

setting the scene  
for PES ...



investing in  
ecosystems  
as  
development  
infrastructure

ecosystems are essential  
– and profitable –  
components of infrastructure  
investment

***“To say that infrastructure development has impact is to state the obvious.***

***No industrial country has advanced to such status without developing solid infrastructure facilities.***

***And no low-income country has managed to escape poverty in the absence of infrastructure.***

***There is no question that, for a developing country, infrastructure investment will pave the way for growth and thus poverty reduction.***

***In addition to economic growth, infrastructure development has a very tangible impact on people's daily lives, and especially on the lives of poor people”***

# defining infrastructure

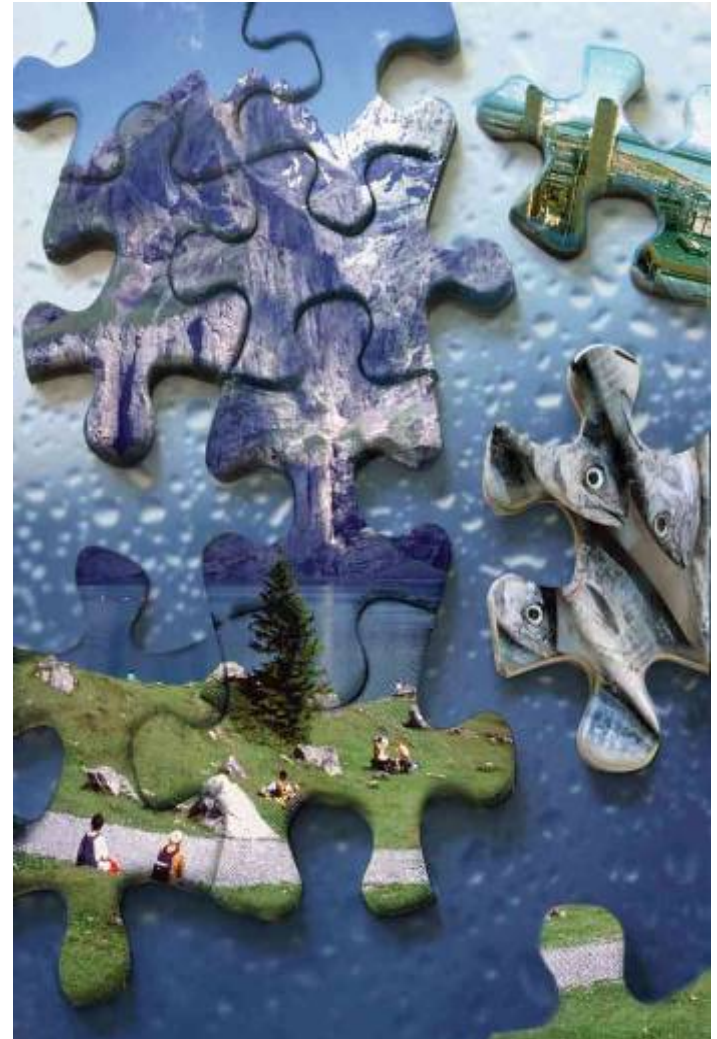
“the stock of facilities, services and equipment that are needed for the economy and society to function properly”



# an incomplete definition

conventional definitions  
of infrastructure,  
and investments in it,  
miss one critical element

***natural ecosystems***



# ecosystems and well-being

## ECOSYSTEM SERVICES

### Supporting

- Nutrient cycling
- Soil formation
- Primary production
- etc. ...

### Provisioning

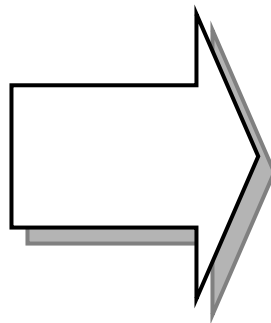
- Food
- Fresh water
- Wood and fibre
- Fuel
- etc. ...

### Regulating

- Climate regulation
- Flood regulation
- Disease prevention
- Water purification
- etc. ...

### Cultural

- Aesthetic
- Spiritual
- Educational
- Recreational
- etc. ...



## HUMAN WELL-BEING

### Security

- Personal safety
- Secure resource access
- Security from disasters

### Basic material for good life

- Adequate livelihoods
- Sufficient nutritious food
- Shelter
- Access to goods

### Health

- Strength
- Feeling well
- Access to clean air & water

### Good social relations

- Social cohesion
- Mutual respect
- Ability to help others

### Freedom of choice and action

Opportunity to be able to achieve what an individual values being and doing

# ecosystems as infrastructure

- provide the basic life support services and facilities which underpin human production and consumption
- inseparable from other parts of development infrastructure
- maintenance and upkeep requires an equal – or even greater – investment priority



# the costs of underinvestment

- ecosystem degradation leads to real losses and costs
- has tangible impacts on economic functioning and social and wellbeing
- undermines profits and growth at all levels and for all sectors
- disproportionate impacts on poorer and more vulnerable groups





# recalculating profit and loss

- problem is not that ecosystems have no value
- rather that they are not adequately reflected in decisions, policies, prices and markets
- gives a false picture and confused signals about private and public profits, losses and trade-offs

