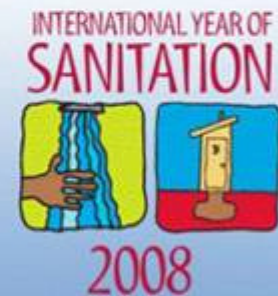




sustainable
sanitation
alliance

**Introduction to SuSanA &
to “sanitation concepts
for the city of the future”**



Arne Panesar, GTZ

www.susana.org

23-24. Sept. 2009

FAO

Rom, Italy

Objectives of the SuSanA



- To raise awareness of what sustainable sanitation solutions are and promoting them on a large scale
- To highlight the key role of sanitation for achieving a whole series of MDGs
- To show how sustainable sanitation projects should be planned with participation of all stakeholders (hand in hand with hygiene promotion and capacity development)

Source: Vision Document 1 “Towards more sustainable sanitation solutions” 2007

What is Sustainable Sanitation?



- emphasises the sanitation **system**
- protects and promotes human health by providing a clean environment and breaking the cycle of disease
- economically viable, socially acceptable, and technically and institutionally appropriate
- protects the environment and natural resources
- can obviously involve a wide selection of system technologies including toilet, collection, transport, treatment, disposal or reuse

Why is sanitation not happening fast enough?



- neglect of external costs and benefits
- low prestige and recognition
- neglect of consumer preferences
- ineffective promotion and low public awareness
- lack of political will
- poor policy at all levels and poor institutional frameworks
- inadequate and poorly-used resources
- inappropriate approaches (e.g. planning and choice of adequate sanitation systems)



SuSanA was triggered by the International Year of Sanitation 2008



- **UNSGAB suggests IYS** (in Feb. 2006 within Hashimoto Action Plan)
- **decision of the UN for the IYS 2008** (in December 2006)
- **objectives of the IYS** (formulated by UNSGAB in May 2007):

- increase of awareness & commitment from actors at all levels
- mobilisation of governments, financial institutions & sanitation providers
- secure real commitments to develop & implement effective action to scale up sanitation programmes
- **encourage demand driven sustainable solutions & informed choices**
- secure increased financing to jump start & sustain progress
- develop & strengthen institutional & human capacity
- **enhance sustainability & effectiveness of sanitation solutions**
- promote & capture learning to enhance evidence base & knowledge on sanitation

sustainable
sanitation
alliance

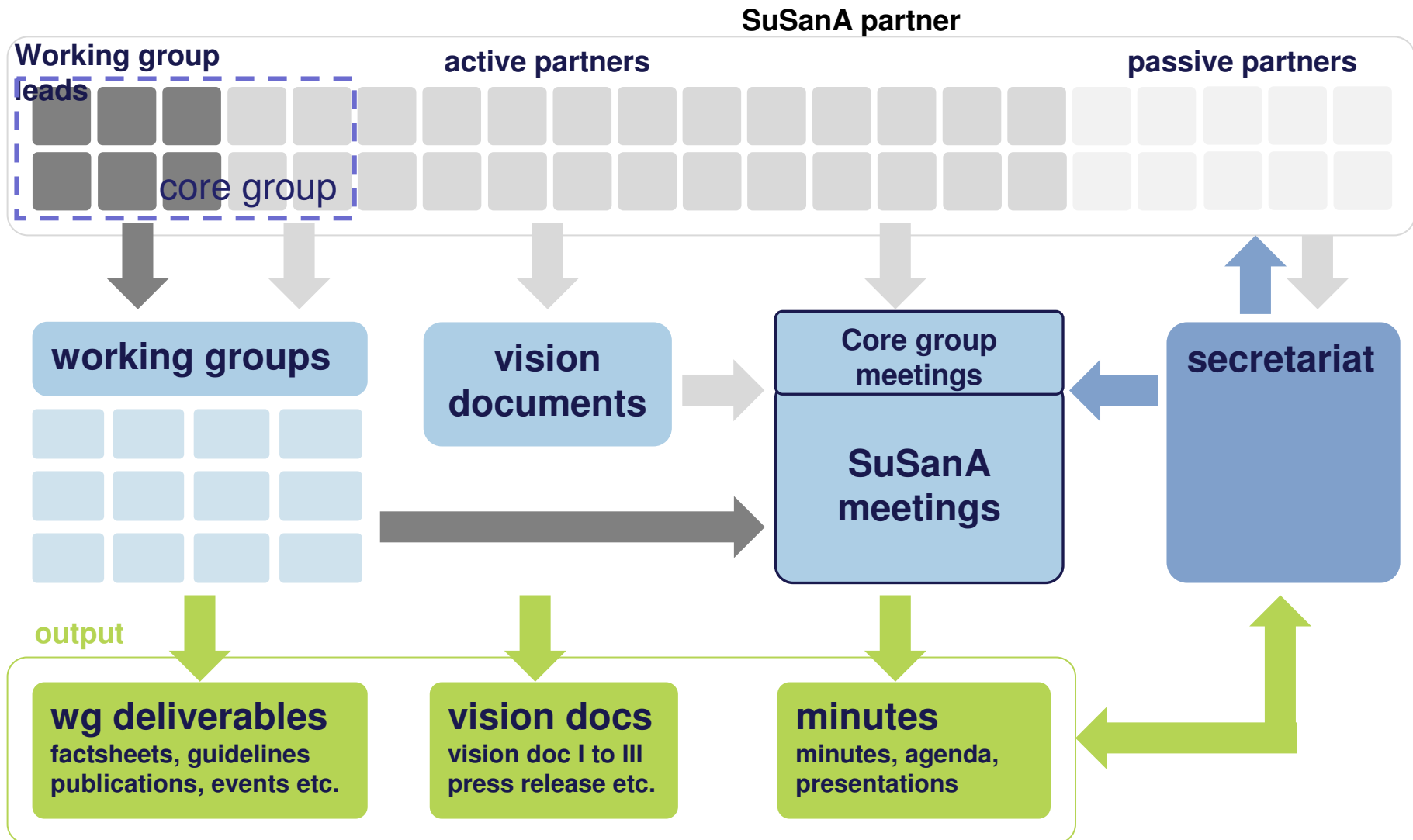
currently >100
SuSanA partners ...

SuSanA partner logo
version 1.7 / 2009-08-09

104 participating organisations



Structure of the SuSanA





SuSanA contributes to the policy dialogue towards sustainable sanitation...

