



2016年(第25回) ブループラネット賞
受賞者記念講演会

2016 Blue Planet Prize
Commemorative Lectures

パバン・シュクデフ氏
講演スライド集

未来を垣間見る " 持続可能性 " の検証

Mr. Pavan Sukhdev

Slides for the Lecture

Measuring Sustainability

Glimpses of the Future

Measuring Sustainability *Glimpses of the Future*

Pavan Sukhdev

Founder-CEO, GIST Advisory
& Goodwill Ambassador for UN Environment

17th November 2016

Measuring Sustainability *Glimpses of the Future*

- ❖ Context: Sustainable Development Goals, 2030
- ❖ Measuring Sustainability for a Nation's Economy
- ❖ Measuring Sustainability for Agri-Food Systems
- ❖ Measuring Sustainability for a Corporation

- ❖ Context: Sustainable Development Goals, 2030
- ❖ Measuring Sustainability for a Nation's Economy
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What is the *Structure* for SDG's?

"Development" = "Improving Well Being for All"



- ❖ Structure: How do SDG's relate to each other?
- ❖ In what sequence, and why, should SDG's be implemented?

What is the *Structure* for SDG's?

“Development” = “Improving Well Being for All”



Source: From J. Rockström/ P. Sukhdev presentation to EAT Forum, Stockholm, 2016

URL: <http://www.stockholmresilience.org/research/research-news/2016-06-21-looking-back-at-2016-eat-stockholm-food-forum.html>

A Thinking Framework for SDG's

“Development” = “Improving Well Being for All”

- Improving *in* Four Dimensions of Wealth (“Capital”)
 - **Human Capital:** *Citizens Health; Education; Skills*
 - **Social Capital:** *Norms & Customs; Law & Order; Taxation systems*
 - **Physical Capital:** *Energy; built infrastructure; patents ; finance*
 - **Natural Capital:** *Ecological infrastructure; Resource scarcities*

Source: From J. Rockström/ P. Sukhdev paper to OWG, 2014

URL: http://www.icsu.org/science-for-policy/sustainable-development-goals-1/pdfs/Rockstrom%20Sukhdev%20input%20OWG%20UNEP_FINAL.pdf

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Dimensions of Wealth

Ownership Categories	Capital Classes	Physical Capital	Human Capital	Natural Capital	Social Capital
Private Ownership: (‘Private Goods’)		<ul style="list-style-type: none"> Factories Securities Software Patents 	<ul style="list-style-type: none"> Health Education Job Skills 	<ul style="list-style-type: none"> Mines Fields Private Forests 	
			<ul style="list-style-type: none"> Market design, regulations, rules, etiquette Civil & Criminal Laws; Judicial systems 		Social Capital
Community Ownership: (‘Club Goods’)		<ul style="list-style-type: none"> Community Centres Community Schools 	<ul style="list-style-type: none"> Traditional Community Knowledge 	<ul style="list-style-type: none"> Community Forests Grazing Commons 	
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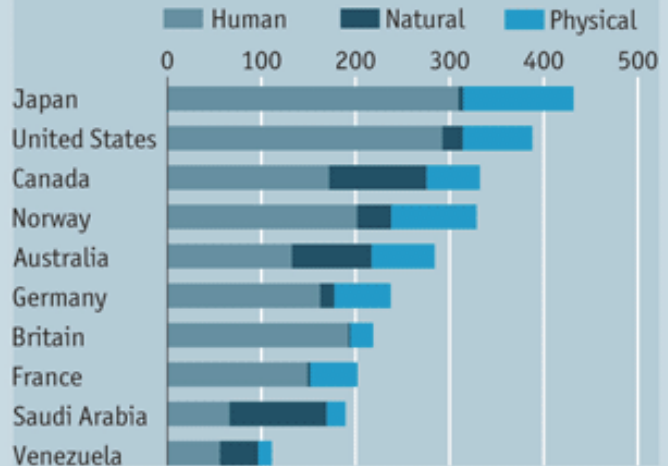
“Inclusive Wealth”: a True Balance Sheet of Nations

The balance-sheet of wealth

Country	2008, \$trn*	1990-2008 growth†, %
United States	117.8	0.7
Japan	55.1	0.9
China	20.0	2.1
Germany	19.5	1.8
Britain	13.4	0.9
France	13.0	1.4
Canada	11.1	0.4
Brazil	7.4	0.9
India	6.2	0.9
Australia	6.1	0.1