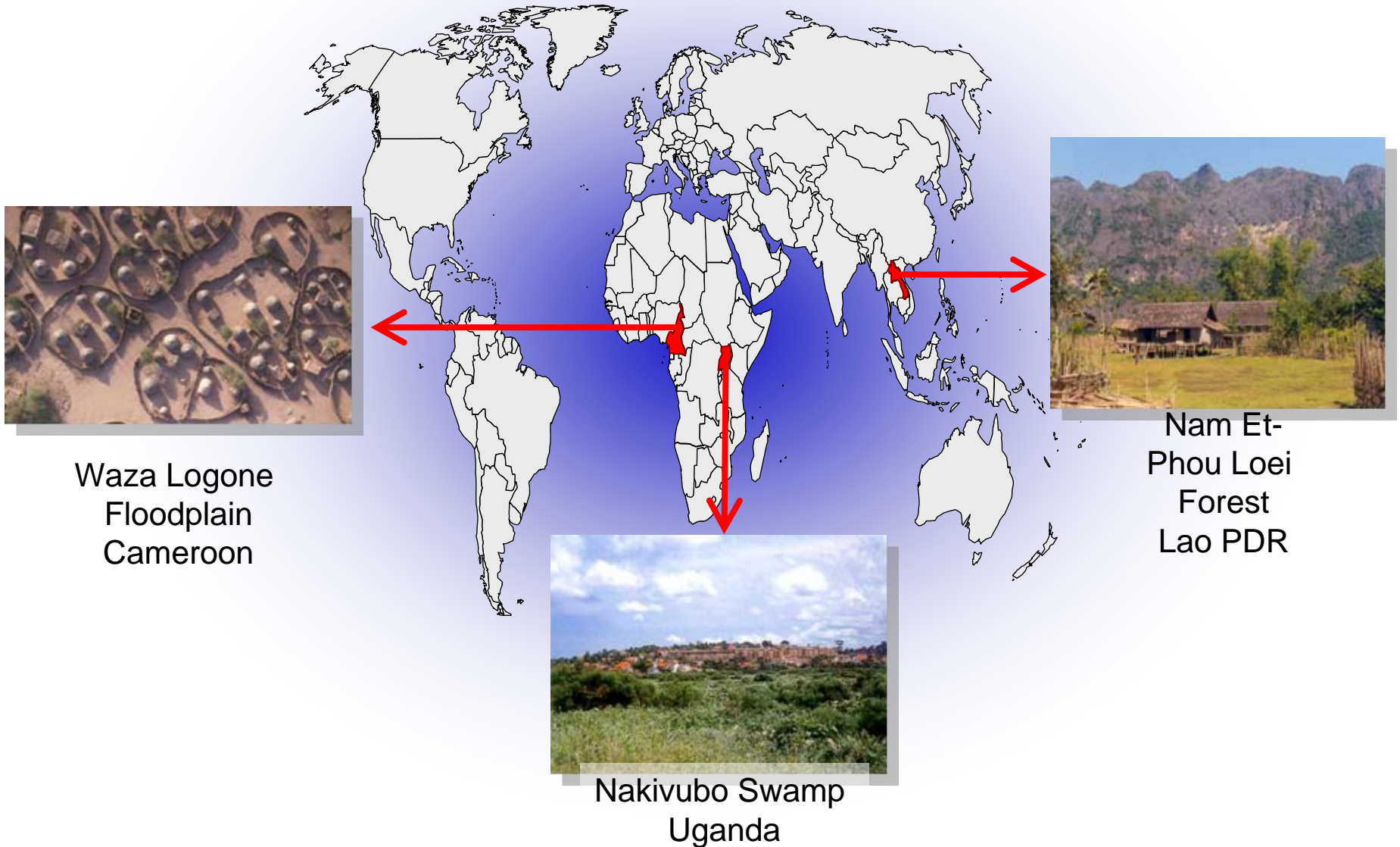


# changing “business as usual”

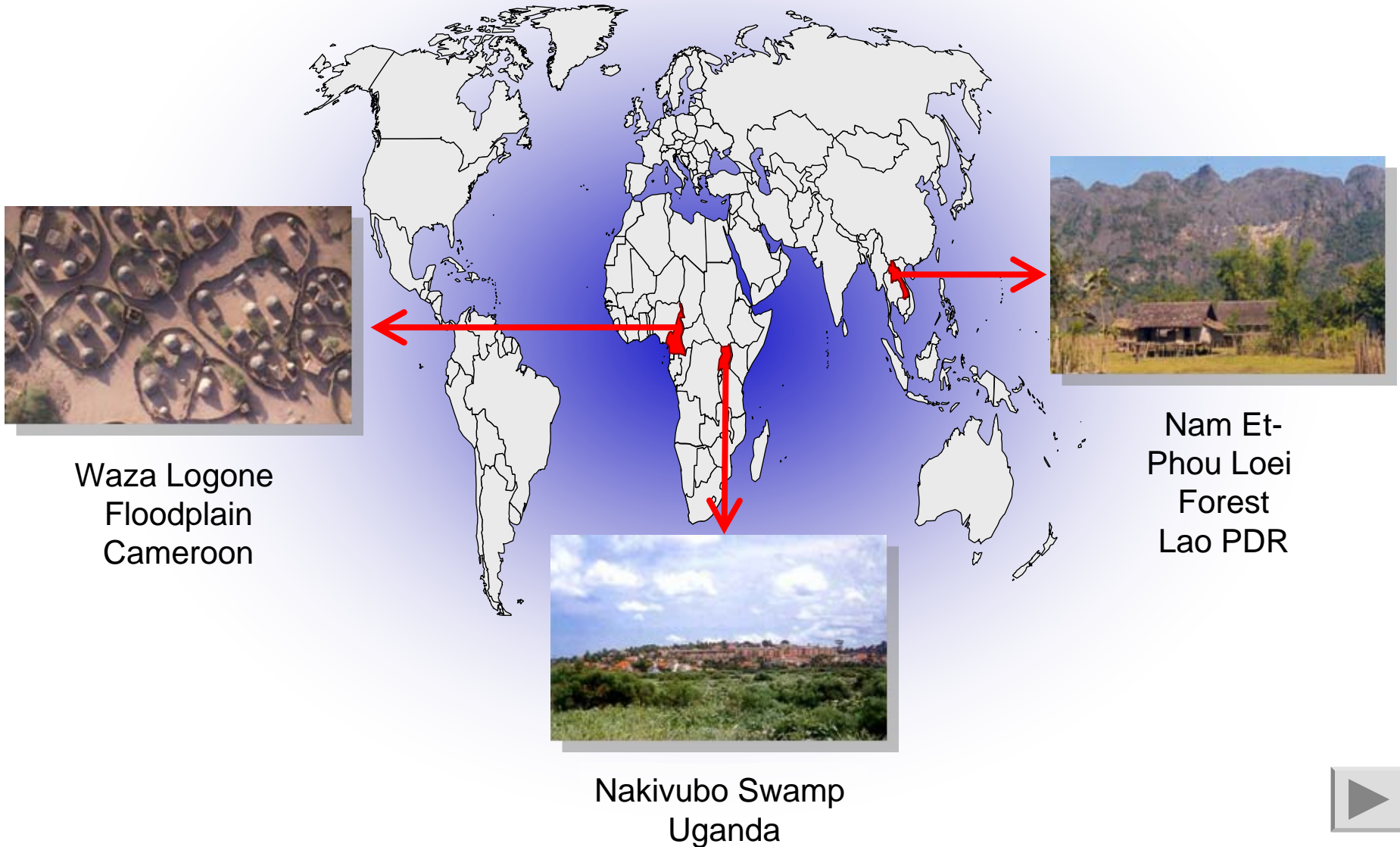
- counting ecosystems as development infrastructure
- modifying the way that profit, returns and trade-offs are calculated
- providing the right arguments and incentive structures to stimulate public and private investment in ecosystem services



