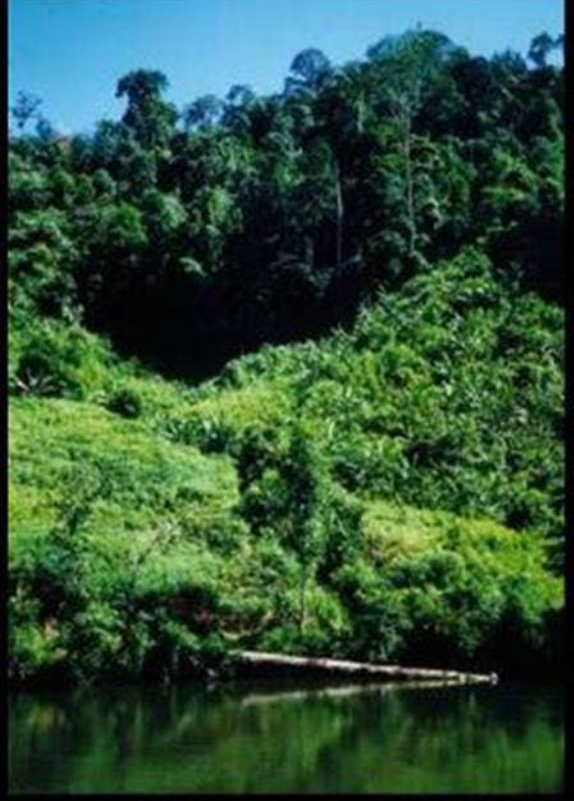

INDONESIA



2: Diagnosis: Malinau – North Kalimantan

- Forest frontier
- Timber - harvesting
- Local land rights
- Oil palm - expansion
- Coal mining
- Infrastructure
- Aluminum and hydro dams


WWF



Malinau landscapes


SELAMAT DATANG
DESA
KEC. MASEH
FORSTU

Contents lists available at SciVerse ScienceDirect

Global Food Security

journal homepage: www.elsevier.com/locate/gfs

Oil palm expansion transforms tropical landscapes and livelihoods

Jeffrey Sayer [a,*], Jaboury Ghazoul [b], Paul Nelson [a], Agni Klintuni Boedhihartono [a]

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[b] Ecosystem Management, Department of Environmental Systems Sciences, ETH Zürich, 8092 Zürich, Switzerland

