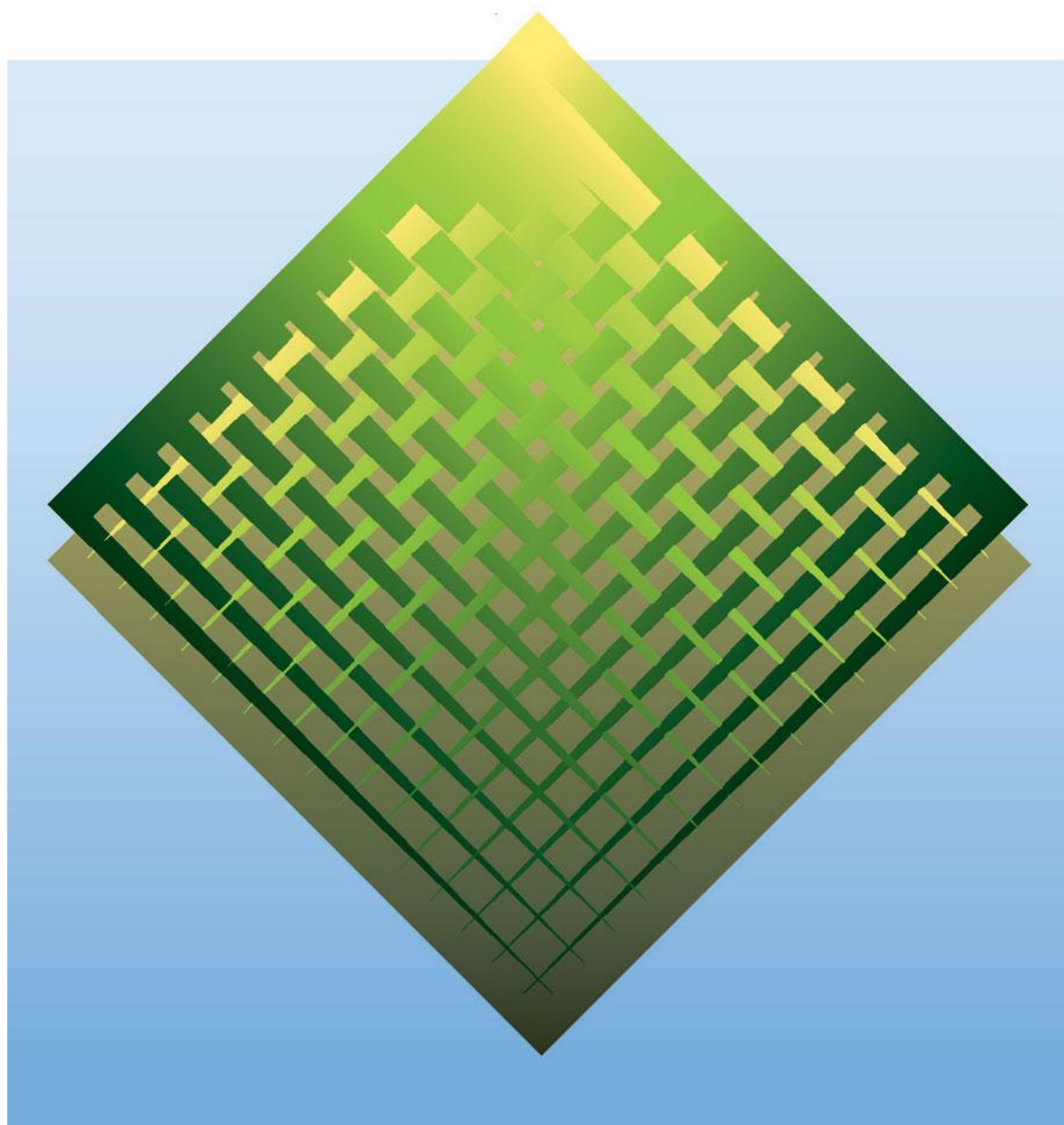


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Human Development Report 2011

Sustainability and Equity: A Better Future for All

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AFRICA

Simulations for this Report suggest that by 2050 the global HDI would be 8 percent lower than in the baseline in an "environmental challenge" scenario that captures the adverse effects of global warming on agricultural production, on access to clean water and improved sanitation and on pollution (and 12 percent lower in South Asia and Sub-Saharan AFRICA). Under an even more adverse "environmental disaster" scenario, which envisions vast deforestation and land degradation, dramatic declines in biodiversity and accelerated extreme weather events, the global HDI would be some 15 percent below the projected baseline.

Pg 4

AFRICA

Agriculture accounts for 70-85 percent of water use, and an estimated 20 percent of global grain production uses water unsustainably, imperilling future agricultural growth. • Deforestation is a major challenge. Between 1990 and 2010 Latin America and the Caribbean and Sub-Saharan AFRICA experienced the greatest forest losses, followed by the Arab States. The other regions have seen minor gains in forest cover. • Desertification threatens the drylands that are home to about a third of the world's people.

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AFRICA

The other regions have seen minor gains in forest cover. • Desertification threatens the drylands that are home to about a third of the world's people. Some areas are particularly vulnerable - notably Sub-Saharan AFRICA, where the drylands are highly sensitive and adaptive capacity is low. Adverse environmental factors are expected to boost world food prices 30-50 percent in real terms in the coming decades and to increase price volatility, with harsh repercussions for poor households.

