

## Figures and Tables

### Figures

Figure 1.1. Conceptual framework of the IAASTD

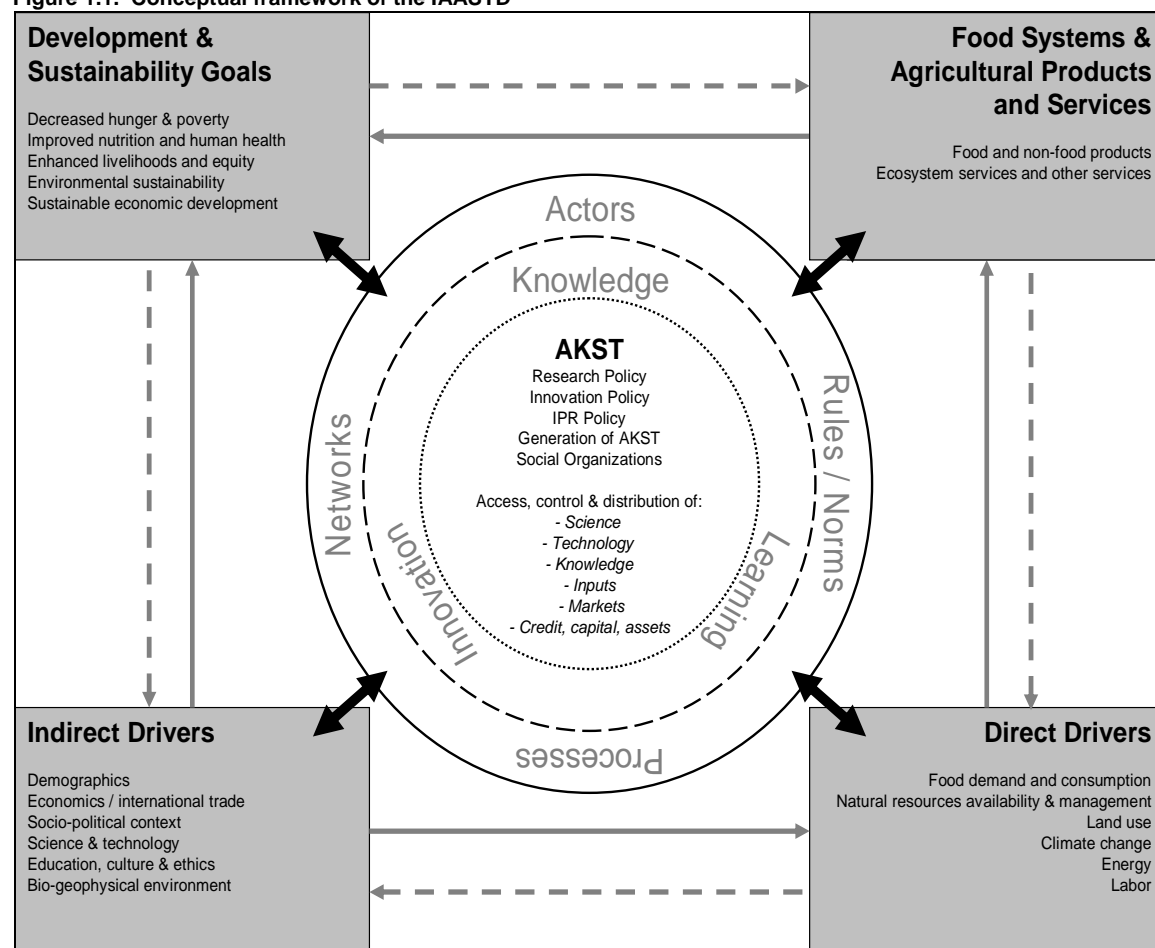


Figure 1.2. Dynamic links between household choices and outcomes (adapted from Maxwell and Wiebe, 1999)