Source: UN

Inclusive wealth per person 2008, \$'000*

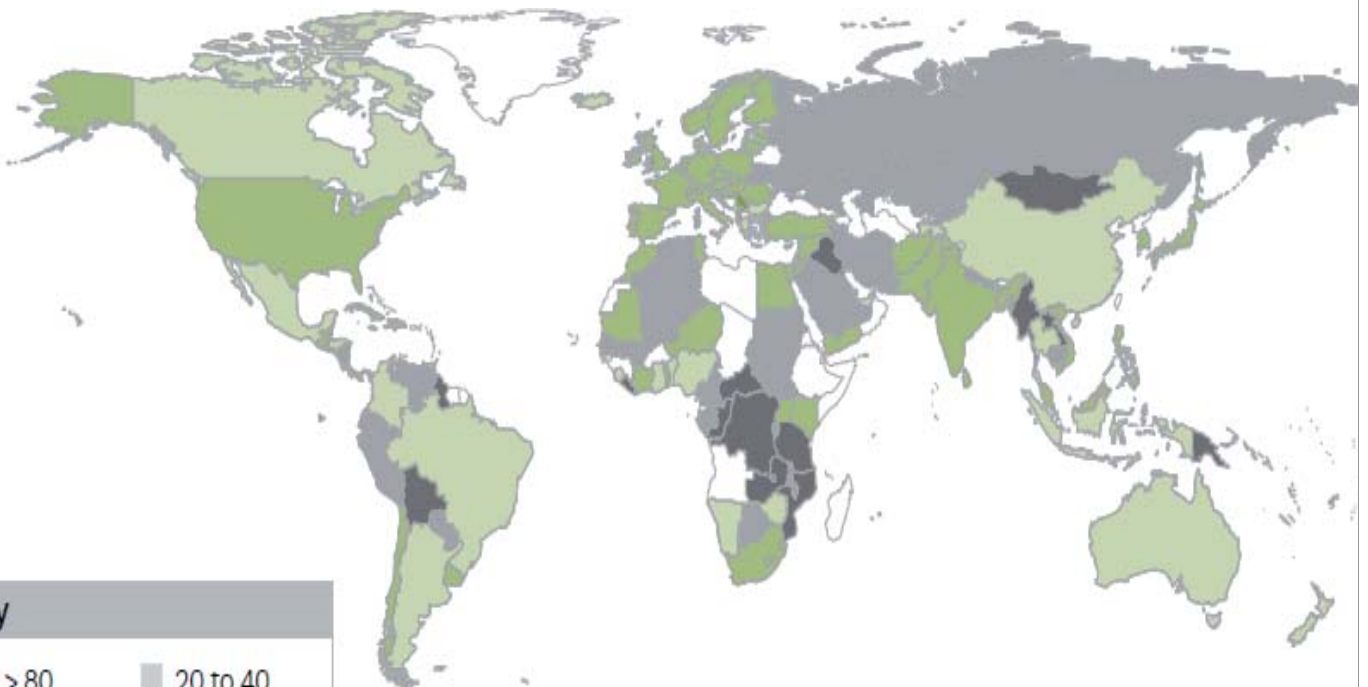


*Constant 2000 \$ †Average annual rate

The UN (“Inclusive Wealth Report, 2014”) calculates human capital based on average years of schooling, workers wages, and the number of years they can expect to work before they retire (or die)¹.

Sources: ¹ Inclusive Wealth Report 2014 URL: http://www.ihdp.unu.edu/docs/Publications/Secretariat/Reports/SDMs/IWR_SDM_2014.pdf
 Chart from: <http://www.economist.com/node/21557732>

Percentage of Human Capital in Nations’ Wealth



Key	
■ > 80	■ 20 to 40
■ 60 to 80	■ < 20
■ 40 to 60	□ no data

Source: : http://www.ihdp.unu.edu/docs/Publications/Secretariat/Reports/SDMs/IWR_SDM_2014.pdf

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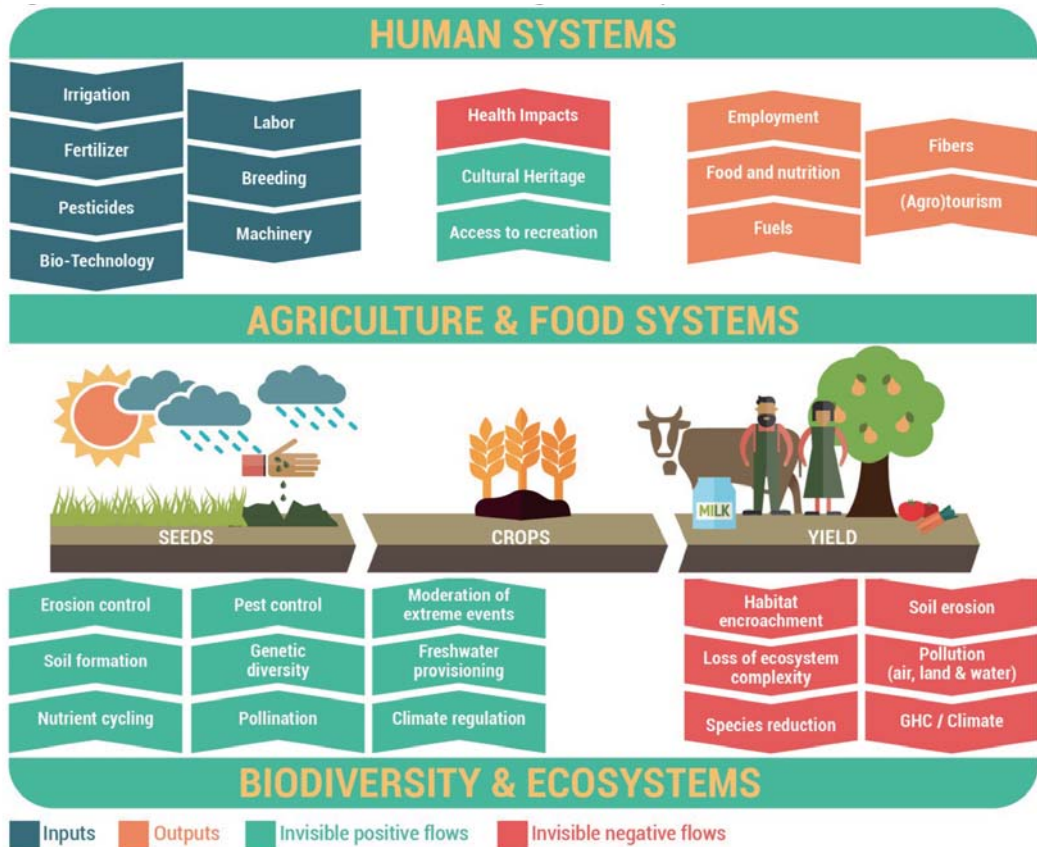