... through its

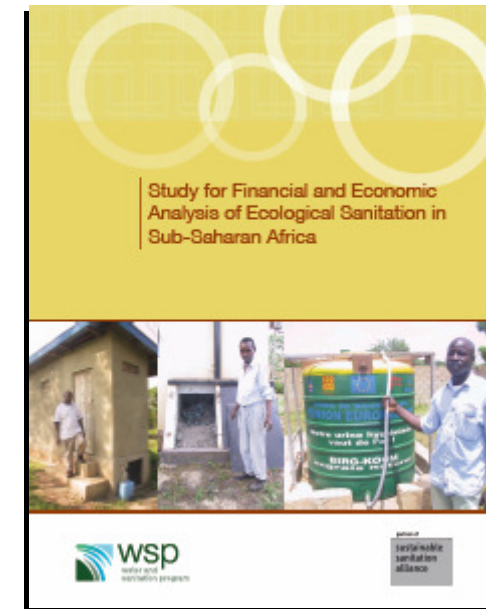
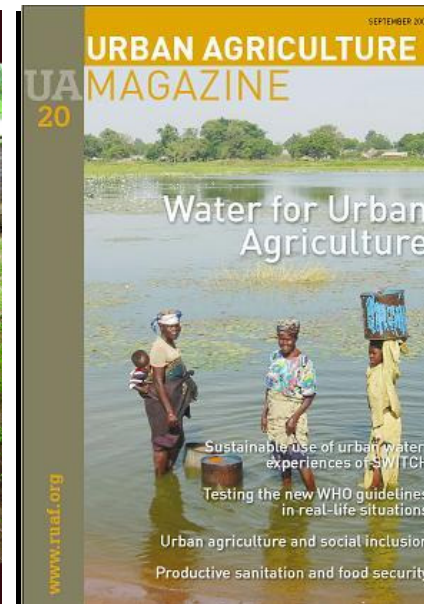
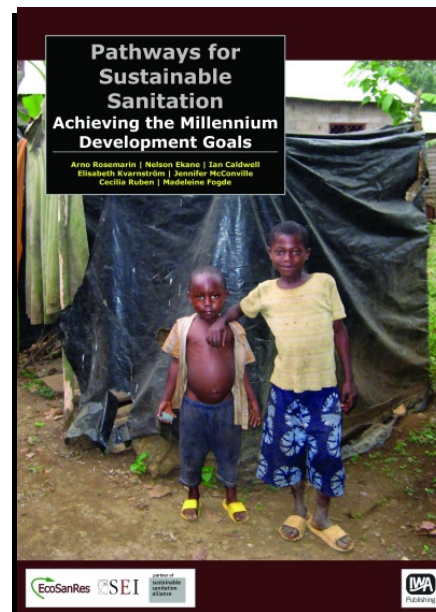
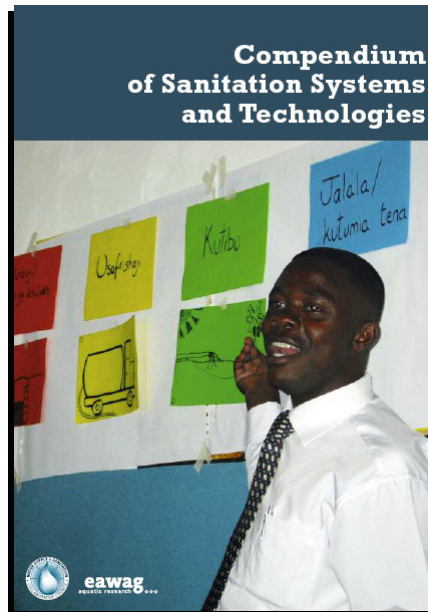
- Vision documents and joint road map
- Fact sheets from several working groups
- Contributions to conferences and events

... through a collection of resource materials related to this policy dialogue, e.g.:

- Website (resource material for capacity development in sustainable sanitation)
- DVD as off-line version
- World map on sustainable sanitation projects (Google-based)
- Case study collection



SuSanA is a sounding board



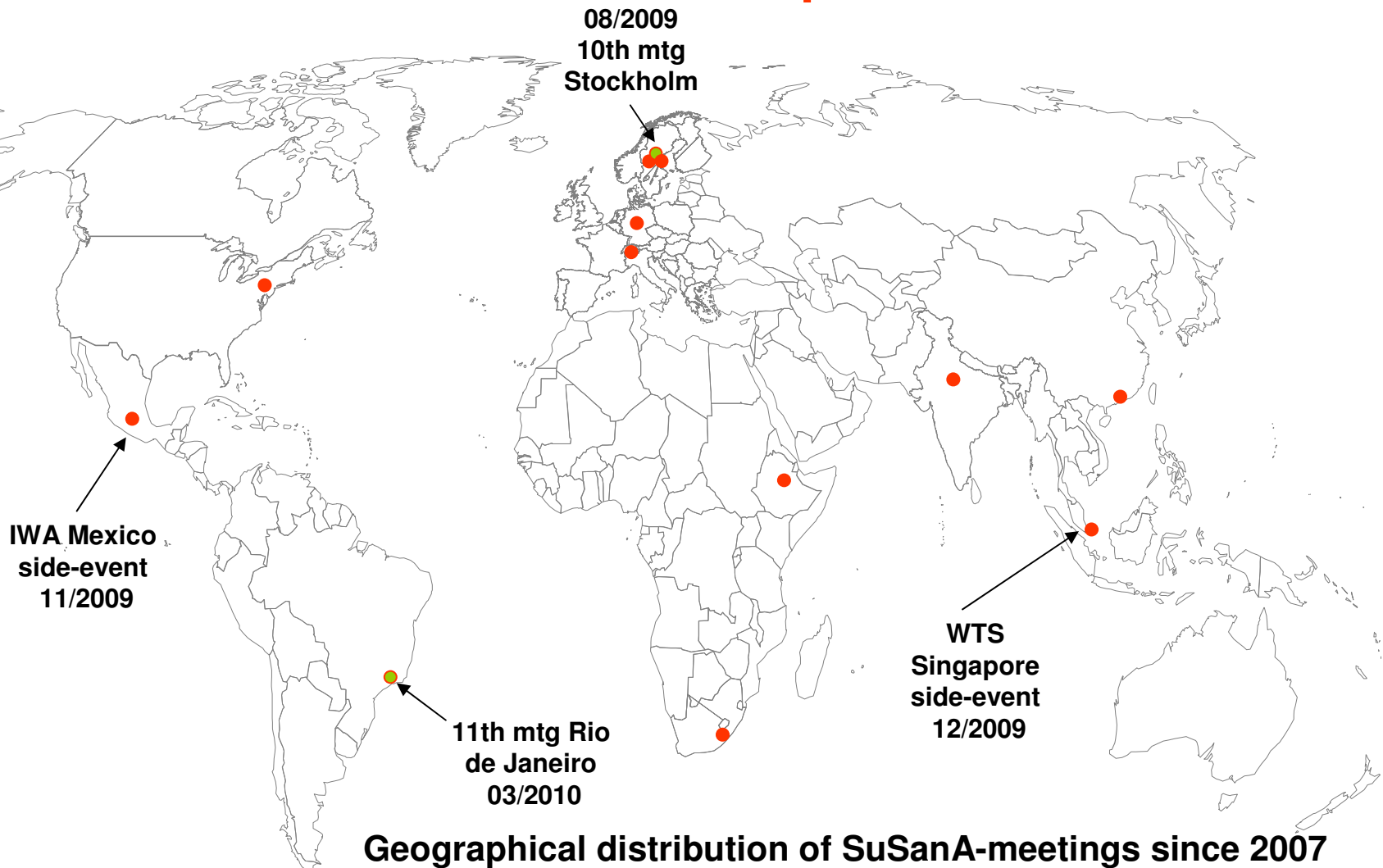
Larger publications from SuSanA partners – discussed during SuSanA-meetings and /or with feedback from SuSanA-partners include e.g.:

- „Compendium of sanitation systems“ (Eawag-Sandec 2008)
- „Sustainable pathways to achieve the MDGs“ (SEI-IWA 2008)
- „UA Magazine“ (contributions from SuSanA working group 7, 2008)
- Study for Financial and Economic Analysis of Ecological Sanitation in Sub-Saharan Africa (WSP 2009)

What is SuSanA? [3]



SuSanA is a coordination platform



Geographical distribution of SuSanA-meetings since 2007

What is SuSanA? [4]



SuSanA is a working platform

The SuSanA working groups:

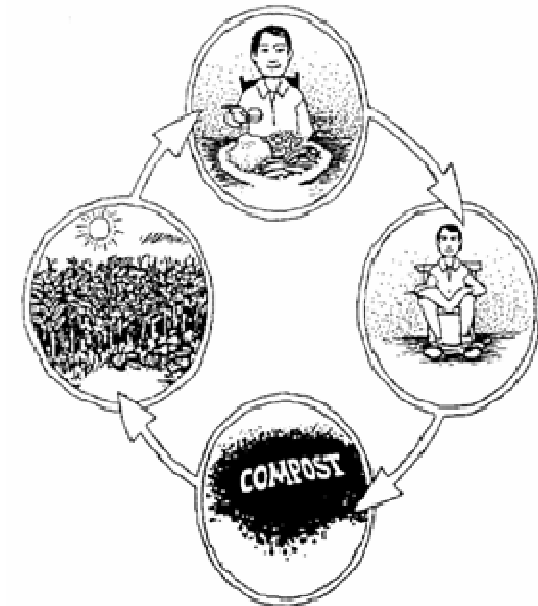
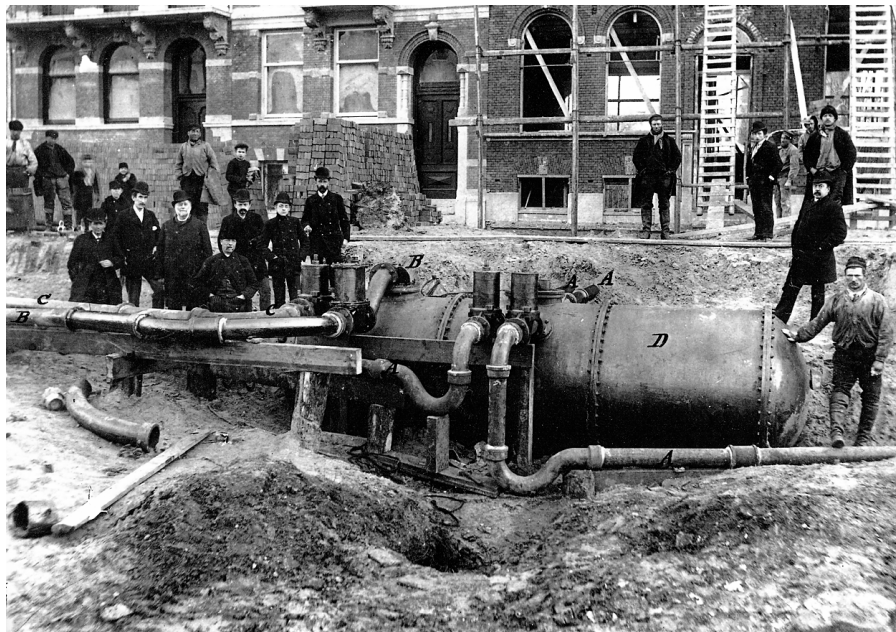
1. Capacity development for sustainable sanitation
2. Cost and economics of sustainable sanitation
3. Renewable energies, groundwater protection and climate change
4. Sanitation systems, technology options, hygiene and health
5. Food security and productive sanitation systems
6. **Sustainable sanitation for cities [today: focus urban nutrient mgmt.]**
7. Community, School, and rural sanitation
8. Sustainable sanitation in emergency and reconstruction situations
9. Sanitation as a business
10. Public awareness & sanitation marketing
11. Operation and maintenance of sustainable sanitation
12. Gender and sustainable sanitation

→ number and thematic subjects of working groups can change

Looking back for inspiration



- In the not too distant past in the northern hemisphere excreta management was different.



- 19th Century urban areas, marketing of excreta and organic waste based fertiliser was a thriving business. There were “great stores of manure on the Schelde between St Amand and Baasrode...whence the excrement from Dutch towns was transported by barge”

BUT.....

Why the change?



- 1.** Nutrient demand met for all three major nutrients (N, P and K) using affordable chemical fertilisers around 1900.
- 2.** Piped domestic water supplies in the late 19th century made water flushed sewerage possible. Sewage was flushed from homes and the hearts of cities. Greatly increased volume and diluted nutrients, making it impossible for them to be recovered and reused.
- 3.** Urban settlements had grown dramatically - logistical challenge proved too great and the public health imperative demanded a solution.