Pg 7

AFRICA

Meeting unmet need for family planning by 2050 would lower the world's carbon emissions an estimated 17 percent below what they are today. The GII also focuses on women's participation in political decision-making, highlighting that women lag behind men across the world, especially in Sub-Saharan AFRICA, South Asia and the Arab States. This has important implications for sustainability and equity. Because women often shoulder the heaviest burden of resource collection and are the most exposed to indoor air pollution, they are often more affected than men by decisions related to natural resources.

Pg 23

AFRICA

Poor countries are catching up with rich countries on the HDI, convergence that paints a far more optimistic picture than do trends in income, where divergence continues. But not all countries have seen rapid progress, and the variations are striking. People in Southern AFRICA and the former Soviet Union have endured times of regress, especially in health. And countries starting from the same position had markedly different experiences. China's per capita income grew an astounding 1,200 percent over the 40 years, but the Democratic Republic of the Congo's fell 80 percent.

Pg 28

AFRICA

Worsening income inequality has offset large improvements in health and education inequality, such that the aggregate loss in human development due to inequality sums to 24 percent. • The global trends conceal widening educational inequality in South Asia and deep health inequality in AFRICA. • Latin America remains the most unequal region in income, but not in health and education. • Sub-Saharan

AFRICA has the greatest inequality in the HDI. Narrowing health inequalities Health affects people's capability to function and flourish.

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AFRICA

The global trends conceal widening educational inequality in South Asia and deep health inequality in AFRICA. • Latin America remains the most unequal region in income, but not in health and education. • Sub-Saharan AFRICA has the greatest inequality in the HDI. Narrowing health inequalities Health affects people's capability to function and flourish. The evidence shows a positive correlation between health and socioeconomic status.

Pg 29

AFRICA

Very high HDI countries led the way, closely followed by improvements in East Asia and the Pacific and Latin America and the Caribbean, with the Arab States not far behind. Gains were most modest in Sub-Saharan AFRICA, from the lowest starting levels, due mainly to the HIV/AIDS pandemic, especially in Southern AFRICA, where adult HIV/AIDS prevalence rates still exceed 15 percent (figure 2.4). Improving equity in education Progress in expanding education opportunities has been substantial and widespread, reflecting improvements in the quantity of schooling and greater gender equity and access.

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AFRICA

Very high HDI countries led the way, closely followed by improvements in East Asia and the Pacific and Latin America and the Caribbean, with the Arab States not far behind. Gains were most modest in Sub-Saharan AFRICA, from the lowest starting levels, due mainly to the HIV/AIDS pandemic, especially in Southern AFRICA, where adult HIV/AIDS prevalence rates still exceed 15 percent (figure 2.4). Improving equity in education Progress in expanding education opportunities has been substantial and widespread, reflecting improvements in the quantity of schooling and greater gender equity and access.

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AFRICA

Education inequality worsened about 8 percent in South Asia, for instance, despite a massive average increase in education attainment of 180 percent. Widening income disparities Income inequality has deteriorated in most countries and regions - with some notable exceptions in Latin America and Sub-Saharan AFRICA. Some highlights: • Detailed studies show a striking increase in the income share of the wealthiest groups in much of Europe, North America, Australia and New Zealand. From 1990 to 2005 within-country income inequality, measured by the Atkinson inequality index, increased 23.3 percent in very high HDI countries.

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AFRICA

FIGURE 2.4 high HIV/AIDS prevalence rates in Southern AFRICA stall improvements in health inequality Loss in the health component of the HDI due to inequality, 1970-2010 Atkinson inequality index *Note:* See Technical note 2 for definition of the Atkinson inequality index. Each observation represents a five-year average. *Source:* HDRO calculations based on life expectancy data from the United Nations Department of Economic and Social Affairs, Population Division, Population Estimates and Projections Section, and Fuchs and Jayadev (2011).

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AFRICA

A base case scenario, which assumes limited changes in inequality, environmental threats and risks, anticipates for 2050 a global HDI that is 19 percent higher than today's (44 percent higher for Sub-Saharan AFRICA). The increase is less than a simple extrapolation of past trends would yield because progress in the HDI tends to slow at very high levels. • The environmental challenge scenario envisions intensified environmental risks at the household (indoor solid fuel use), local (water and sanitation), urban and regional (outdoor air pollution) and global levels.

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AFRICA

The global HDI in 2050 is 8 percent lower than in the base case and 12 percent lower for South Asia and Sub-Saharan AFRICA. • Under an environmental disaster scenario most early 21st century gains have eroded by 2050 as biophysical and human systems are stressed by overuse of fossil fuels and falling water tables, glacial melting, progressive deforestation and land degradation, dramatic declines in biodiversity, greater frequency of extreme weather events, peaking production of oil and gas, increased civil conflict and other disruptions.

Pg 32

AFRICA

In very high HDI countries the carbon intensity of production has fallen 52 percent, but total emissions and emissions per capita have more than doubled and are 112 percent higher now than 40 years ago. Improvements in carbon efficiency have not kept up with economic growth. • Emissions are more than 10 times higher in East Asia and the Pacific than in Sub-Saharan AFRICA.

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AFRICA

While very high HDI countries account for the largest share of world carbon dioxide emissions, low, medium and high HDI countries account for more than three-fourths of the growth in carbon dioxide emissions since 1970. East Asia and the Pacific is the largest contributor by far to the increase in these emissions (45 percent), while Sub-Saharan AFRICA contributed only 3 percent, and Europe and Central Asia, 2 percent (figure 2.8). For methane and nitrous oxide, we have data for a shorter period, but here too, the contribution of the East Asia and the Pacific region is pronounced.

