

Global Chapter 1: Figures and Tables

Figure 1.1 Total world population 1950-2050 (in billion) and average number of children per women (total fertility: TF). Source: UNFPA, 2007

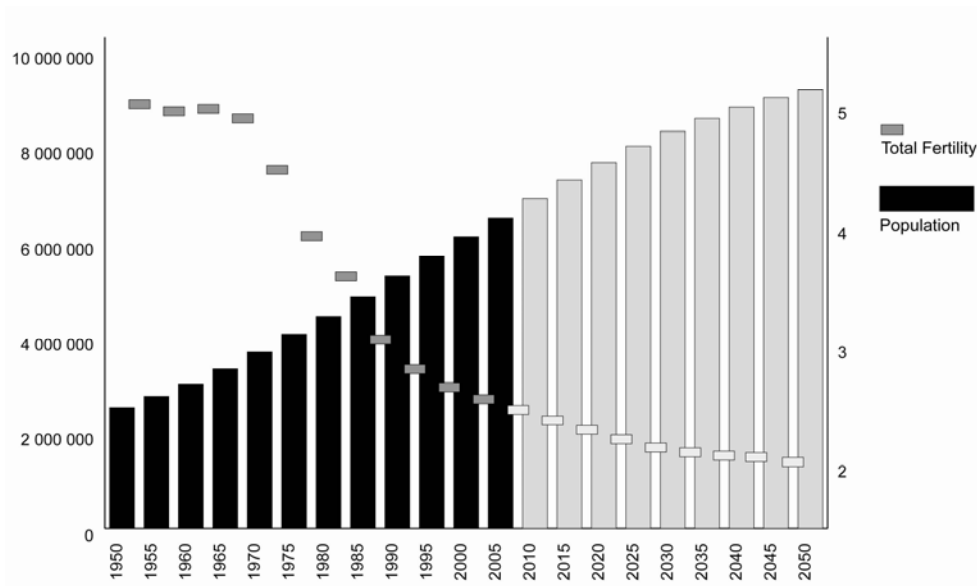


Figure 1.2 Global trends in cereal and meat production; nitrogen and phosphorus fertilizer use; irrigation, and pesticide production. Source: Tilman et al., 2002

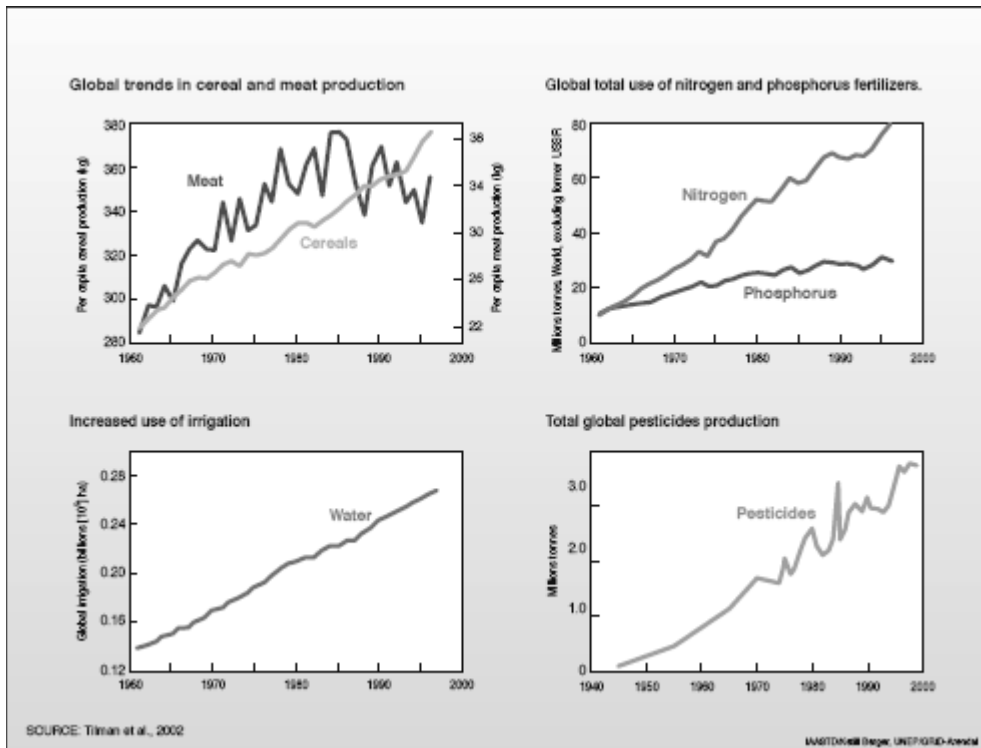


Figure 1.3 Small-scale farmer heterogeneity and the access and market gap. Source: Huvio et al., 2004

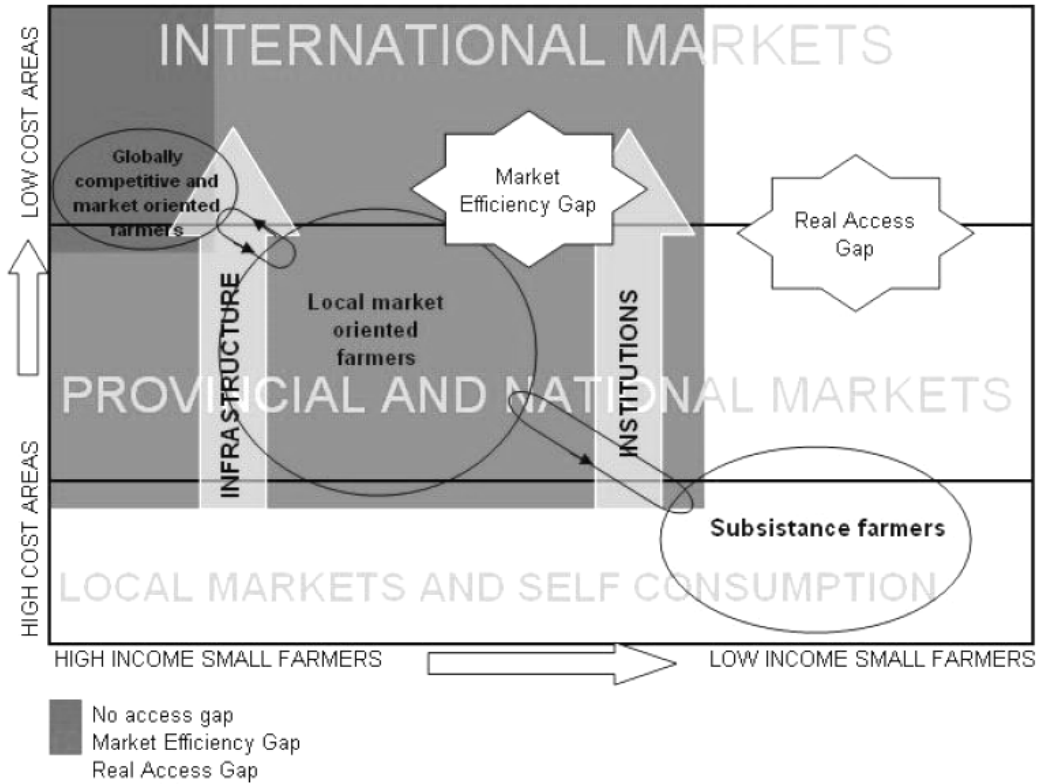
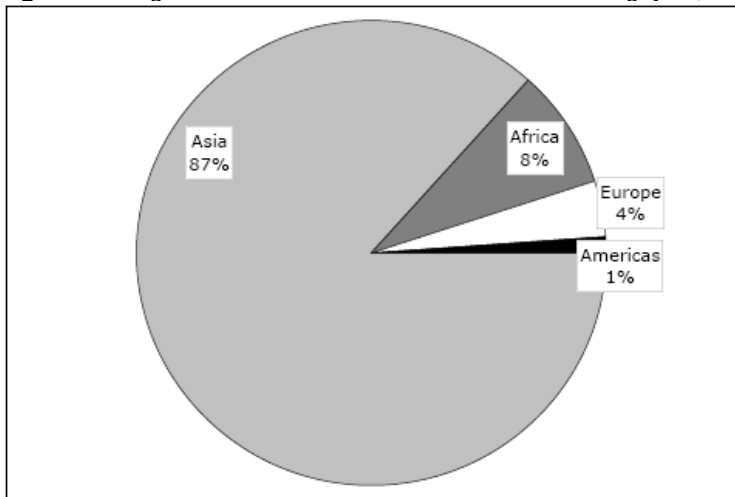