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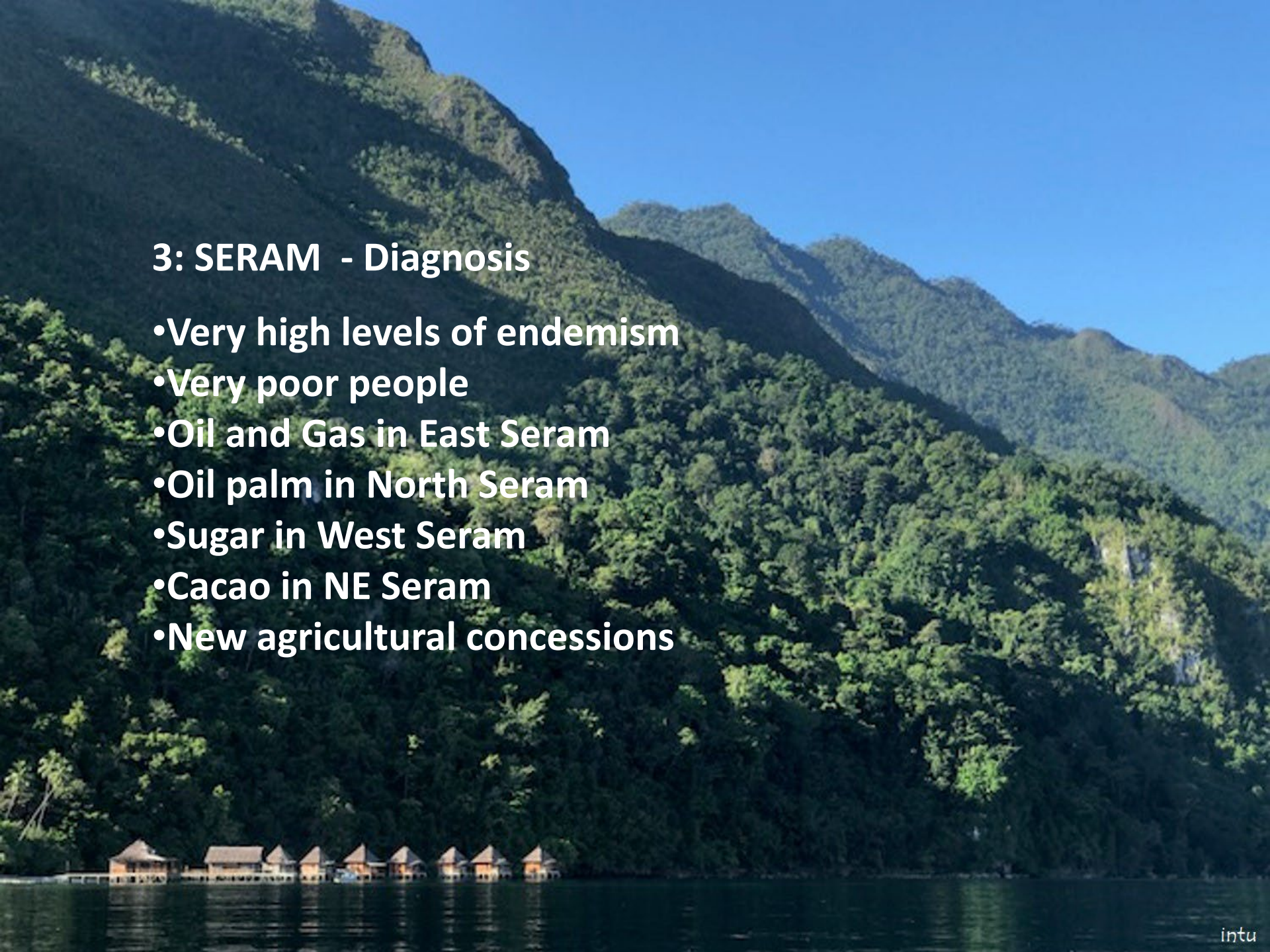
2: Solution – a mosaic with small, strategic protected areas