# influencing investment



# influencing investment



Waza Logone  
Floodplain  
Cameroon

Nam Et-  
Phou Loei  
Forest  
Lao PDR

Nakivubo Swamp  
Uganda



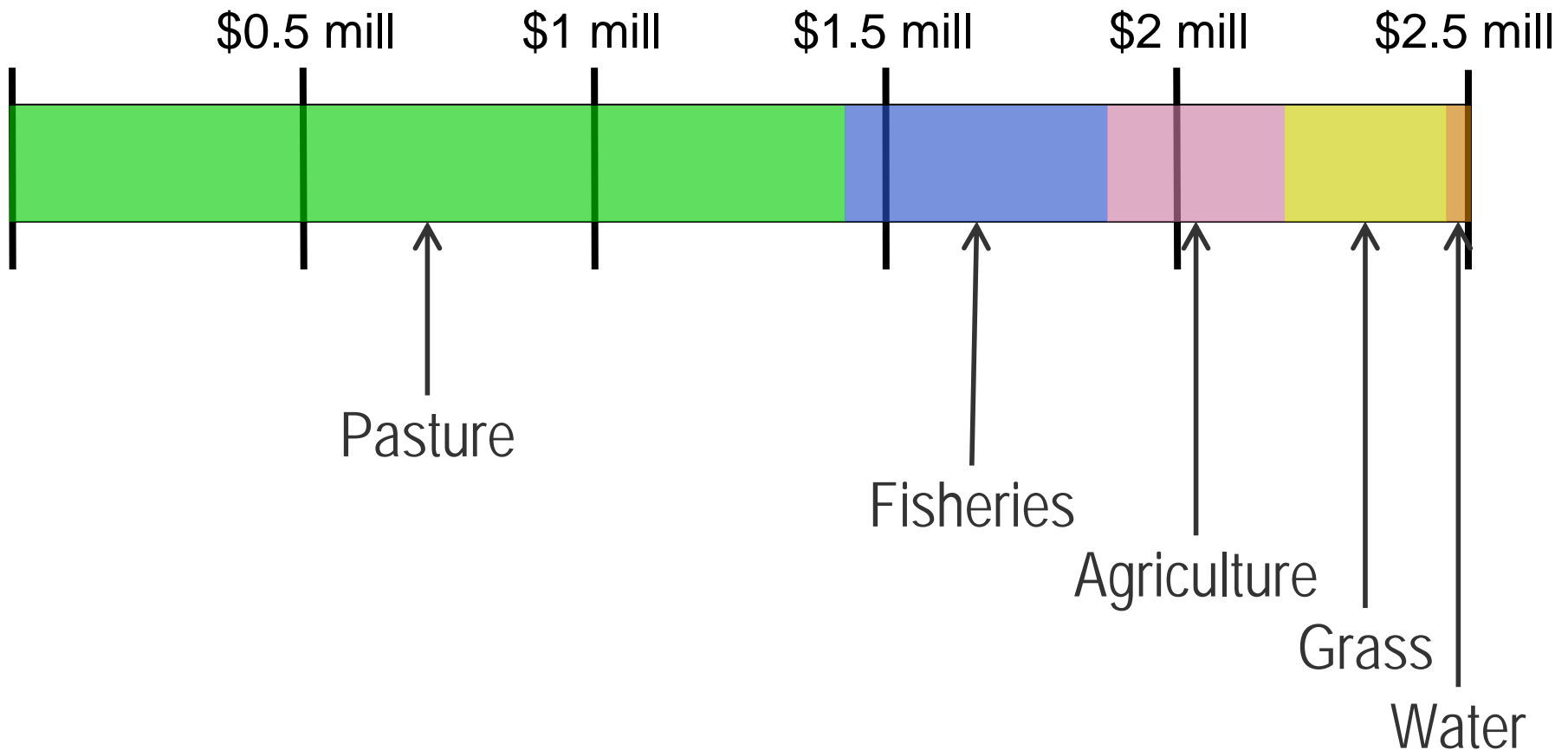
# Waza Logone, Cameroon

- 8,000 km<sup>2</sup> floodplain in dry  
`northern region of Cameroon
- 1972 rice irrigation scheme  
drastically curtailed flooding
- undermined livelihoods of  
150,000 of the poorest people,  
including pastoralists,  
agriculturalists and fisherfolk
- **need to provide rationale for  
using poverty reduction funds to  
undertake civil engineering  
works to restore flood regime**



# Waza Logone, Cameroon

## Livelihood costs of floodplain degradation



# Waza Logone, Cameroon

## Returns to floodplain restoration works

Physical effects	Additional flow	215 m <sup>3</sup> /s
	Flood recovery	90%
Incremental costs and benefits	Capital costs	\$11.26 mill
