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# Agricultural landscapes and the resilience of social-ecological systems

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## Some observations from the Discussion Paper

### Role of human agency in shaping landscapes

Biocultural landscapes – where/whether to draw the line?

### Locally appropriate policies (p.1), Ecosystem Approach (p.2)

No “regulation of human activities,” but strengthening them

Ecosystem Approach is not yet a very practical guide to action

### Who validates these landscapes, is certification necessary?

“pay due respect to unique histories, cultures”... (p.7)

scientifically explaining rationale behind local forms of knowledge and practices (p.7)

certification schemes for environmentally-sound agricultural methods (p.8)

### The concept and ideal of “harmony”, iconic systems

risk of disqualifying itself → harmony rarely exists, and where it does it's under threat.

Instead → identify aspects in human-environment interaction that contribute to landscape resilience, and elements that do not (can be improved).



## Viewing the conservation of *Satoyama*-like landscapes through the prism of social-ecological resilience

*The resilience of landscapes derives from **ecological characteristics** (biodiversity, habitat, ecosystem services) and **social features** (institutions, networks, education), **as well as from the link between the natural and anthropogenic components.***

### 'Preservation' approach

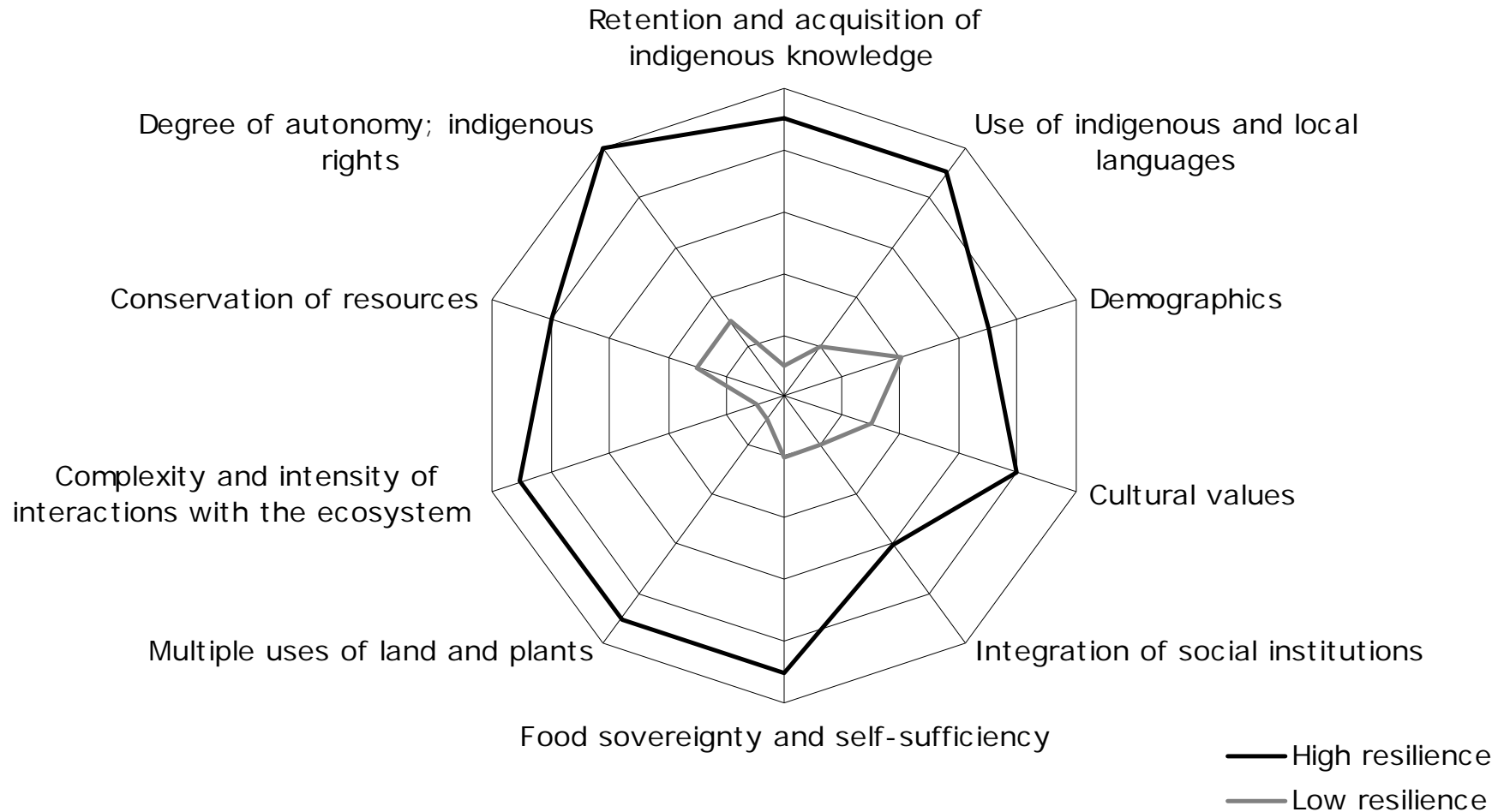
- Conserve iconic landscapes
- Limit human activity (disturbance)
- Human activity must be kept within limits of ecosystem (disconnection)
- External management
- Local participation

