## **TEEBAgriFood**

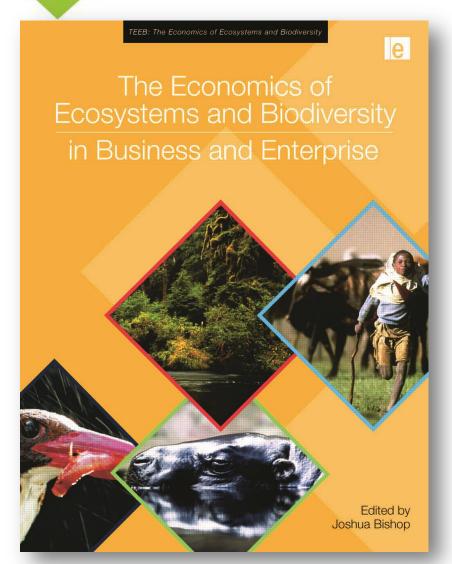
## 2016 Business and Biodiversity Forum 2-3 December 2016

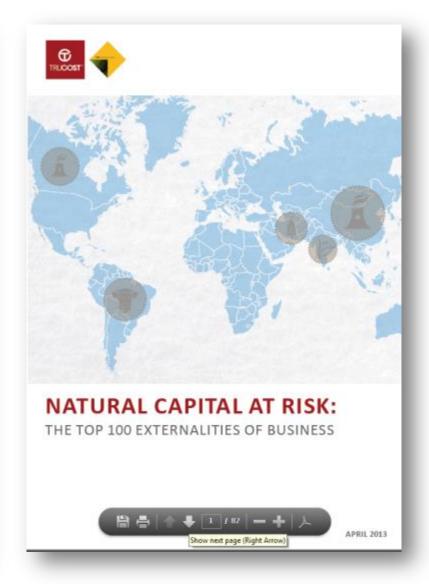


Dr Salman Hussain TEEB Coordinator



#### **TEEB for Business**









## Why select the Agriculture sector?

#### 7.1.2 THE GLOBAL 20 REGION-SECTORS

Ranking of the 20 region-sectors with the greatest total impact across the 6 EKPIs when measured in monetary terms.

RANK	SECTOR	REGION	NATURAL CAPITAL COST, US\$ BN	REVENUE, US\$ BN	IMPACT RATIO
1	COAL POWER GENERATION	EASTERN ASIA	452.8	443.1	1.0
2	CATTLE RANCHING AND FARMING	SOUTH AMERICA	353.8	16.6	18.8
3	COAL POWER GENERATION	NORTHERN AMERICA	316.8	246.7	1.3
4	WHEAT FARMING	SOUTHERN ASIA	266.6	31.8	8.4
5	RICE FARMING	SOUTHERN ASIA	235.6	65.8	3.6
6	IRON AND STEEL MILLS	EASTERN ASIA	225.6	604.7	0.4
7	CATTLE RANCHING AND FARMING	SOUTHERN ASIA	163.0	174.0	0.8
8	CEMENT MANUFACTURING	EASTERN ASIA	147.0	5.8	23.0
9	WATER SUPPLY	SOUTHERN ASIA	111.7	14.1	7.9
10	WHEAT FARMING	NORTHERN AFRICA	100.1	7.4	13.6
11	RICE FARMING	EASTERN ASIA	99.3	91.2	1.1
12	WATER SUPPLY	WESTERN ASIA	86.7	18.4	4.7
13	FISHING	GLOBAL	86.1	136.0	0.6
14	RICE FARMING	NORTHERN AFRICA	84.2	1.2	69.6
15	CORN FARMING	NORTHERN AFRICA	80.4	1.7	47.8
16	RICE FARMING	SOUTH-EASTERN ASIA	79.7	41.0	1.9
17	WATER SUPPLY	NORTHERN AFRICA	76.4	3.4	22.2
18	SUGARCANE	SOUTHERN ASIA	75.6	6.0	12.5
19	PETROLEUM AND NATURAL GAS EXTRACTION (excludes water and land use)	EASTERN EUROPE	72.6	371.6	0.2
20	NATURAL GAS POWER GENERATION	NORTHERN AMERICA	69.4	122.7	1.0





## **Summary statement**

The **TEEBAgriFood** study is designed to:

- provide a comprehensive economic evaluation of the 'eco-agri-food systems' complex
- 2. demonstrate that the economic environment in which farmers operate is distorted by *significant externalities*, both negative and positive, and a lack of *awareness* of *dependency on natural and social capital*