1. Biodiverse
2. Poor
3. Local Partners
4. Change is happening
INDONESIA



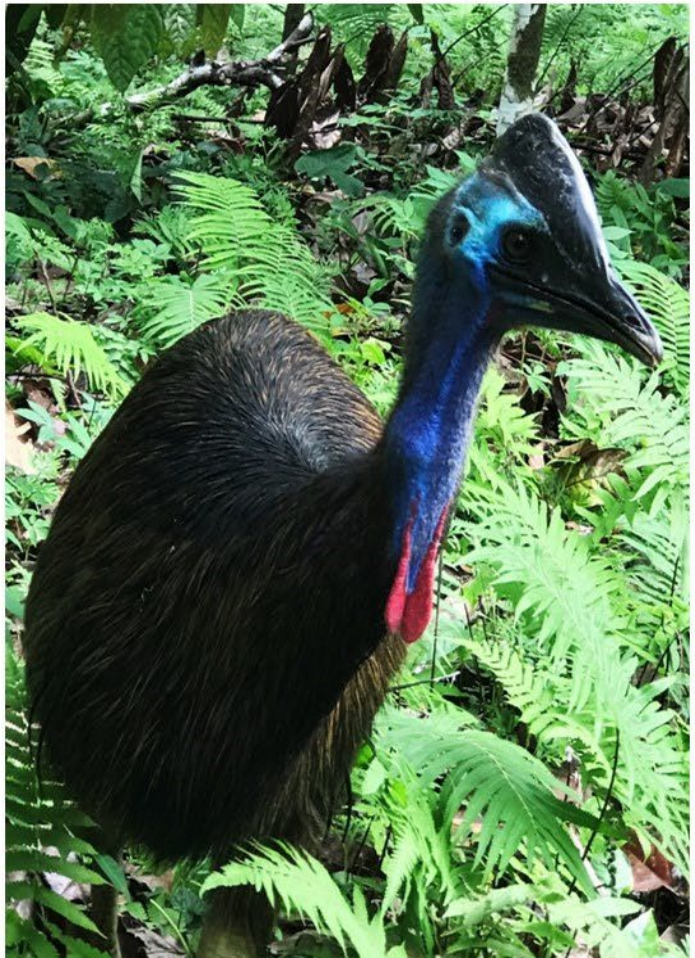
3: SERAM - Diagnosis

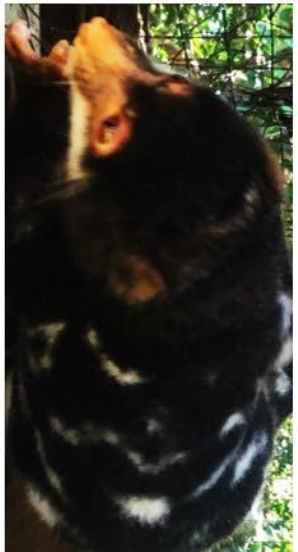
- Very high levels of endemism
- Very poor people
- Oil and Gas in East Seram
- Oil palm in North Seram
- Sugar in West Seram
- Cacao in NE Seram
- New agricultural concessions









intu


BOANO ISLAND, MALUKU


intu

land

MDPI

Article

Can Community Forests Be Compatible With Biodiversity Conservation in Indonesia?

Agni Klintuni Boedhihartono [1,2]


Geographical Research

Agroforestry on an Active Volcanic Small Island in Indonesia: Prospering with Adversity

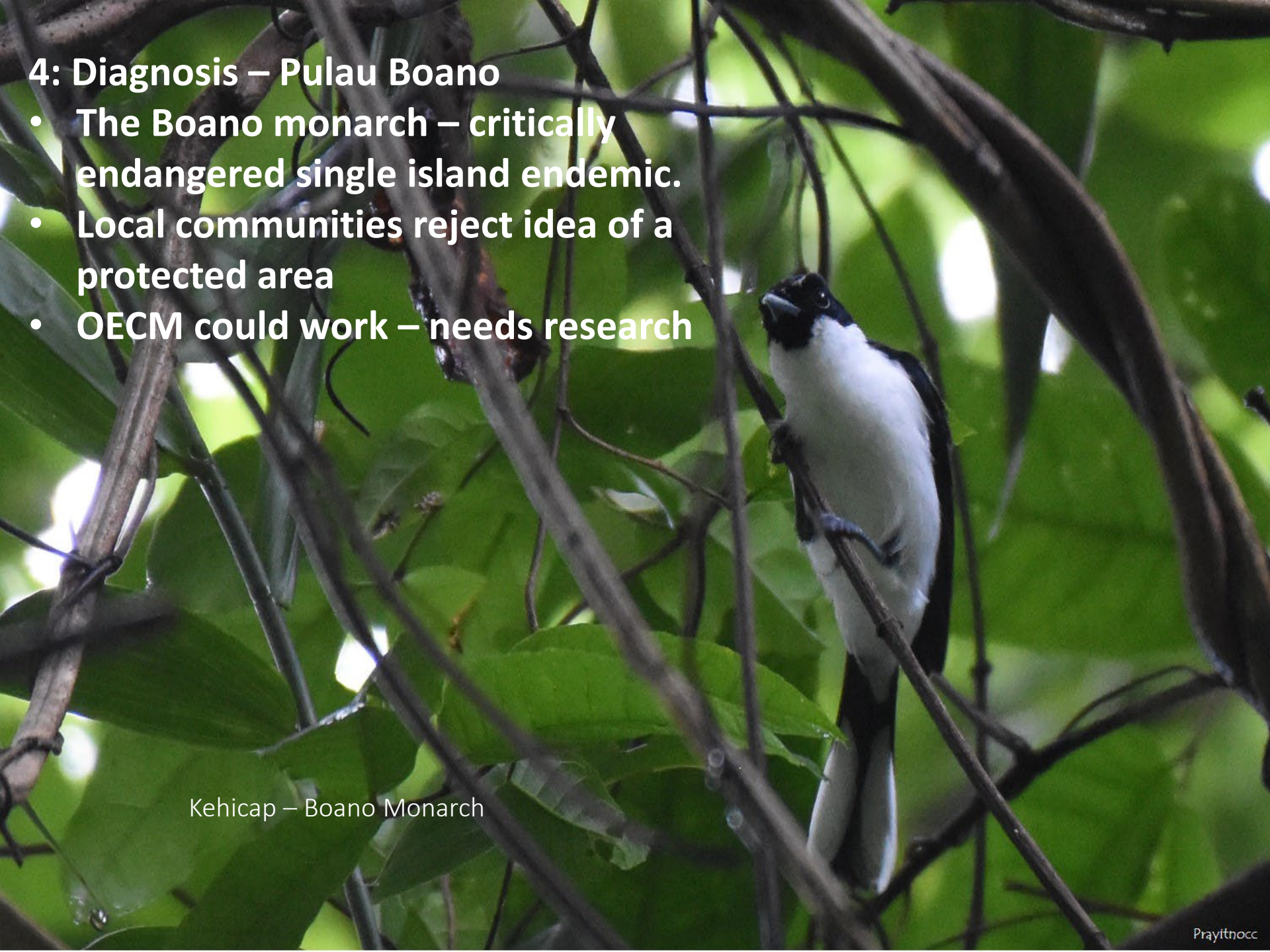
MERCY MAGGY FRANKY RAMPENGAN[1]*, AGNI KLINTUNI BOEDHIHARTONO[2], CHRIS MARGULES[2], JEFFREY SAYER[1], LISA LAW[1], JEAN-CHRISTOPHE GAILLARD[3], ONG THI NGAN TIEN[1] and TRAN THI MY LINH[4]