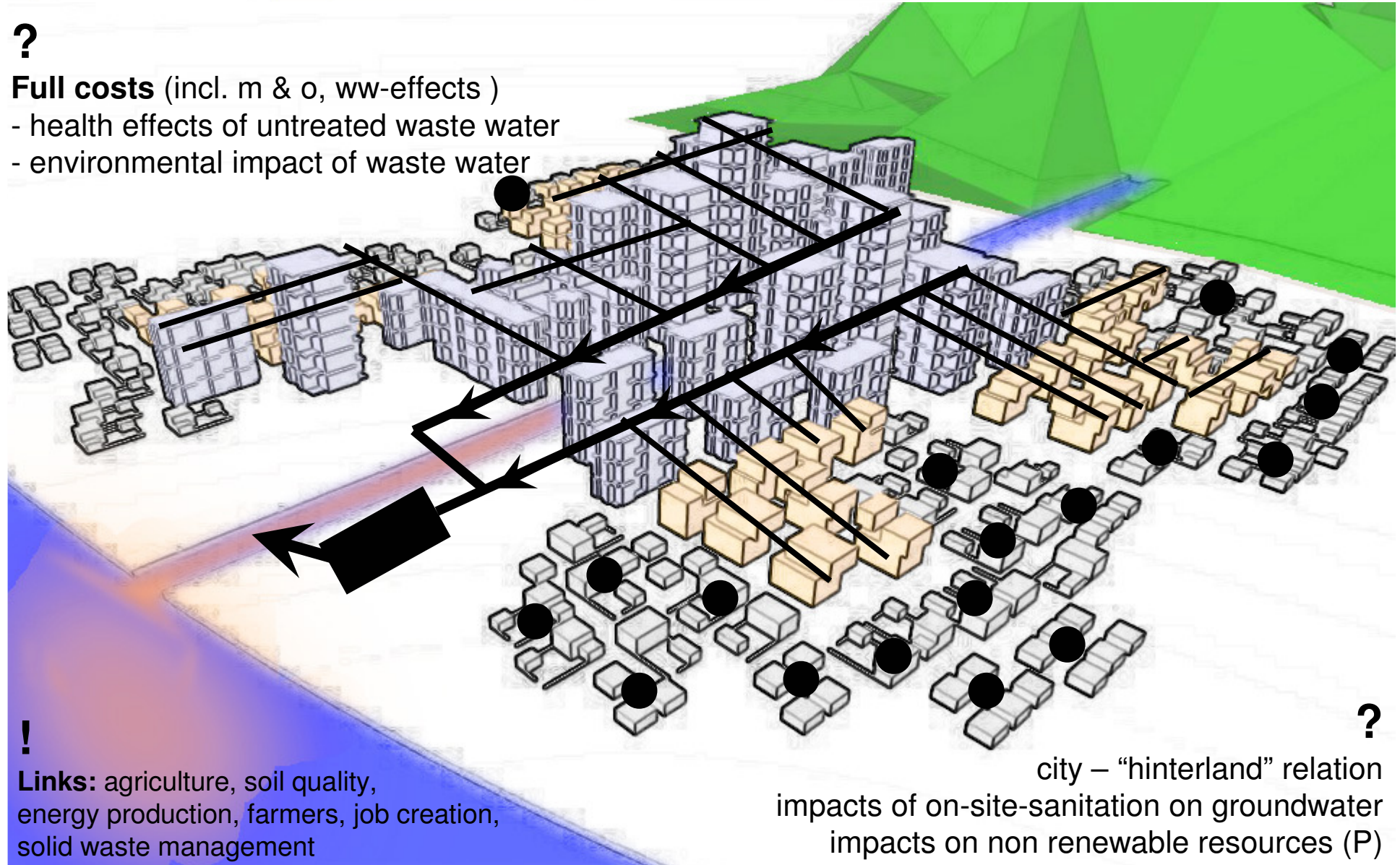
Common current state



?

Full costs (incl. m & o, ww-effects)

- health effects of untreated waste water
- environmental impact of waste water



!

Links: agriculture, soil quality,
energy production, farmers, job creation,
solid waste management

?

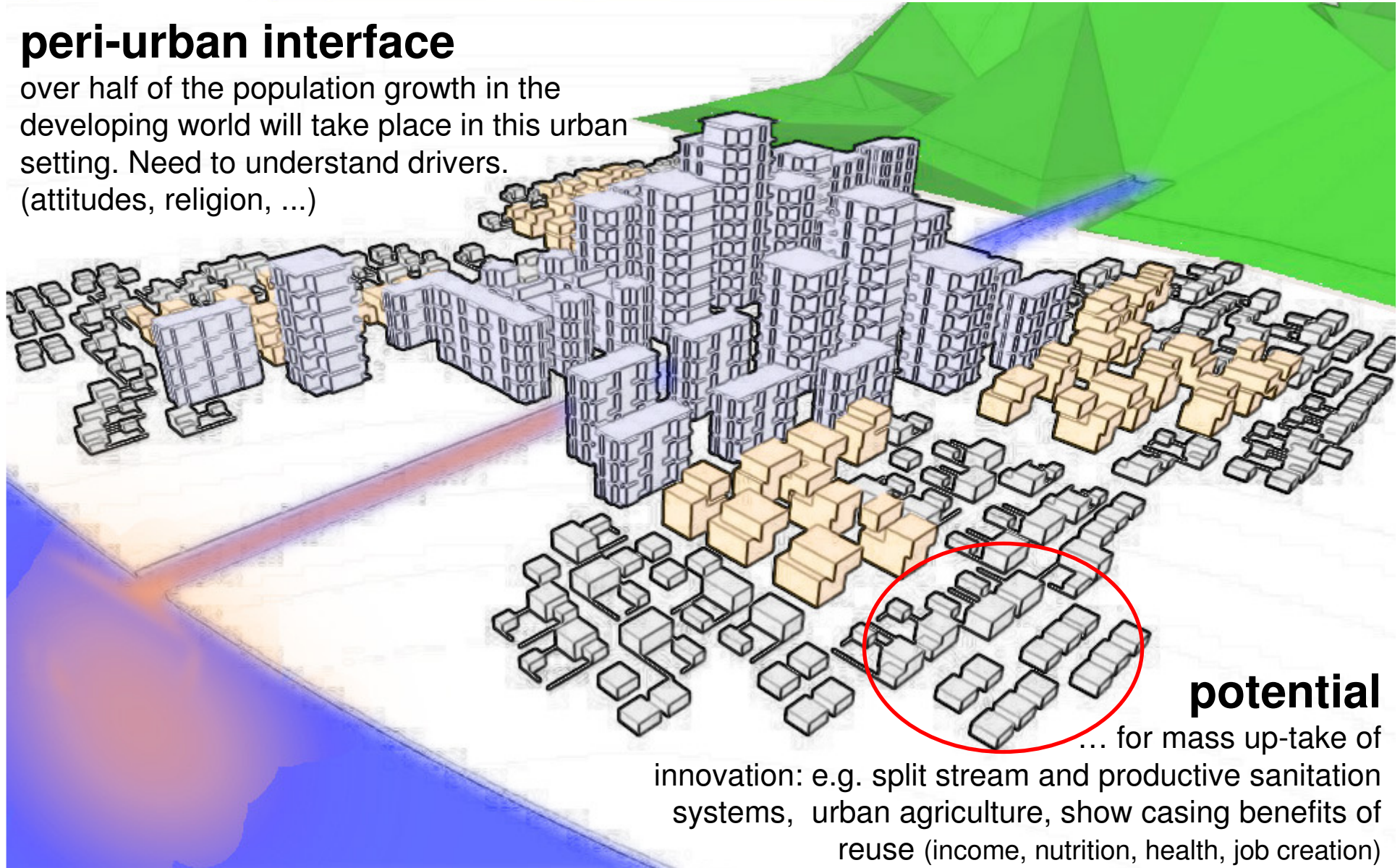
city – “hinterland” relation
impacts of on-site-sanitation on groundwater
impacts on non renewable resources (P)

