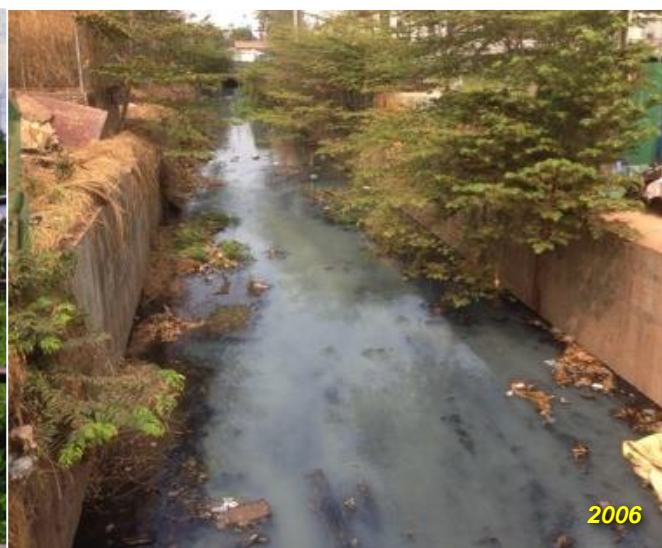


Toilets need allies – breaking down silo thinking for decentralized sanitation



Vientiane (Lao PDR) 1990



2006

Prof. Jean O. Lacoursière and Lena B.-M. Vought
Coordinators, **CITYBLUES** ++ Partnership

presentation to the  seminar “Sanitation Governance – making the system work”

Thursday 19th February 2015, Stockholm, Sweden

... recently (2011) came to sanitation “ through the backdoor ”

- ✓ **Our research and advisory activities focus on aquatic ecosystem functioning and sustainable use...**

Water quality, bio-indicator, cross-sectorial approach

- ✓ **Work with tropical wetlands (natural and urban) since creating and training the first cross-ministries “Wetland Teams” in Lao PDR, Vietnam and Thailand in 1990...**

Project of the Interim Mekong Committee (now the MRC)



... recently (2011) came to sanitation “ through the backdoor ”

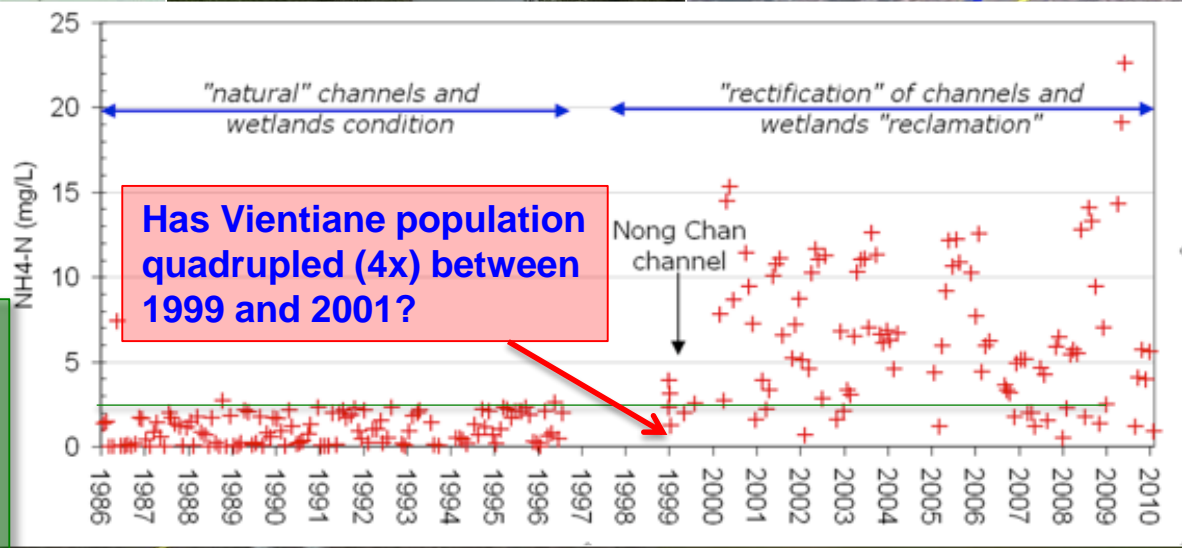
We were “forced” to address sanitation after:

- ✓ ***it became obvious that it was a recurrent/common bottleneck to much of the problematic we dealt with!***
- ✓ ***all practitioners dealing with environmental “issues” were always waiting for sanitation engineers to fix the problem first; and that...***
- ✓ ***sanitation engineers were unable to act because policymakers were invariably aiming for the large centralized treatment plants! (€ \$ ¥ ₩...)***

That Luang Wetland, Vientiane (Lao PDR)

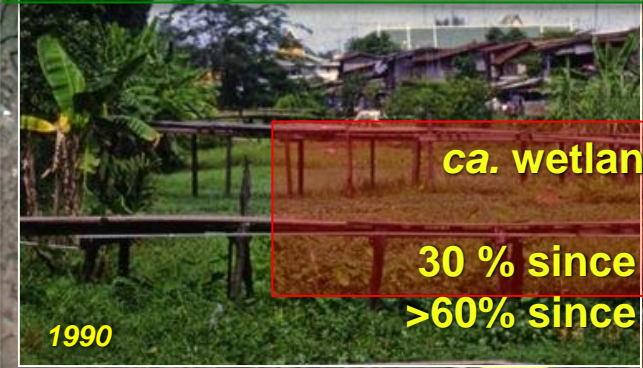


... all of Vientiane drains to a 54 km wetland-river system which outflows to the Mekong River

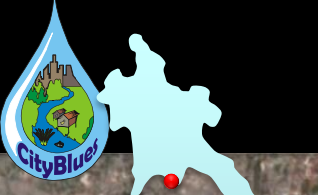


... before 1999:
 aquatic plants + sediment
 = natural water treatment
 Part of "Ecosystem Services"
 provided by urban aquatic
 ecosystems

ca. wetland area lost
 (2013):
 30 % since 1999
 >60% since 1990



Google earth



... all of Vientiane drains to a 54 km wetland-river system which outflows to the Mekong River

How far has the urban pollution reached (length of impact zone) ?