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AFRICA

The largest decline has been in Sub-Saharan AFRICA (7 millimetres, or more than 7 percent) and in low HDI countries (4 millimetres, or more than 4 percent), followed by medium HDI countries (figure 2.9). Low HDI countries have also experienced the sharpest increases in rainfall variability.

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AFRICA

There is no scientific consensus on the net effects of climate change on precipitation, given different patterns around the world. However, some broad regional trends emerge from the climate models. AFRICA is expected to see higher than average warming - with less rain in North AFRICA and the southern and western parts of the continent but more rain in East AFRICA. Western Europe is expected to become warmer and wetter, while the Mediterranean will experience less rainfall.

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AFRICA

However, some broad regional trends emerge from the climate models. AFRICA is expected to see higher than average warming - with less rain in North AFRICA and the southern and western parts of the continent but more rain in East AFRICA. Western Europe is expected to become warmer and wetter, while the Mediterranean will experience less rainfall. In Asia the number of hot days will increase, and the number of cold days will decrease.

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AFRICA

TABLE 2.2 projected impacts of a half-metre rise in sea level by 2050 *Source:* HDRO calculations based on data from Wheeler 2011.

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AFRICA

The lowest shares of severely and very severely degraded land in developing regions are in Latin America and the Caribbean and Europe and Central Asia, and the highest are in South Asia. Nonetheless the highest shares of people living on degraded land are in the Arab States (25 percent of the population) and Sub-Saharan AFRICA (22 percent) (see statistical table 7). Water is vital for natural systems and human development. Irrigated lands produce two to three times as much as rainfed agriculture. Agriculture accounts for 70-85 percent of water use - and an estimated 20 percent of global grain production uses water unsustainably.

Pg 38

AFRICA

The average forest share is similar in very high and low HDI countries (28-29 percent), and around 23 percent in medium HDI countries. And while very high HDI countries have increased total forest cover about 1 percent since 1990, low HDI countries have averaged 11 percent loss and high HDI countries 4 percent loss, while medium HDI countries have had almost no change. Latin America and the Caribbean and Sub-Saharan AFRICA had the greatest loss, followed by the Arab States; the other regions have seen

minor gains (figure 2.10). Seven developing countries (Bhutan, China, Costa Rica, Chile, El Salvador, India, and Viet Nam) have recently transitioned from deforesting to reforesting with support from domestic and international programmes.

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AFRICA

The impact of biodiversity loss on human development is severe in tropical developing countries, where poor communities rely heavily on natural resources. For example, wild foods are an important source of vitamins and minerals in the diets of many AFRICAN communities. Use of wild foods can also reduce disease transmission in complex tropical ecosystems.

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AFRICA

FIGURE 2.10 Some regions deforest, others reforest and afforest Forest cover shares and rates of change by region, 1990-2010 (millions of square kilometres) *Source:* HDRO calculations based on data from World Bank (2011b).

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AFRICA

Global trends tell a more optimistic story. Pollution measurement has been a subject of vigorous debate, but outdoor concentrations of particulate matter suggest declines around the world over the past two decades. Sub-Saharan AFRICA has seen more rapid decline, though from a higher level. In very high HDI countries pollution has fallen almost one-third. Even so, average concentrations of particulate matter in urban areas are 2.3 times higher in low, medium and high HDI countries than in very high HDI countries.⁷⁸ Richer countries have tougher air quality regulations and measures targeting air pollution, such as control systems on power plants and industrial facilities, catalytic converters on vehicles and cleaner fuels. This section on trends in key environmental indicators and their threats to human development has shown deterioration on several fronts, but not on all.

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AFRICA

FIGURE 3.2 environmental deprivations in the MPI Share of multidimensionally poor with three environmental deprivations (percent) Environmental deprivation contribution to the MPI (percent)
Note: The dashed line in the top panel denotes what the average contribution of environmental deprivations would be if their contribution to total poverty were equal to their weight in the MPI.

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AFRICA

But there are some good performers as well, with lower shares of environmental deprivation. In several Arab States (Jordan, Occupied Palestinian Territory, the Syrian Arab Republic and the United Arab Emirates) and European and Central Asian countries (Croatia, Estonia, Russian Federation and Ukraine) such deprivations are less than half their weight in the index. Brazil has also performed well. Regional patterns show that environmental deprivations are most acute in Sub-Saharan AFRICA: 99 percent of the multidimensionally poor face at least one environmental deprivation, and nearly 60 percent face all three (figure 3.2, bottom panel). Environmental deprivations are also severe, if less pervasive, in South Asia: 97 percent of the poor suffer at least one deficit, and 18 percent face all three.

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AFRICA

By contrast, in Europe and Central Asia 39 percent of the poor have one or more environmental deprivations (excluding Tajikistan, where the poor population is large and the share with one deprivation or more is an unusually high 82 percent). Few have all three - just over 1 percent, excluding Tajikistan. Deprivations are most widespread for access to cooking fuel (figure 3.3). In South Asia and Sub-Saharan AFRICA, the two poorest regions, more than 90 percent of the multidimensionally poor lack access to modern cooking fuel. More than 85 percent of poor people in both regions lack access to improved sanitation.

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AFRICA

FIGURE 3.3 Environmental deprivations are greatest for access to modern cooking fuel *Note:* Survey years vary by country; see statistical table 5 for details. *Note:* Survey years vary by country; see statistical table 5 for details. Data are not shown for the Arab States because low poverty levels render the results potentially unreliable. *Source:* Calculated based on data in statistical table 5.