TEEB for Agriculture & Food

The *visible* flows of agriculture

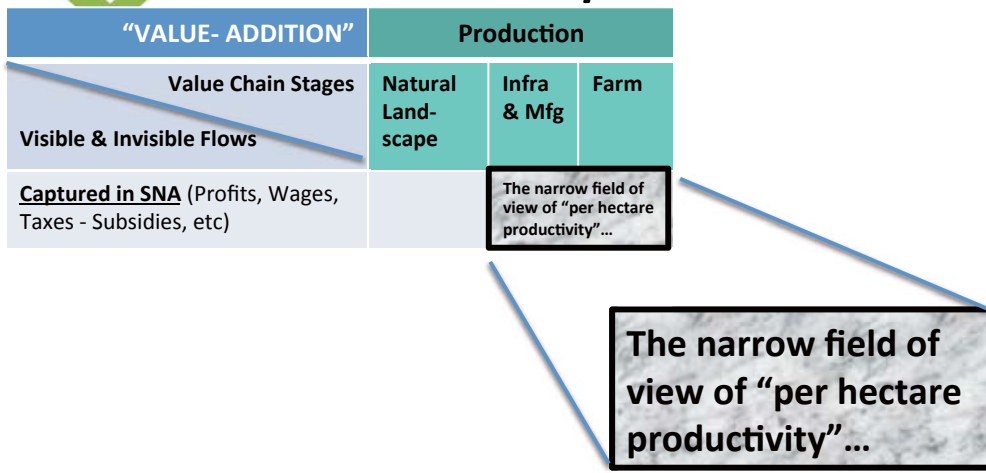


The *visible* and *invisible* flows!



Source: http://img.teebweb.org/wp-content/uploads/2016/01/TEEBAgFood_Interim_Report_2015_web.pdf teeb.agfood@unep.org

Why has TEEBAgriFood proposed a *Comprehensive Valuation Framework*?



Source: http://img.teebweb.org/wp-content/uploads/2016/01/TEEBAgFood_Interim_Report_2015_web.pdf teeb.agfood@unep.org



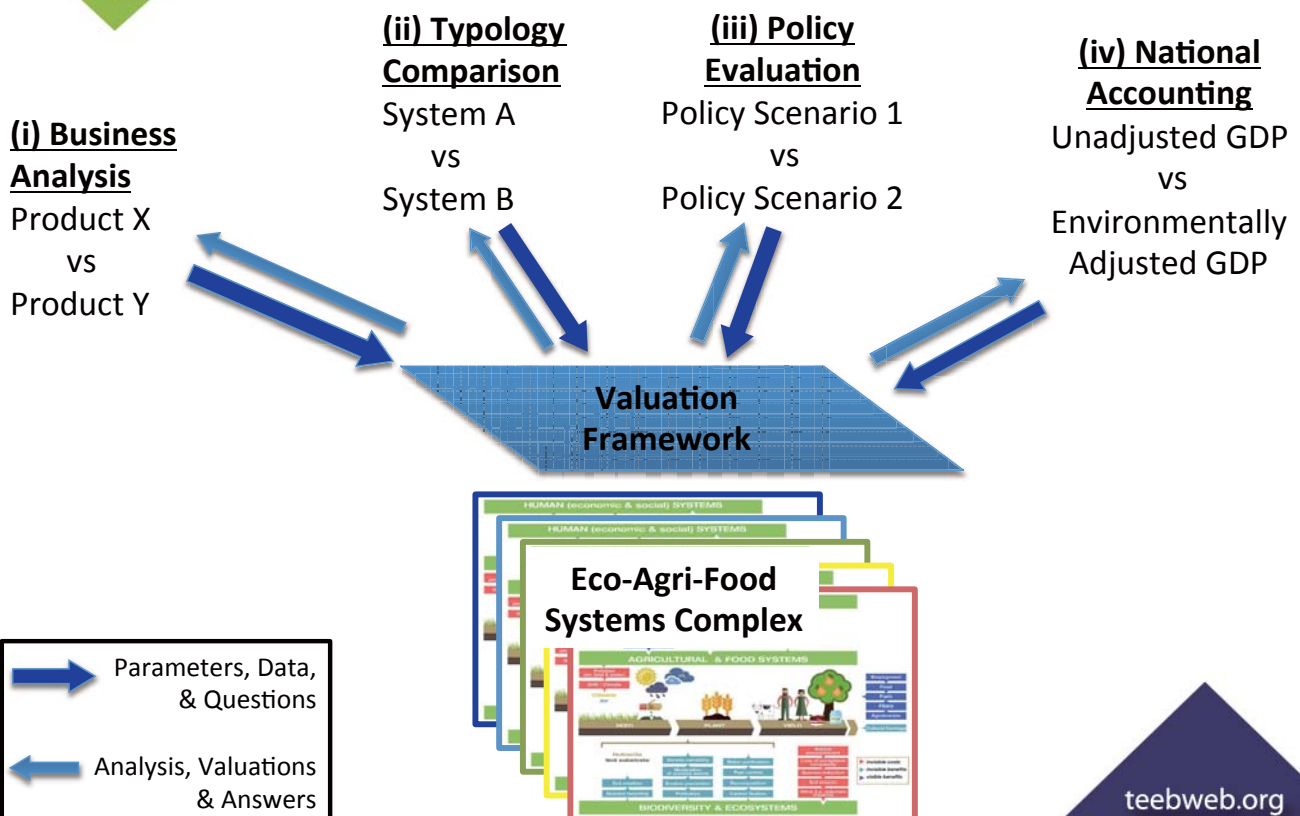
Why has TEEBAgriFood proposed a Comprehensive Valuation Framework?