From disposal-oriented to reuse-oriented urban sanitation



peri-urban interface

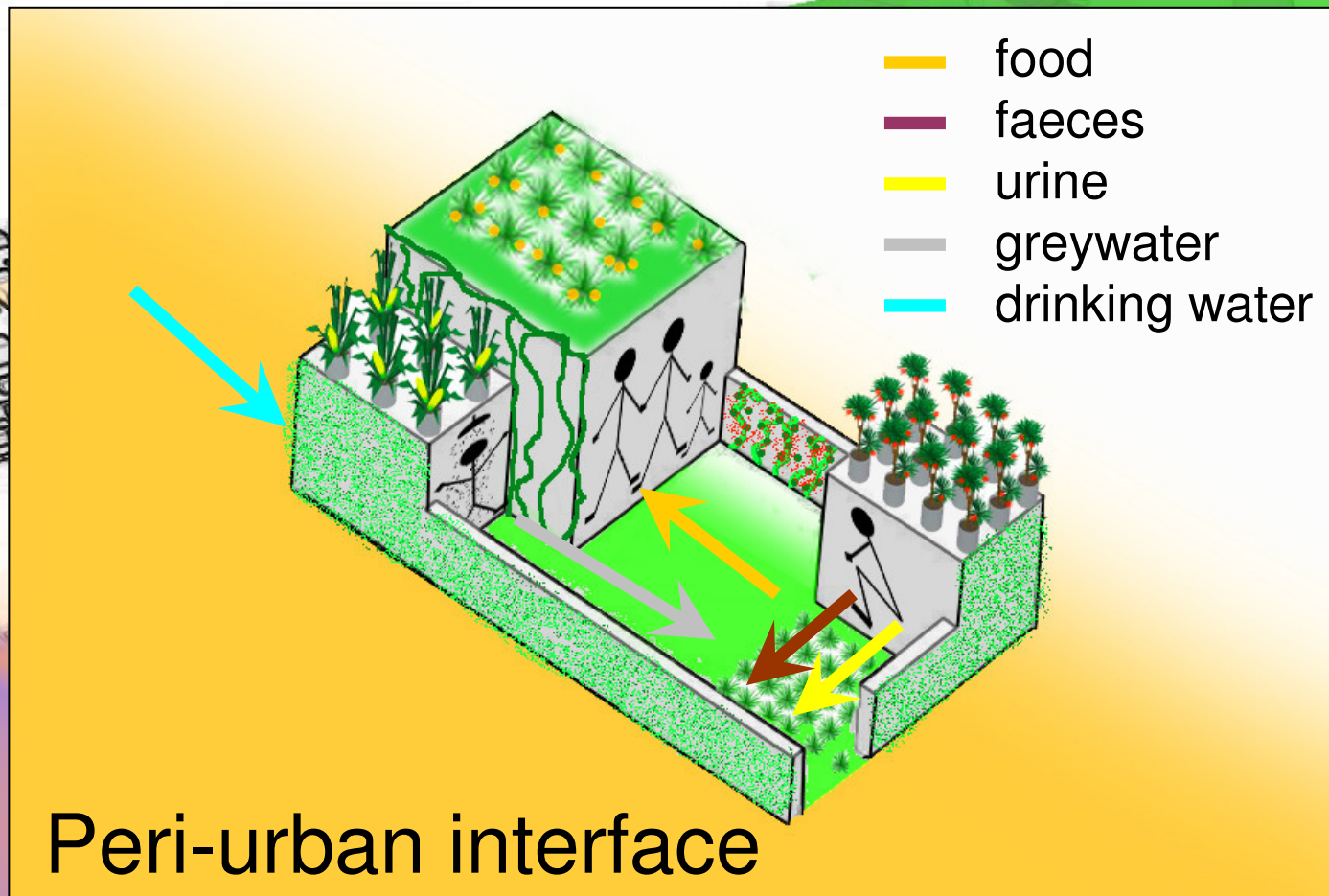
over half of the population growth in the developing world will take place in this urban setting. Need to understand drivers. (attitudes, religion, ...)



potential

... for mass up-take of innovation: e.g. split stream and productive sanitation systems, urban agriculture, show casing benefits of reuse (income, nutrition, health, job creation)

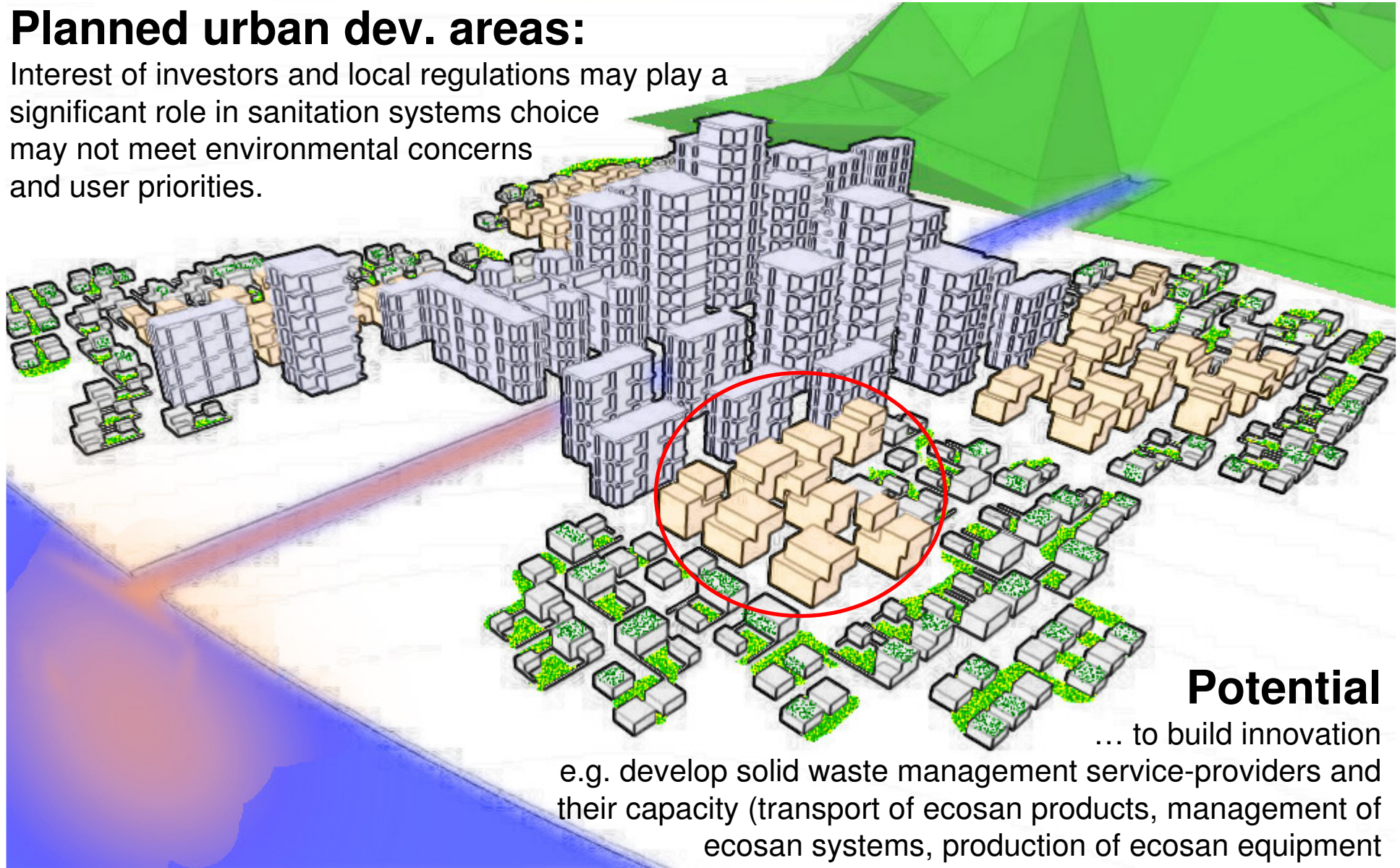
From disposal-oriented to reuse-oriented urban sanitation