	Net livelihood benefits	\$2.32 mill/yr
Indicators and measures of profitability	Net present value	\$ 7.76 mill
	Benefit:cost ratio	6.5:1
	“Development” payback	5 years

# Waza Logone, Cameroon

demonstrated a positive economic return  
from investing in flood restoration works

justified the allocation of funds on  
development and poverty alleviation grounds

**use of poverty reduction grant and loan funds  
for floodplain restoration works approved**





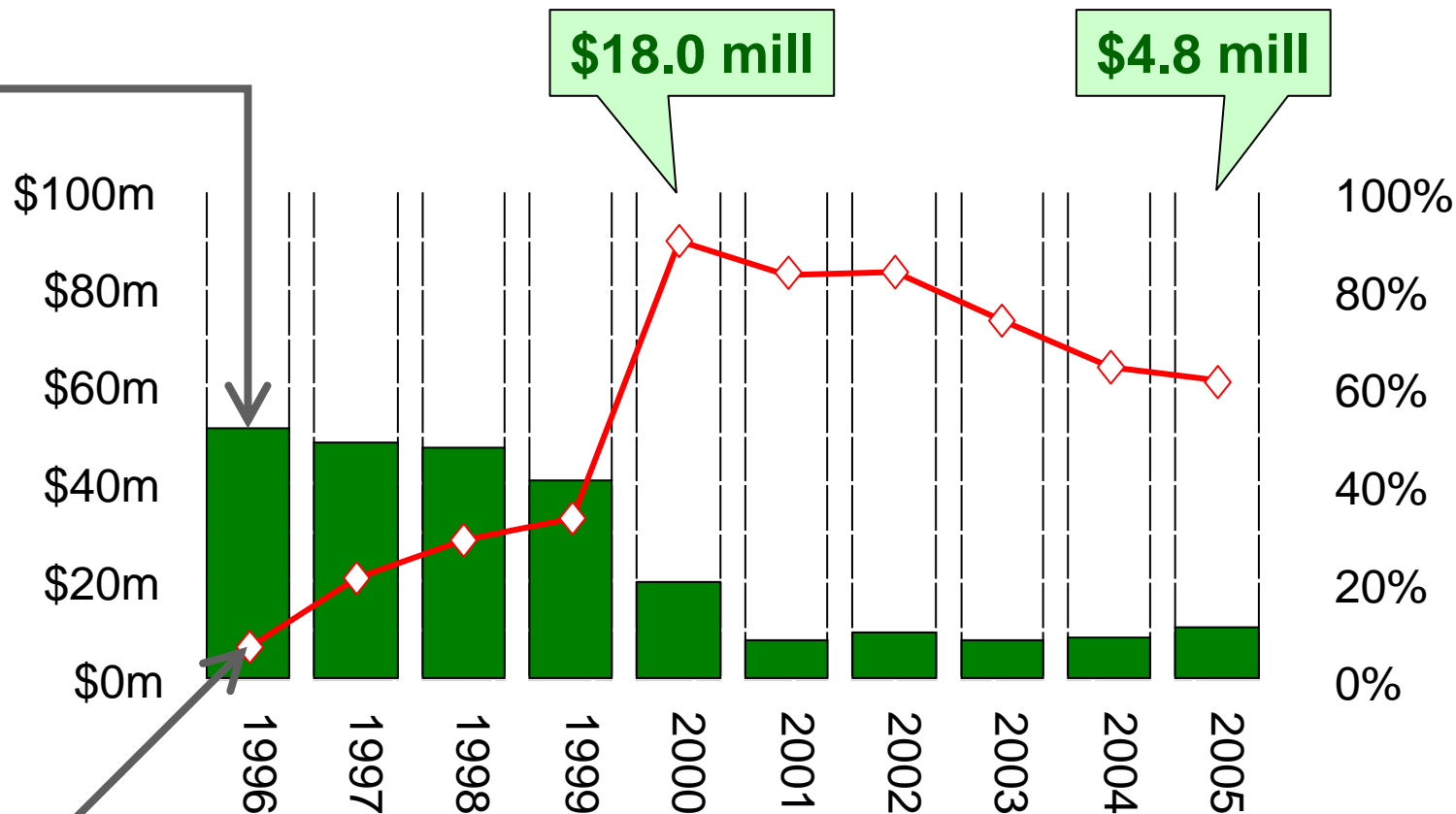
# Nam Et-Phou Loei, Lao PDR

- located in remote area of Lao PDR – poorest region, 75% of population fall under national poverty line
- around 25,000 people source the bulk of their basic subsistence and income from Protected Area products
- dramatically decreasing budgets to conservation, in favour of “poverty reduction” investments
- **need to present development case for adequate budget allocations to Protected Area**