"VALUE- ADDITION"	Production			Processing & Distribution			Consumption	
	Natural Landscape	Infra & Mfg	Farm	Wholesale	F & B	Retail	Industry/ Household/ Hospitality	Waste Mngmt
Value Chain Stages								
Visible & Invisible Flows								
Captured in SNA (Profits, Wages, Taxes - Subsidies, etc)		The narrow field of view of "per hectare productivity"...						
Provisioning Services (Materials, Energy, etc)								
Regulation & Maintenance (Soil, Water, Habitat, etc)								
Cultural (lifestyle, heritage...)								
Health (Nutrition, Diseases, Antibiotic Resistance, etc)								
Pollution (Nitrates, Pesticides, Heavy metals, etc)								
Emissions (CO ₂ ; CH ₄ ; etc)								
Social Values (food security; gender equity; etc)								
Risks & Uncertainties (Resilience; Health; etc)								

Source: http://img.teebweb.org/wp-content/uploads/2016/01/TEEBAgFood_Interim_Report_2015_web.pdf

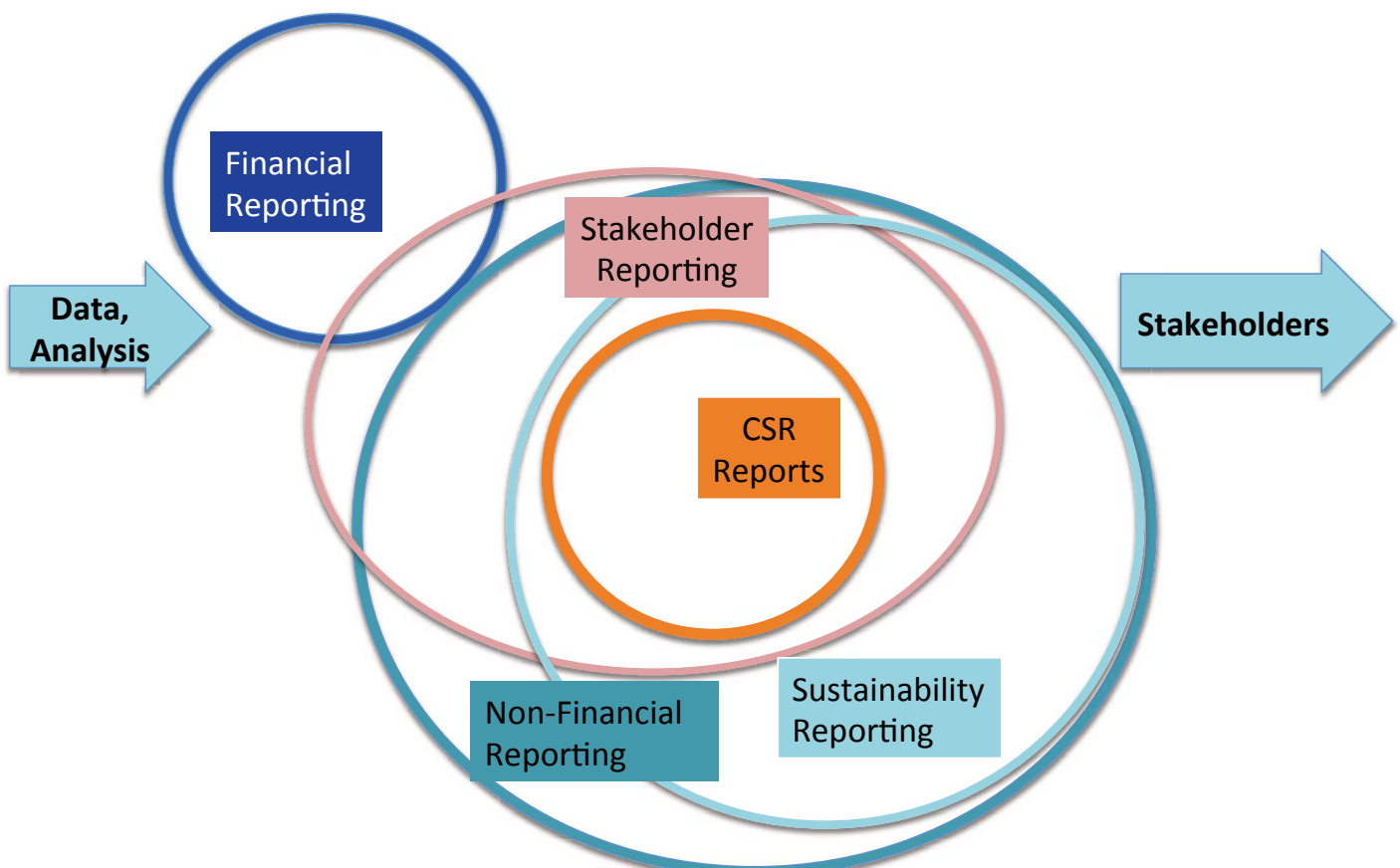


Applications of a Universal "Valuation Framework"



Source: http://img.teebweb.org/wp-content/uploads/2016/01/TEEBAgFood_Interim_Report_2015_web.pdf