From disposal-oriented to reuse-oriented urban sanitation

Planned urban dev. areas:

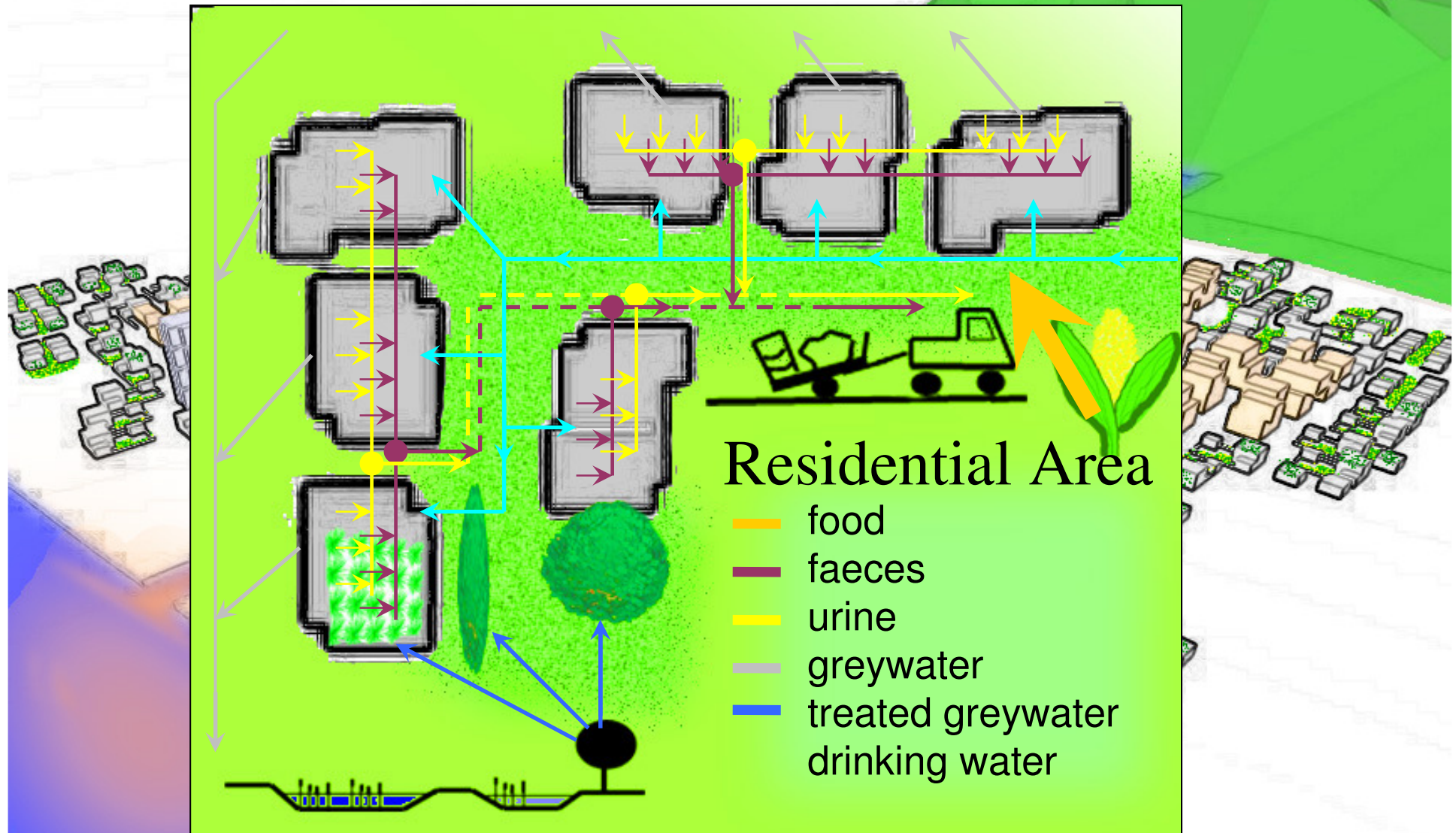
Interest of investors and local regulations may play a significant role in sanitation systems choice may not meet environmental concerns and user priorities.



Potential

... to build innovation
e.g. develop solid waste management service-providers and
their capacity (transport of ecosan products, management of
ecosan systems, production of ecosan equipment)

