



# Rethinking the idea and practice of scaling innovations for development and progress

**Scale Up Conference**  
**Purdue University, West Lafayette, USA**

26 September 2018  
Seerp Wigboldus

# Preamble to a critical reflection on the idea and practice of scaling innovations for development and progress


- I do acknowledge the useful role which the scaling of innovations can and does play in society
  - Some good things only work if produced/used/applied at scale
  - Some good things can only become **affordable** for all if produced/used/applied at scale
  - Some good things have been proven to have no significant negative side effects even if applied at scale
- The following considers cumulative and compound effects of scaling innovations, not just effects of individual projects.



## So what then is the problem?

- Scaling innovations has had and may (continue to have **seriously negative implications and consequences for society**. E.g. climate change, acidification of oceans, plastic soup in ocean can often be traced back to earlier scaling of innovations. The same goes for many forms of environmental degradation and also socio-cultural disintegration and loss of cultural identity, etc.
- This is generally not sufficiently taken into account, apparently based on the fallacy that scaling up something good means automatically getting more good – a **critical attitude** tends to be **lacking**.
- The **focus** tends to be on **“how to get innovations to go to scale”**.
- Much less on what are appropriate and responsible ways for engaging in processes of scaling innovations
- Hardly on the essential idea of why scaling innovations as such would be a good approach at all.

# Illustrating the issue



Schurman, R. (2018) Micro(soft) managing a 'green revolution' for Africa: The new donor culture and international agricultural development. *World Development* 112, 180-192:

“I argue that the (...) heavy emphasis on strategic planning has produced an approach to agricultural development that abstracts away from smallholder farmers' sociocultural worlds and relies on a **generalizable** set of development **solutions**.” (italics added)

Ben Tiggelaar (Dutch management guru) in column NRC in November 2012:

“If pilots were a succesful way of getting to change, why not continue doing pilots? **Stop the rolling out**. Just do pilots” (translated from Dutch)

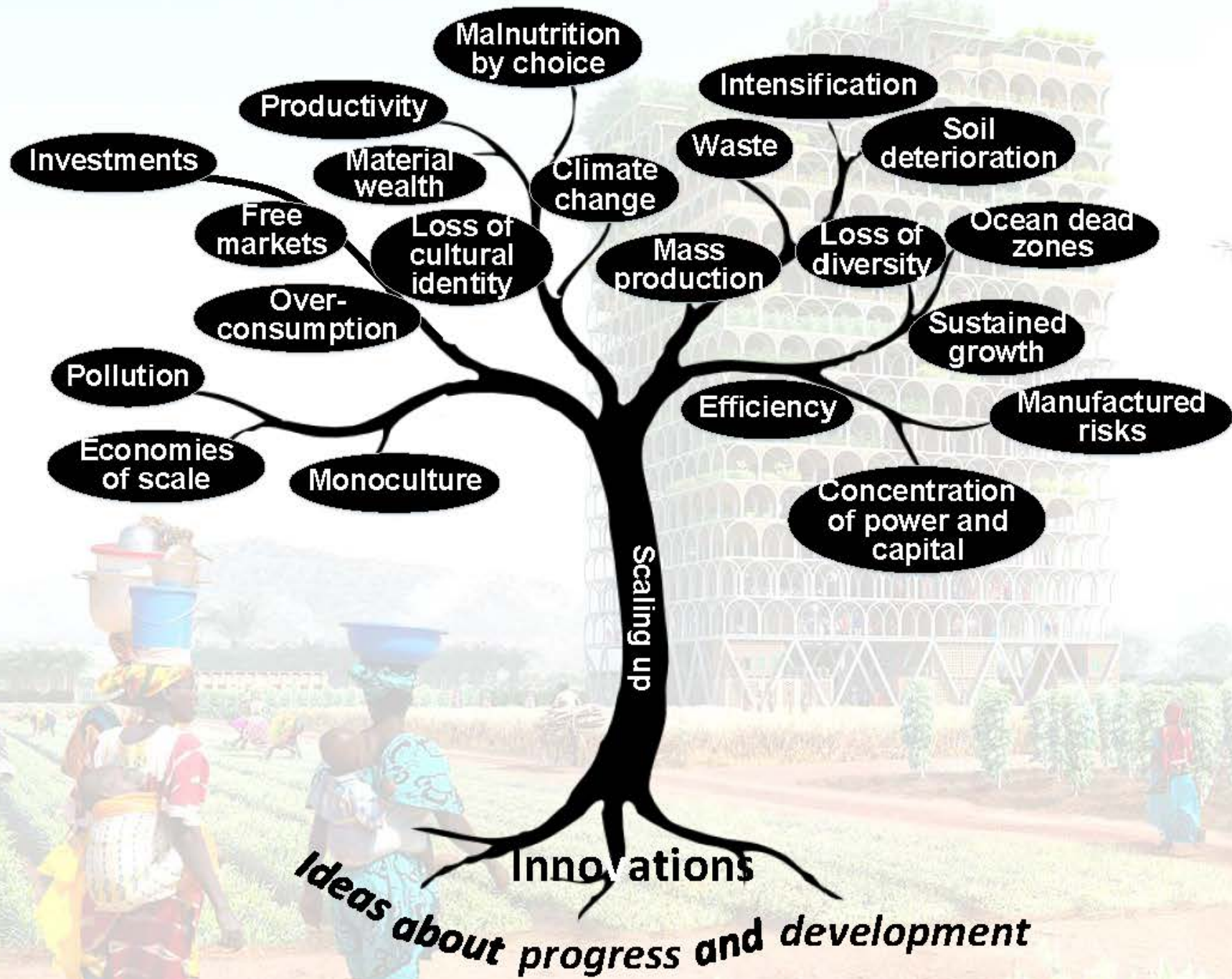
## Illustrating the issue (2)