3: Solution

- Agroforestry
- Local management
- Critical ecosystem
- OECM

4: Diagnosis – Pulau Boano

- The Boano monarch – critically endangered single island endemic.
- Local communities reject idea of a protected area
- OECM could work – needs research



Kehicap – Boano Monarch

Prayitnocc


Boano island
intu

TAB2019


TAB/Longston


intu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4: Community managed Mosaic

- Working with Pattimura University & GoI
- Ethnobotany – peoples' uses of landscapes
- Small & Medium Forest Enterprises
- Drivers of change – can we "nudge"
- Actor network analysis
- Theories of change

intu

State-of-the-art pulp & paper mill
Now a Bio-Refinery

5: Diagnosis

- Partnership with industry
- “Net zero” goal
- Exploit corporate social responsibility
- Resources and capacity of company
- License to operated5:

6: Solution
Habitat restoration

- Biodiversity 1+1
- Carbon positive
- High value products
- Jobs – economic growth
- Local – SMEs

Contents lists available at ScienceDirect

Forest Policy and Economics

journal homepage: www.elsevier.com/locate/forpol

Determining the effectiveness of forest landscape governance: A case study from the Sendang landscape, South Sumatra

Dwi Amalia Sari[a,f,*], Jeffrey Sayer[a,b,d], Chris Margules[a,c,d,e], Agni Klintuni Boedhihartono[b,d]

intu

Why do we use landscape approaches?

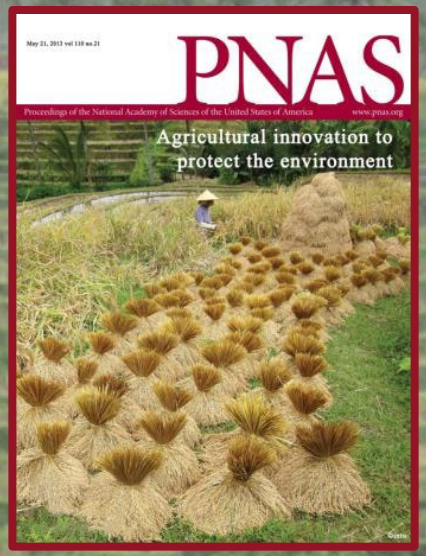
- Deep understanding of context and of real drivers of long-term change
- Engagement with actors on the ground – co-generation of understanding
- Ability to experiment, learn and adapt
- Optimize societal benefits – reconcile local needs with public goods values
- Achieve practical conservation and development outcomes
- Learning landscapes for UBC and partners

Vibrant Forest Landscapes: https://vibrantforestlandscapes.forestry.ubc.ca/
Tanah Air Beta: https://tanahairbeta.org/




Landscape Principles

- Continuous learning and adaptation
- Common concern/problem
- Multiple Scales
- Multi-functionality
- Multiple stakeholders
- Theory of change
- Clear rights and responsibilities
- Participatory monitoring
- Resilience
- Capacity