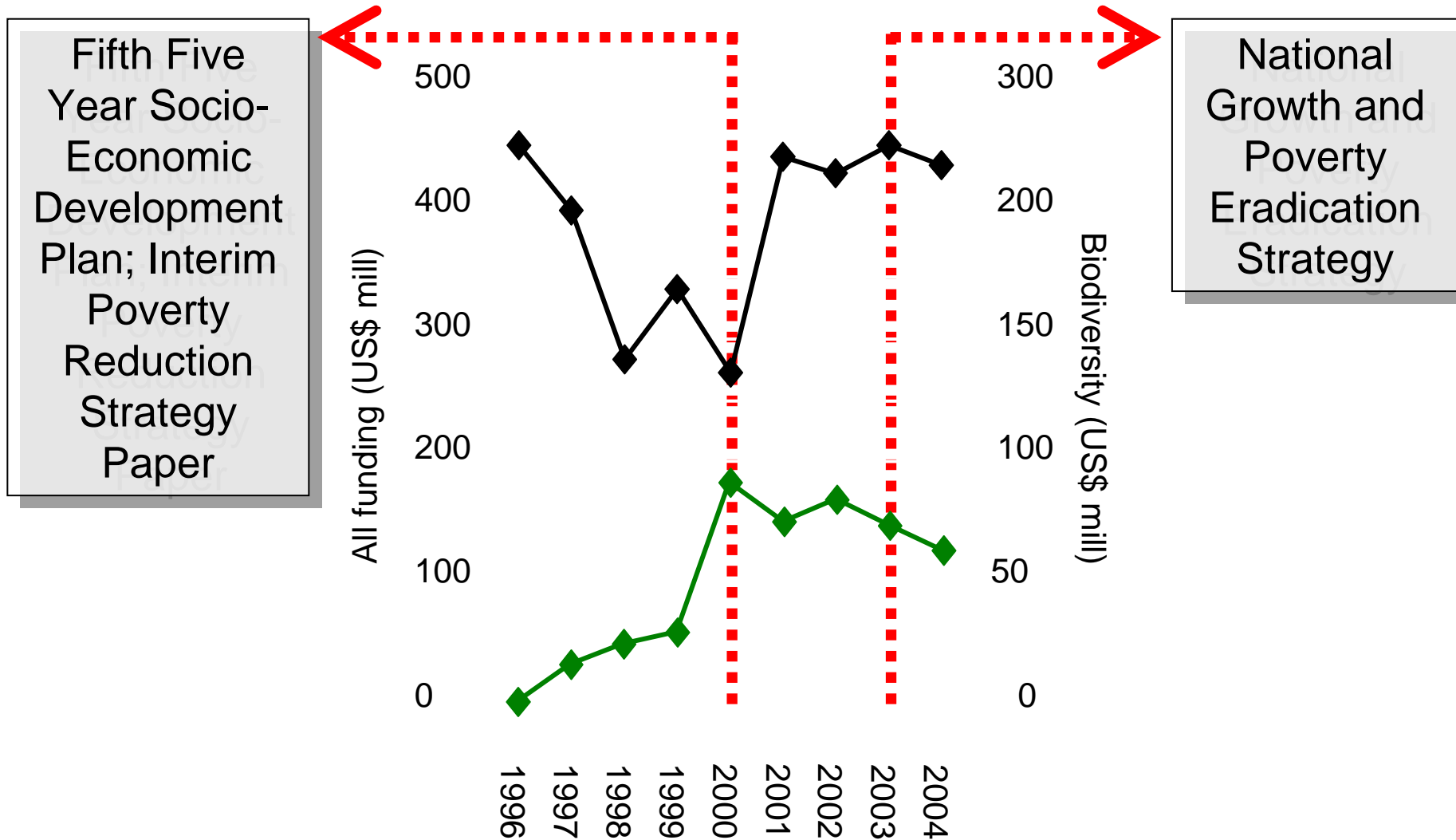
# Nam Et-Phou Loei, Lao PDR

Proportion  
to Protected  
Areas



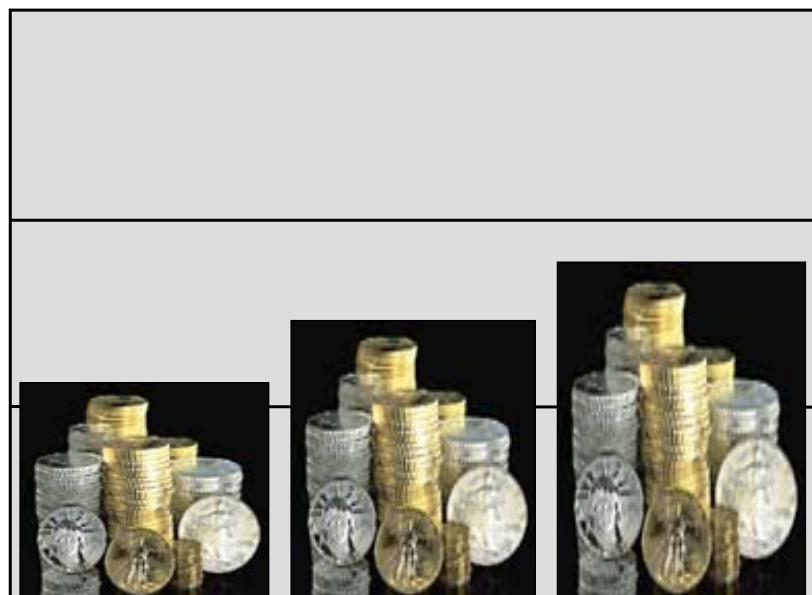
Funding to  
biodiversity  
(US\$ mill)