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Reporting by Public Companies ...To The Future We Want !



- Sustainability Considerations are *Integrated* into Reporting
- Sustainability in terms of *dimensions of wealth*, hence *capitals*
- Sustainable Development Goals:
 - Productivity, Equitable Access, Security of *capital classes*
 - *Four Capitals : Physical, Human, Natural, Social*

The Economics of Ecosystems & Biodiversity



Natural Capital Protocol

Natural Capital Coalition (NCC), *earlier* TEEB for Business Coalition, in 2014 launched a 2-year project to prepare and test a global framework and guidelines for measuring and valuing environmental impacts (externalities) and dependencies.

Work-streams



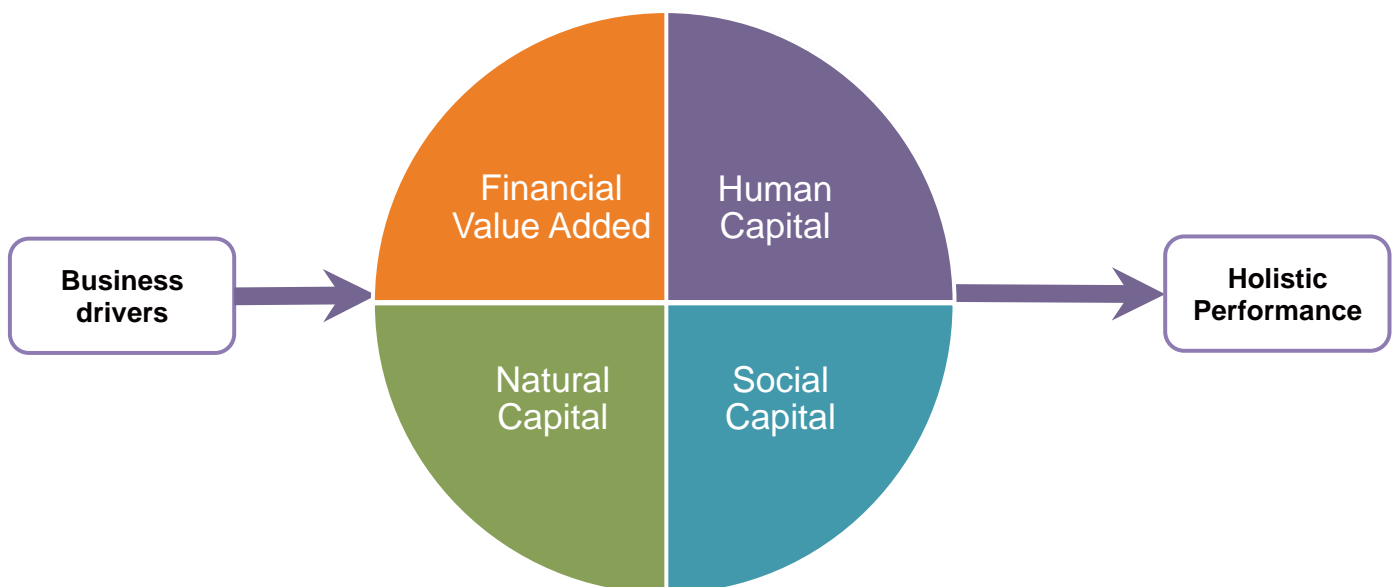
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|----------|--|
| Lot
1 | Global natural capital valuation framework ('Protocol') |
| Lot
2 | Sectoral valuation guidance for Food & Beverage |
| Lot
3 | Sectoral valuation guidance for Apparels |
| Lot
4 | 'Protocol' Pilot Tests with projects across many sectors |

