

How and When Do Ecosystem Services Contribute to Poverty Alleviation?

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Outline

- Where ESPA came from.
 - Ten + years from the Millennium Ecosystem Assessment.
 - Millennium Development Goals (MDGs)
- What can ESPA tell us about how ecosystem services contribute to poverty alleviation.
 - ES for PA works.... BUT!
- What next?
 - Emerging questions
 - Ecosystem Services and the Sustainable Development Goals.

Definitions Matter!

- Derived from the *Millennium Ecosystem Assessment*:
 - An **ecosystem** is a dynamic complex of plant, animal, and microorganism communities and the non-living environment interacting as a functional unit.
 - **Ecosystem services** are the **benefits people obtain from ecosystems**.
 - People are integral parts of ecosystems

Where ESPA came from

**OLID
COMI
FUTU**

1
ERADICATE EXTREME POVERTY AND HUNGER

2
ACHIEVE UNIVERSAL PRIMARY EDUCATION

3
PROMOTE GENDER EQUALITY AND EMPOWER WOMEN

4
REDUCE CHILD MORTALITY

5
IMPROVE MATERNAL HEALTH

6
COMBAT HIV/AIDS, MALARIA AND OTHER DISEASES

7
ENSURE ENVIRONMENTAL SUSTAINABILITY

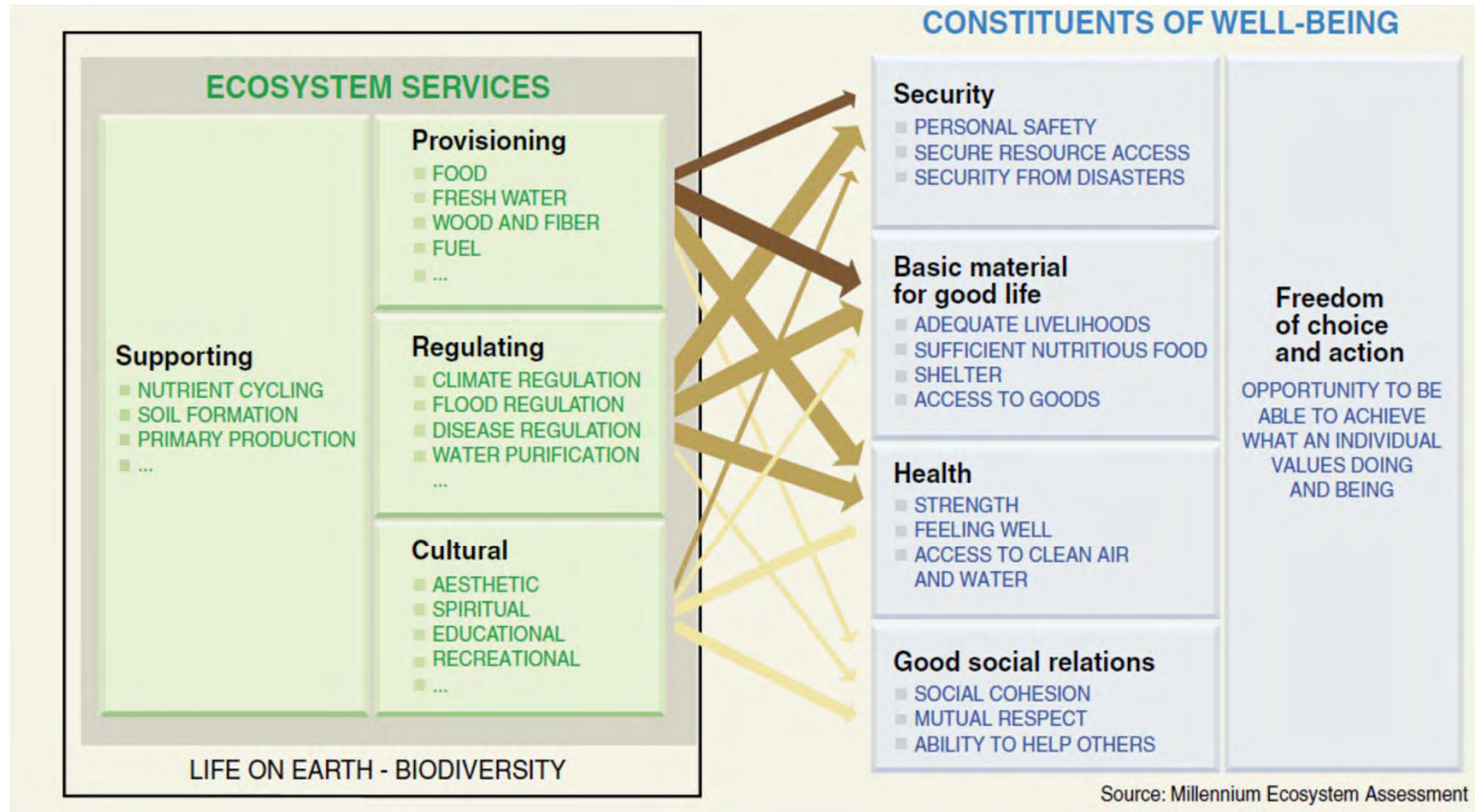
8
GLOBAL PARTNERSHIP FOR DEVELOPMENT

**THE WORLD C
ON ENVIRONMENT
AND DEVELOPMENT**

**SYSTEMS
AND HUMAN
WELL-BEING**

Synthesis

Millennium Ecosystem Assessment





WHAT IF FIGHTING POVERTY AND
PROTECTING THE PLANET WERE ONE
AND THE SAME?

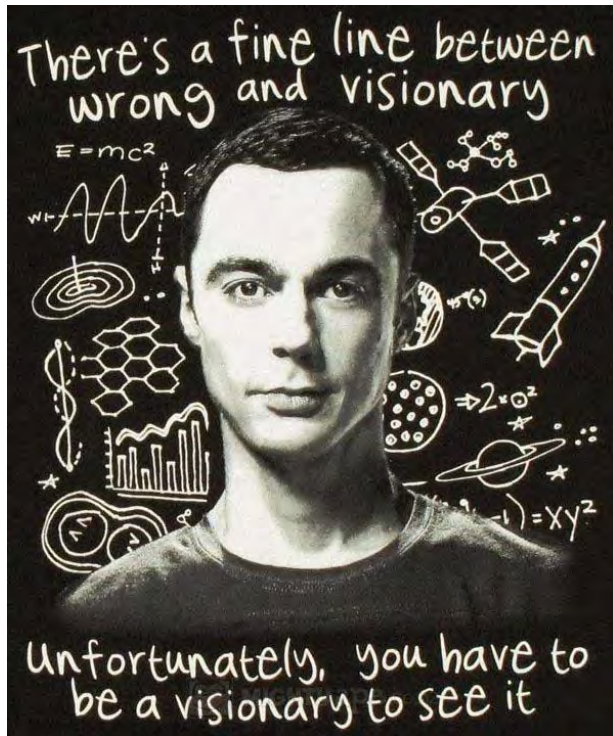


MUST
BECAUSE THEY ~~COULD~~ BE ...

Telling ESPA's Story



How Scientists Communicate Complex Environmental Issues



ESPA in Numbers

(1 January 2016)

105

Projects working in

52

countries involving

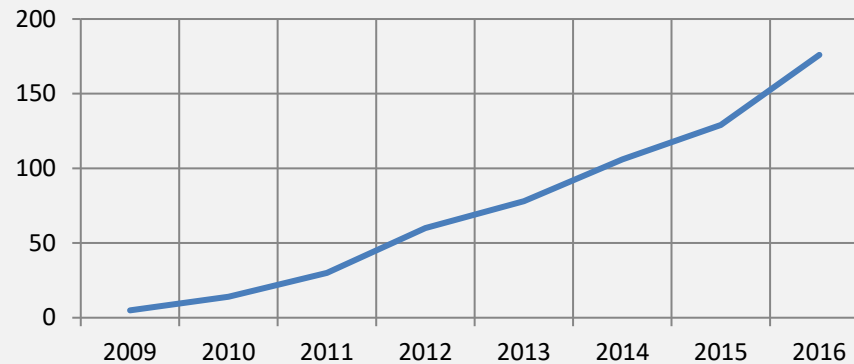
917

ESPA researchers from

348

institutions

ESPA's Academic Publications



176 Academic publications

112 In ISI listed journals

2101 Citations

25 Books and chapters

27 Models

19 Datasets

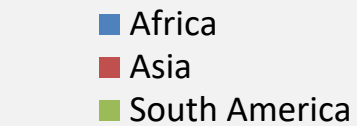
1083 Outcomes reported

ESPA's most influential paper cited

635 times

50% of all ESPA researchers from developing countries

Where does ESPA operate?