AFRICA

The MPI sheds light on the patterns of environmental deprivations facing households, showing the prevalence of overlapping deprivations but also, more optimistically, highlighting countries that have done relatively well-played in planning, designing and implementing small subprojects for water supply, sanitation, health and hygiene. The worst performers by share of the multidimensionally poor with environmental deprivations are located across several regions, with Sub-Saharan AFRICAN countries featuring prominently. Among the countries performing relatively poorly in this respect, weak institutional capacity emerges as one explanation. Some examples: • The share of Peru's population with access to water and sanitation is among the lowest in Latin America.

AFRICA

Notes: Higher temperatures will broaden the spread and increase the transmission rates of vector-and rodent-borne diseases, expanding endemic areas for malaria, tick-borne encephalitis and dengue fever. Estimates suggest that 260-320 million more people will be affected by malaria by 2080, and many more will be at risk of contracting dengue fever. A recent study of 19 AFRICAN countries found that weather variations increased the prevalence of diarrhoea, acute respiratory infections and under-nutrition in children under age 5. Heat stress will rise with temperatures, and more people will die from heatstroke - particularly urban residents and people with respiratory conditions.

AFRICA

Land degradation reduces arable land and crop yields and increases the frequency of flooding. Specifically: • Loss of fertile topsoil is reducing land productivity, with estimated yield losses as high as 50 percent in the most adverse scenarios. Sub-Saharan AFRICA (especially Angola, Gabon and Swaziland) and East Asia and the Pacific (especially China, Indonesia, Malaysia and Myanmar) are hit hardest. • Drylands, home to about a third of the world's population, are threatened by desertification.

AFRICA

Sub-Saharan AFRICA (especially Angola, Gabon and Swaziland) and East Asia and the Pacific (especially China, Indonesia, Malaysia and Myanmar) are hit hardest. • Drylands, home to about a third of the world's population, are threatened by desertification. Some areas are especially vulnerable, such as Sub-Saharan AFRICA's drylands, where adaptive capacity is low. Other parts of the world have also been affected. Land degradation in northern China's Minqin County led to the abandonment of more than 80 percent of its farmland.

Pg 55

AFRICA

Globally, maize production has decreased 3.8 percent and wheat production 5.1 percent since 1980 due to climate change, with considerable regional variation (and some countries even benefitting from a changing climate). For rice and soy, countries benefitting and losing largely balanced out. Projections through 2030 suggest that maize and wheat production in Southern AFRICA will fall sharply, while rice yields are expected to be positively affected by climate change. Rainfed maize yields are predicted to increase in China's northeast but to fall in its southern regions.

Pg 56

AFRICA

One modelling exercise covering 15 countries found that the effects on income Poverty depend on a household's location and whether it engages in agriculture. Price hikes were predicted to hurt nonagricultural households most, with 20-50 percent falling into poverty in parts of AFRICA and Asia. But households specializing in agriculture benefit, and many in Latin America and the Caribbean and elsewhere in Asia are lifted from poverty. • Another recent study of nine countries (Bolivia, Cambodia, Madagascar, Malawi, Nicaragua, Pakistan, Peru, Viet Nam and Zambia) found that rising food prices increased income poverty overall, even if rural food producers did better.

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AFRICA

Pressuring forests Around 350 million people living in or near forests depend on forest wood and nonwood resources for subsistence and income. Many people in developing countries rely on forests for fuelwood: in Asia and the Pacific more than 70 percent of wood removed from forests is for fuel; in AFRICA the share may be as high as 90 percent. Women are responsible for most fuelwood collection in many parts of the world. Though global data are lacking on the number of women working in forestry, evidence suggests that women, with fewer occupational options and less mobility, rely on forests more

than men do. Forest resources also generate income, through employment and the sale of goods and services.

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AFRICA

Countries most at risk from over fishing and climate change are also among those relying most on fish for dietary protein, livelihoods and exports. More than 80 percent of the world's poor fishers are in South and Southeast Asia. But two-thirds of the countries whose capture fisheries are most vulnerable to climate change are in tropical Africa. Climate change is predicted to reduce fishery resources in the Pacific Islands by as much as half by 2100 and to drastically reduce mangrove forests and coral reefs. Research commissioned by the United Nations development Programme Pacific Centre emphasizes the centrality of fishing to livelihoods in the Pacific region for both subsistence and cash.

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AFRICA

Nearly half the households in low HDI countries, mostly in Sub-Saharan AFRICA, spend more than 30 minutes a day collecting water. The burden is especially high in rural areas. Trips average 82 minutes in Somalia, 71 minutes in Mauritania and 65 minutes in Yemen. Widespread environmental stress increases time burdens for households, with adverse implications for their well-being.

Pg 58

AFRICA

The UN High Commissioner for Refugees found that 24 million people had been displaced by floods, famine and other environmental factors. A recent detailed estimate suggests that temperature and rainfall variation drove some 2.35 million people in Sub-Saharan Africa to move between 1960 and 2000. As argued in the 2009 HDR, expanding people's opportunities to choose where they live is an important way to expand their freedoms.

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AFRICA

TABLE 3.2 Average time per week spent fetching wood and water, rural areas of selected Sub-Saharan AFRICAN countries (hours) *Source:* HDRO calculations based on data from Bardasi and Wodon (2009) (Guinea); Blackden and Wodon (2006) (Madagascar); Beegle and Wodon (2006) (Malawi); and Wodon and Ying (2010) (Sierra Leone).

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AFRICA

An estimated 40 percent of civil wars over the past 60 years are associated with natural resources, and since 1990 at least 18 violent conflicts have been fuelled by the exploitation of natural resources and other environmental factors. Some cross-country evidence is illustrative. For example, greater variability in rainfall increases the risk of civil conflict, particularly in Sub-Saharan AFRICA, where a 1°C rise in temperature is associated with a greater than 10 percent increase in the likelihood of civil war the same year. Recent episodes support the link.