### 'Resilience' approach

- Conserve adaptation processes
- Strengthen beneficial human innovations
- Promote social and ecosystem interdependence
- Endogenous management
- Local autonomy



# Using indicators to measure the resilience of social-ecological systems



## Afghan Pamirs

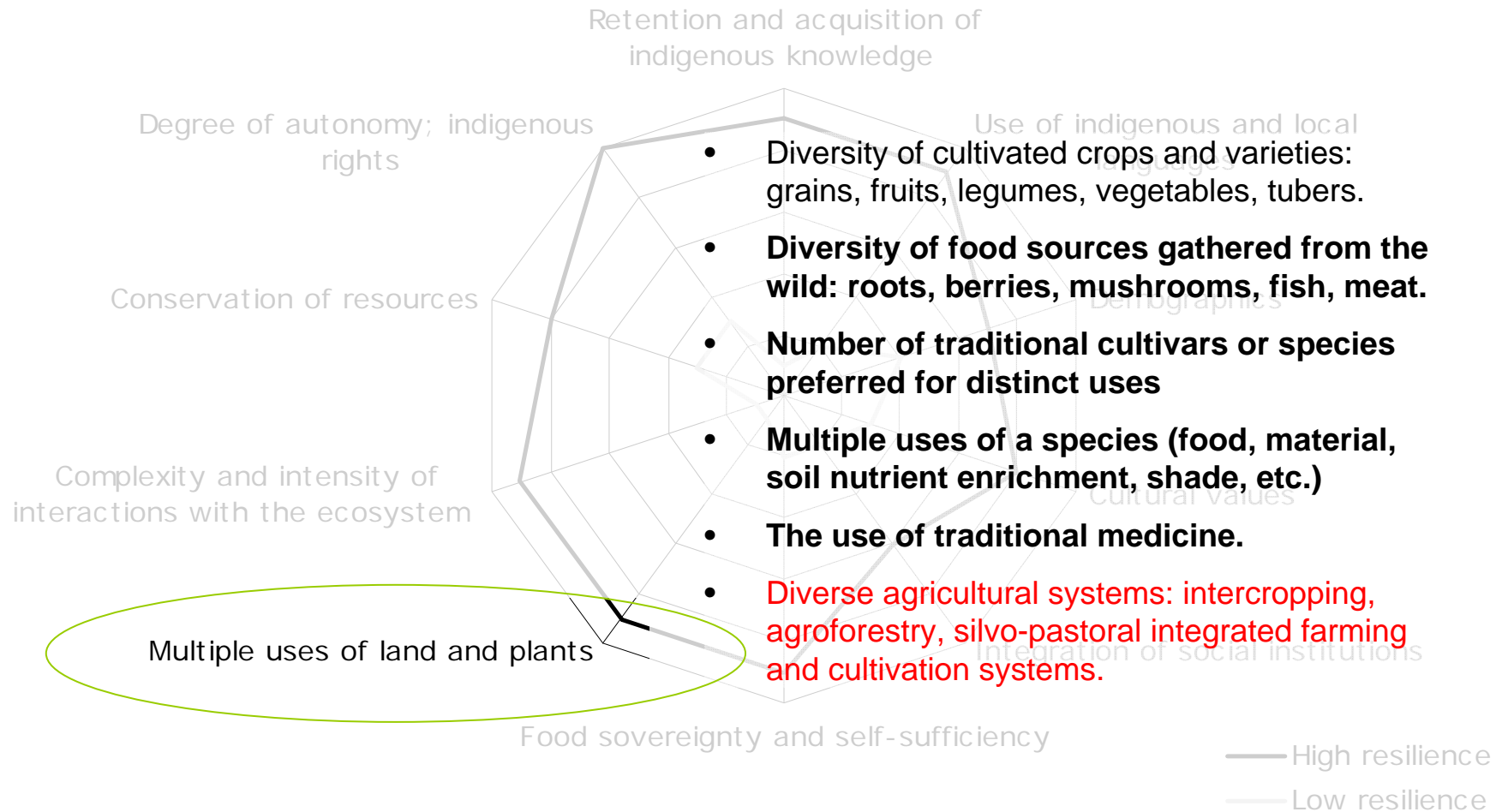
Ingenuously irrigated system largely based on the cultivation of mulberry (*Morus alba* & *Morus nigra*)