Figure 1.4 Regional distribution of small farms. Source: Nagayets, 2005.



Sources: Calculated by author based on FAO (2001, 2004) and data from national statistical agencies (details of which are available from the author on request).

Note: Small farms are defined as those of less than 2 hectares. The total number of small farms is 404 million.

Figure 1.5 Productivity differences between cereal systems using motorized mechanization and chemicals, on the one hand, and manual or animal-drawn cultivation in developing countries, on the other. Source: Mazoyer, 2001.

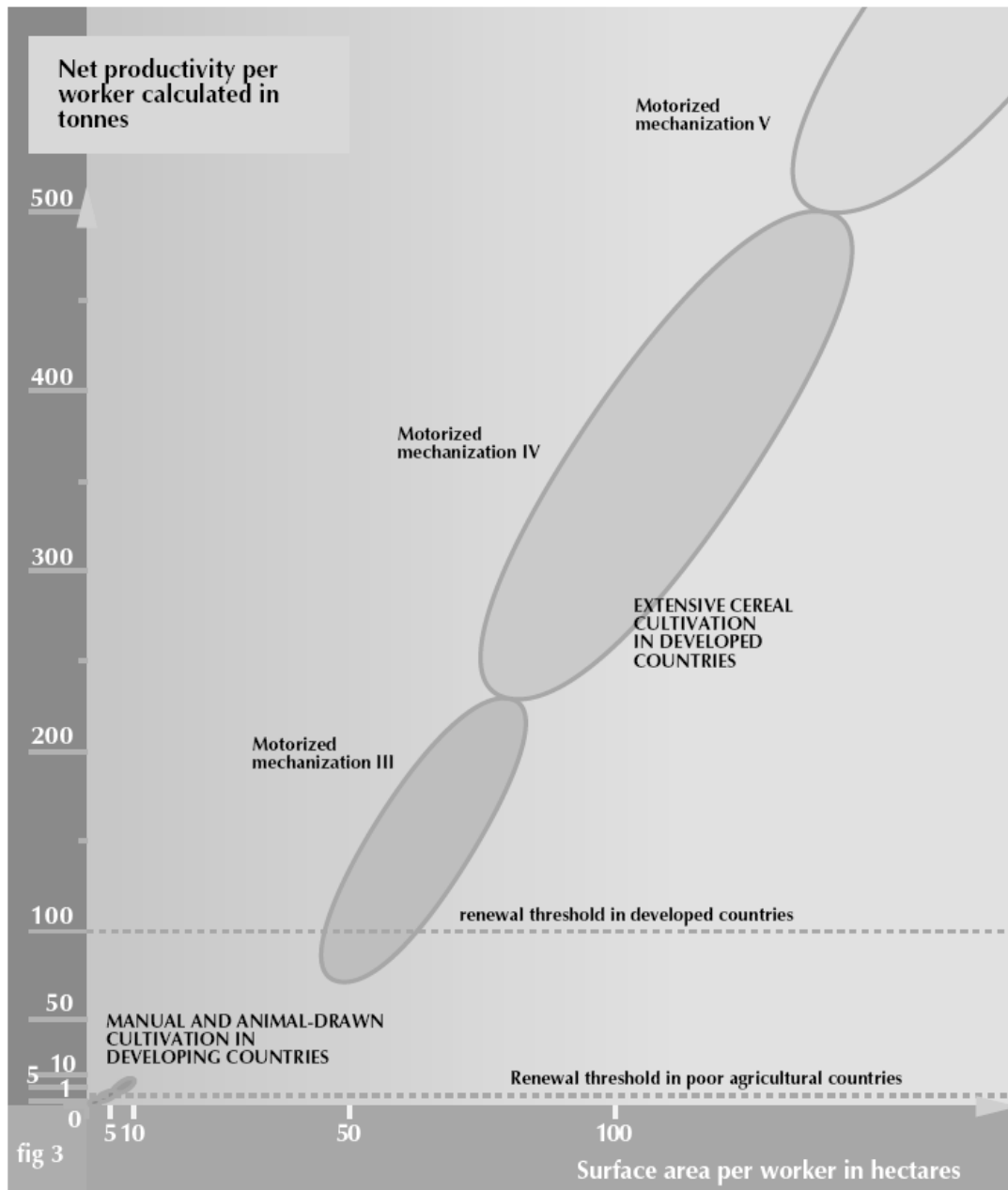


Figure 1.6 Labor force diversity and income circa 1992. Source: Mazoyer, 2001.