Biodivers Conserv
DOI 10.1007/s10531-006-9079-9

ORIGINAL PAPER

Assessing environment and development outcomes in conservation landscapes

Jeffrey Sayer · Bruce Campbell · Lisa Petheram · Mark Aldrich · Manuel Ruiz Perez · Dominique Endamana · Zacharie-L Nzooh Dongmo · Louis Defo · Stephen Mariki · Nike Doggart · Neil Burgess

Received: 31 March 2006 / Accepted: 30 May 2006

Abstract An approach to assessing the environmental outcomes and changes in peoples' livelihoods resulting from landscape-scale conservation interventions was developed for three locations in Africa. Simple sets of performance indicators were

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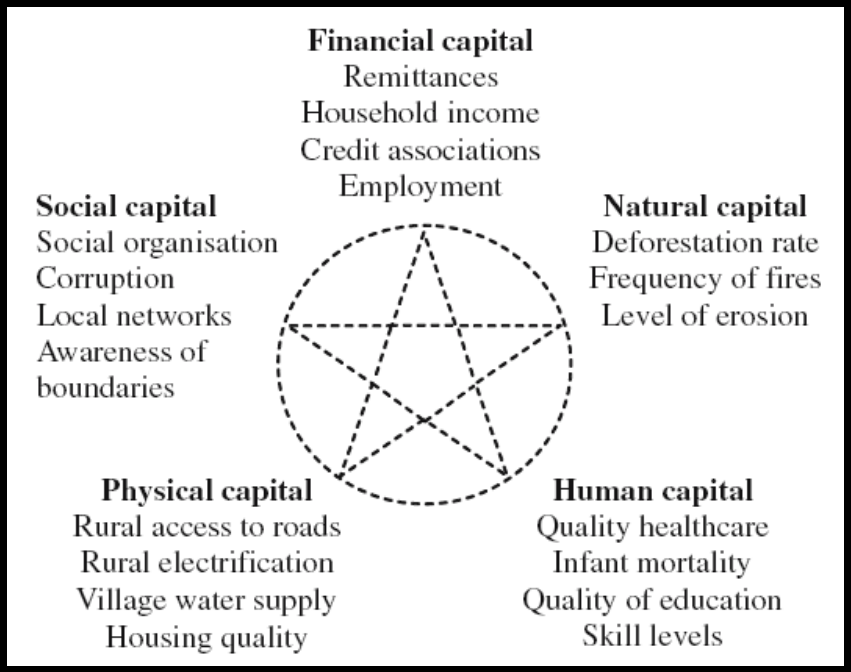


Garnett, S. T., J. Sayer, and J. Du Toit. 2007. Improving the effectiveness of interventions to balance conservation and development: a conceptual framework. *Ecology and Society* 12(1): 2. [online] URL: http://www.ecologyandsociety.org/vol12/iss1/art2/

Insight, part of a Special Feature on Navigating Trade-Offs: Working for Conservation and Development Outcomes

Improving the Effectiveness of Interventions to Balance Conservation and Development: a Conceptual Framework

Stephen T. Garnett[1], Jeffrey Sayer[2], and Johan du Toit[3]

ABSTRACT. There are numerous case studies around the world describing integrated conservation and development projects (ICDPs). Recently some localized syntheses have been published that use sophisticated statistics to identify patterns and causal linkages, but no attempt has yet been made to draw together lessons from across the globe. This paper is an attempt to provide a framework for such an analysis. A set of lessons is proposed for improving the prospects of ICDPs by giving consideration to each of the five capitals: natural, social, human, built, and financial. The language of ICDPs has been adopted by development agencies of all persuasions. There is now some urgency to identify the characteristics of the environment and the community in which success is most likely. This paper is intended as a step in that direction.