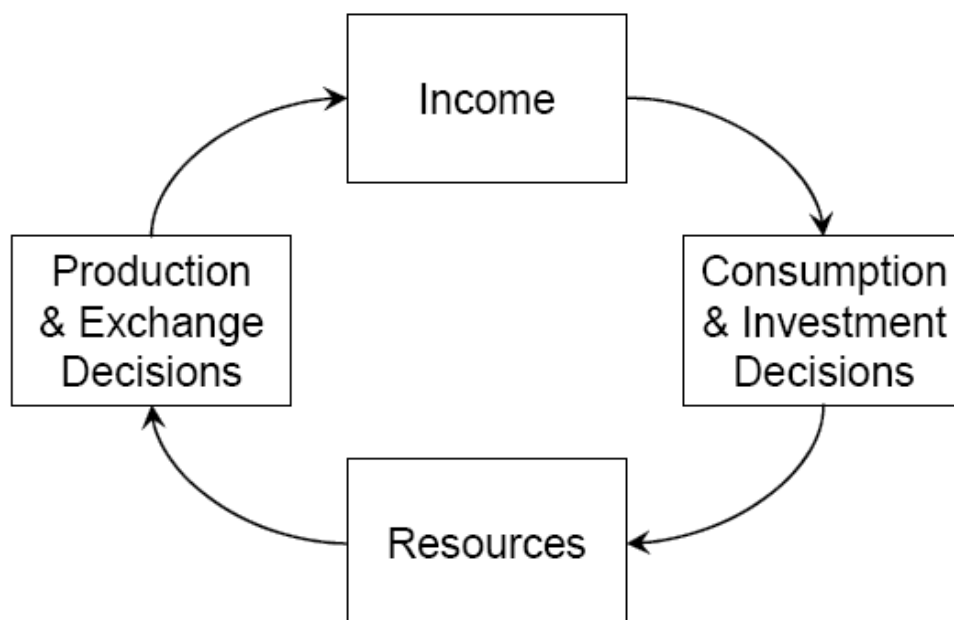


Figure 1.3. Adjusted net savings (World Bank, 2006c)

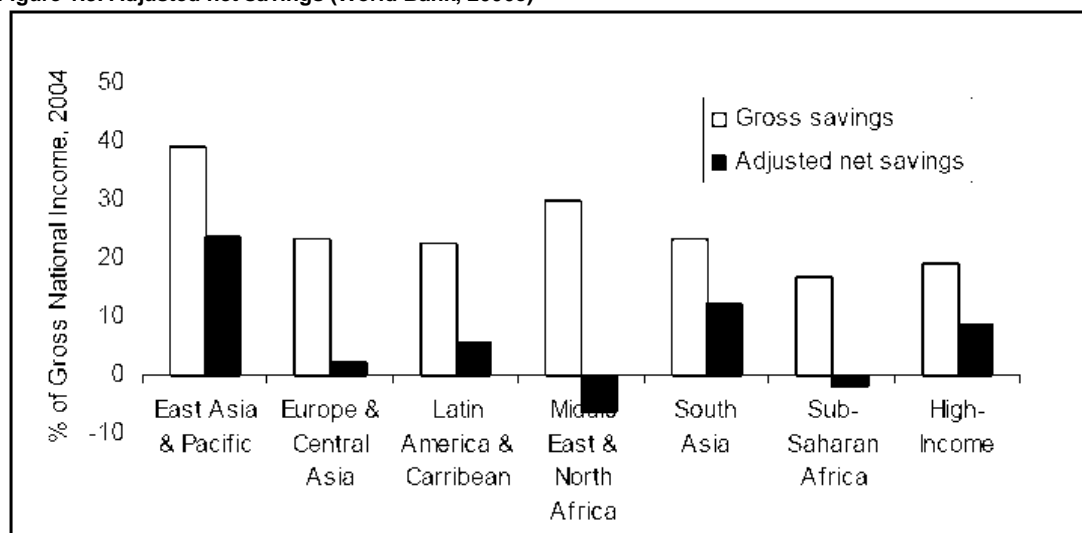
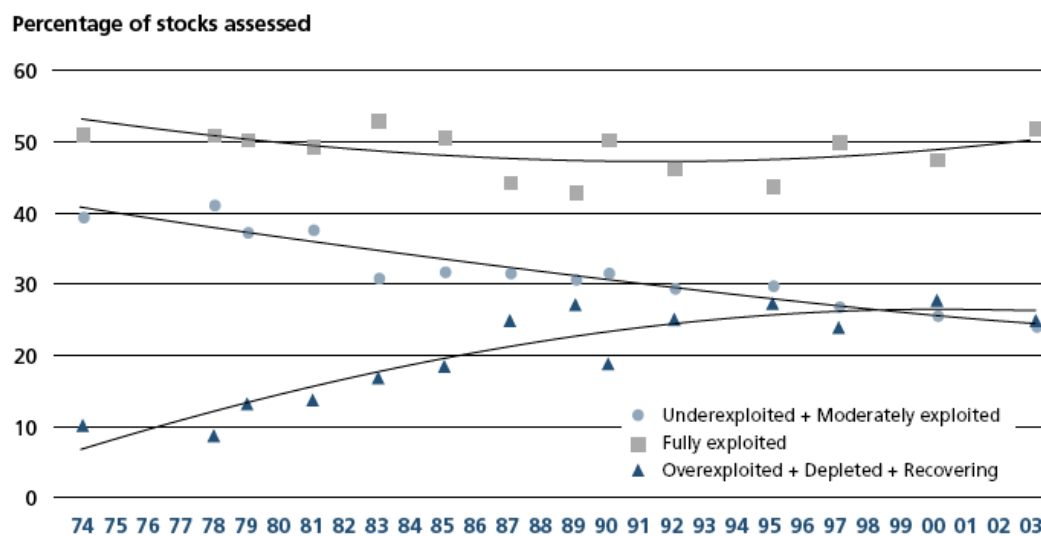