1/19/2008

ca. 36 km (2013)
70% to Mekong

2012

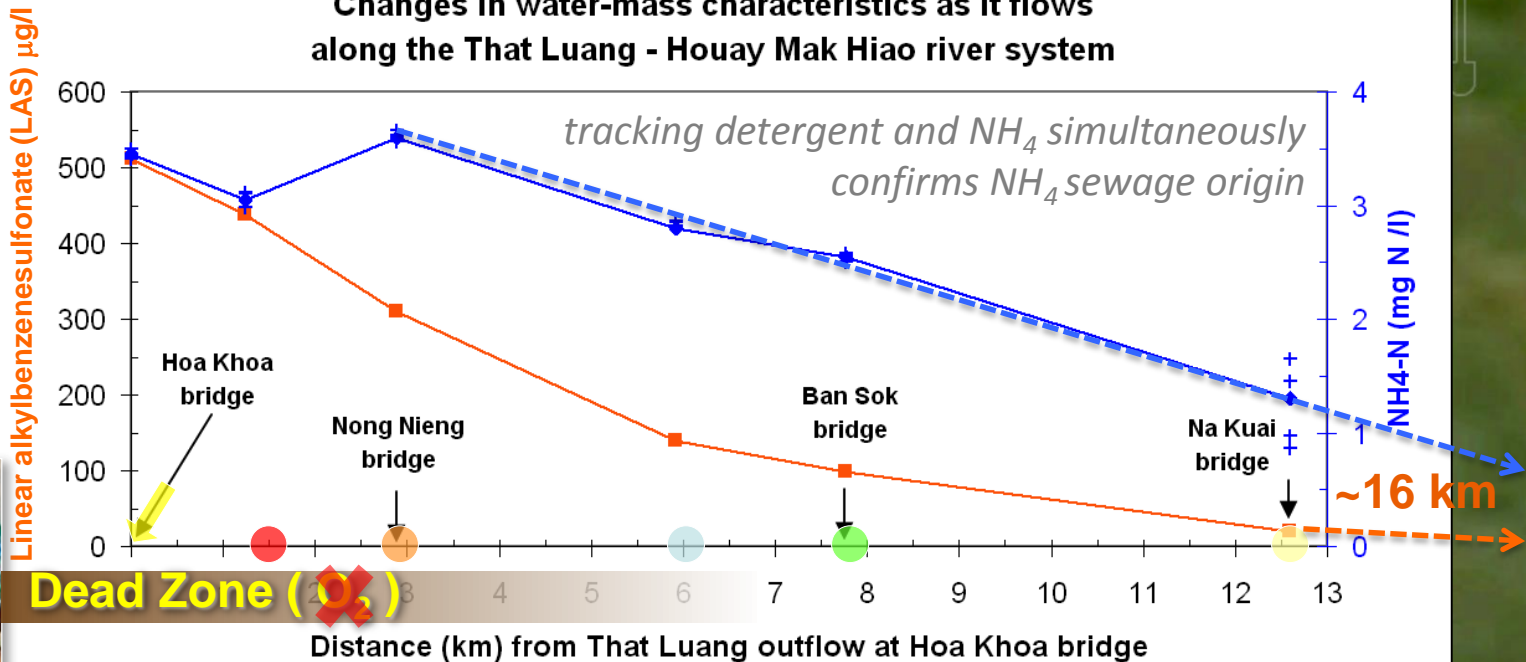
early 2013

Flooding risks reduction:
entire wetland-river was "rectified"

2006

ca. 16 km
30% of distance to Mekong (2006)

Changes in water-mass characteristics as it flows along the That Luang - Houay Mak Hiao river system



Google earth

... the pitfalls of “silo-thinking”

Vientiane, the norm... not the exception

- all practitioners dealing with environmental “issues” (e.g., urbanisation, agriculture, fisheries, natural resources) are always waiting for sanitation engineers to fix the problem first...
- and... sanitation engineers are unable to act because policymakers are invariably aiming for the *large centralized treatment plants!*



(septic tanks & soak pits, ca. 50:50)

Could sanitation and drainage engineers be the next allies in the struggle to maintain functioning aquatic ecosystems in and around urban centers ?

Small drainage basin survey

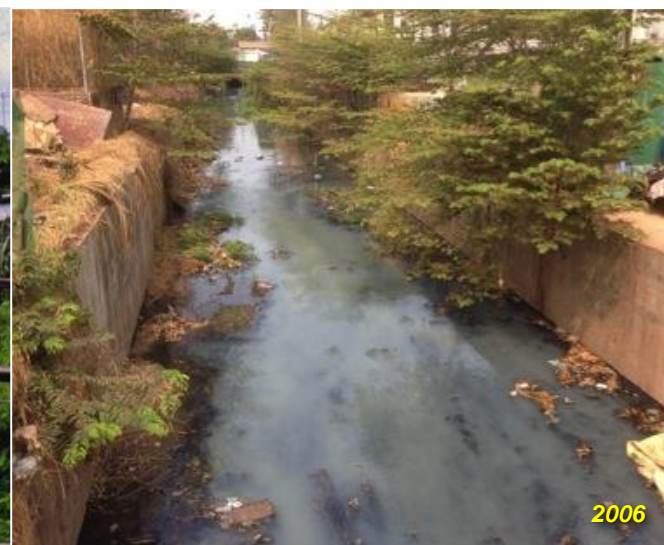
Desludging frequency	% of 856 buildings (25% commercial)
> 1 time / yr	3%
1 time / yr	26%
1 time / 2-3yr	30%
never	41%

source: JICA 2010

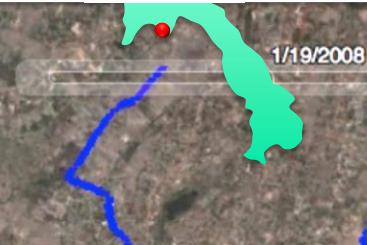
Can wetlands/fisheries practitioners help in the struggle to establish the rapid roll-out of a decentralized and “lower tech” approach to sanitation?

Aquatic Resources need Toilets !