A reported **lack of ability to anticipate** what happens when innovations go to scale and

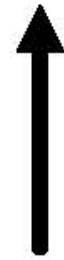
a **lack of ability to act timely** when there are initial warning signals showing negative effects

“Human ability for developing ever more sophisticated technologies increasingly exceeds the ability to anticipate long-term effects and implications of the same for society”





The diverse (positive, and not so positive) fruits of scaling innovations



The practice of scaling innovations



Ideological roots of the idea of scaling innovations

# Visualising potentially distortive effects of scaling innovations which enhance vulnerability and reduce resilience of systems

Selective scaling: getting more of the same and losing diversity



Asymmetric scaling: pulling things out of proper proportions



Excessive scaling: depleting resources



Boat at bottom of Aral Sea after excessive scaling of irrigation

These are potential implications if the scaling of innovations is not guided by good governance, considering long-term effects and putting healthy limits on ambitions even if it means missing out on certain short-term benefits.

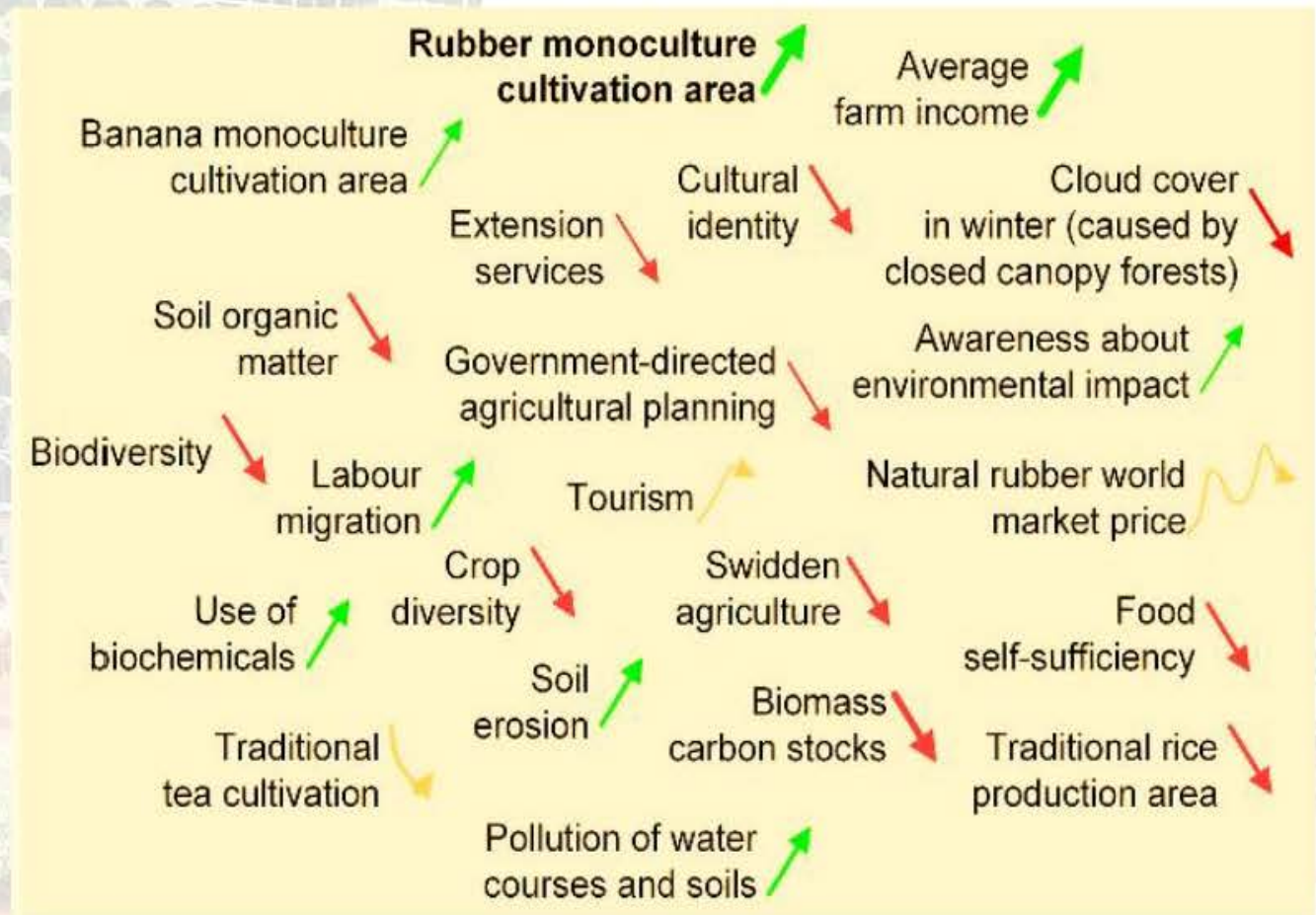
# Need for systemic/integrated perspectives on scaling agricultural innovations

