Platform Knowledge Event: Food and Nutrition Sensitive Landscapes

The next knowledge event of the NLandscape platform will be held on February 28th and will address the key role of landscape approaches in ensuring food and nutrition security.

Read more

This platform brings together the knowledge and networks of over 25 Netherlands-based organisations implementing international programmes with landscape approaches from different perspectives. Our aim is to share knowledge, learn from the expertise jointly built up and promote landscape approach as a means to solve interrelated issues in an integrated manner.

Contact Us

Resources
- Upcoming and past events
- NLandscape Members @ GLF
- Materials from the Landscape Finance Knowledge Event
- Past Newsletters

Platform Members
- Action Aid
- Aidenvironment
- Beagle Sustainable Solutions
- Both Ends
- Care Netherlands
- Commonland
- Food & Knowledge Business Platform
- Hivos
- ICCO
- IDH - Sustainable Trade

IDH: Achieving economic growth and zero hunger
Landscape inhabitants living a healthy and active life

- Nutrition sensitive commodity chains
- Diversified production patterns
- Green & healthy growth corridors
- Food & nutrition autonomous landscapes
- Max. localized prod./consump. local sourcing
Nutrition Sensitive Landscapes
Experiences from Kenya, Vietnam and Zambia

Knowledge session Platform NLandscape
February 28 2018
Freedom Lab Amsterdam
Global challenge: 1 in 3 people malnourished

2 billion people suffer from micronutrient deficiencies

Global Nutrition Report 2015
FAO: The State of Food Insecurity in the World 2015
Global challenge: 5 planetary boundaries in risk zone due to agriculture

The Rockefeller Foundation–Lancet Commission on planetary health

Safeguarding human health in the Anthropocene epoch: report of The Rockefeller Foundation–Lancet Commission on planetary health

Sarah Whitten, Andy Haines, Chris Beyrer, Frederick Bolte, Anthony G Capon, Braulio Ferreira de Souza Dias, Alex Ezeh, Howard Frumkin, Peng Gong, Peter Head, Richard Horton, Georgina M Mace, Robert Marten, Samuel S Myers, Sarsia Nithi, Steven A Osifodun, Subheendu K Pattanayak, Maria J Pongsiri, Cristina Romanelli, Agnes Soucat, Jeanette Vega, Derek Yach

*Figure 4:* The present status of the control variables for seven of the nine planetary boundaries
The green zone is the safe operating space (below the boundary), yellow represents the zone of uncertainty (increasing risk), and red is the high-risk zone. The planetary boundary itself lies at the inner red circle. The control variables have been normalised for the zone of uncertainty (between the two red circles); the centre of the figure therefore does not represent values of zero for the control variables. The control variable shown for climate change is atmospheric carbon dioxide concentration. The term novel entities represents the growing awareness that, in addition to toxic synthetic substances, other potentially systemic global risks exist, such as the release of radioactive materials or nanomaterials. Processes for which global-level boundaries cannot yet be quantified are represented by grey wedges; these are atmospheric aerosol loading, novel entities, and the functional role of biosphere integrity. Reproduced from Steffen and colleagues, by permission of The American Association for the Advancement of Science.
**Food (on farm and market) – nutrition pathways**

Malawi, Tanzania, Uganda (Carletto et al 2017)
Ghana (Anderman et al 2014)
Senegal (Roufahi Tnakari 2017)
India (Vijaya Bhaskar et al 2017)
Developing countries (Thompson and Meerman 2013)

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**Fig 1. Conceptual model of the relationships among on-farm, dietary and market diversities.**

doi:10.1371/journal.pone.0162535.g001
Bellon et al. 2016
Food (on farm and market) – nutrient pathways

Fig 1. Conceptual model of the relationships among on-farm, dietary and market diversities.
Nutrition-sensitive landscape hypotheses

- Agricultural biodiversity within landscapes can lead to more nutritionally diversified diets

- Environmental management and restoration of agricultural landscapes can be a critical pathway to improve sustainability
Package of research questions and methods

**Research questions**

- What are current dietary patterns and related nutrient gaps and how are they changing over time?
- How and why is the changing landscape used by # groups for their diets?
- What is the potential of the changing landscape to improve diets?
- What are costs and benefits of different options?
- What are best operational pathways to implement best-bet options?
- How can options go to scale?

**Methodology work packages**

- **Diet module**
  - 24h recall
  - FGs (seasonal calendar)

- **Participatory Action Research**
  - HH, scenario, behavior games
  - Lab in the field experiments

- **Landscape monitoring**
  - Remote sensing, ABD assessm., Plot & market sampling

- **Integrated modeling**
  - Landscape IMAGES, Cost of Diet, INVEST, Farm DESIGN

- **Theory of change & link to policy, markets & capacity building**
Learning cycles

- **Action:**
  - Implementing a ‘bright idea’

- **Describe:**
  - What?

- **Plan:**
  - Which improvements?

- **Explore:**
  - Diversify
  - What if?

- **Select:**
  - Which?

- **Design:**
  - What?

- **Analysis:**
  - What are implications?

- **Explain:**
  - Why?
Cattle in the floodplain during the dry season

Temporal villages (fisherman)

Reeds to make mats

Cropping with high risk of floods

Fishing

Wildlife habitat
Seasonality

- Hunger season
  - Mapungu
  - Lealui
  - Nalitoya

- Fish Ban
- Rainy season
- Cold months
- Hot months

Nutritional Functional Diversity

- Lealui (lowland)
- Mapungu (upland 1)
- Nalitoya (upland 2)
Food consumption

% of adults consuming food group

- All starchy staple foods: 99%
- Flesh foods: 39%
- Vitamin A-rich dark green leafy vegetables: 42%
- Other vegetables: 36%
- Other vitamin A-rich vegetables and fruits: 10%
- Dairy: 20%
- Nuts and seeds: 9%
- Beans and peas: 2%
- Other fruits: 2%
- Eggs: 1%

Round 1 - Jul/Aug (N=362)  Round 2 - Nov (N=391)  Round 3 - Feb/Mar (N=336)  Total (N=1089)
Land for agriculture and other ecosystem services
Activities on the ground
Educational material – Seasonal calendars

January

February
Modeling approach – impact intervention crops
Trade-offs and synergies
Modeling approach – impact intervention crops
Nutritional contribution
Learning cycles

- **Design**
  - Select
  - Which?

- **Plan**
  - Which improvements?

- **Explore**
  - Diversify
  - What if?

- **Action**
  - Implementing a ‘bright idea’

- **Describe**
  - What?

- **Analysis**
  - What are implications?

- **Observe**
  - Find out consequences

- **Explain**
  - Why?
NSL videos

https://www.youtube.com/watch?v=eUbotq1d8dI

https://www.youtube.com/watch?v=2KlYXiofBWY
Thank you

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