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AFRICA

Last year's HDR introduced the Gender Inequality Index (GII) for 138 countries. This year it covers 145 countries, and our updated estimates confirm that the largest losses due to gender inequality are in Sub-Saharan AFRICA, followed by South Asia and the Arab States. In Sub-Saharan AFRICA the biggest losses arise from gender disparities in education and from high maternal mortality and adolescent fertility rates. In South Asia women lag behind men in each dimension of the GII, most notably in education, national parliamentary representation and labour force participation.

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AFRICA

One multidimensionally poor person in three (32 percent) lacks electricity, and there is a strong regional pattern to this deprivation (figure 4.1). More than 60 percent of the multidimensionally poor in Sub-Saharan AFRICA lack electricity, compared with less than 1 percent in Europe and Central Asia. Progress in electrification has been slow in AFRICA. Electricity generation capacity per person in Sub-Saharan AFRICA today is similar to levels in the 1980s but just a tenth that in South and East Asia.

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AFRICA

More than 60 percent of the multidimensionally poor in Sub-Saharan AFRICA lack electricity, compared with less than 1 percent in Europe and Central Asia. Progress in electrification has been slow in AFRICA. Electricity generation capacity per person in Sub-Saharan AFRICA today is similar to levels in the 1980s but just a tenth that in South and East Asia. And rural electrification has stagnated at below 10 percent - while growing to 50 percent for developing countries as a whole.⁷ Electrification can reduce poverty by increasing productivity, employment and time spent in school and reducing environmental pressures.

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AFRICA

FIGURE 4.1 large regional differences in the share of multidimensionally poor people lacking electricity
Note: Excludes very high HDI countries. *Source:* HDRO staff calculations based on data from the Oxford Poverty and Human Development Initiative.

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AFRICA

Developing countries are adopting renewable energy and now have more than half of global renewable power capacity for close to 70 percent of electricity generated in Sub-Saharan AFRICA (excluding South AFRICA). According to the Renewable Energy Policy Network for the 21st Century, global energy supply reached a tipping point in 2010, as renewables accounted for a quarter of global power capacity and delivered almost a fifth of electricity supply (see statistical table 6).

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AFRICA

The continuing roll-out of renewable energy sources will require large private investments, but corruption and lack of regulation can slow the momentum. A recent Transparency International study, for example, reported that almost 70 percent of potential energy investors in North AFRICA consider regulatory risk, including corruption, a serious impediment to investment. Technical limitations must also be overcome. For example, intermittency raises capital costs for wind and solar power and requires supplementation by other sources.

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AFRICA

A first step in increasing access to potable water is recognizing equal rights to water, regardless of ability to pay. Right-to-water legislation exists in 15 countries in Latin America, 13 in Sub-Saharan AFRICA, 4 in South Asia, 2 in East Asia and the Pacific and 2 in the Arab States. In July 2010 the UN General Assembly recognized the right to water and sanitation and acknowledged that clean drinking water and improved sanitation are integral to the realization of all human rights.

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AFRICA

Along with increasing the use of toilets, other behavioural interventions, such as promoting hand washing, are reducing faecal bacterial contamination in AFRICA and Asia. In sum, greater public policy efforts are needed to increase investments in water and sanitation to improve access. Current patterns of natural resource exploitation are creating huge environmental hardships for the poor, who are often excluded from even minimal levels of service.

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AFRICA

In Himachal Pradesh, India, the number of people in rural areas who had toilets rose from 2.4 million in 2006 to 5.6 million in 2010 out of a total population of 6 million. CLTS has spread to more than 40 countries: more than 10 million people in AFRICA and Asia already live in open defecation-free communities, and many more have benefited from toilets. In some countries CLTS is making the sanitation Millennium Development Goal look not just achievable but surpassable.

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AFRICA

Sweden recognizes the right of public access through its constitutional "Don't disturb; don't destroy" policy: people have the right to roam freely in the countryside as long as they do not inconvenience others. Kenya's 2010 Constitution grants the right to a clean environment and requires the government to maintain its natural resources. At least 31 other AFRICAN countries express environmental rights in their constitutions, and some - such as Ethiopia and NAMIBIA - also stress that economic development

should not harm the environment. The enforceability of environmental rights in AFRICA is largely untested, however, except in South AFRICA.

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AFRICA

India's Mahatma Gandhi National Rural Employment Guarantee Act cost about 0.5 percent of GDP in 2009 and benefited 45 million households, about a tenth of the labour force. For several AFRICAN and Asian countries the international Labour Organization (ILO) estimated in 2008 that a scheme guaranteeing workers 100 days of employment a year could cost less than 1 percent of GDP on average.

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AFRICA

Countries with MPI data include 11 in the Arab States, 9 in East Asia and the Pacific, 23 in Europe and Central Asia, 18 in Latin America and the Caribbean, 5 in South Asia and 37 in Sub-Saharan AFRICA. There are 103 countries that have complete data on environmental deprivations - the descriptive analysis focuses on these countries. Data for the Arab States are not given because low poverty levels render the results potentially unreliable.

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AFRICA

Notes: 98 See www.fao.org/forestry/28811/en/. 99 FAO 2011. 100 Agarwal 2010b: 37; FAO 2010b: 16. 101 Mayers 2007. 102 Vedeld and others 2004: meta-study examining 54 case studies (33 in AFRICA). 103 Mitra and Mishra 2011. 104 Yemiru and others 2010. 105 Based on surveys covering 2002-2008 (Volker and Waible 2010). Similar findings are reached by Pattanayak and Sills (2001) for Brazil and McSweeney (2004) and Takasaki, Barham and Coomes (2004) for Honduras.