Photograph: F. van Oudenhoven



# Using indicators to measure the resilience of social-ecological systems





**A village in the walnut-fruit forests of Kyrgyzstan**



Wild cherry plum (*Prunus cerasifera*)



Wild apple (*Malus sieversii*)



# Using indicators to measure the resilience of social-ecological systems



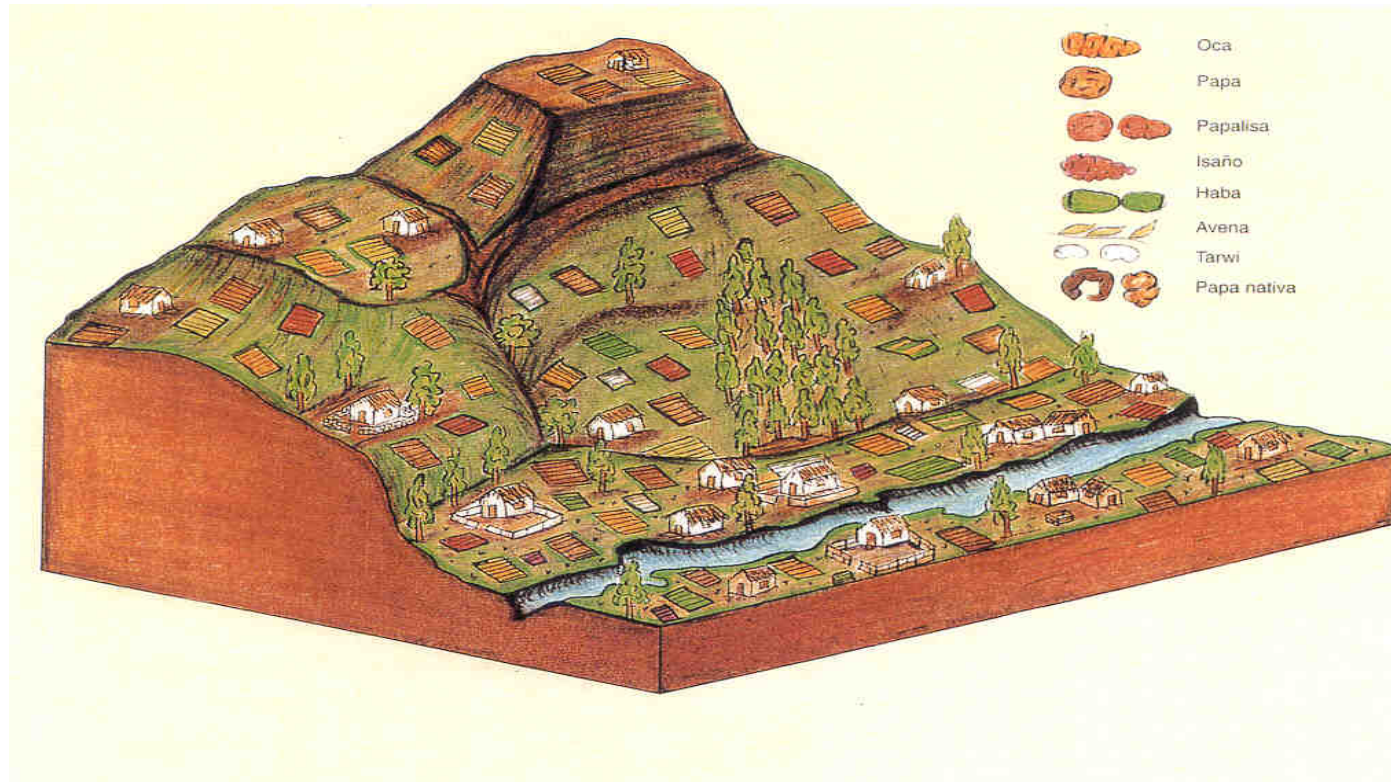




**Nepali agrarian  
landscapes create and  
intensify niches to  
maximize use of  
biodiversity and  
maintain the resilience  
of mountain  
ecosystems**