Figure 1.4. Global trends in the state of world marine stocks: 1974-2003 (FAO 2004b)



## Tables

**Table 1.1. Differences between a review and an assessment (Watson and Gitay, 2004)**

	Scientific Reviews	Assessment
<b>Audience</b>	Undertaken for scientists	Undertaken for decision-makers from a specified authorizing environment
<b>Conducted by</b>	One or a few scientists	A larger and varied group based on relevant geographic and disciplinary representation
<b>Issues/Topics</b>	Often deal with a single topic	Generally a broader and complex issue
<b>Identifies gaps in</b>	Research issues generally driven by scientific curiosity	Knowledge for implementation of outcomes; problem-driven
<b>Uncertainty statements</b>	Not always required	Essential
<b>Judgment</b>	Hidden; a more objective analysis	Required and clearly flagged
<b>Synthesis</b>	Not required, but sometimes important	Essential to reduce complexity
<b>Coverage</b>	Exhaustive, historical	Sufficient to deal with main range of uncertainty associated with the identified issues

**Table 1.2. Positive functions of agriculture**

	Environmental	Social	Food Security	Economic	Cultural
<b>Global</b>	Ecosystem resilience Mitigation of climatic change (carbon sequestration, land cover) Biodiversity	Social stability Poverty alleviation	Food security / food for all	Growth, international trade	Cultural diversity
<b>Regional/ National</b>	Ecosystem resilience Soil conservation (erosion, siltation, salinization) Water retention / availability (flood and landslide prevention) Biodiversity (agricultural and wildlife) Pollution abatement	Balanced migration Social stability (and sheltering effects during crisis) Unemployment prevention Poverty alleviation	Access to food National security Food safety	Economic stability Employment Foreign exchange Tourism	Landscapes Cultural heritage Cultural identity Social capital
<b>Local</b>	Ecosystem resilience Soil conservation Water retention Biodiversity Pollution abatement	Social stability (employment, family) Livelihoods Balanced gender relations	Local and household food security	Employment effects on secondary and tertiary sectors	Landscapes Indigenous, local knowledge Traditional technologies Cultural identity

**Table 1.3. Broad categories of agricultural systems, their characteristics and related agro-ecosystems (Dixon et al., 2001).**

<b>System category</b>	<b>Characteristics</b>	<b>Related agro-ecosystems</b>
Irrigated farming systems	Embraces a broad range of food and cash crops	Cultivated
Wetland rice-based farming systems	Depend upon seasonal rains supplemented by irrigation	Cultivated
Rainfed farming systems in humid areas	Characterized by specific dominant crops or mixed crop-livestock systems	Cultivated
Rainfed farming systems in steep and highland areas	Often mixed crop-livestock systems	Mountain
Rainfed farming systems in dry or cold areas	With mixed crop-livestock and pastoral systems merging into systems with very low current productivity or potential because of extreme aridity or cold	Dryland; polar
Dualistic farming systems (mixed large commercial and smallholders)	Located across a variety of ecologies and with diverse production patterns	Cultivated
Coastal artisanal fishing systems	Often incorporate mixed farming elements	Coastal
Urban-based farming systems	Horticultural, livestock	Urban
Forestry and agroforestry	Land dominated by trees; mixed trees and crops	Forests
Fishery	Fishing	Marine; Lacustrine
Wild game	River fishing, hunting, gathering	Inland water; Forests
Livestock breeding	Usually large-scale or intensive systems, and more rarely pastoralist systems.	Cultivated; Dryland; Urban

**Table 1.4. Categories of ecosystems and their importance for agriculture (MA, 2003; with one column added (estimated importance for agriculture)).**