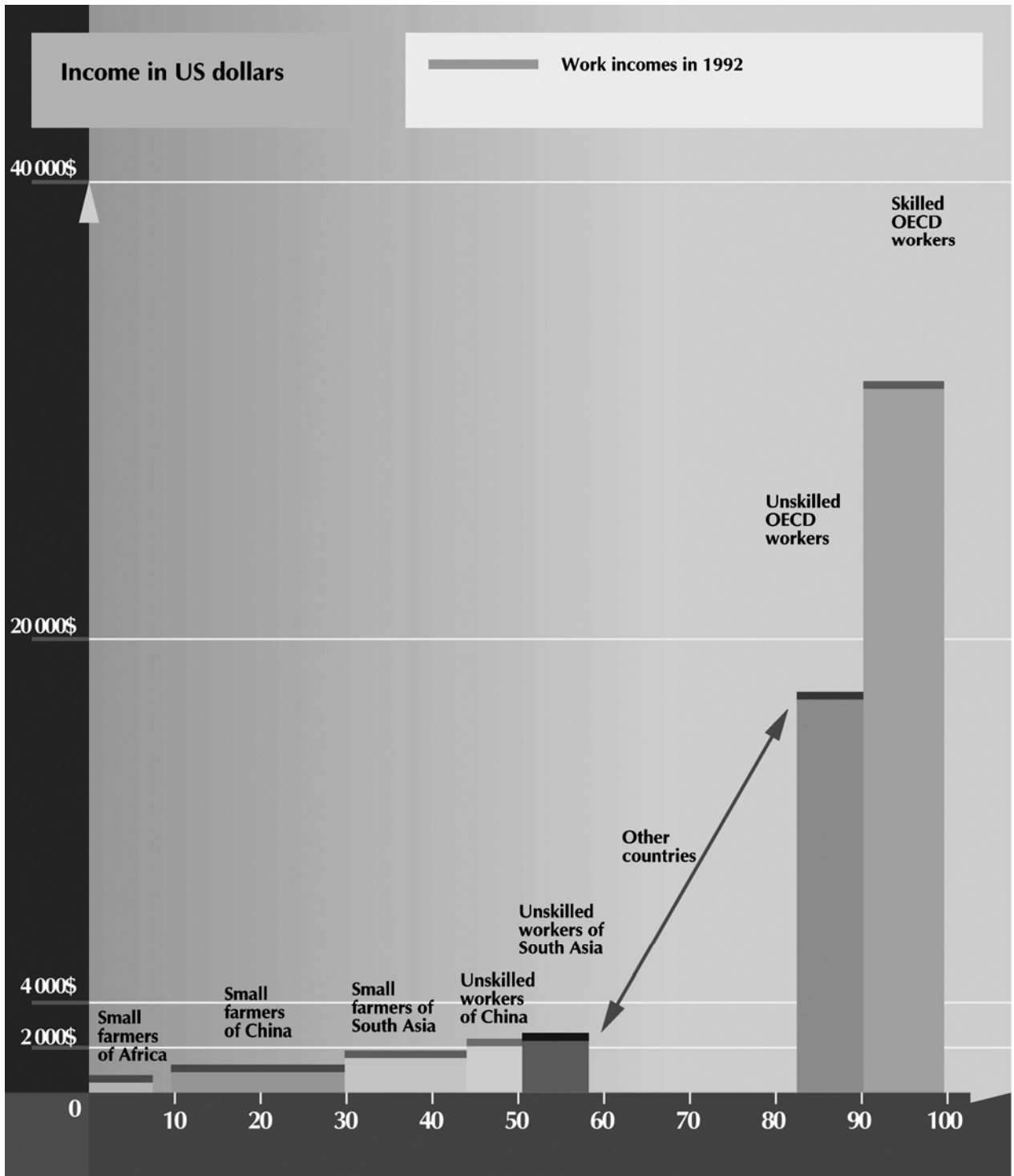


Figure 1.7 Conceptual framework of the IAASTD

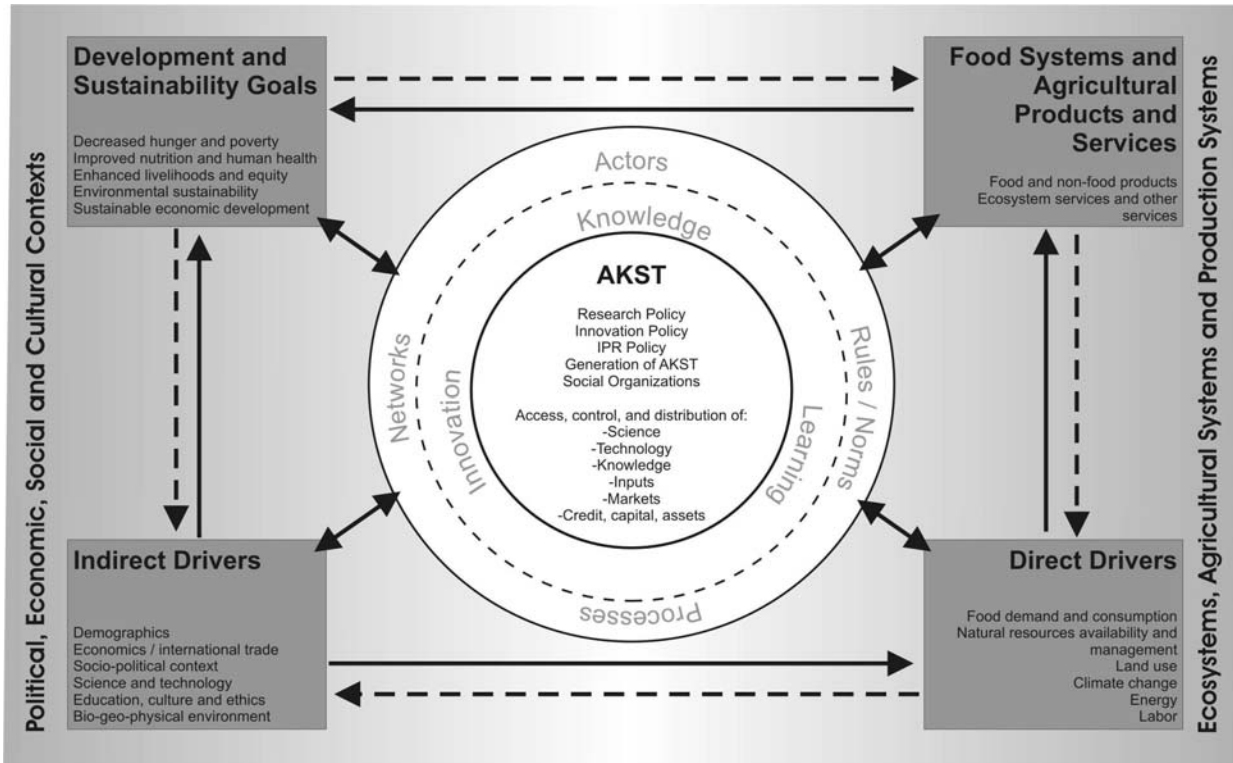
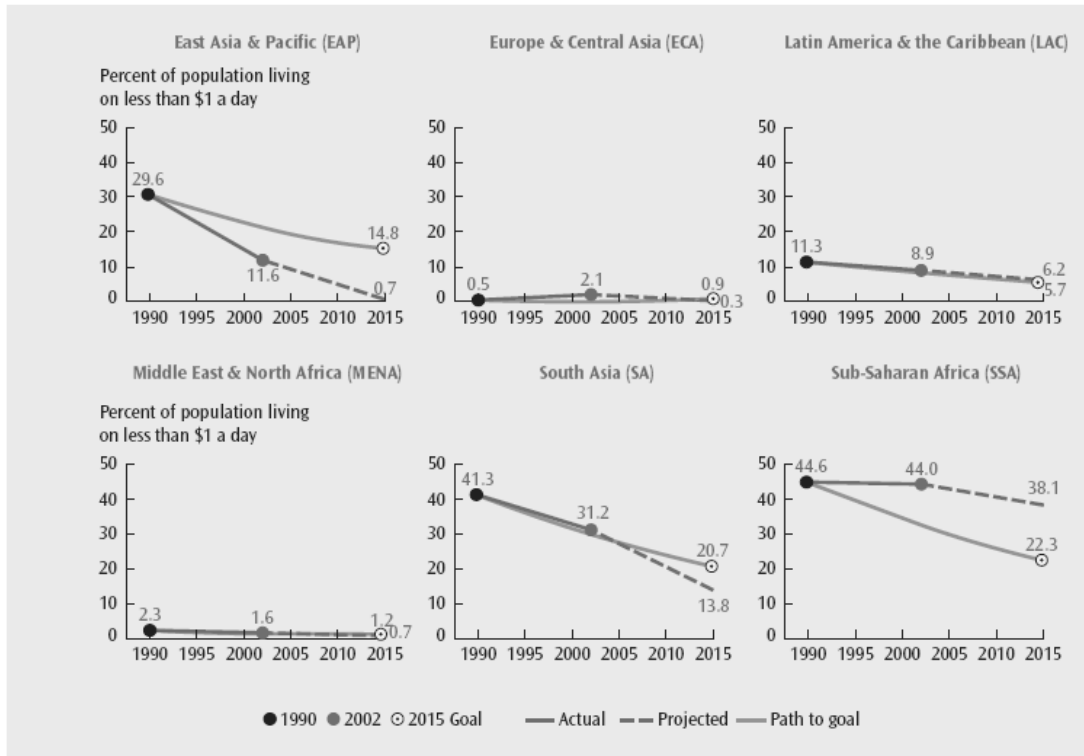