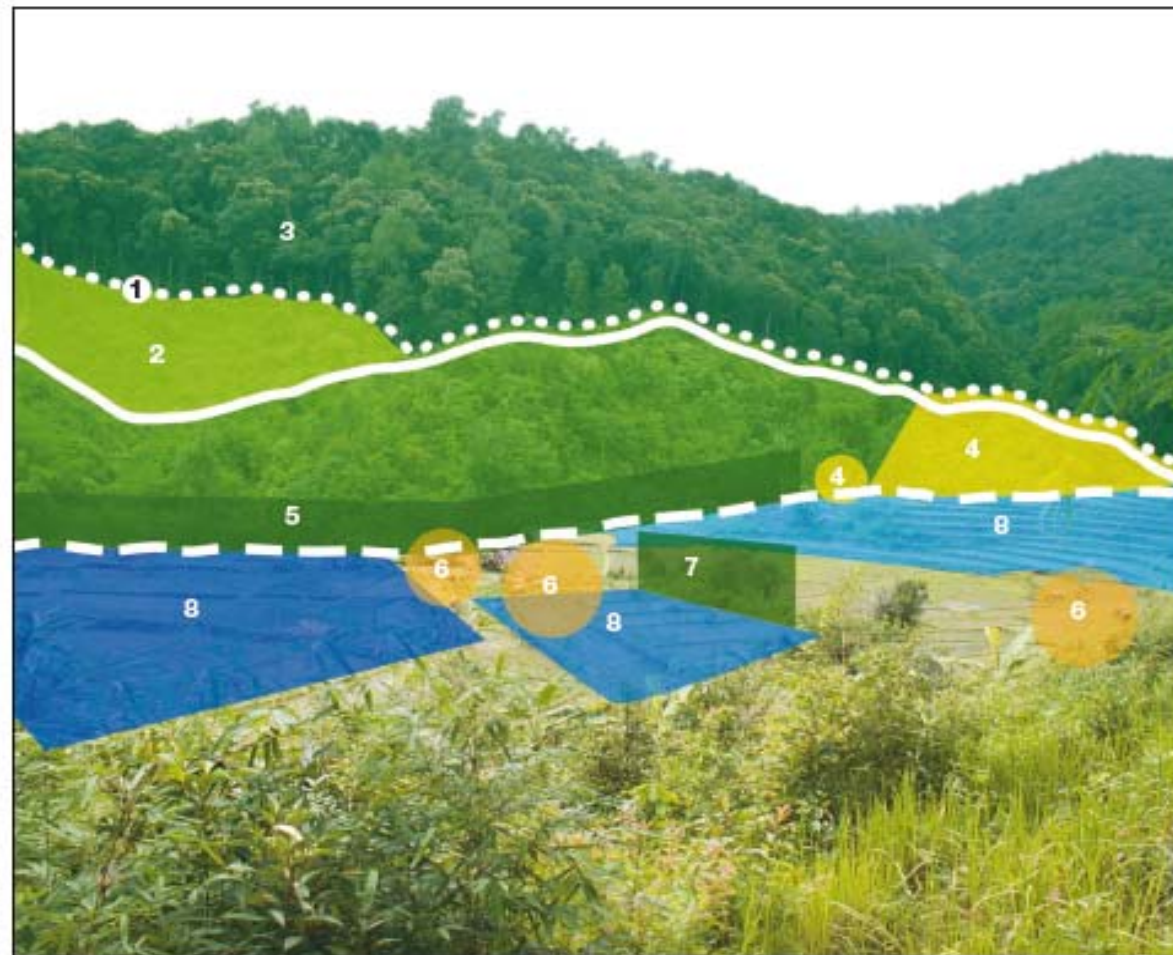
## Bio-intensive Technology for Mosaic Landscapes



