CHANGING LANDSCAPES: FROM FORESTS TO FOOD

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FORESTS IN LANDSCAPES: WHAT DO WE KNOW?

• One billion+ people rely on forest products for consumption and income in some way (Agrawal et al. 2013)

• Safety-net during times of food and income insecurity (Wunder et al. 2014)

• Wild harvested meat and freshwater fish provides 30-80% of protein intake for many rural communities (Nasi et al. 2011; McIntyre et al. 2016)

• 75% of world’s population rely on biodiversity for primary health care (WHO, 2003)

• 40%-80% of global food production comes from diverse smallholder agricultural systems in complex landscapes (FAO 2011; IFAD 2016)

• Long tradition of managing forests for food – e.g. shifting cultivation (van Vliet et al. 2011)

• Forests sustaining agriculture through ecosystem services provision (Reed et al. 2017)
HOW DO FORESTED LANDSCAPES SUPPORT DIETARY DIVERSITY?

- Direct
- Indirect
- Multiple pathways
ZONES OF AGRICULTURAL INTENSIFICATION

Zone 1: Low (e.g., subsistence farming)

Zone 2: Agricultural modification

Zone 3: High (e.g., commodity farming)
WHAT HAPPENS TO DIETS AND LIVELIHOODS WHEN THIS HAPPENS?
THE “INDOMIE-ICATION” OF DIETS
Areas of swidden/agroforestry, natural forest, timber and agricultural tree crop plantations were all associated with more frequent consumption of food groups rich in micronutrients. The swidden/agroforestry land class was the landscape associated with more frequent consumption of the largest number of micronutrient rich food groups. Swidden cultivation is often viewed as a backward practice that is an impediment to food security in Indonesia and destructive of the environment. If further research corroborates that swidden farming actually results in better nutrition than the practices that replace it, Indonesian policy makers may need to reconsider their views on this land use”. Ickowitz et al., 2016
How does landscape configuration maximise the provision of these goods and services for both forestry and food production???
“When incorporating forests and trees within an appropriate and contextualized natural resource management strategy, there is potential to maintain, and in some cases, enhance agricultural yields comparable to solely monoculture systems”. Reed et al. 2017
Scientists warn of 'ecological Armageddon' after study shows flying insect numbers plummeting 75%
Grand Challenge:
Managing complex landscape mosaics that contribute to ecosystem services, livelihoods and biodiversity
OPERATIONALISING THE LANDSCAPE APPROACH: FROM THEORY TO PRACTICE

THEORY & POLICY

Drivers: Researchers Policy makers Central government

PRACTICE:
Integration & evaluation
Local stakeholders: NGO’s; CSO’s Local communities Private sector Local government

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FORESTS AND LANDSCAPES: WHAT VISION?

• Diverse forest and tree-based production systems offer advantages over monocropping systems because of their adaptability and resilience.

• There are a multitude of ecosystem services provided by forests and trees that simultaneously support food production, nutrition, sustainability and environmental and human health.

• Managing landscapes on a multi-functional basis that combines food production, biodiversity conservation and the maintenance of ecosystem services can contribute to food and nutritional security.

• Forests and trees alone will not achieve global food security, but can play a major role: discourse has started to change.

• Therefore, is “business as usual” an acceptable strategy?