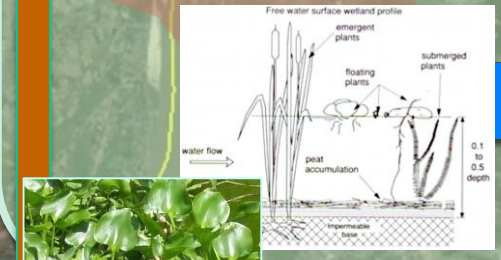
~~Toilets need allies~~ – *breaking down silo thinking for decentralized sanitation*



Prof. Jean O. Lacoursière and Lena B.-M. Vought
Coordinators, **CITYBLUES** ++ Partnership



Public Work
septic tanks/DEWATS

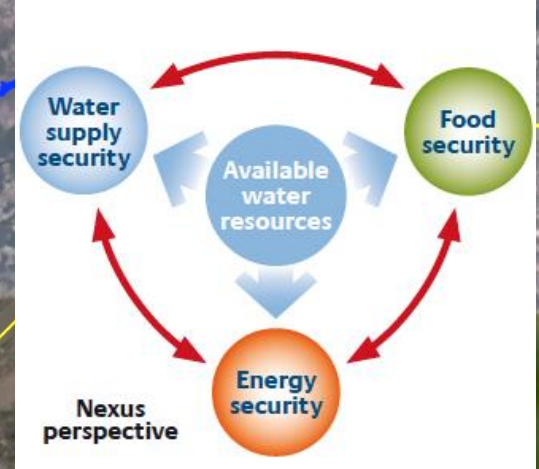


Energy
city busses /
garbage trucks
✓ **BIOGAS**

Natural Resources & Environment
✓ **reduced risk**
habitat diversity,
biodiversity,
productivity
...
people
livelihood



Agriculture
✓ **safe & "steady" water supply (reuse)**
✓ **organic fertilizer & soil conditioning**



Water, Energy, Food Security Nexus... in urban environment

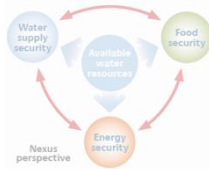
part of **Climate Adapted Development (CAD)**...

part of **GREEN ECONOMY**...



CITYBLUES

+ Energy
+ Food-Security



Keep water clean as it flows *through* and *out* of the city...



1990



Vientiane, Lao PDR

2006



1990

photos: Laocursière and Vought



CITYBLUES ++

Vision: drawing by Ananh Sinsavang, student, Faculty of Architecture National University of Laos (2012)