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AFRICA

Notes: Duval-Diop and Rose 2008. 91 See Grosh and others (2008) and Tucker (2010). 92 UKaid-DFID 2011. 93 Fuchs 2011. 94 See Arnall and others (2010). 95 Lieu-Kie-Song 2009. 96 South AFRICA

Department of Environmental Affairs and UNEP 2011. 97 UNDP 2011c. Chapter 5 1 Frankel and Bosetti 2011. 2 IPCC 2007. 3 Chang and Grabel 2004; Rodrik 2006. 4 See Aghion (2009); Rodrik (2005); Lin 2010.

Pg 6

ANGOLA

Dimensions of disadvantage can interact, Compounding adverse impacts - for example, the intensity of health risks is highest where water and sanitation are inadequate, deprivations that often coincide. Of the 10 countries with the highest rates of death from environmental disasters, 6 are also in the top 10 in the MPI, including Niger, Mali and ANGOLA. Impeding education advances for disadvantaged children, especially girls. Despite near universal primary school enrolment in many parts of the world, gaps remain. Nearly 3 in 10 children of primary school age in low HDI countries are not even enrolled in primary school, and multiple constraints, some environmental, persist even for enrolled children.

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ANGOLA

TABLE 3.1 ten countries with the lowest share of environmental deprivations among the multidimensionally poor, most recent year available for 2000-2010 Lowest share of multidimensionally poor with at least one deprivation Lowest share of multidimensionally poor with all three deprivations
Note: Countries in bold are on both lists. *Source:* HDRO calculations based on data in statistical table 5.

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ANGOLA

FIGURE 3.5 Deaths attributable to environmental risks are associated with high MPI levels Deaths due to environmental causes (per million people) *Note:* Excludes very high HDI countries. Survey years vary by country; see statistical table 5 for details. *Source:* Calculations based on data from statistical table 5 and Pruss-Ustun and others 2008.

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ANGOLA

Land degradation reduces arable land and crop yields and increases the frequency of flooding. Specifically: • Loss of fertile topsoil is reducing land productivity, with estimated yield losses as high as 50 percent in the most adverse scenarios. Sub-Saharan Africa (especially ANGOLA, Gabon and Swaziland) and East Asia and the Pacific (especially China, Indonesia, Malaysia and Myanmar) are hit hardest. • Drylands, home to about a third of the world's population, are threatened by desertification.

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BENIN

FIGURE 3.7 unmet contraceptive need is higher among the multidimensionally poor *Note:* Data are for most recent year available during 2000–2010 and are based on the Demographic and Health Survey second definition of unmet need (DHS 2008). *Source:* Calculated based on data on MPI from statistical table 5 and from Demographic and Health Surveys.

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BOTSWANA

Conserving biodiversity while promoting equity In recent years perceived trade-offs between preserving livelihoods and maintaining biodiversity have been replaced by a clearer understanding of the potential synergies. For instance, preserving natural ecosystems and biodiversity can help secure livelihoods, food, water and health. Many countries (including BOTSWANA, Brazil and Namibia) and international organizations (including the United Nations Development Programme) are calling for investments to preserve biodiversity for its potential development benefits. One instrument is to assign and enforce protected area status to ecosystems, putting in place measures to avert or reverse land degradation and ecotourism.

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BOTSWANA

Notes: 6 Baker 2011. 107 SDR surpluses occur when a country's holdings exceed allocations. The largest SDR surplus countries include the United States, China, Japan, Libya, Saudi Arabia, Kuwait and BOTSWANA. 108 Birdsall and Leo (2011). Willing governments would use a small portion of their SDR allocation to capitalize a third-party financing entity that would offer bonds on international capital markets backed by SDR reserves.

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BURKINA FASO

Almost 6 in 10 of the economically active people engaged in these activities live in low HDI countries, while just 3 percent live in very high HDI countries. In Bhutan, BURKINA FASO and Nepal, 92 percent of economically active people depend directly on natural resources for their livelihoods; less than 1 percent do in Bahrain, Qatar, Singapore and Slovenia. The rural poor depend overwhelmingly on natural resources for their income.

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BURKINA FASO

Notes: The ILO (2008) estimates the cost would not exceed 0.5 percent of GDP in Bangladesh, Cameroon, Guinea, India, Pakistan, Senegal and Viet Nam, for example; while for BURKINA FASO, Ethiopia, Kenya, Nepal and Tanzania the costs are 0.7-0.8 percent of GDP. 97 See Cichon and Hagemeyer (2006). 98 "Adaptive social protection" is a term coined by researchers at the Institute of Development Studies, Sussex, to bring together thinking about social protection, disaster risk reduction and climate change adaptation (Davies, Oswald and Mitchell 2009).

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BURUNDI

Emissions per capita vary from a low of 0.04 tonnes in BURUNDI to a high of 53 tonnes in Qatar. Trade enables countries to shift the carbon content of the goods they consume to the trading partners that produce them. The carbon dioxide emitted in the production of goods traded internationally increased by half from 1995 to 2005. Several countries that have committed to cutting their own emissions are net carbon importers, including Germany and Japan, as are countries that have not signed or ratified global treaties, such as the United States.