**What** is (meant to be) moving up on **what scale** generally not explored and this will almost always be about **many things** (not one) moving on **many different** (not one) **scales**

Life is about more than economics and the material side of things;

Integrated, holistic perspectives need to guide scaling initiatives to prevent reductionist approaches.

Illustration from the case of scaling green rubber in SW-China





# Discussion

So, yes, there are good reasons to **rethink** the idea and practice of scaling innovations

- Tendency that this in effect reintroduces the infamous **blueprint approaches**
- Tendency to become a **scaling the factory-method** of rolling out pre-packaged “solutions” = a kind of industrialisation and homogenisation of what makes for development and progress
- Increasing uniformity resulting from scaling innovations tends to **play into the hands of the powerful.**

Once a new technology rolls over you, if you're not part of the steamroller, you're part of the road.     Stewart Brand

- Tendency that scaling a particular innovation **becomes purpose in itself**
- Tendency of innovation processes getting on the “**automatic pilot**” in scaling rather than stimulating processes of continuous creativity.

## Final thought on “solutions thinking”

- We can only call something a solution when it has effectively solved something. In other words, we cannot have solutions “on the shelves”. Only in a specific context will it become clear to what extent something indeed became a solution.
- Also, a “solution” will target something specific and something which is limited in scope. Through foresight analysis, or only after some time we may know whether solving one thing will/did not create new problems in other spheres of life that then require to be solved. Hence the danger of “rollercoaster scaling”: solving certain problems at scale, which then require solving newly caused problems at scale, which then.... etc.

# Conclusion

## We need to move away

- **from** aiming for *generalizable solutions* to be “massively scaled”
- **towards** identifying *generalizable* design and application *principles and purposes* to learn from and inform variable and diverse designs/applications-in-context

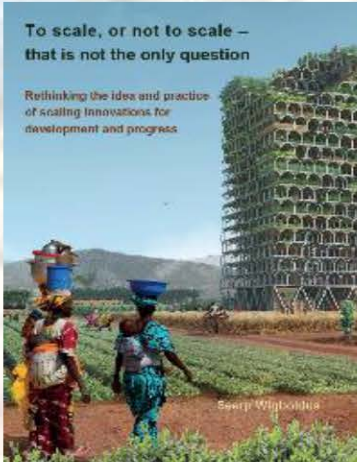
## And

- There is a need to develop a practice of **responsible scaling of innovations**
- ... while at the same time **rethinking dominant paradigms** underpinning the scaling of “generalizable solutions”

*We cannot solve our problems with the same thinking we used when we created them (Albert Einstein)*

# To scale, or not to scale – that's not the only question

## Rethinking the idea and practice of scaling innovations for development and progress



As PDF downloadable at [www.library.wur.nl/wda](http://www.library.wur.nl/wda)

As eBook readable at [http://www.digitaalproefschrift.nl/ebooks/seerp\\_wigboldus](http://www.digitaalproefschrift.nl/ebooks/seerp_wigboldus)

Wageningen Centennial



Wageningen  
Academy of  
Social Sciences



WAGENINGEN  
UNIVERSITY & RESEARCH