The deployment of agricultural biodiversity in culturally maintained landscapes. Andean landscape mosaics (Terrazas and Valdivia 1998)



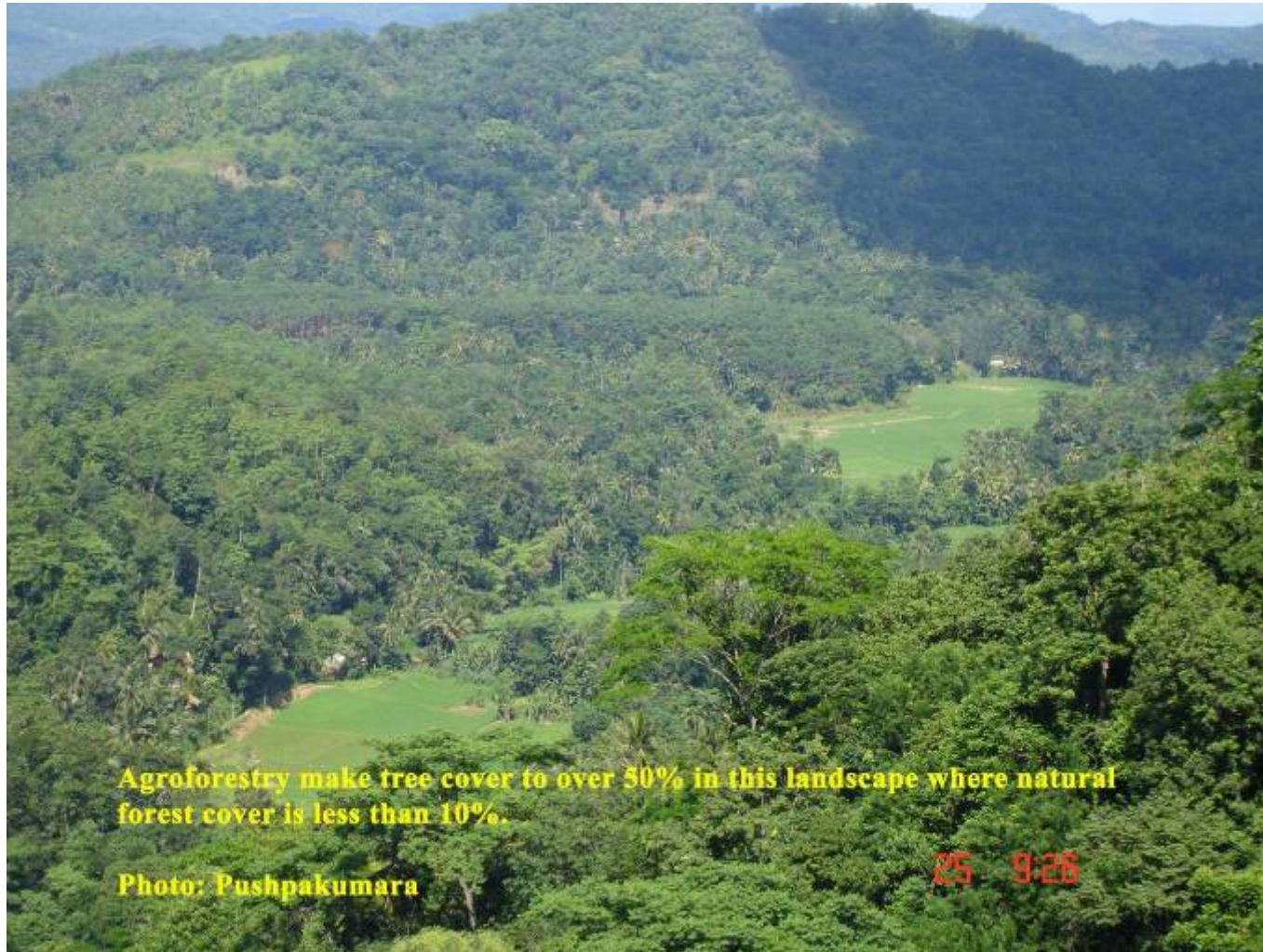
## Karen rotational farming system (northern Thailand)



Fotograph: P. Bordonì Graphics: P. Tazza



## Homegardens in Landscape of Kadugannawa Area of Kandy District, Sri Lanka



Agroforestry make tree cover to over 50% in this landscape where natural forest cover is less than 10%.

Photo: Pushpakumara

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