



**NILE BASIN INITIATIVE**  
INITIATIVE DU BASSIN DU NIL



# An Adaptive Tool for Adaptation

BY Roland Treitler

# Content

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- Nature matters
- Basic thoughts – Nature & Economics
- Intrinsic Ecological Value – The method
- Applications of the Intrinsic Ecological Value

# Nature matters

- Rehabilitation of ecosystems is very costly (The Economics of Land Degradation (ELD))
- Giving values to nature and its services (The Economics of Ecosystems and Biodiversity (TEEB))
- ELD demonstrates the high costs of rehabilitation - TEEB demonstrates the high values of natural ecosystems
- Still, land degradation is one of the biggest emission sectors

# Basic Thoughts – Nature & Economics



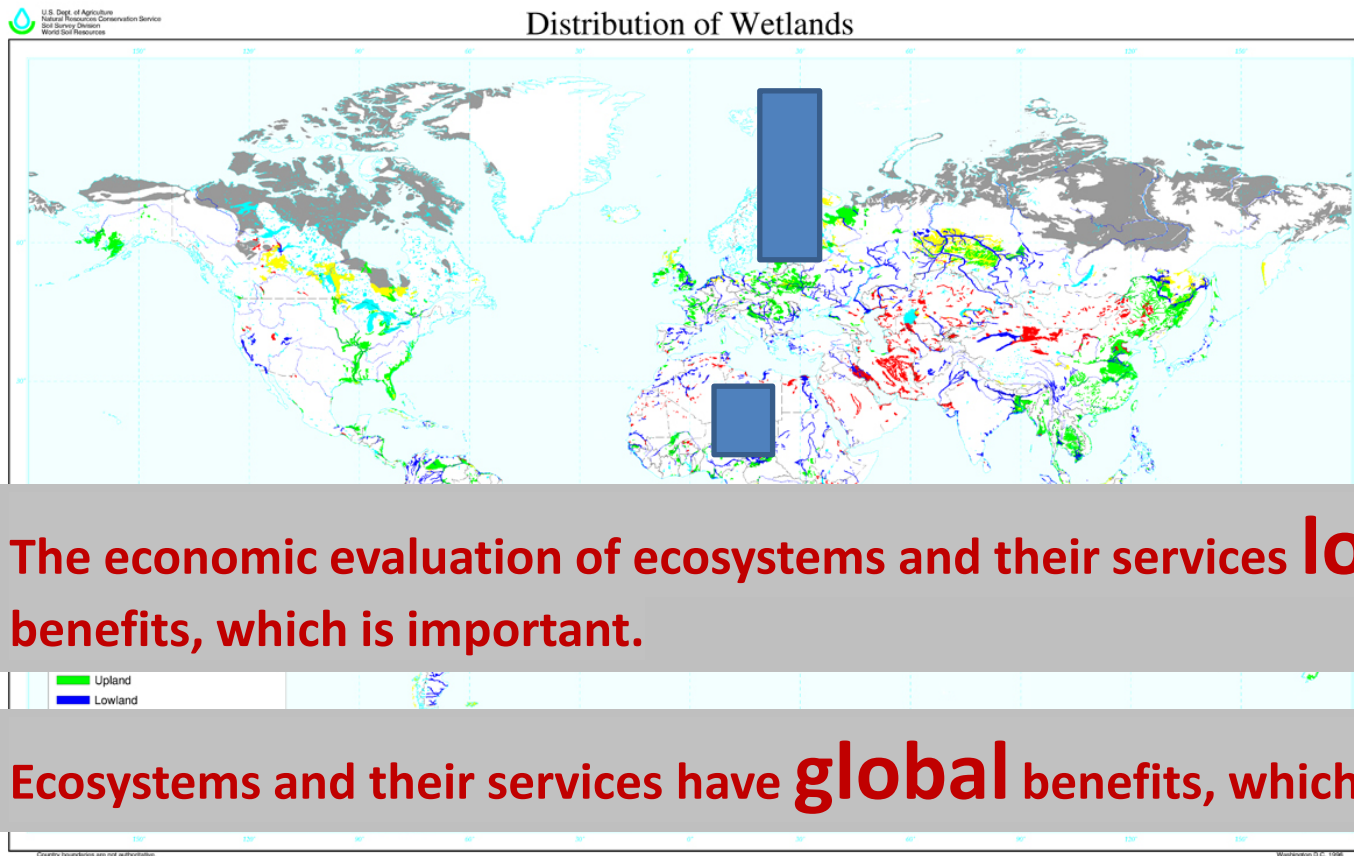
Animation by Maximilian Treitler

**Plants are adapting and surviving for more than 300 million years.**

**Money was invented about 11.000 years ago and crashes frequently.**

**It is time to NATURALIZE the economy rather than economize the nature.**

# Basic Thoughts – Nature & Economics



The economic evaluation of ecosystems and their services **localizes** the benefits, which is important.

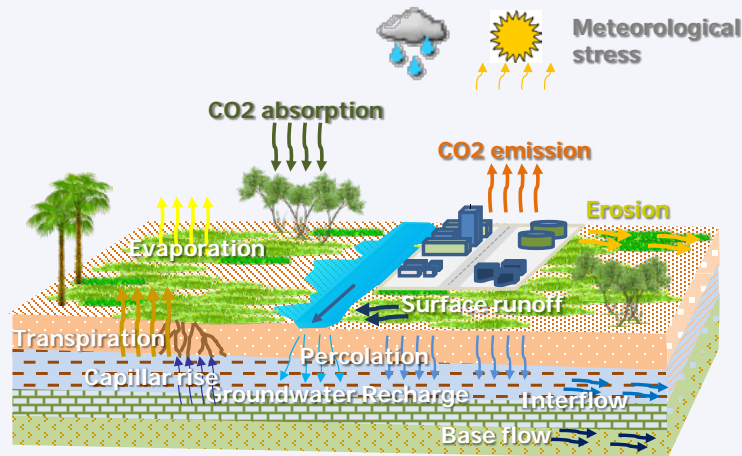
Ecosystems and their services have **global** benefits, which we measure.