# Nam Et-Phou Loei, Lao PDR



## Protected Area resources in local livelihoods

*As a proportion of household cash income*



Better-off



Poorest

*As a proportion of overall livelihoods*

75%

50%

25%



Better-off

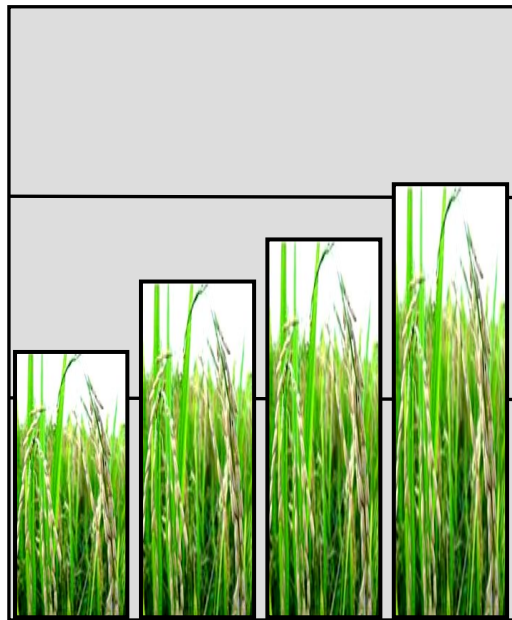


Poorest

## Protected Area resources in local livelihoods

*According to  
rice security*

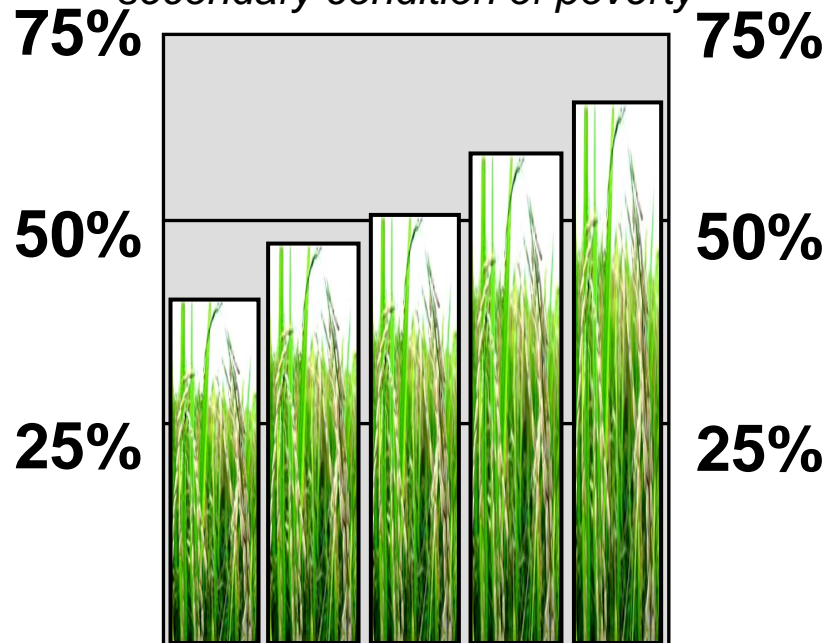
*primary indicator of poverty*



Surplus → Deficit

*According to  
cropped area*

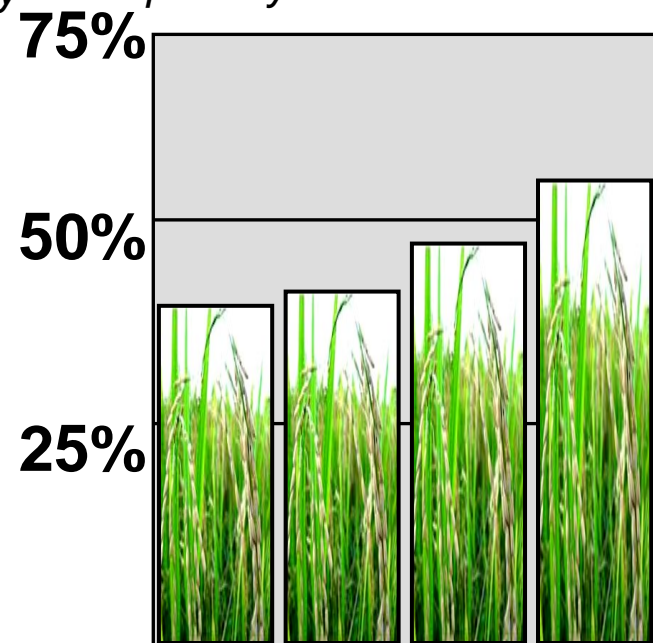
*secondary condition of poverty*



Highest → Lowest

*According to  
livestock herd*

*primary indicator of wealth*



Many → None

contributes two thirds of livelihood value to poorest households, around a half for others

cash income alone is double entire government and donor development spending per capita in Province