Figure 1.8 Poverty headcount by region, 1990-2002, and forecasts to 2015. Source: Global Monitoring Report, 2006.



Source: World Bank staff estimates.

Figure 1.9 Child malnutrition by urban or rural residence, stunting (low height for age) prevalence among pre-school children, surveys since 1999. Source: Rosegrant et al., 2006

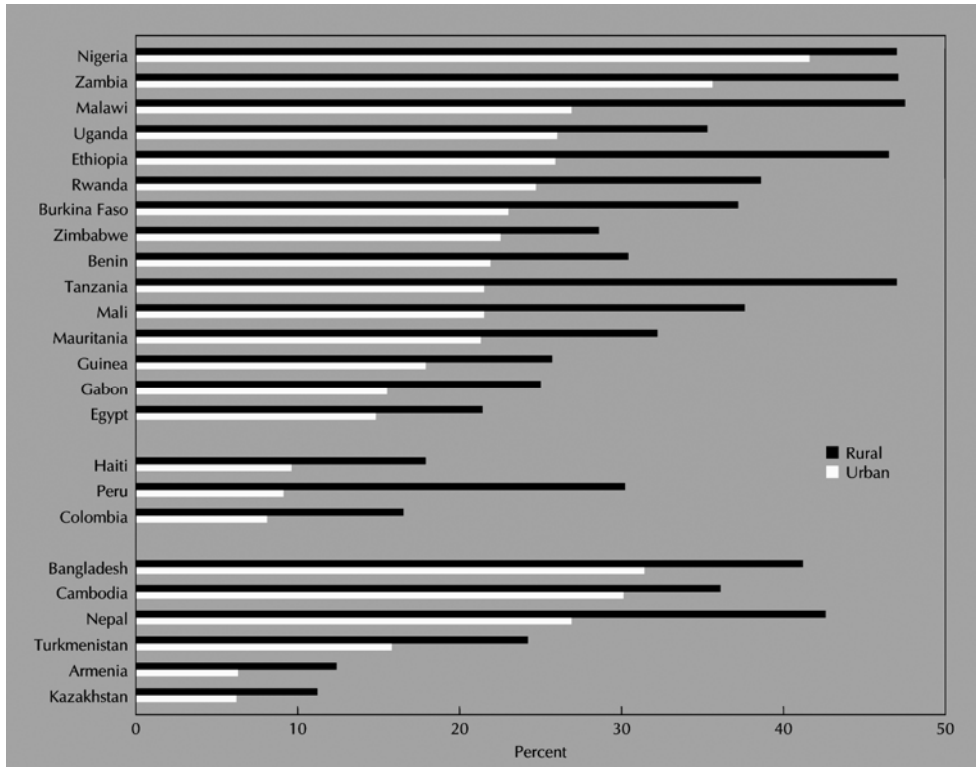


Figure 1.10 Global capture fisheries and aquaculture production, 1950-2000. Source: FAO, 2007b; US Census Bureau, 2007