These work-streams were coordinated by to two groups of experts led respectively by **WBCSD** and by **IUCN**

Dimensions of Wealth

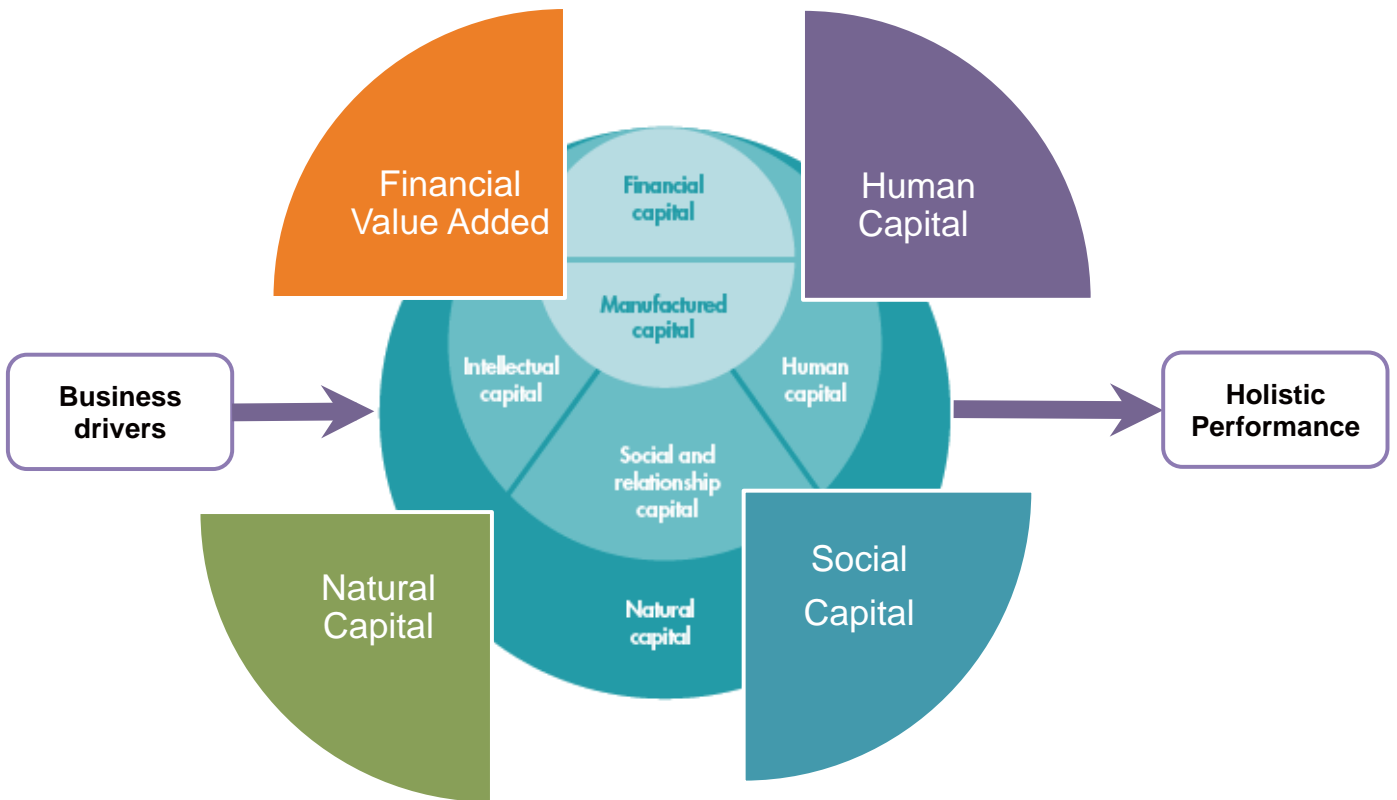
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IIRC vs GIST Categorization of Capitals



IIRC vs GIST

Categorization of Capitals



Source: Adapted from www.theiirc.org & www.gistadvisory.com, "Towards a Valuation Framework for Business Externalities"