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BURUNDI

FIGURE 3.6 Gender equality and contraceptive prevalence are closely linked Contraceptive prevalence rate (percent) Gender Inequality Index *Note:* Contraceptive prevalence rates are for the most recent year available from the World Health Organization for each country during 2000-2008; see statistical table 4 for details.

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CAMEROON

FIGURE 3.5 Deaths attributable to environmental risks are associated with high MPI levels Deaths due to environmental causes (per million people) *Note:* Excludes very high HDI countries. Survey years vary by country; see statistical table 5 for details. *Source:* Calculations based on data from statistical table 5 and Pruss-Ustun and others 2008.

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CAMEROON

FIGURE 3.7 unmet contraceptive need is higher among the multidimensionally poor Population with unmet contraceptive need (percent) *Note:* Data are for most recent year available during 2000–2010 and are based on the Demographic and Health Survey second definition of unmet need (DHS 2008). *Source:* Calculated based on data on MPI from statistical table 5 and from Demographic and Health Surveys.

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CAMEROON

And there is cause for optimism. Innovative approaches are under way in many countries. Some highlights: • Providing affordable access. Small-scale, needs-driven technologies can provide households with low-cost potable water. In CAMEROON cheap bios and filters, developed in South Africa, are used to make water safe to drink. In India the international nongovernmental organization (NGO) Water for People partnered with a local university to develop simple, locally manufactured filters that remove arsenic from the water at public wellheads in West Bengal.

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CAMEROON

At least 31 other African countries express environmental rights in their constitutions, and some - such as Ethiopia and NAMIBIA - also stress that economic development should not harm the environment. The enforceability of environmental rights in Africa is largely untested, however, except in South Africa. Some countries have structural impediments. In CAMEROON citizens do not have the right to appeal to

the country's constitutional council, which limits enforceability. And in Namibia environmental rights can be enforced only by someone with a private interest, barring claims in the public interest. Several Latin American countries, including Chile, Costa Rica, Ecuador and Peru, have recognition of equal rights to a healthy, well-functioning environment, enabling institutions are needed, including a fair and independent judiciary and the right to information from governments enforceable environmental rights.

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CAMEROON

Notes: Article 44 of the 1994 Constitution of the Federal Democratic Republic of Ethiopia says that "government shall endeavor to ensure that all Ethiopians live in a clean and healthy environment" and Article 92 that "the design and implementation of programmes and of development shall not damage or destroy the environment." Constitution of the Republic of CAMEROON 1996, Article 47(2). 35 Constitution of the Republic of Namibia 1990, Article 25(2). 36 Bruch, Coker and Van Arsdale 2007. 37 Costa Rica, El Salvador and Honduras do not recognize environmental rights for indigenous peoples, and the constitutions of Guatemala, Panama, Paraguay and Peru refer to land but not natural resources (Aguilar and others 2010).

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CAMEROON

Notes: 4 Transparency International calculations based on the Conference of Parties documentation, pollution data from 2006 (UN Stats Division 2010) and Climate Risk Index 2010 by Germanwatch (Transparency International 2011). 65 Ballesteros and others 2009. 66 www.un-redd.org/Home/tabid/565/Default.aspx. 67 In Eastern CAMEROON, for example, a United Nations Development Programme (UNDP) initiative gave the Baka people access to video cameras to document how climate change is damaging the forests where they live, and the resulting documentary was used in advocacy work at the 2009 Global Indigenous Summit on Climate Change (UNDP 2010).

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CAMEROON

Notes: And while 75 percent of people over age 64 receive some kind of pension in high-income countries, less than 20 percent do in low-income countries, with a median of just over 7 percent (see ILO 2010). 95 OECD 2010b. The ILO (2008) estimates the cost would not exceed 0.5 percent of GDP in Bangladesh, CAMEROON, Guinea, India, Pakistan, Senegal and Viet Nam, for example; while for Burkina

Faso, Ethiopia, Kenya, Nepal and Tanzania the costs are 0.7-0.8 percent of GDP. 97 See Cichon and Hagemeyer (2006).

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CHAD

FIGURE 3.5 Deaths attributable to environmental risks are associated with high MPI levels Deaths due to environmental causes (per million people) *Note:* Excludes very high HDI countries. Survey years vary by country; see statistical table 5 for details. *Source:* Calculations based on data from statistical table 5 and Pruss-Ustun and others 2008.

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CHAD

However, the same does not apply for income - if we control for income alone, gender inequality and contraceptive prevalence continue to be strongly linked. This underlines the importance of investments in health and education in furthering reproductive health choices. The reported unmet demand for family planning is very low in CHAD, the Democratic Republic of the Congo and Niger (below 5 percent), alongside very high average fertility. This can happen because of cultural or religious objections by women, their husbands or other family members; a lack of knowledge of contraceptive methods or fear of their side effects; or preference for larger families.

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CHAD

Note: Contraceptive prevalence rates are for the most recent year available from the World Health Organization for each country during 2000-2008; see statistical table 4 for details. The Gender Inequality Index is for 2011.

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CHAD

Notes: 164 Potts and Marsh 2010: p. 5. 165 United States National Academy of Sciences 1992: 26. 166 O'Neill and others 2010. 167 Wire 2009. 168 Of 6.2 births per woman for CHAD, 4.4 for the Democratic

Republic of Congo and 7.1 for Niger; see statistical table 4. 169 Mills, Bos and Suzuki 2010. 170 Filmer and Pritchett (2002) find a partial correlation between indicators of fuelwood scarcity and fertility in Pakistan, and Biddlecom, Axinn and Barber (2005) link poorer environmental quality and a greater reliance on public natural resources with higher fertility in Western Chitwan Valley, Nepal.