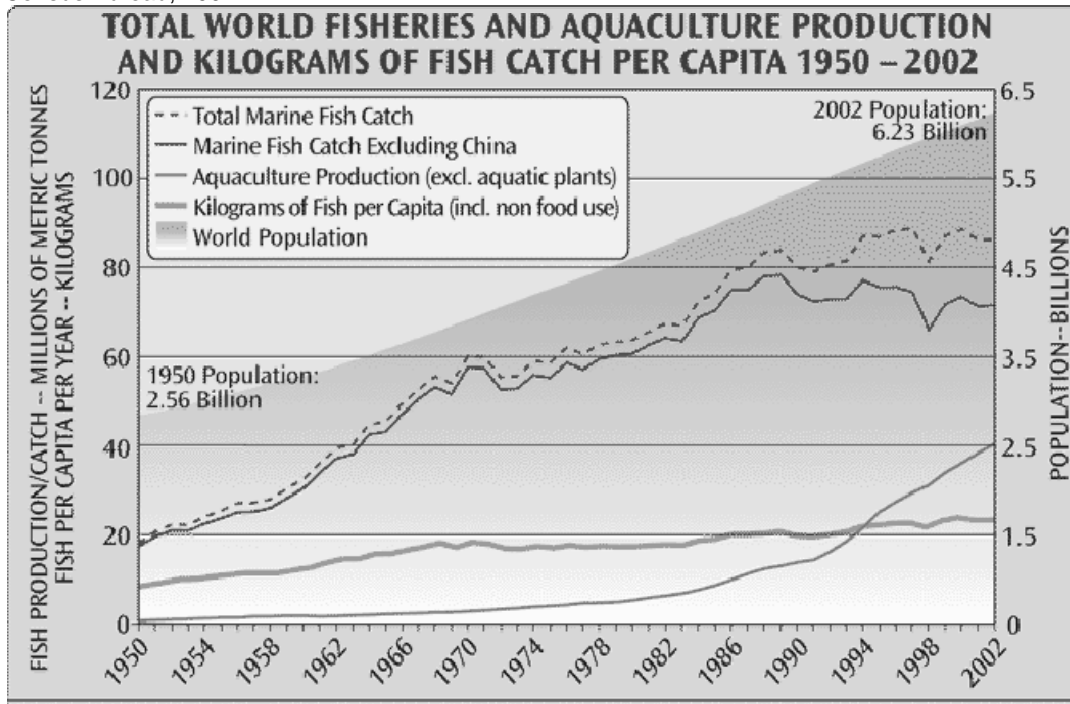


Figure 1.11 Scenarios of land requirement increase in different regions from 2000 to 2050. Source: CA, 2007; FAOSTAT, 2006

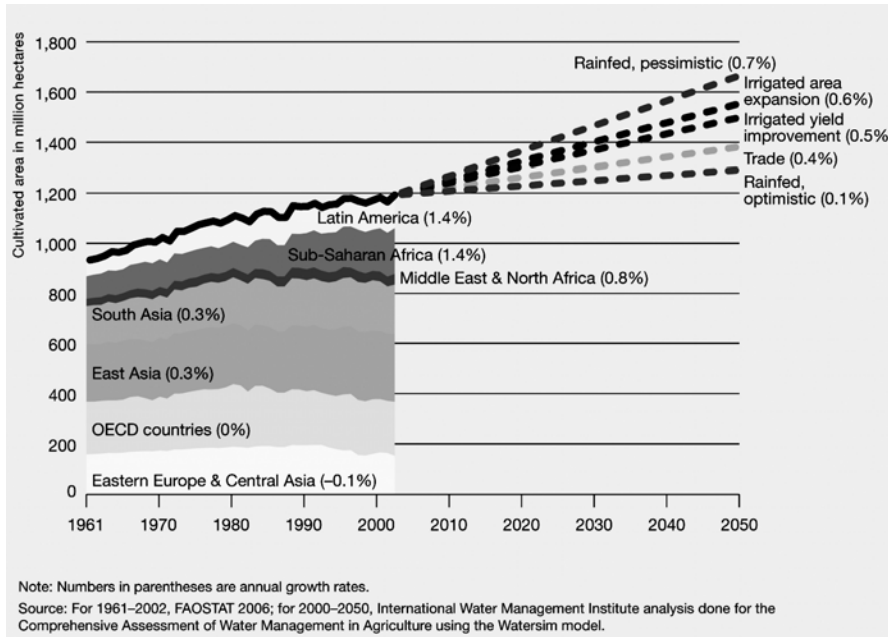


Figure 1.12 Number of people without access to an improved water source, 1995, and projected 2015 baseline and MDG scenario. Source: Rosegrant et al., 2006.

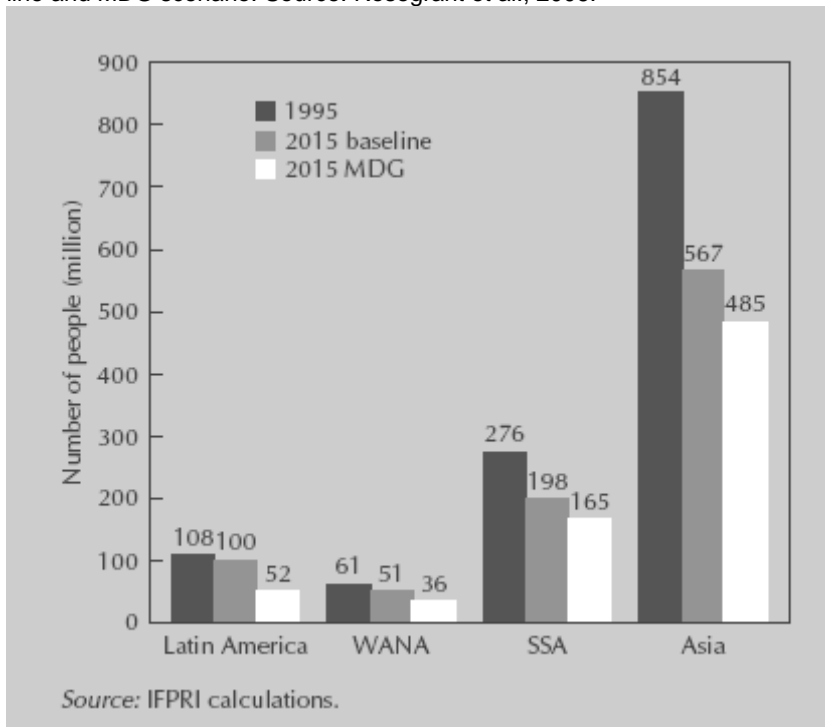


Figure 1.13 World distribution of GDP per capita and percentage of population living in agriculture (Average of years 1990- 2002). Source: ILO, 2007; World Bank, 2006c.