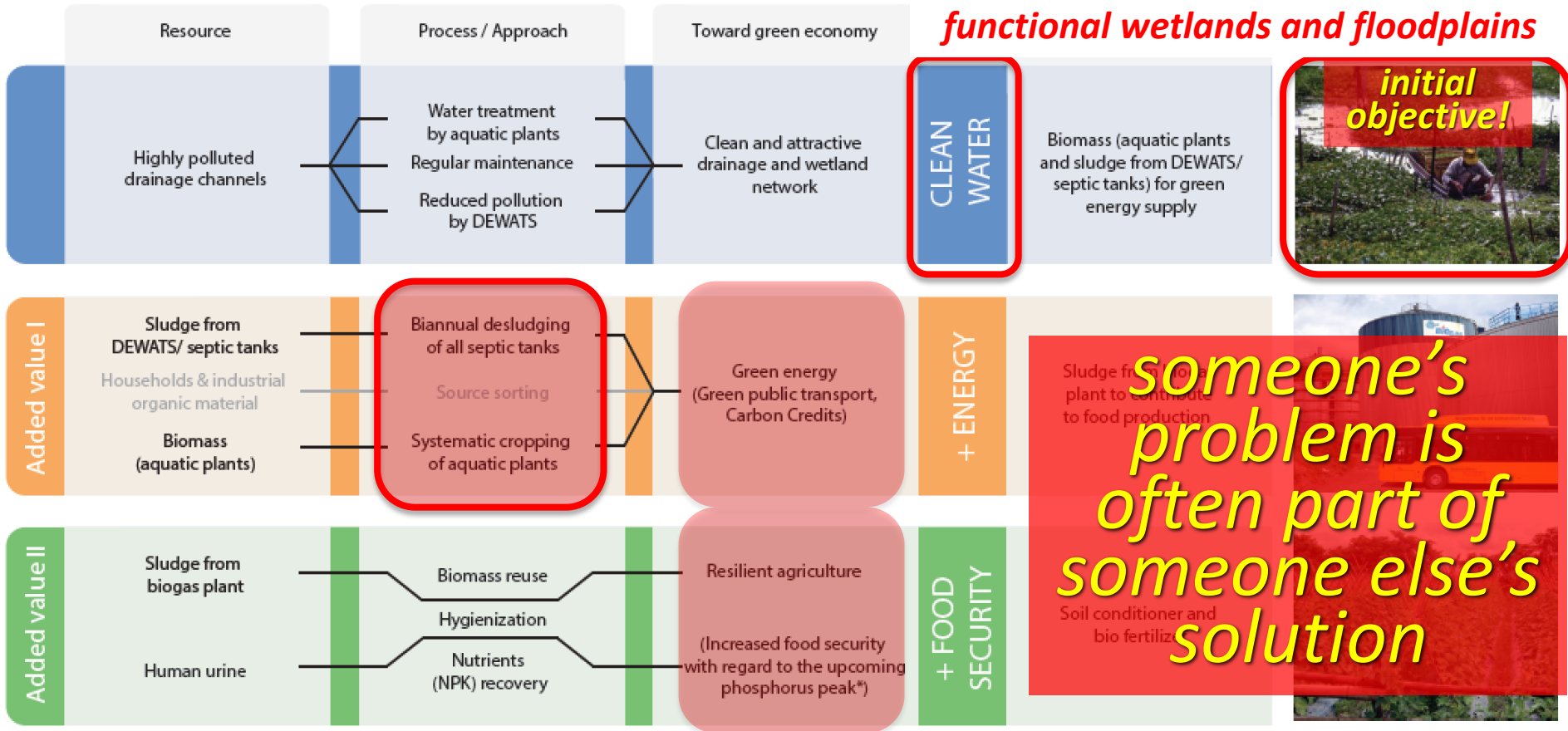
**“bird-view”
system thinking**

“brain storming” and **ACTION!**

Individually, there is nothing new with any of these “interventions” ...

business opportunities

the innovation is to interlink them in a scientifically testable approach (concept validation)



* increased cost of chemical fertilizer

Science is not enough...

Anchoring of the "question process" (OWNERSHIP by practitioners that have the headaches to find solutions) is key to supporting decision-making and **business opportunities**



Approach adopted after hearing too often...

Green Economy, Climate Adapted Development, Water-Energy-Food Nexus...
"Too many high-level discussions and not much on the ground"
"We need to see, smell and feel the effect of each interventions"
Policymakers and Practitioners in Vientiane and Hoi An

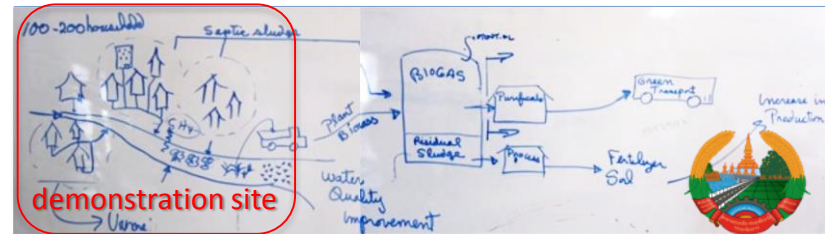
CITYBLUES ++ 
Helping Hoi An achieve its Eco-City Vision



2 workshops... outcome: small steps action plan
Hoi An, Vietnam, Jan. - July 2013

  **Partner Driven Cooperation**
Dec. 2012 - July 2013 (planning Grant)

CITYBLUES ++ 
Climate Compatible Development in Vientiane

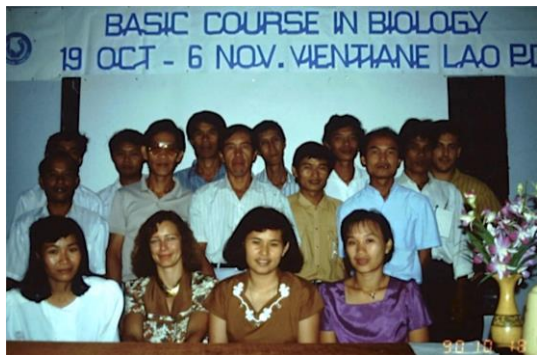


3 workshops... outcome: large project framework
Vientiane, Lao PDR, Jan. - June 2012

Science is not enough...