(number of projects)

24% of funds for recent projects allocated directly to developing countries

28% of ESPA researchers are women

Telling the ESPA Story

Describing *how and when* ecosystem services contribute to human well-being and poverty alleviation

and why this matters to all people on Earth.



Alleviating Poverty: *ESPA Swahili Seas*



- Mikoko Pamoja Kenya
 - 2,490 community members are benefitting from an innovative carbon credit scheme supported by ESPA research.
 - A 20 year contract worth US\$ 17,000 in 2014.
 - The communities decided to invest in education for their first year.

Food Security in Malawi

ESPA Assets

- The ESPA Assets project is investigating the impacts of converting land from forest to agriculture.
- Most systems need to be managed as a mosaic of land-uses and services.
- There may be an optimal level of ecosystem change or disturbance.



Enhancing Benefits

- Better management of landscapes and ecosystems for a range of ecosystem services does help to reduce poverty.



Understanding Trade-Offs

- Between ecosystem services and stakeholders
- In space and time (Sustainability)



The Need to Avoid Tipping Points

- Exceeding sustainable production leads to irreversible environmental degradation.



The Need to Identify and Avoid Tipping Points

- There is a ***significant and potentially irreversible decline in ecosystem services*** when the exploitation or degradation of the environment exceed a tipping point.
- Where is the limit?
- When to act?



How do the Poor Benefit from ES?

ESPA P4GES. Madagascar



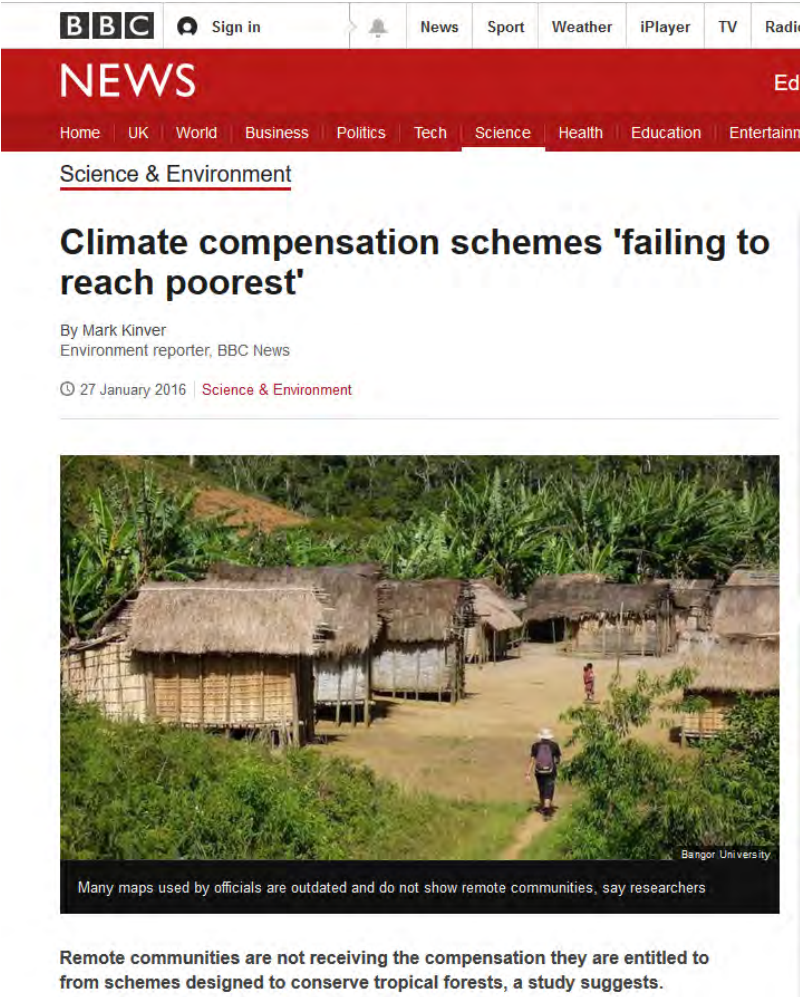
Protected Areas and Poverty Alleviation



- How can local people benefit from global payments for ecosystem services?
- Working closely with very strong local research and NGO partners
- Working with major development partners and the private sector