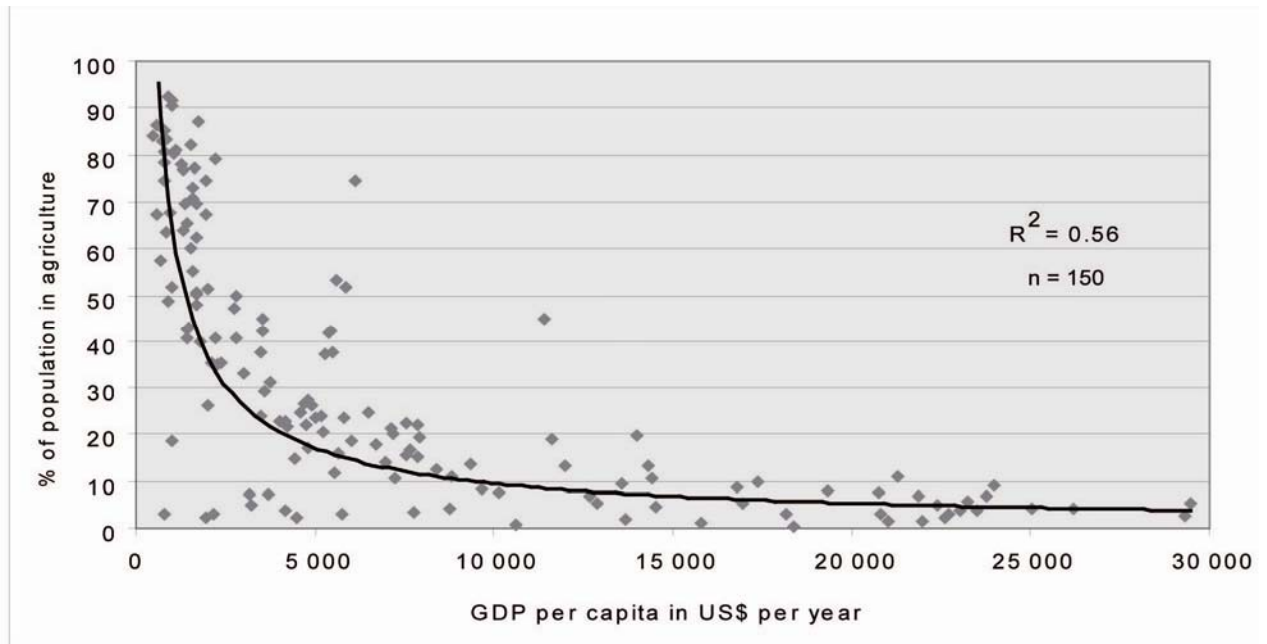


Figure 1.14 Labor productivity in agriculture by region, 1992-2001, and labor productivity levels in 1992 and 2001 (index 1992 = 100). Source: ILO, 2004

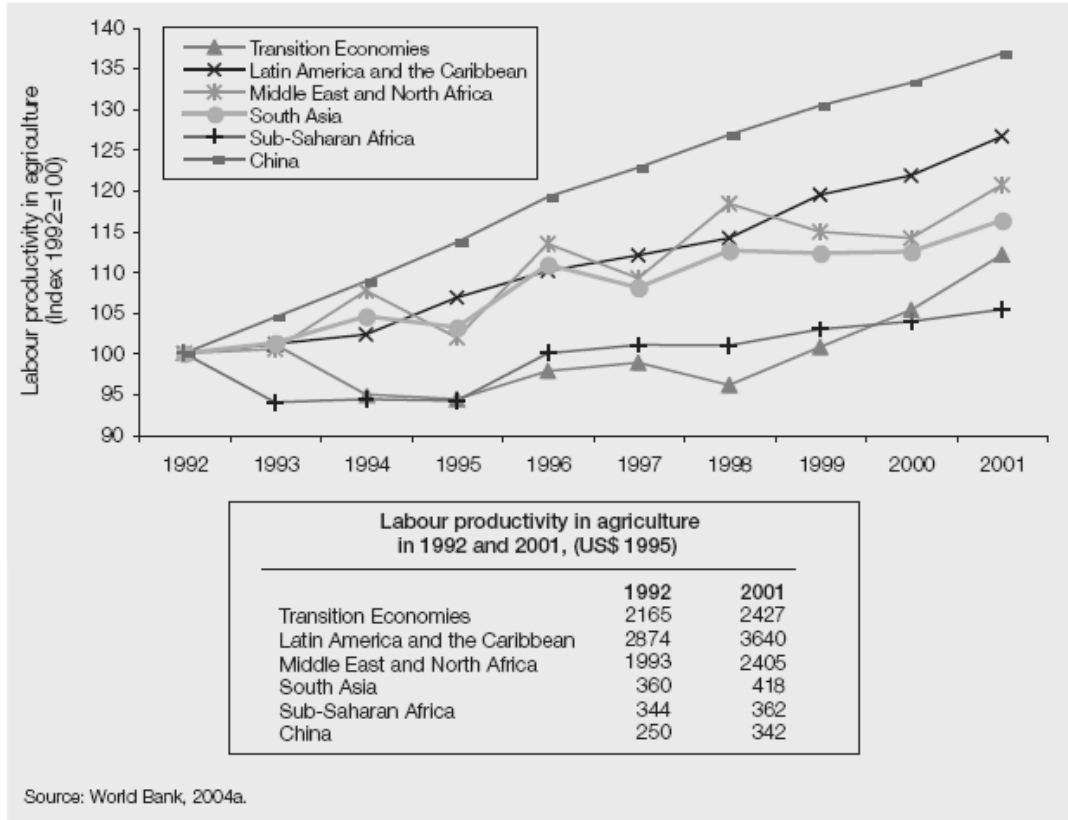


Figure 1.15 Prevalence of undernourishment: proportion of the population unable to acquire sufficient calories to meet their daily caloric requirements, 2003 estimates. Source: Rosegrant et al., 2006.

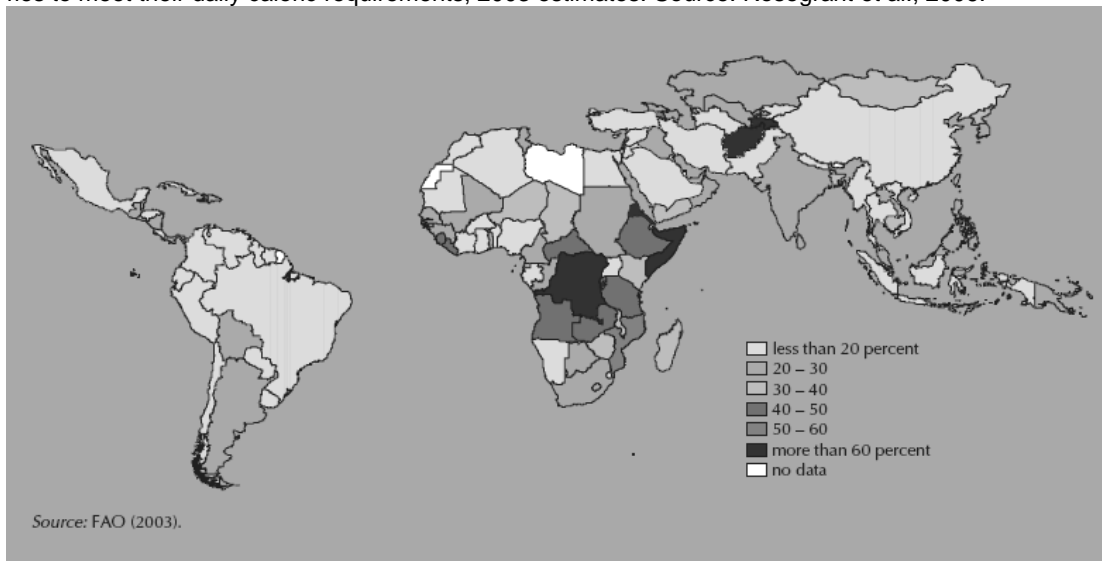


Figure 1.16 Per capita gross national product (GNP) and nutrition are linked, but not tightly. Source: Haddad, 2000.