<b>Eco-system category</b>	<b>Characteristics</b>	<b>Major agricultural activities</b>	<b>Relative importance for agricultural outputs (% of global)</b>
Marine	Ocean, with fishing typically a major driver of change	Fishing; Mariculture	1
Coastal	Interface between ocean and land, extending seawards to about the middle of the continental shelf and inland to include all areas strongly influenced by the proximity of the ocean	Aquaculture	2
Inland water	Permanent water bodies inland from the coastal zone, and areas whose ecology and use are dominated by the permanent, seasonal, or intermittent occurrence of flooded conditions	Aquaculture; Fishing	1
Forest	Land dominated by trees; often used for timber, fuelwood, and non-timber forest products	Forestry; Gathering; Hunting	10
Dryland	Land where plan production is limited by water availability; the dominant uses are large mammal herbivores, including livestock grazing and cultivation	Crop cultivation (mainly irrigated); Livestock grazing; Hunting	10
Island	Land isolated by surrounding water, with a high proportion of coast in relation to the hinterland	Fishery; Crop cultivation (mainly rainfed)	1
Mountain	Steep and highlands	Cultivation (mainly rainfed); Forestry; Livestock	15
Polar	High-latitude systems	Hunting	0
Cultivated	Land dominated by domesticated plant species, used for and substantially changed by crop, agroforestry, or aquaculture production	Crop cultivation (rainfed and irrigated); Aquaculture; Agroforestry	58
Urban	Built environments with a high human density	Urban and periurban agriculture	2
Total			100

Table 1.5. Selected public research intensity ratios (Pardey and Beintema, 2001)

	Expenditures as a share of AgGDP			Expenditures per capita			Expenditures per economically active agricultural population		
	1976	1985 <sup>a</sup>	1995 <sup>a</sup>	1976	1985 <sup>a</sup>	1995 <sup>a</sup>	1976	1985 <sup>a</sup>	1995 <sup>a</sup>
	(percent)			(1993 international dollars)					
<b>Developing countries</b>	0.44	0.53	0.62	1.5	2.0	2.5	4.6	6.5	8.5
<b>Sub-Saharan Africa</b>	0.91	0.95	0.85	3.5	3.0	2.4	11.3	10.6	9.4
<b>China</b>	0.41	0.42	0.43	0.7	1.3	1.7	1.8	3.1	4.1
<b>Other Asia</b>	0.31	0.44	0.63	1.1	1.7	2.6	3.8	6.1	10.2
<b>Latin America</b>	0.55	0.72	0.98	3.4	4.0	4.6	26.0	36.0	45.9
<b>Developed Countries</b>	1.53	2.13	2.64	9.6	11.0	12.0	238.5	371.0	594.1
<b>TOTAL</b>	0.83	0.95	1.04	3.3	3.8	4.2	12.9	15.3	17.7

SOURCES: See Table 1. Agricultural GDP from World Bank (2000); Total and economically active agricultural population from FAO (2000).

NOTES: See Table 1.

<sup>a</sup> Three-year averages centered on 1985 and 1995.

Table 1.6. Overview of issues addressed by indicators in the IAASTD framework. (See Annex for currently available and needed indicators.)

IAASTD framework components	Issues addressed by indicators
<b>Development and Sustainability Goals</b>	<ul style="list-style-type: none"> <li>• Decreased hunger and poverty</li> <li>• Improved nutrition and human health</li> <li>• Sustainable economic development</li> <li>• Enhanced livelihoods and equity</li> <li>• Environmental sustainability</li> </ul>
<b>AKST Systems</b>	<ul style="list-style-type: none"> <li>• Research / Innovation policies</li> <li>• Local and institutional setting of AKST</li> <li>• Social organization</li> <li>• Generation, dissemination, access to, adoption and use of AKST</li> <li>• Agricultural markets</li> </ul>
<b>Agricultural Outputs and Services</b>	<ul style="list-style-type: none"> <li>• Biomass, livestock, fish, crop production</li> <li>• Forestry for food</li> <li>• Fiber</li> <li>• Carbon sequestration</li> <li>• Energy</li> <li>• Ecosystem services</li> </ul>
<b>Indirect drivers</b>	<ul style="list-style-type: none"> <li>• Economic</li> <li>• Demographic</li> <li>• Socio-political</li> </ul>
<b>Direct drivers</b>	<ul style="list-style-type: none"> <li>• Economic</li> <li>• Demographic</li> <li>• Availability and management of natural resources</li> </ul>