Anchoring of the “question process” (**OWNERSHIP** by practitioners that have the headaches to find solutions) is key to supporting decision-making and *business opportunities*

- ✓ **cross-sectorial “brain storming” did weaken silo-thinking... and win-win solutions directly benefiting “aquatic resources” actually emerged (with sustainable sanitation as key player);**
- ✓ **key cross-sectorial questions that need answers to support decision-making (policy development) were identified... and strategic cross-sectorial alliances promoted;**
- ✓ **most importantly, no one was joining “someone else’s platform”... all were on neutral ground and everyone had problems that could be part of someone else’s solutions.**



Training the first cross-ministries “Wetland Team” in Lao PDR (1990)

“the only other times we meet at such high levels and from so many departments is during Political Meetings!”

20 Departments, City and Ministry levels
Directors, Deputy-Directors and technicians



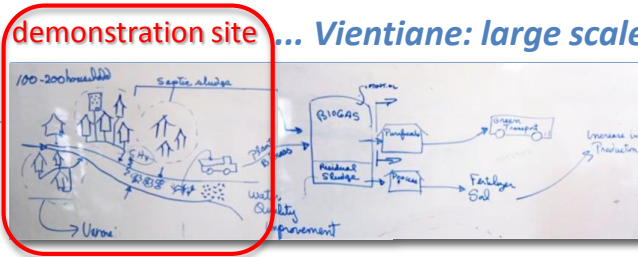
3 workshops... outcome: large project framework Vientiane, Lao PDR, Jan. – June 2012



Science is not enough, but...

✓ the “validation process”... the need to see, smell and even taste the actual effect of each interventions... is central to their acceptability, as these solutions are often “outside” institutionally accepted ones (i.e., challenging).

 **demonstration site** ... *Vientiane: large scale + cross-sectorial = funding of Phase II did not materialise*



CITYBLUES ++
Xây dựng thành phố Hội An sinh thái
Helping Hoi An achieve its Eco-city vision

... a dialogue platform for cross-sectorial
“brain storming” and **ACTION!**

Resource	Process / Approach	Toward green economy	Enhance resources (Process by products)
Highly polluted drainage channels	Water treatment by aquatic plants Reduced pollution by DEWATS	Clean and attractive drainage and wildlife network	Biomass (aquatic plants and sludge from DEWATS) for septic tanks for green energy supply
Sludge from DEWATS septic tanks Household & industrial sewage treatment Biomass (sewage plants)	Biological detoxifying of all septic tanks Resource recycling Systematic sipping of aquatic plants	Green energy (Green public transport, Carbon Credits)	Sludge from biogas plant to contribute to food production
Sludge from biogas plant Human urine	Biogas reuse Hydroponics Nutrients (NPK) recovery	Resilient agriculture Increased food security with regard to the upcoming population peak	Soil conditioner and bio-fertilizer

Integrating Sustainable Urban Drainage, Resource-Based Sanitation, Biogas and Food Security
- Concept Validation of Climate Compatible Development and Eco-City Vision -
www.hkr.se/cityblues

Decentralized Wastewater Treatment Systems (DEWATS)

Completed (3):

- ✓ primary school **
- ✓ noodle factory
- ✓ a homestay

Requested/Planned (12)

Urban Organic farm is operational with local farmers producing and receiving visitors.

- ✓ seed-money **
- ✓ private investment
- ✓ public-private venture



sought funding 2015



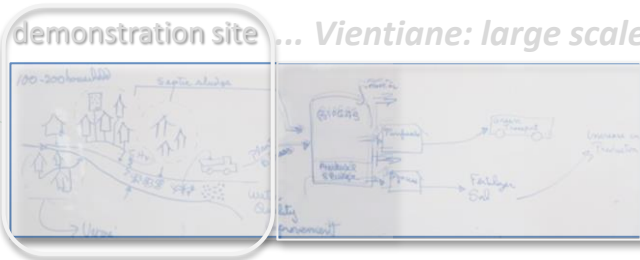
NCF5 pre-selection call (deadline 30 January 2015)

CONCEPT NOTE: The Water-Energy-Food Security Nexus as driving force of urban climate resilience