**declining trend in donor and government funding to Protected Areas still continues**

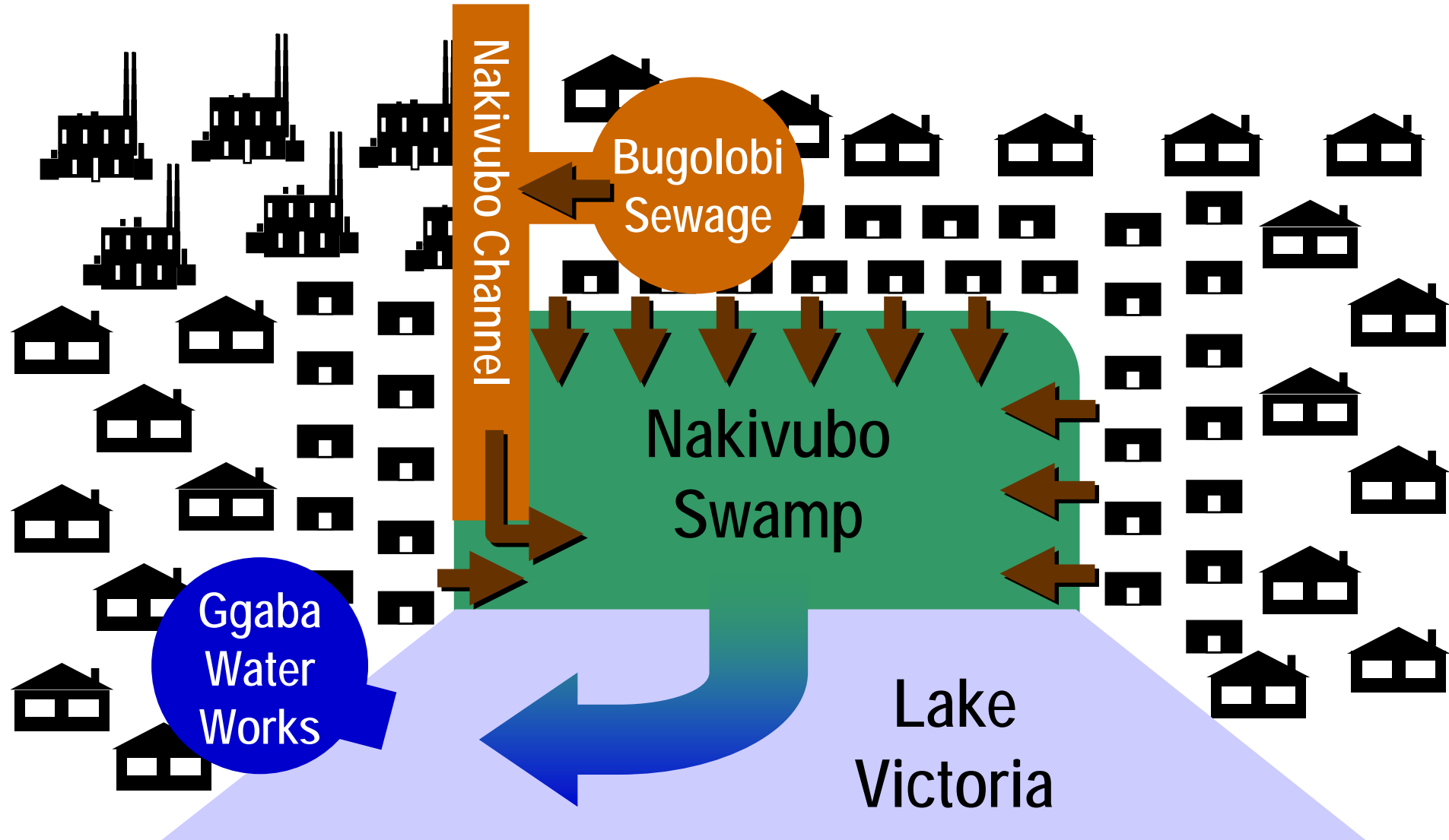


# Nakivubo, Uganda

- wetland area in central Kampala
- ongoing urban planning designates development and protection zones in municipality
- Nakivubo zoned for reclamation for industrial and housing development
- **need to influence urban zoning designations**