#### **HUMAN SYSTEMS**



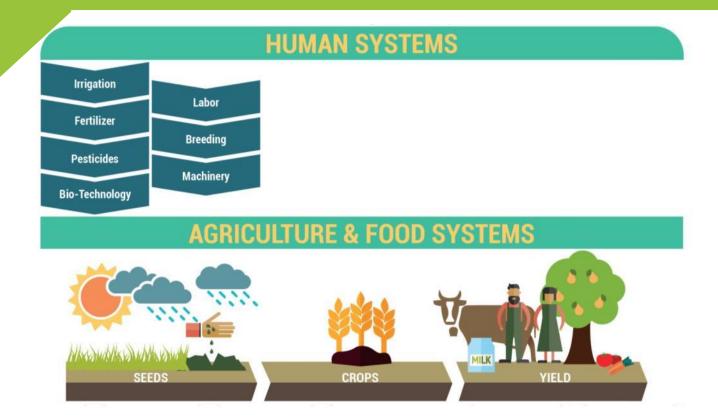
#### **BIODIVERSITY & ECOSYSTEMS**





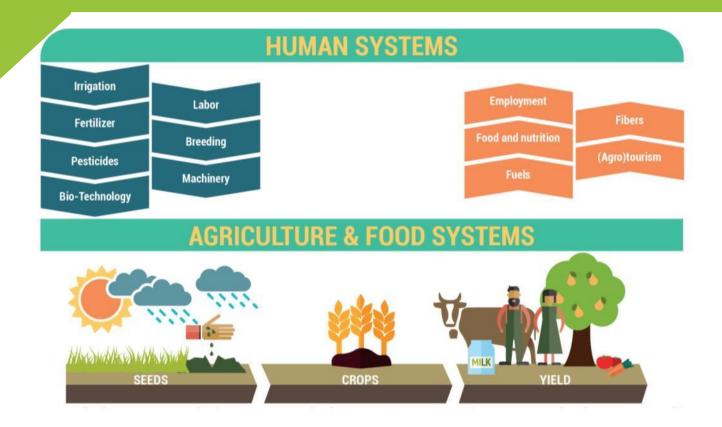
Invisible positive flows



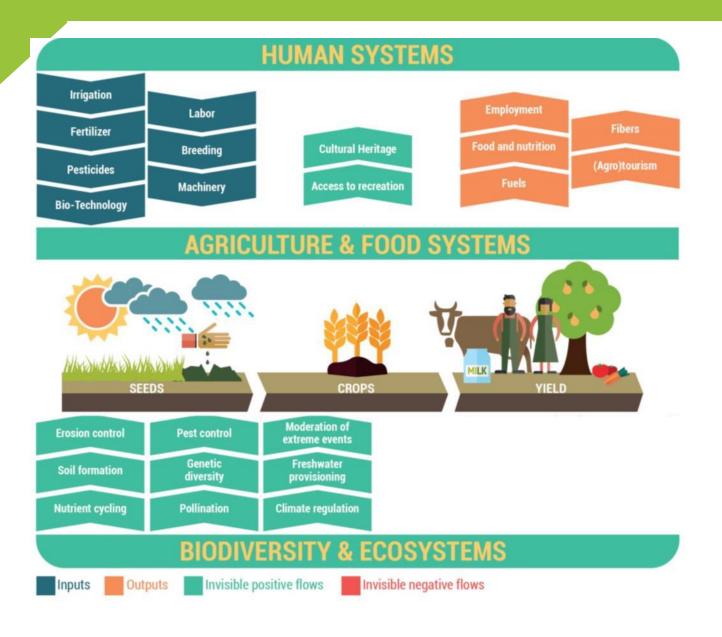


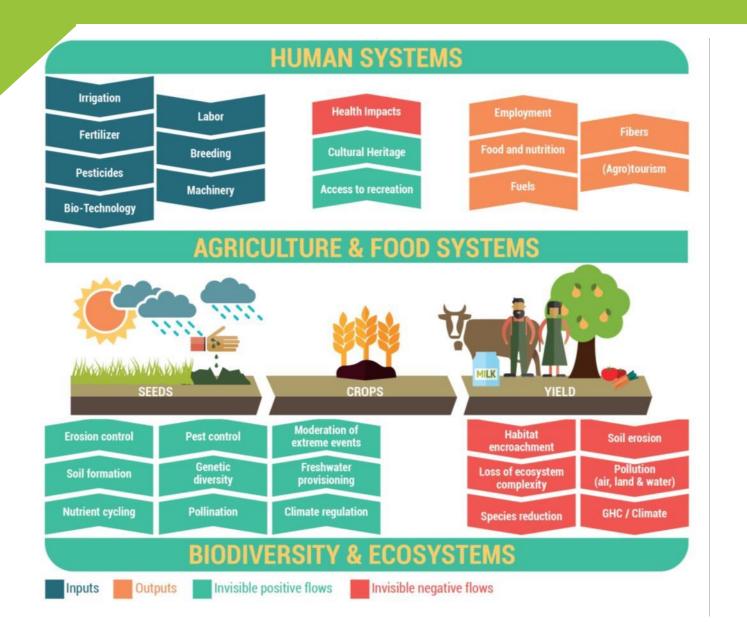


Inputs

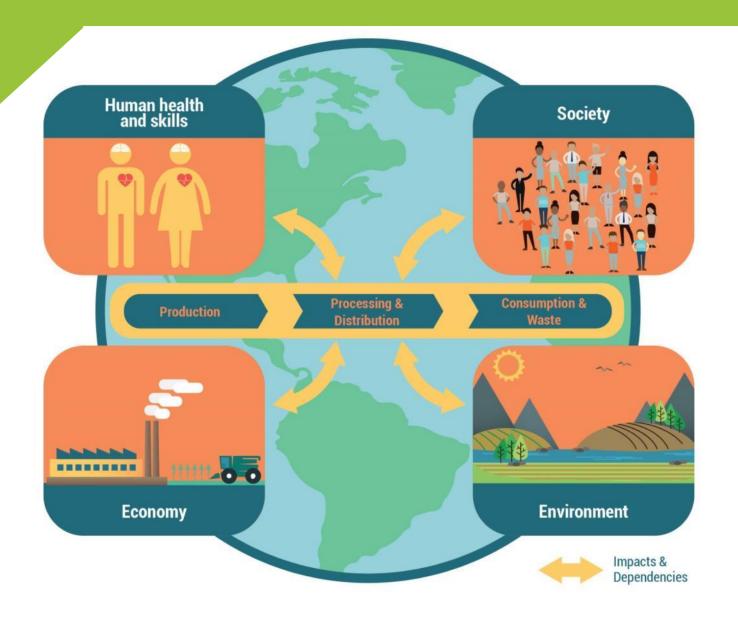








#### **Eco-agri-food systems complex – impacts and dependencies**



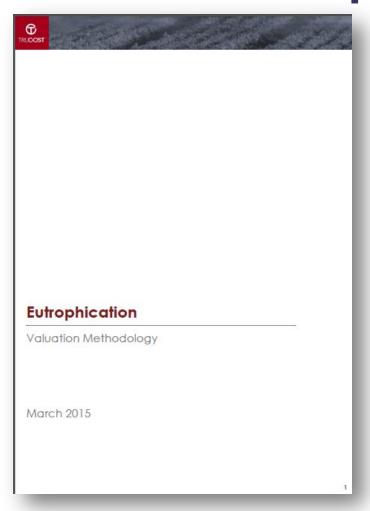


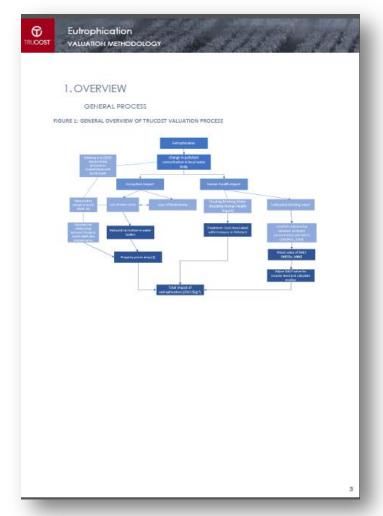
## **Feeder Studies**





# Trucost valuation approach to Eutrophication I

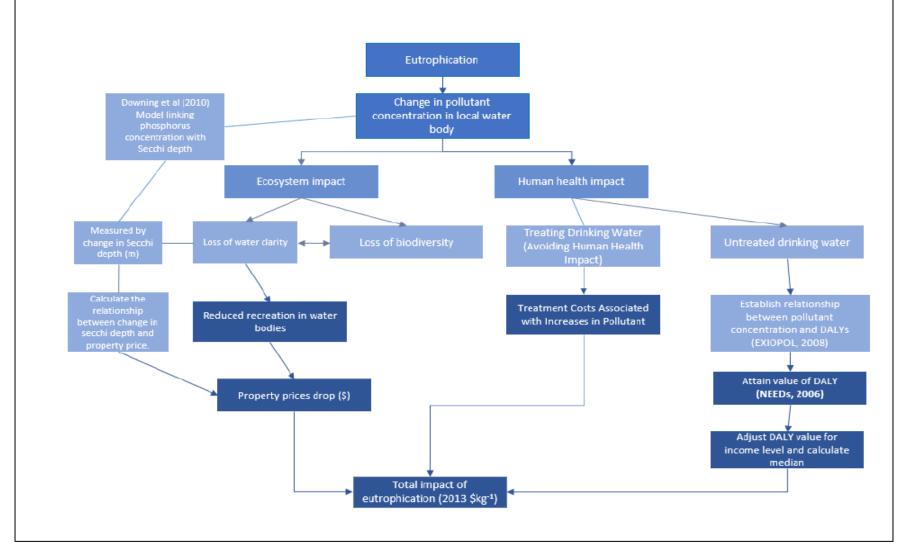




#### 1. OVERVIEW

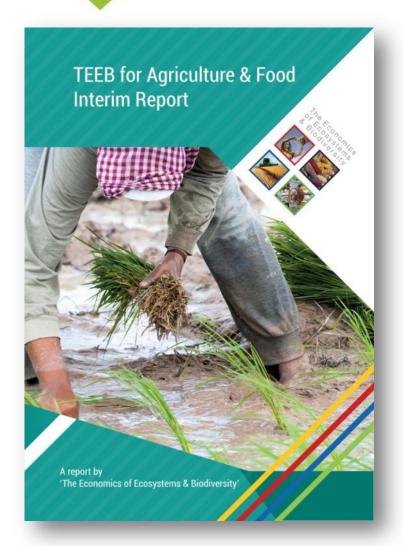