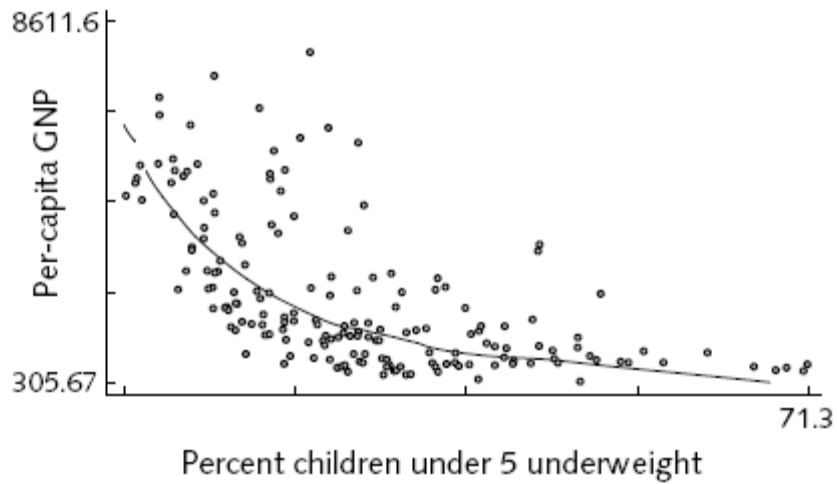


Figure 1.17 Annual net change in forest area, 2000-2005. Source: FAO, 2007a

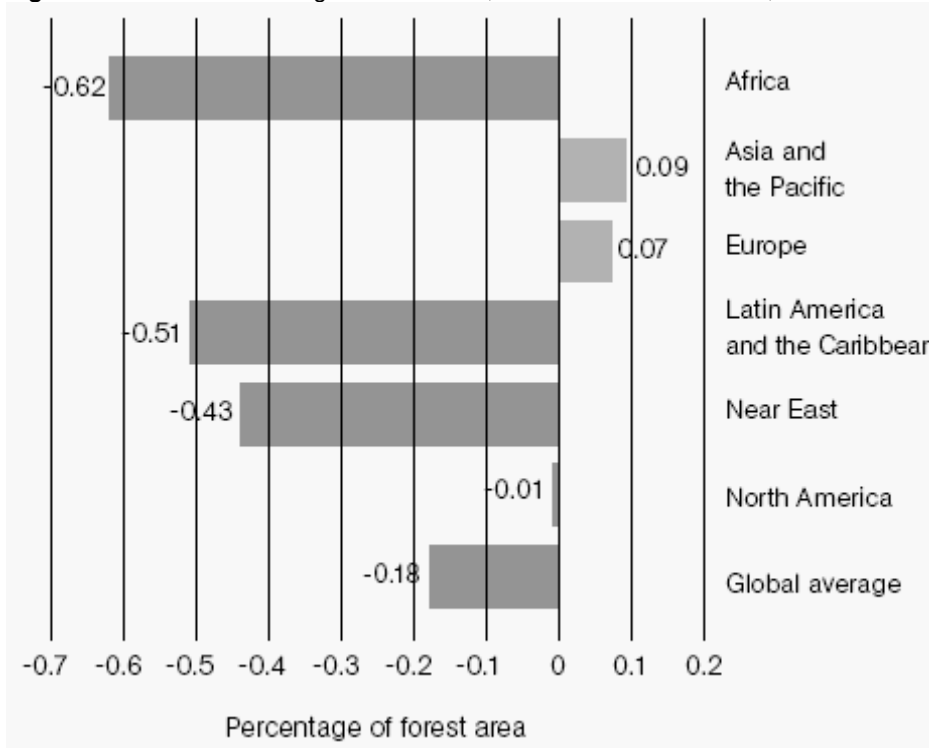


Figure 1.18 Share of rainfed and irrigated arable land in developing countries, 1998–2002 (%). Source: HDR, 2006

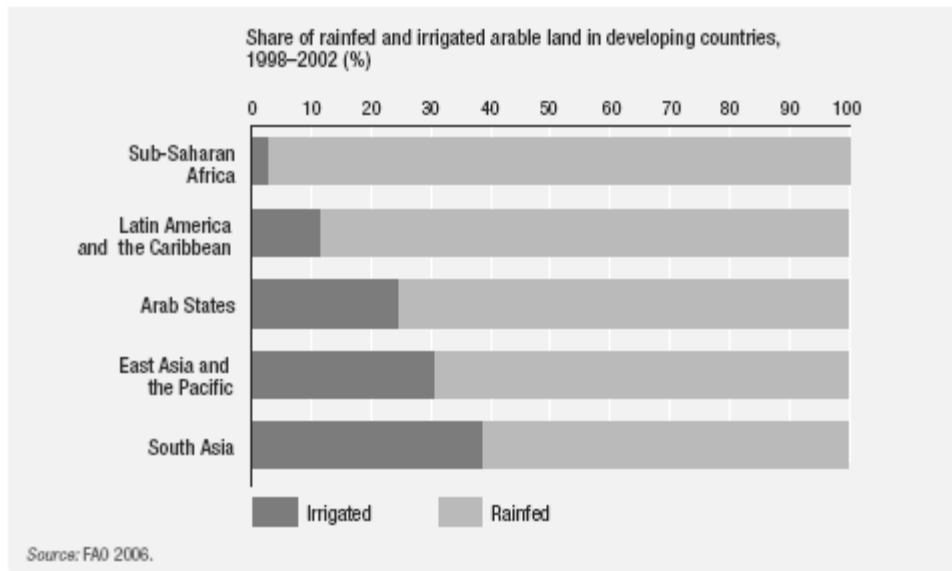


Figure 1.19 Climate change will cause a decline in water run-off for many regions. Source: HDR, 2006