Source of map: [wetlands\\_map.jpg \(1224x792\)](http://wetlands_map.jpg) ([panda.org](http://panda.org))

# Intrinsic Ecological Value – The method

+ CO2 Absorption  
- CO2 Emission

+ Water Storage  
- Water Use



Each ecosystem emits and absorbs CO2. IEV quantifies the emissions and the absorption and calculates a net sum.

Each ecosystem uses and stores water. IEV quantifies water use and water storage and calculates a net sum.

The net quantities of CO2 and water are multiplied with CO2 market prices and water prices (Treitler, 2010) and hence monetarized. It is basically a Profit-Loss calculation which produces one money value.

# Intrinsic Ecological Value – The method

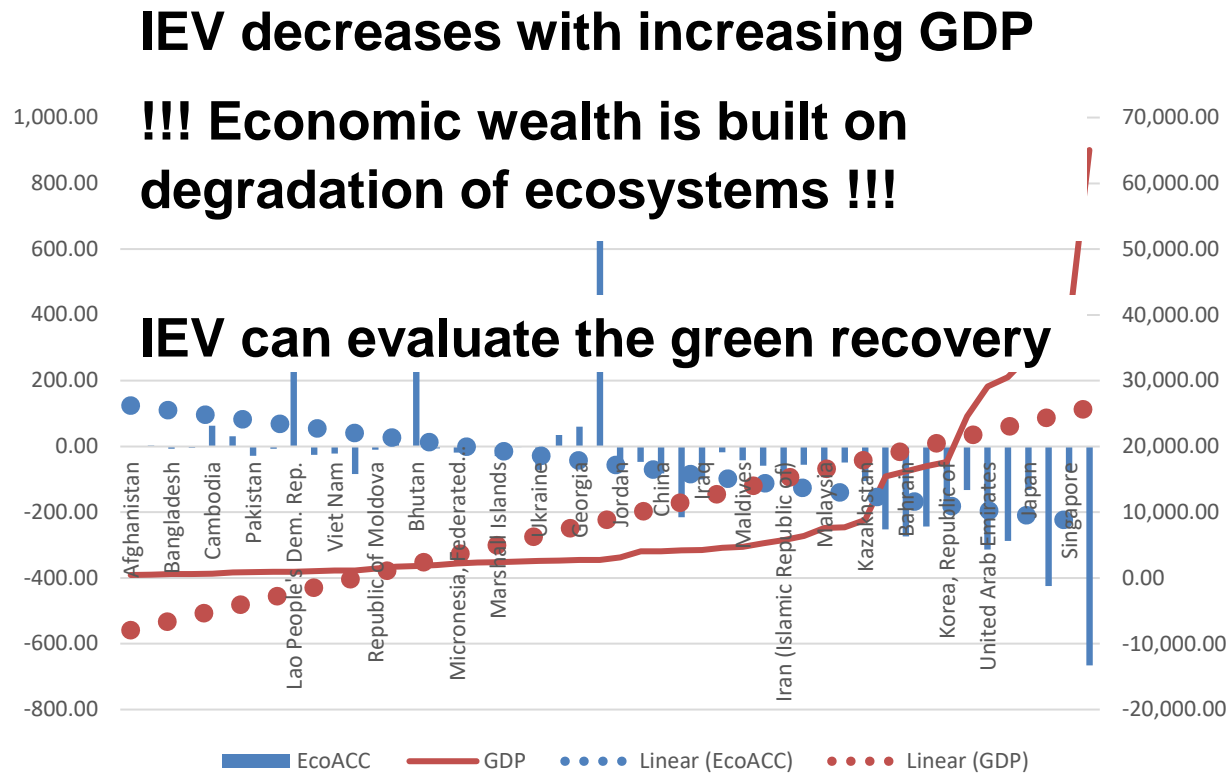


- The core natural process “photosynthesis” influences directly the evaluation (Carbon sequestration and water balance)
- Limited data requirements (only official, open source data are used)
- Data and method are fully transparent
- All input data are based on scientifically proven carbon sequestration and water models, studies, publications or local assessments
- The surrounding economics and wealth are not relevant
- Any time frame, all areas, regions, nations, economic sectors, etc. can be quantified and evaluated
- Fast and accurate results



# Applications of the IEV

- The Intrinsic Ecological Value of Nations



# Applications of the IEV

- Bankable product for protecting ecosystems
- The IEV produces a monetary incentive for natural processes based on carbon sequestration and water balance
- Daily evaluation possible – daily net asset value
- Monetary income can be generated by keeping or protecting ecosystems

# Applications of the IEV

- Applied on
- Ecosystems (wetland, peatland, forest, swamp, etc.)
- Agricultural sector (organic vs. industrial)
- Urban areas
- Rural areas
- Companies

# Summary

## The Intrinsic Ecological Value

can evaluate and compare ecosystems and their benefits

- Globally
- Independent from the surrounding economics
- Could be based on local assessment of on open source data if no local assessment are available

measures

- Green recovery
- Incentives based on natural processes



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**THANK YOU!**