Key Words: *integrated conservation and development, natural capital, social capital*

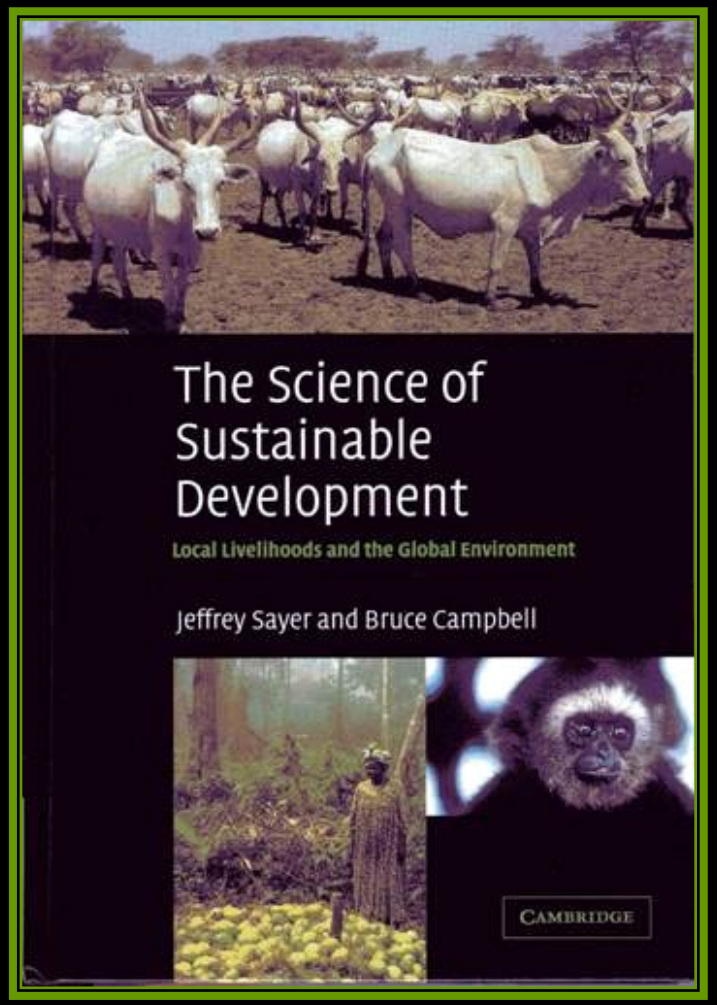
INTRODUCTION

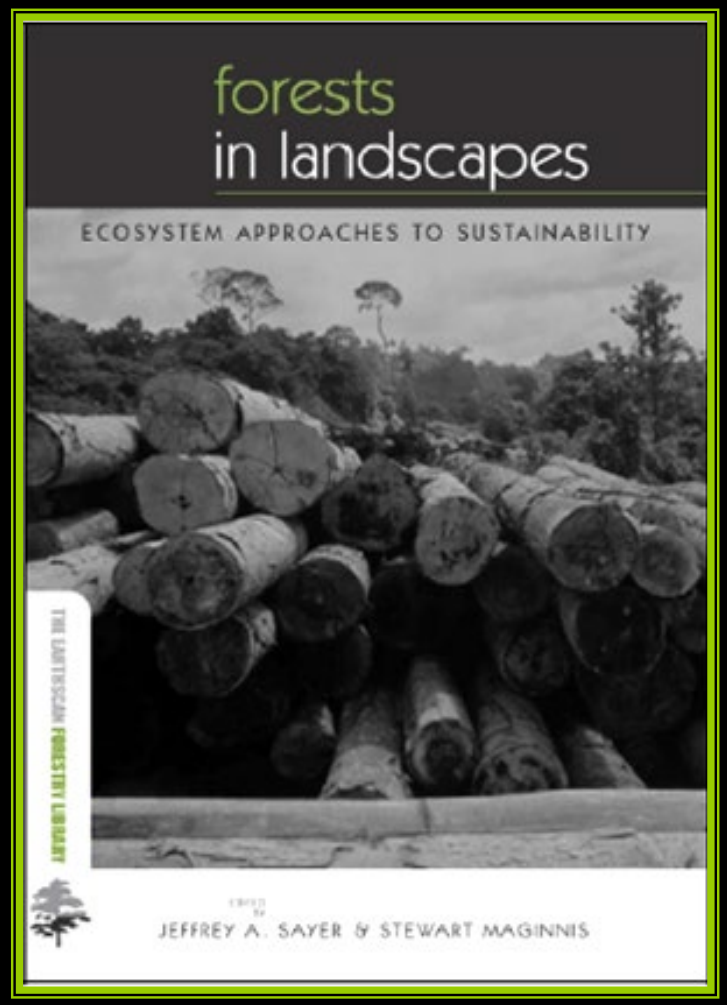
The first use of the term "integrated conservation and development project" (ICDP) that we have been able to locate was in the Luangwa Valley Integrated Conservation and Development Project jointly undertaken by FAO and the Government of Zambia in the mid-1960s (Child and Dalal-Clayton 2004). This project set out to manage wildlife sustainably for the benefit of the local people. Since then, the term ICDP has been widely applied to many different types of conservation initiatives. By the 1990s the concept had been embraced as a standard part of the aims of many major international organizations (Wells et al. 2004); organizations whose primary mission is conservation and those whose mission is development have both adopted the ICDP approach in some form (Campbell and Vainio-Mattila 2003). As a result, the definition of the ICDP has expanded, so that projects of this type are now described as "...approaches to the management and conservation of natural resources in areas of significant biodiversity value that aim to reconcile the biodiversity conservation and socio-economic development interests of multiple stakeholders at local, regional, national and international levels" (Franks and Blomley 2004).