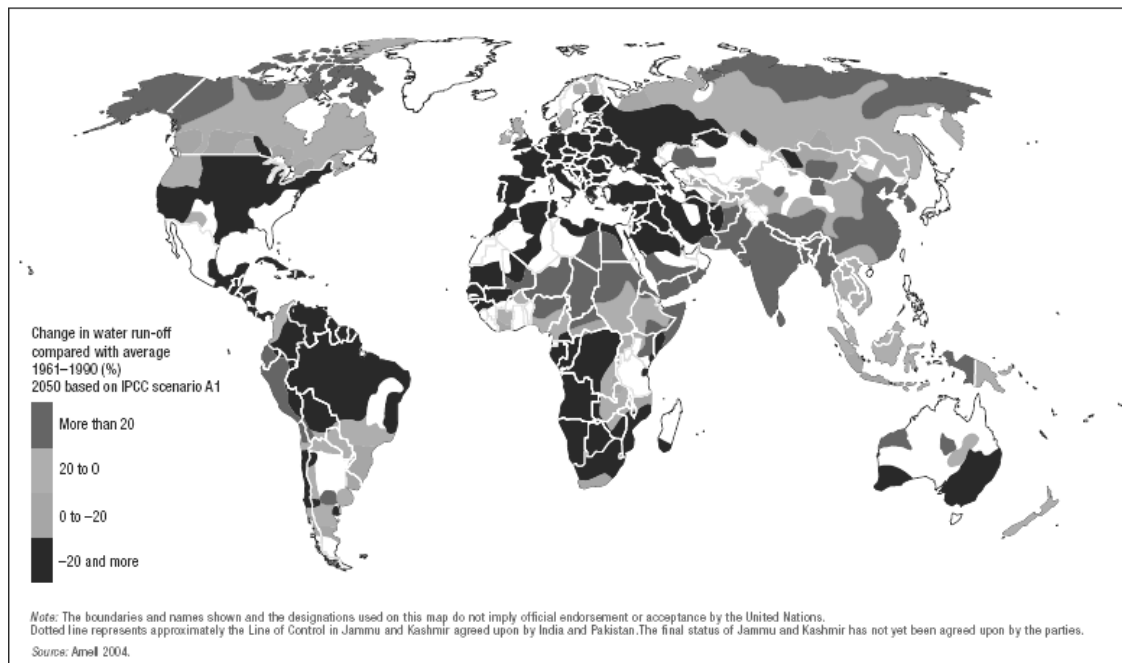
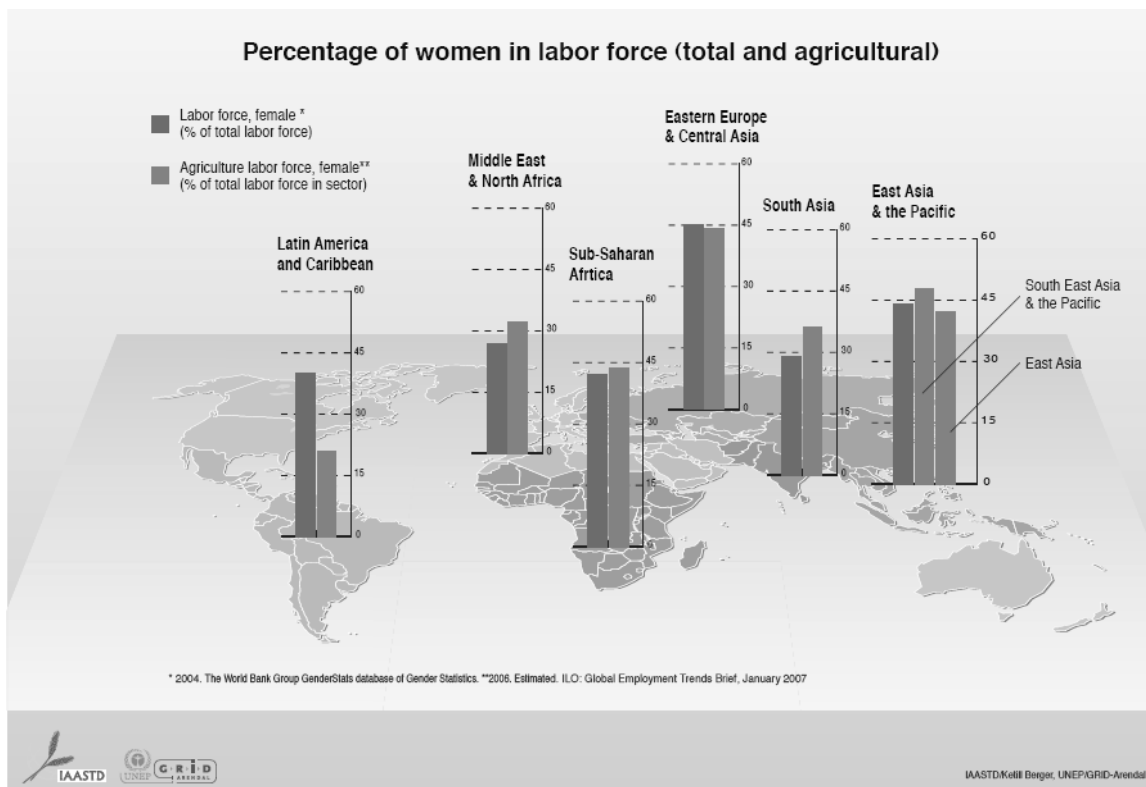


Figure 1.20 Percentage of women in labor force (total and agricultural). Source: World Bank, 2004b; ILO, 2007.



Tables

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

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

Table 1.2. Approximate farm size by world region (Nagayets, 2005)

World region	Average farm size, hectares
Africa	1.6
Asia	1.6
Latin America and Caribbean	67.0
Europe	27.0
North America	121.0

Source: von Braun 2005; For Europe -- data includes Western Europe only.

Table 1.3. Positive functions of agriculture

	Environmental	Social	Food Security	Economic	Cultural
Global	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
Regional/National	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
Local	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 1.4 Overview of issues addressed by indicators in the IAASTD framework.

IAASTD framework components	Issues addressed by indicators
Development and Sustainability Goals	<ul style="list-style-type: none"> • Decreased hunger and poverty • Improved nutrition and human health • Sustainable economic development • Enhanced livelihoods and equity • Environmental sustainability
AKST Systems	<ul style="list-style-type: none"> • Research / Innovation policies • Local and institutional setting of AKST • Social organization • Generation, dissemination, access to, adoption and use of AKST • Agricultural markets
Agricultural Outputs and Services	<ul style="list-style-type: none"> • Biomass, livestock, fish, crop production • Forestry for food

	<ul style="list-style-type: none">• Fiber• Carbon sequestration• Energy• Ecosystem services
Indirect drivers	<ul style="list-style-type: none">• Economic• Demographic• Sociopolitical
Direct drivers	<ul style="list-style-type: none">• Economic• Demographic• Availability and management of natural resources