From disposal-oriented to reuse-oriented urban sanitation



From disposal-oriented to reuse-oriented urban sanitation



*Assainir
et
produire plus !*

PROJET
D'ASSAINISSEMENT
ECOLOGIQUE DE LA VILLE DE OUAGADOUGOU

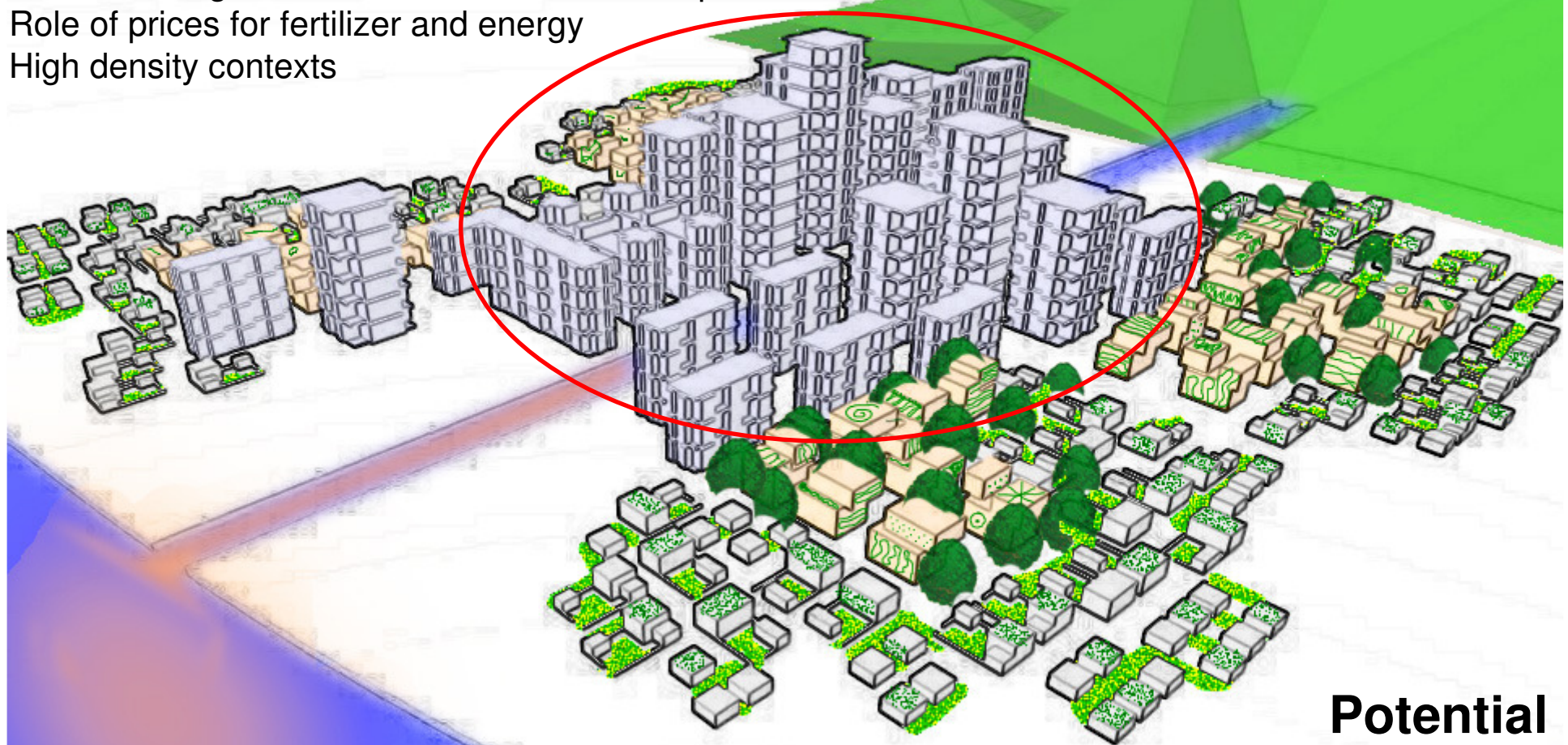
From disposal-oriented to reuse-oriented urban sanitation

Up-grade & Non residential buildings:

Radical change in sanitation infrastructure expected

Role of prices for fertilizer and energy

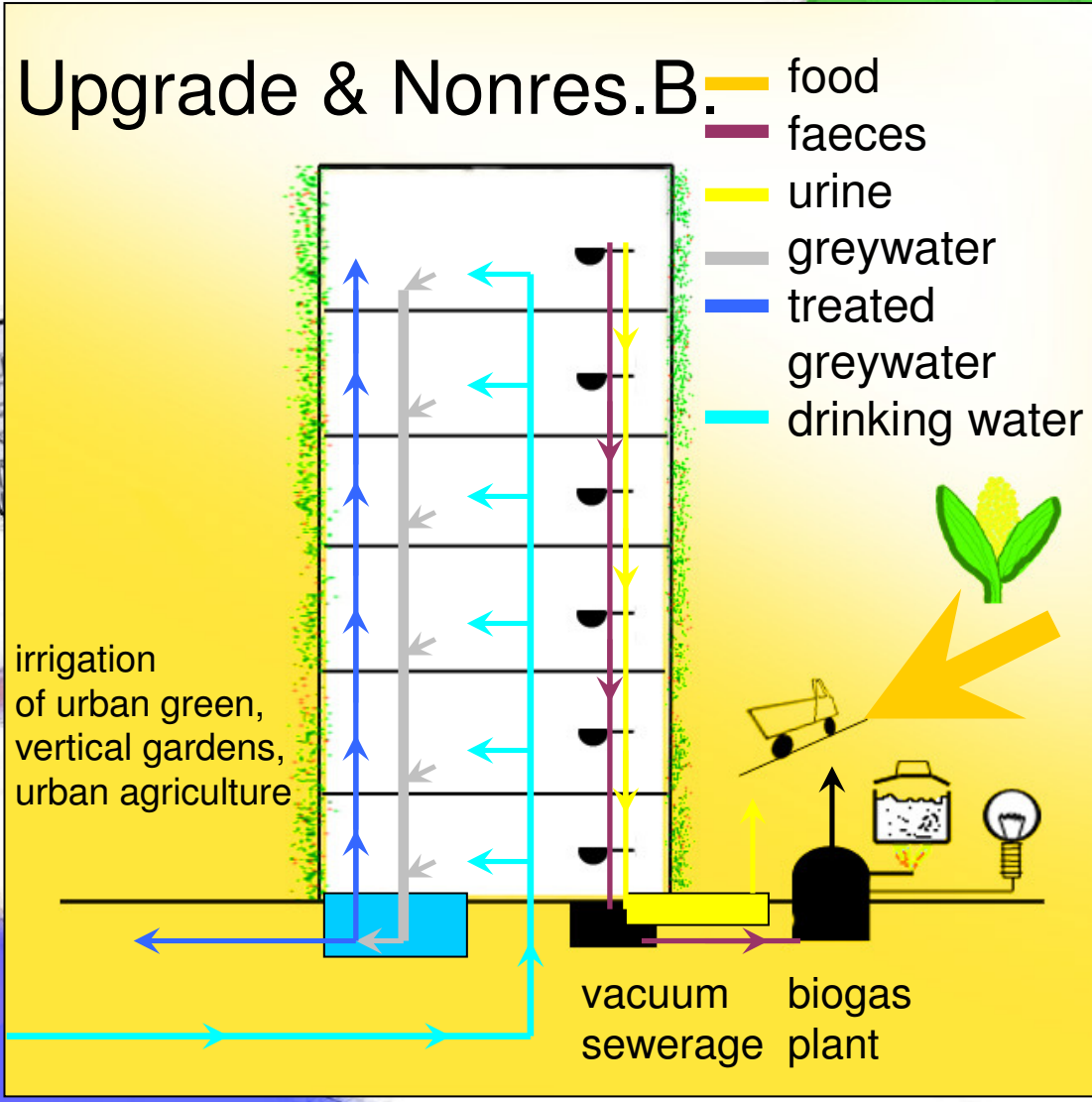
High density contexts



Potential

for high-end technology innovation:
e.g. biogas from black-water; struvite
from urine; reuse of greywater.