# Nakivubo, Uganda





# Nakivubo, Uganda

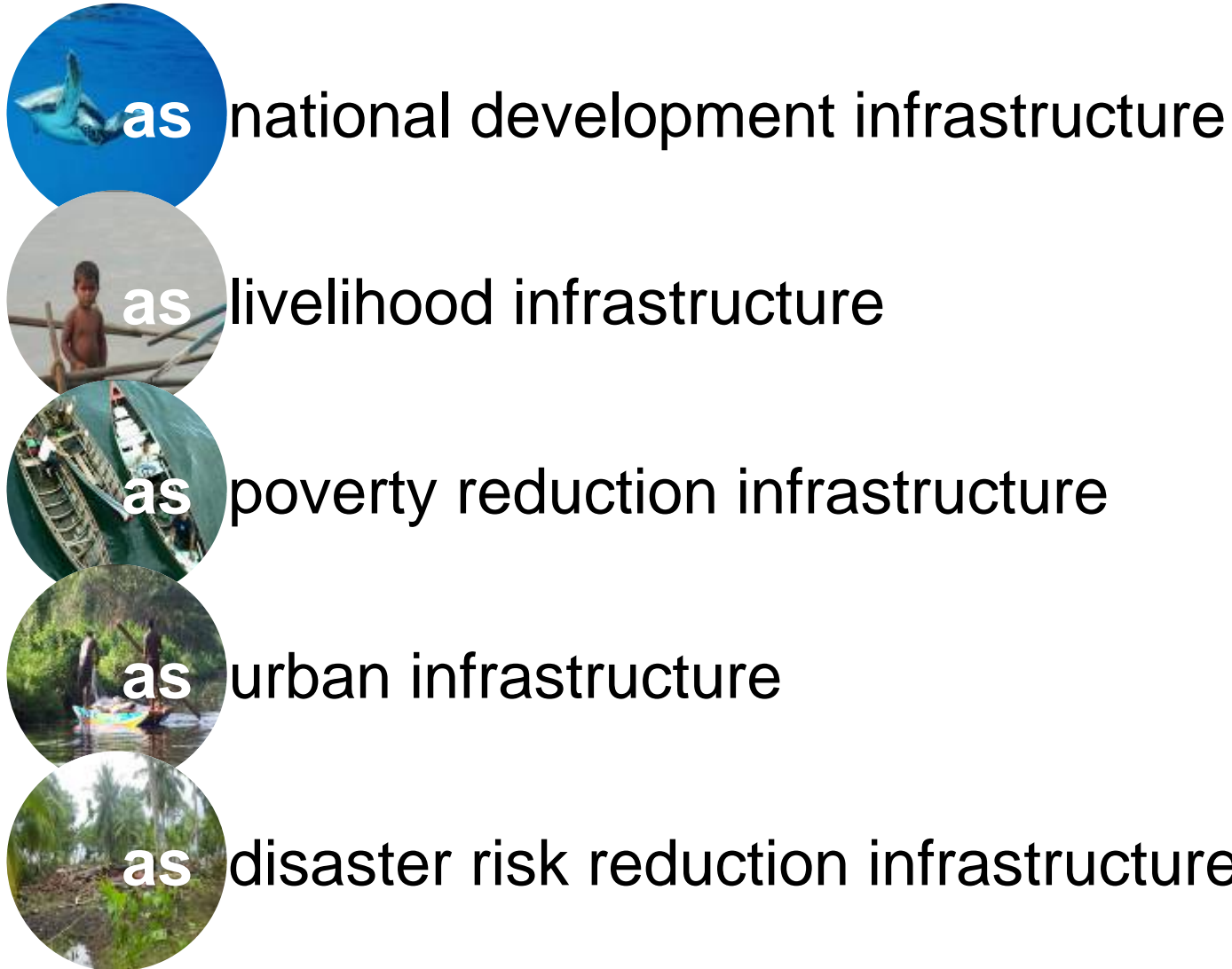
underlines value of wetland's valuable role  
(approx. \$5 mill/year) as urban infrastructure

fills the gap between basic services  
required by urban dwellers, and those that  
the government is currently able to provide

**high values justify re-zoning  
Nakivubo as part of urban greenbelt**

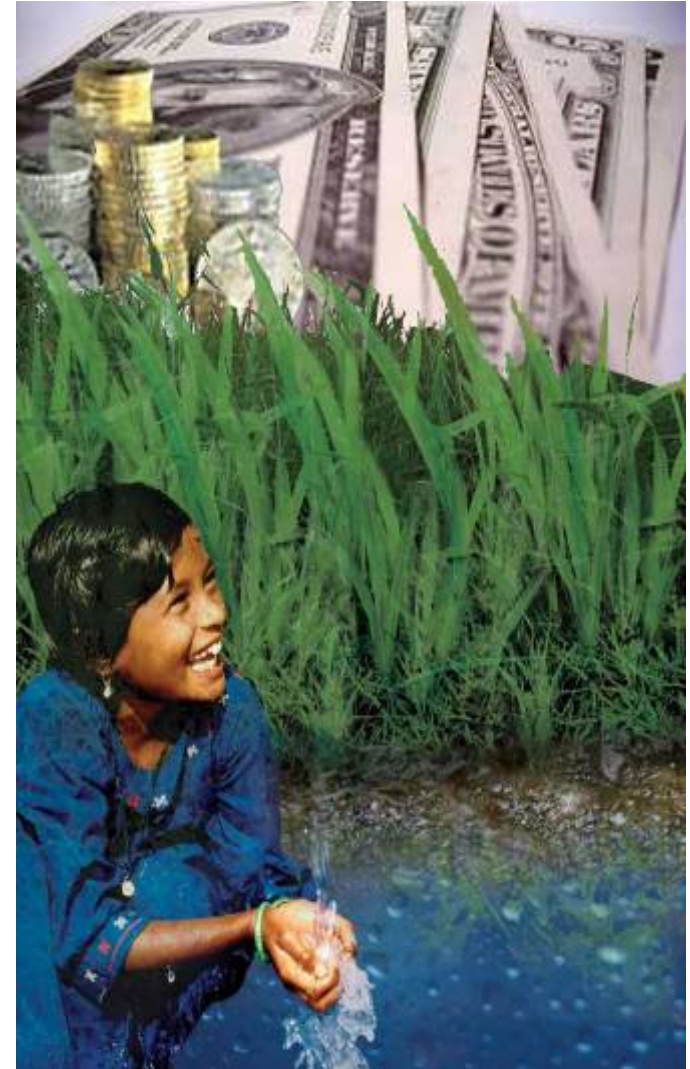


# Investing in ecosystems



# moving forward ...

- PEP can help to foster the awareness and constituency, and share the real-world case studies, to promote:
  - counting ecosystems as productive natural assets
  - rewarding for the provision of valuable ecosystem services
  - stimulating public and private investment in ecosystems as development infrastructure  
*(such as through PES ...)*





Thank  
You