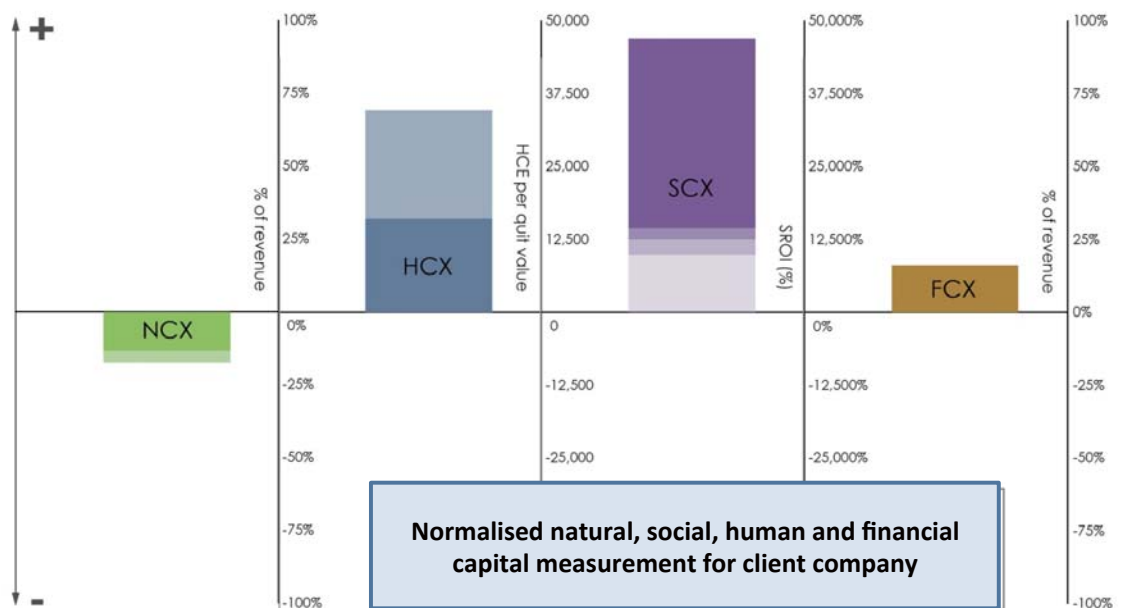
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Response:

Economic Valuation of Stakeholder Impacts

Integrated Profit & Loss <IP&L™>

- Natural Capital
- Human Capital
- Social Capital
- Financial Capital

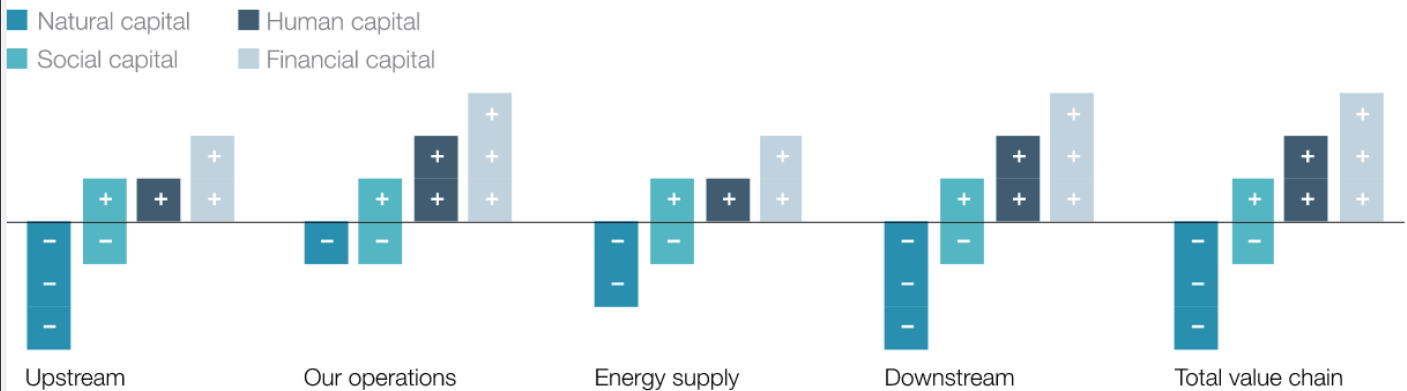


Relevant normalising metric	NCX per million € revenue NCX per tonne of sales product GHGs per tonne of sales product	HCE in € per Quit	Total value of benefits in million € per program/activity Social Returns on Investment (SROI)	Total Financial Value Added in million €
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AkzoNobel (AN) wanted to develop an understanding of how their business impacts the environment, people and society at large. Understanding these aspects better – and attaching a monetary value to them – will enable them to identify possible improvements and ultimately increase business value.

The pilot study of AN’s Pulp and Performance Chemicals business in Brazil looked at their environmental, human, social and financial impact. By measuring these four dimensions across the whole value chain, they were able to identify where they can improve. This will enable them to make better decisions by reducing the negatives and building on the positives.

Monetized impact across the whole value chain (indicative¹)



Source: <http://report.akzonobel.com/2014/ar/case-studies/sustainable-business/measuring-our-impact-in-4d.html>

AMATA

A Brazilian forestry and forest products company that promotes the use of low-impact forestry techniques.