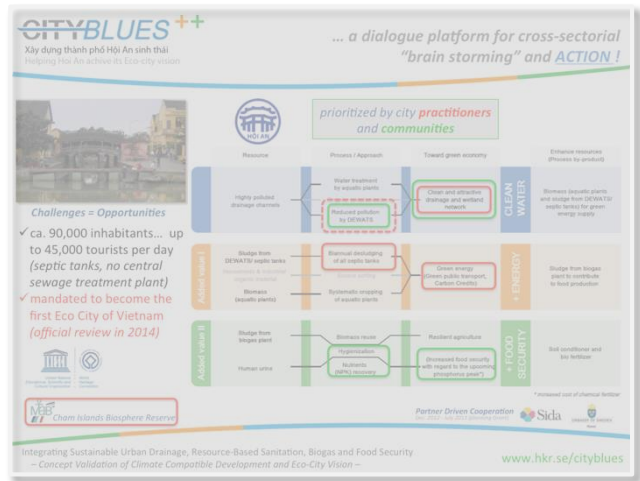
Science is not enough, but...

✓ the “validation process”... the need to see, smell and even taste the actual effect of each interventions... is central to their acceptability, as these solutions are often “outside” institutionally accepted ones (i.e., challenging).

 demonstration site ... Vientiane: large scale + cross-sectorial = funding of Phase II did not materialise



✓ more flexibility (can we say less silo-thinking?) is also required from granting/donor institutions



Decentralized Wastewater Treatment Systems (DEWATS)

Completed (3):

- ✓ primary school**
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- ✓ a homestay

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Urban Organic farm is operational with local farmers producing and receiving visitors.

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- ✓ public-private venture



sought funding 2015



NCFS pre-selection call (deadline 30 January 2015)

CONCEPT NOTE: The Water-Energy-Food Security Nexus as driving force of urban climate resilience

The critical importance of civil society & local communities



ACTION FOR THE CITY
Bringing people together for livable cities
Hanoi and Hoi An, Vietnam

NGO linking communities and local government authorities.
Hoi An authorities requested their assistance in developing:

- ✓ a public space master plan;
 - ✓ an eco-tourism master plan; and,
 - ✓ a sustainable urban agriculture strategy.
- use **CITYBLUES++** as an enabling framework, adding / linking more dimensions to their equity and sustainability approach.



Project “Mitigating Inflows of **Tourism Related Pollutants** to the Nipa Palm Wetlands of Cam Thanh Commune”,
UCN Mangrove for the Future – Small Grant Facility program [wrapping-up]



Toilets need allies – breaking down silo thinking for decentralized sanitation

Lessons learned...

- ✓ *decentralized (resource-based) sanitation and natural resources/environment have similar “problematic” when it comes to development prioritisation... all need allies to strengthen their respective positions;*



Expert Meeting on Mekong Cooperation on Fisheries, Aquatic Resources and Wetlands: 15 years lesson learnt (12th - 14th November 2014, Phnom Penh, Cambodia)

RECOMMENDATIONS

CLUSTER 5: Environmental Focus

5.5 Concerned countries and agencies should consider developing the platform for facilitating discussion, coordination and development of joint projects between relevant sectors and communities to explore the measures that would mitigate the impacts of development projects including urbanization, and fisheries should be considered in the planning of development projects; seeking support from decision makers to adopt technologies that are already available; and encouraging people from the fisheries sector to be involved in other sectors' discussion fora to reflect the issues and concerns on the various aspects of fisheries.

Toilets need allies – breaking down silo thinking for decentralized sanitation

Lessons learned...

- ✓ *decentralized (resource-based) sanitation and natural resources/environment have similar “problematic” when it comes to development prioritisation... all need allies to strengthen their respective positions;*
- ✓ *a proactive cross-sectorial platform (system thinking) is key to breaking silo thinking... but no one should feel that they are joining “someone else’s platform”; because, ownership of the fact-finding process is critical to the acceptance of “challenging” approaches... those who have the headaches to find solutions and have them streamline into decision-making / policy development must become allies;*
- ✓ *decentralized sanitation pilot projects should be “drainage-basin based”... as to ensure a “see, smell and taste/feel the effect of each interventions” ; but, Granting Agencies / Donors must recognised that some level of “silo thinking” still exist within their own approach to funding.*



Kristianstad
University
Sweden

Toilets need allies – breaking down silo thinking for decentralized sanitation

contact us...



A part of Kristianstad University's
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