#### GENERAL PROCESS

#### FIGURE 1: GENERAL OVERVIEW OF TRUCOST VALUATION PROCESS





## **Interim Report Launch**









## **Rice Study**

- Worldwide, about 80 million hectares of irrigated lowland rice provide 75% of the world's rice production
- This predominant type of rice system receives about 40% of the world's total irrigation water and 30% of the world's developed freshwater resources



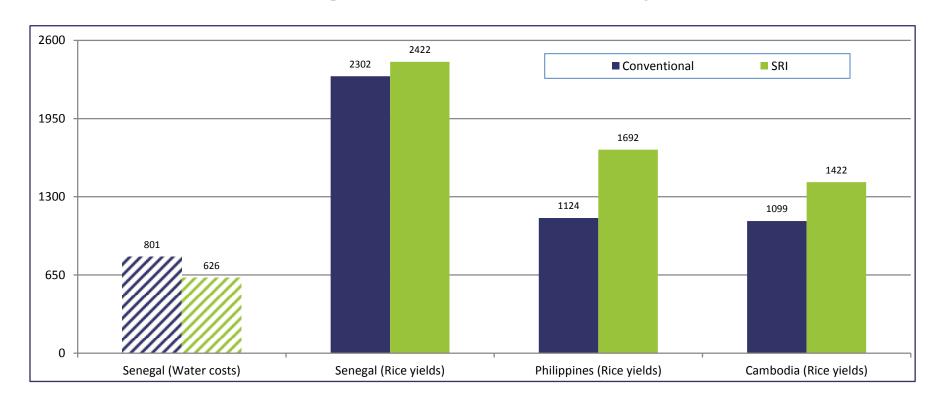
# Rice Study Conventional vs SRI production

- The System of Rice Intensification (SRI) includes intermittent flooding as part of the production package.
- SRI advises transplanting of young (eight to ten days old) single rice seedlings, with care and spacing, and applying intermittent irrigation and drainage to maintain soil aeration.
- In addition, the use of a mechanical rotary hoe or weeder to aerate the soil and control weeds is encouraged.





## Increasing rice yields, Reducing water consumption





# TEEB Three different levels of action:

- **1. Recognizing value** identifying the wide range of benefits in ecosystems, landscapes and biodiversity, such as provisioning, regulating, habitat/supporting and cultural services
- 2. Demonstrating value using economic tools and methods to make nature's services economically visible in order to support decision-makers wishing to assess the full costs and benefits of land-use change
- 3. Capturing value incorporating ecosystem and biodiversity benefits into decision-making through incentives and price signals





## is supported by