Structure of the report

About the Company

History | Employees | Governance | Assets Development | 2015 Updates

Operations

Objective + Learning + 2015 Milestones + Challenges; by region of operation

Integrated Analysis of Externalities

Natural Capital | Social Capital | Human Capital | Financial Capital

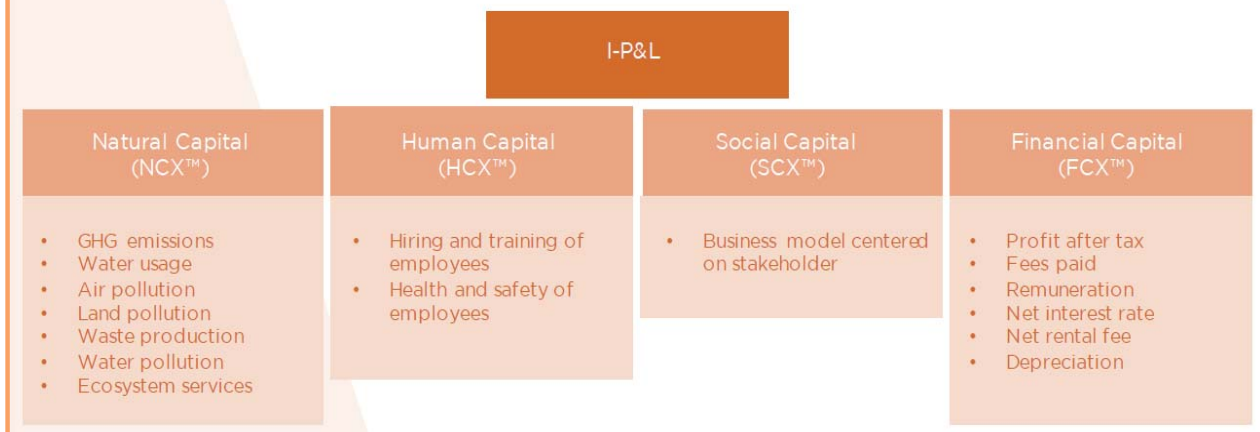
More Results

Further Sustainability Indicators | Financial Statements | GRI G4 Compliance | Acknowledgements

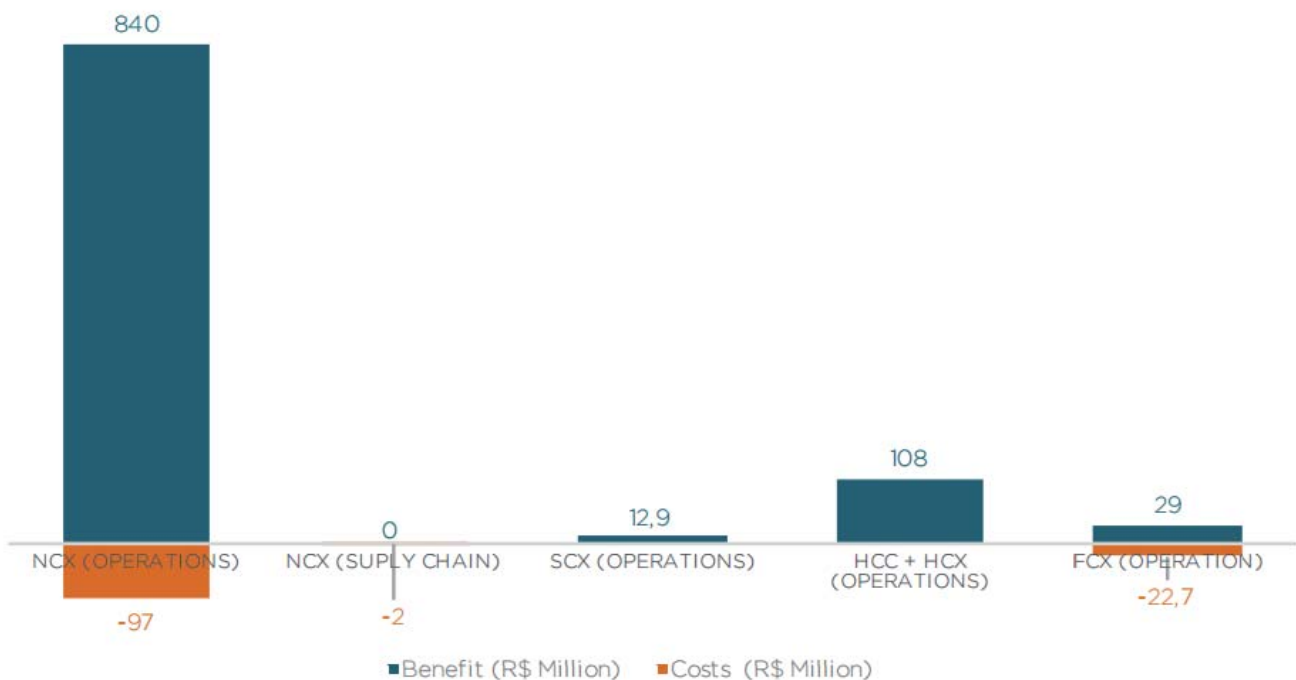
Source: www.amatabrasil.com.br/arquivos/integratedannualreportamata2015_EN.pdf



Approach used to evaluate each capital was:



Balance of the positive and negative externalities of AMATA in 2014




Source: www.amatabrasil.com.br/arquivos/integratedannualreportamata2015_EN.pdf

Thank You!

www.gistadvisory.com

Pavan Sukhdev

**Founder-CEO, GIST Advisory
& Goodwill Ambassador fr UN Environment**

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