However, regardless of definition, there has been a long history of concern about the effectiveness of ICDPs in meeting either conservation or development objectives (Adams et al. 2004, McShane and Wells 2004). Integration is still the exception, and synergies do not emerge naturally (Barrett et al. 2005). Given the ubiquity of the rhetoric about reconciling the imperatives of local livelihood improvement with the desire to reduce, minimize, or even reverse environmental degradation, it might be assumed that an established methodology must be available to guide the implementation of these projects.

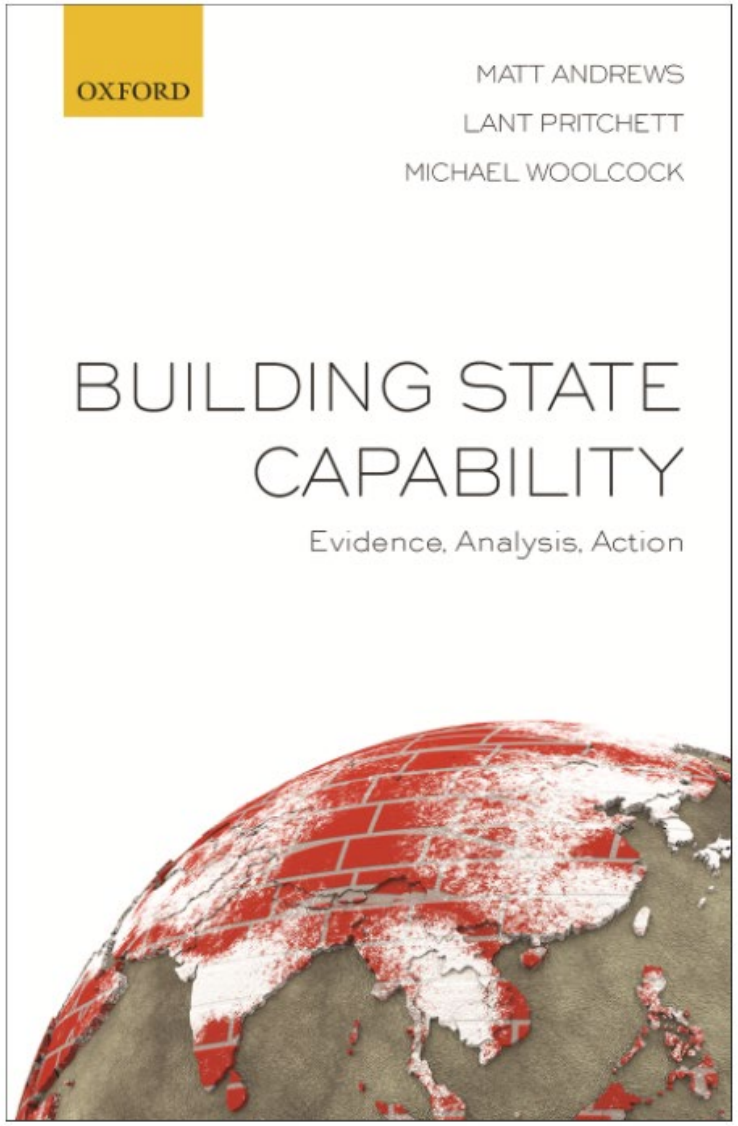
However, there is none. Analysis of many ICDPs has shown that success tends to be fleeting and fragile. Failure leads inevitably to loss of biodiversity, and purported successes are rarely associated with lasting improvements in the wealth and well-being of the communities in which the interventions were undertaken (McShane and Wells 2004, Robinson and Redford 2004, Sayer and Campbell 2004, Wells et al. 2004). Such successes are typically described in anecdotal case studies and often appear idiosyncratic, temporary, and contingent on local history, society, and environment. That said, there have been some