From disposal-oriented to reuse-oriented urban sanitation



From disposal-oriented to reuse-oriented urban sanitation



Eawag (near Zürich, CH)



Kibera, (Nairobi, Kenia)



GTZ-HQ (near Ffm, Germany)



Bank (Ffm, Germany)



ecotact, downtown (Nairobi, Kenia)



eco-building, (Freiburg, D)

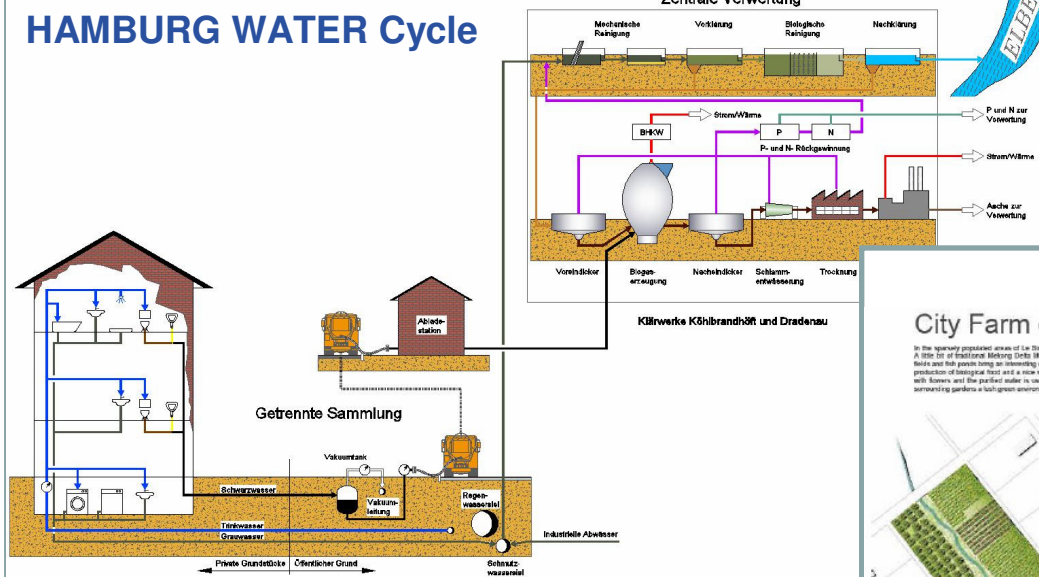


From disposal-oriented to reuse-oriented urban sanitation



Zukunftsorientierte Abwasserentsorgung in Hamburg

HAMBURG WATER Cycle



Possible solution for Hamburg:

- Separate, decentralized collection
- Centralized treatment / recovery

© Hamburg Wasser

Vision for Le Binh, Vietnam



© E. Nemcova & C. Wust 2009

sustainable
sanitation
alliance

From disposal-oriented to reuse-oriented urban sanitation





Tenured or non-tenured peri-urban interface:
> **Ouagadougou**

Planned urban areas: > **China**



Non-residential building > **Eawag**

Non-tenured inner-city slums: > **Nairobi**

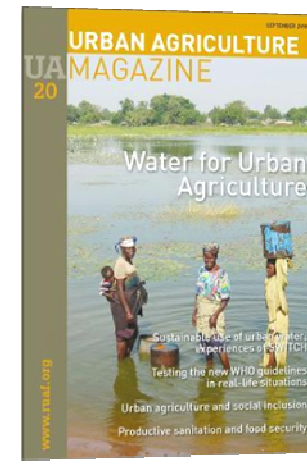
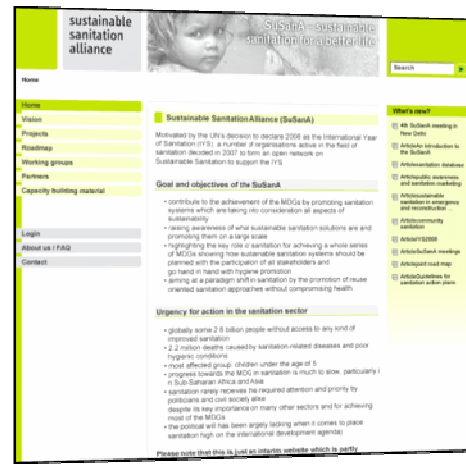
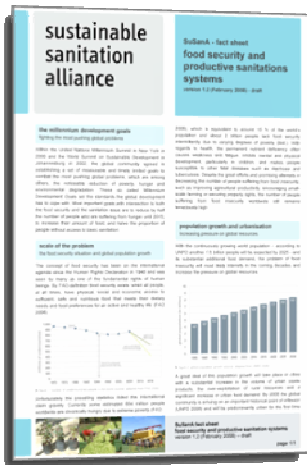


Conclusions



- **In the sustainable city of the future recycling will be a must.** This will include urban agriculture, urban recreation areas, green buildings and production of renewable energy e.g. from biogas. For all this “productive sanitation systems” will provide input.
- Hence, for the sustainability of cities and particularly for the urban poor, urban sanitation should not be considered as a waste disposal problem but rather seen as an element of a system.
- There is no experience with such city wide, interlinked, large scale and safely operating systems – just as there was none with water flushed sewers in the 1850’s.

- factsheet
- case study collection
- reuse guidelines for farmers (for urine and faeces)
- articles in different magazines
- collection of relevant literature on the SuSanA homepage



„You can be part of SuSanA“



- SuSanA is **a loose network of existing organisations working along the same lines**, and open to others who want to join and be active in the promotion of sustainable sanitation systems
- SuSanA had quarterly SuSanA meetings in 2007 – 2008, and will have in future 1-2 larger meetings per year
→ one major meeting in Stockholm, ideally plus
→ one in a country in the South for more regional input
- SuSanA has formed a core group, consisting of the WG-leads plus active individuals, to facilitate coordination and take certain decisions between SuSanA meetings
- All partnering organisations contribute their work and resources on their own expense

sustainable
sanitation
alliance

Thank you!



**Pama-agi sa Paggamit
Urine-Diversion Toilet**

Angayan nga Buhaton...

Human gamit sa kasilya, manghugas sa kamot ginamit ang sabon.

Human gamit sa kasilya, manghugas sa kamot ginamit ang sabon.

Ang tao ihilog diha sa iyong bahin sa "toilet bowl" ug ang babaye manghi sa atubangan nga bahin (urine chamber).

Bobo-an ug abo o yuta ang tao pagkatapos kailiang. Ayaw bobo-e ug tubig sulod sa tangke.

Ang lalaki ug mga batang lalaki mogamit sa line-in nga bi-anan para sa pag-ibi.

Isabay ang ginamit nga ilo ngadto sa lineag sudlanan aron masugon o ibabong.

Isabay ang tao sa mga bata ngadto sa tangag sa kailiangang alang sa tao.

Paingkamotan nga kanunay nga sirado ang "toilet bowl" aron walay makasulod nga langaw sa tangag.

Dili Angayan nga Buhaton...

Ayaw pagkailiang sa atubangan nga bahin sa "bowl" (urine chamber).

Ayaw pagpanghi sa layo sa "bowl", gamita ang lineag ibi-anan.

Ayaw bobo-e ug bisan man ang "toilet" sulod sa tangke para sa pagkilo.

Ayaw pagpanghi sa "anal cleaning area".

Ayaw isabay ang apas nga sigarilyo sulod sa tangke.

Ayaw pagibay ug mga bata, botelya o "basura" sulod sa tangke.

Ayaw bobo-e ug akasibang tubig sulod sa tangke.

Developed by GTZ Water Program in cooperation with the BIRPAT and Food for the Children Philippines and CMC

gtz

Food for the Children

CMC

Join SuSanA

www.susana.org