Equitable Distribution of Benefits

- Who benefits the most from local ecosystem services?
- Who has access to resources?
- Who influences decisions about land-use and distribution of benefits?
- Effective institutions and governance are crucial



The image shows a screenshot of a BBC News article. The page header includes the BBC logo, a 'Sign in' button, and navigation links for News, Sport, Weather, iPlayer, TV, and Radio. The main heading is 'NEWS' in a red banner. Below this, there are sub-navigation links for Home, UK, World, Business, Politics, Tech, Science, Health, Education, and Entertainment. The article is categorized under 'Science & Environment'. The headline reads 'Climate compensation schemes 'failing to reach poorest''. The author is Mark Kinver, an environment reporter for BBC News. The article is dated 27 January 2016. Below the text is a photograph of a rural village with several thatched-roof huts. A person is walking on a dirt path in the foreground. A caption below the photo states: 'Many maps used by officials are outdated and do not show remote communities, say researchers'. Below the photo, a paragraph of text reads: 'Remote communities are not receiving the compensation they are entitled to from schemes designed to conserve tropical forests, a study suggests.'

Effective Institutions and Markets

- Effective institutions can help individuals and communities to access benefits from ecosystem services.
- There may be a need to develop new markets (e.g. carbon, conservation) or to enhance access to existing markets.



Cocoa in Ghana, Coffee in Ethiopia: *ESPA EcoLimits*



Understanding Land-Use Change

ESPA DDDAC (Ghana)



Making the Business Case Scaling up

- Making the case for investment in natural infrastructure rather than engineering solutions.
 - *ESPA Deltas*, Bangladesh
- How to scale up from single small-scale research examples?
 - e.g. Swahili Seas in Kenya



Research Informing Decisions

(Often difficult decisions)

- When and how can ESPA's research support better policy and management decisions?
- What do potential users of research need to make better decisions?



Can Ecosystem Services Reduce Poverty?

- There is growing evidence from ESPA that ecosystem services can reduce poverty, *but...*
 - It is not automatic or necessarily easy.
 - It may be difficult for the poorest members of a community to benefit (risk of elite capture).
 - We need to consider multiple dimensions of poverty and well-being.
 - Avoid tipping points.
 - Understanding trade-offs is critical.

Key Messages

- Become smarter about communicating ***positive messages*** on how the ***environment contributes to social and economic development.***
- Treat environmental interventions in the same way as most other approaches to reducing poverty.

ESPA's Lessons for Poverty Alleviation

- ES do alleviate poverty.... But we need to ..
 - find ways to enhance the flow of sustainable benefits from ES;
 - ensure the equitable distribution of benefits;
 - understand trade-offs and avoid tipping points;
 - understand optimal land-use / LU change;
 - build effective markets, governance and institutions;
 - find ways to scale-up and scale-out success;
 - Make the business (economic) case for investing in natural capital (ecosystem services)

Beyond ESPA and the MDGs

- Universality is central to the UN's new Sustainable Development Goals.
- ESPA's research is also relevant to developed countries.
 - ES imported from developing countries.
 - ES produced in developed countries.



A UK Illustration Scottish Borders



Some Emerging Questions

- How do ES contribute to sustainable development?
- What mosaic of land-uses are likely to “maximise” the sustainable production of multiple ecosystem services from landscapes?
- How to promote more equitable distribution of ES?
- Understanding the socio-economic enabling conditions.
- What are the ecological and social limits in any socio-ecological system?
- When does investing in ES make sense?

Questions for YOU!

- Have you ever thought about how the **full range of ecosystem services** support your own life?
- Where do they come from?
- Are they produced and consumed sustainably? (Trade-offs, tipping points).
- Are benefits **you** enjoy, being shared equitably?
- Where do ES fit into the SDGs?



A research programme co-funded by DFID, NERC & ESRC and accredited by LWECC



ESPA's Starting Point for the SDGs

- ES are essential for Sustainable Development.... But we need to:
 - find ways to enhance the flow of sustainable benefits from ES;
 - ensure the equitable distribution of benefits;
 - understand trade-offs and avoid tipping points;
 - understand optimal land-use / LU change;
 - build effective markets, governance and institutions;
 - find ways to scale-up and scale-out success;
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