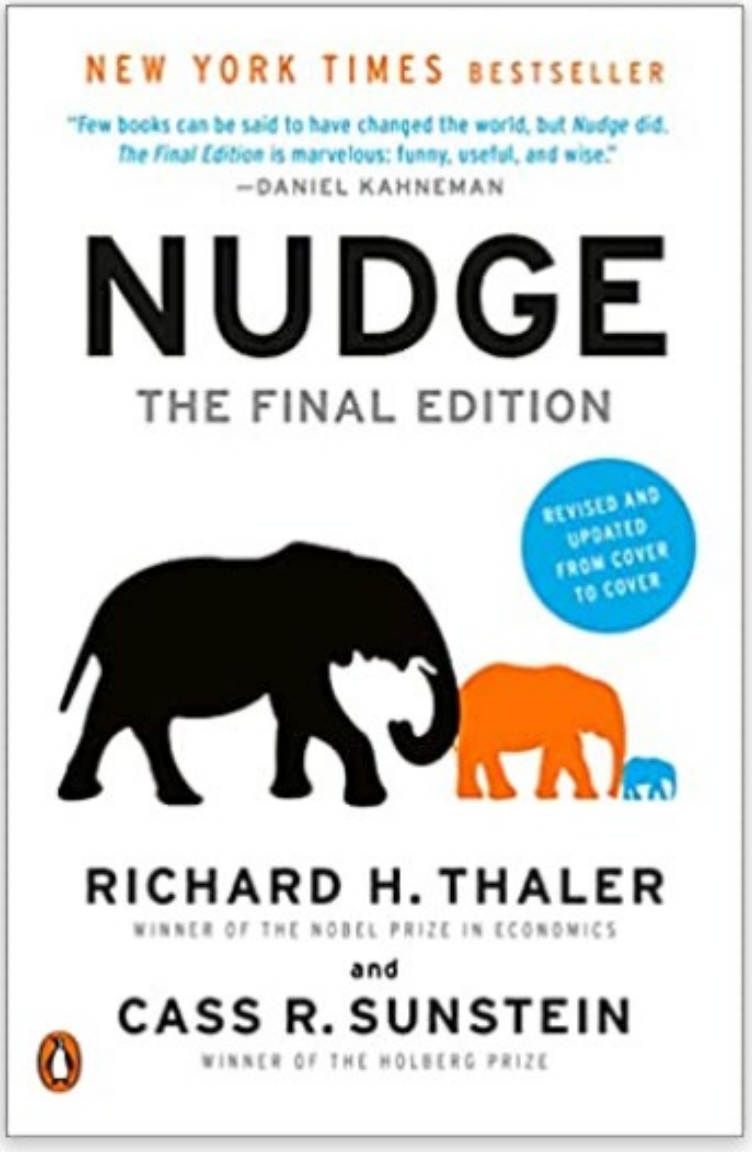
[1]Charles Darwin University, [2]World Wide Fund for Nature, [3]Utah State University


The Science of Sustainable Development
Local Livelihoods and the Global Environment
Jeffrey Sayer and Bruce Campbell
CAMBRIDGE


forests in landscapes
ECOSYSTEM APPROACHES TO SUSTAINABILITY
JEFFREY A. SAYER & STEWART MAGINNIS

Peripheral Agents to influence policy change





Vibrant Forest Landscapes:

- Alleviate poverty SDG 1 - 9
- Industry partnerhsips
- Broad consultation – SDG 16 & 17
- Local empowerment
- Create opportunities for SMEs
- OECMs
- Science – evidence – Learning
- Sustainable, equitable, resilient development
- Model for the BRI


Thank You
intu