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COMOROS

FIGURE 3.5 Deaths attributable to environmental risks are associated with high MPI levels Deaths due to environmental causes (per million people) *Note:* Excludes very high HDI countries. Survey years vary by country; see statistical table 5 for details. *Source:* Calculations based on data from statistical table 5 and Pruss-Ustun and others 2008.

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CONGO, DEMOCRATIC REPUBLIC OF THE

FIGURE 3.7 unmet contraceptive need is higher among the multidimensionally poor Population with unmet contraceptive need (percent) *Note:* Data are for most recent year available during 2000–2010 and are based on the Demographic and Health Survey second definition of unmet need (DHS 2008). *Source:* Calculated based on data on MPI from statistical table 5 and from Demographic and Health Surveys.

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CONGO, DEMOCRATIC REPUBLIC OF THE

People in Southern Africa and the former Soviet Union have endured times of regress, especially in health. And countries starting from the same position had markedly different experiences. China's per capita income grew an astounding 1,200 percent over the 40 years, but the Democratic REPUBLIC of the CONGO's fell 80 percent. Advances in technical knowledge and globalization made progress more feasible for countries at all levels of development, but countries took advantage of the opportunities in different ways.

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CONGO, DEMOCRATIC REPUBLIC OF THE

Particularly striking were the changes in these countries relative to others at a similar HDI 40 years earlier. For instance, in 1970 Tunisia had a lower life expectancy than the DEMOCRATIC REPUBLIC of the CONGO and fewer children in school than Malawi. Yet by 2010 Tunisia was in the high HDI category, with an average life expectancy of 74 years and most children enrolled through secondary school.

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CONGO, DEMOCRATIC REPUBLIC OF THE

Not surprising, there is wide disparity across countries. For example, only 2.5 percent of people are dissatisfied with water quality in Denmark, compared with 78 percent in the DEMOCRATIC REPUBLIC of the CONGO.

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CONGO, DEMOCRATIC REPUBLIC OF THE

However, the same does not apply for income - if we control for income alone, gender inequality and contraceptive prevalence continue to be strongly linked. This underlines the importance of investments in health and education in furthering reproductive health choices. The reported unmet demand for family planning is very low in Chad, the DEMOCRATIC REPUBLIC of the CONGO and Niger (below 5 percent), alongside very high average fertility. This can happen because of cultural or religious objections by women, their husbands or other family members; a lack of knowledge of contraceptive methods or fear of their side effects; or preference for larger families.

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CONGO, DEMOCRATIC REPUBLIC OF THE

Notes: 165 United States National Academy of Sciences 1992: 26. 166 O'Neill and others 2010. 167 Wire 2009. 168 Of 6.2 births per woman for Chad, 4.4 for the DEMOCRATIC REPUBLIC of CONGO and 7.1 for Niger; see statistical table 4. 169 Mills, Bos and Suzuki 2010. 170 Filmer and Pritchett (2002) find a partial correlation between indicators of fuelwood scarcity and fertility in Pakistan, and Biddlecom, Axinn and Barber (2005) link poorer environmental quality and a greater reliance on PUBLIC natural resources with higher fertility in Western Chitwan Valley, Nepal.

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COTE D IVOIRE

Notes: 151 The probability of dying as a result of Hurricane Katrina was higher for people who were black and poor (Price 2008; 2007/2008 HDR: 81, box 2.3 [UNDP-HDRO 2008; see inside back cover for a list of HDR s). 152 Baez, de la Fuente and Santos 2010. 153 Seballos and others 2011. 154 Alderman, Hoddinott and Kinsey (2006). Jensen (2000) found similar results in COTE D'IVOIRE. 155 Baez and Santos (2007). 156 Alkire and Roche forthcoming. 157 Christiaensen, Do and Trung 2010. 158 UN 2010. 159 See the Mobile Alliance for Maternal Action (www.mobilemamaalliance.org/issue.html).

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ABIDJAN

The convention recognizes the urgency of the problem, but an adequate international regulatory framework has not yet been established. Exposure to hazardous waste in developing countries remains serious. In 2006 a Dutch company dumped 500 tonnes of toxic waste in 16 sites in ABIDJAN, contaminating the city's drinking water, soil and fisheries; killing at least 10 people; and affecting more than 100,000 people. Such cases reflect not only weaknesses in the Basel Convention but also the economic reality in many developing countries.

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ETHIOPIA

FIGURE 3.5 Deaths attributable to environmental risks are associated with high MPI levels Deaths due to environmental causes (per million people) *Note:* Excludes very high HDI countries. Survey years vary by country; see statistical table 5 for details. *Source:* Calculations based on data from statistical table 5 and Pruss-Ustun and others 2008.

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ETHIOPIA

Having access to electricity and other modern fuels can reduce the time spent collecting biomass fuel. In Malawi children often collect fuelwood and other resources, and their likelihood of attending school falls as time allocated to this work rises. In rural ETHIOPIA the probability of schooling as the main activity, especially for boys, falls as the time to reach a water source rises. A negative relationship was found between children's resource collection and their likelihood of attending school, though not the performance of those attending school.

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ETHIOPIA

In Arunachal Pradesh, India, poor households depended on community forests for basic survival, and households that had less land and less education and that were farther from markets depended more on forest products. •In southern ETHIOPIA forest income kept a fifth of the population above the poverty line, reducing income inequality some 15 percent. 104 •In Viet Nam forest products provided rural households with a safety net when other sources of income failed.

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ETHIOPIA

Every country, developed or developing, that offers women a full range of reproductive health options has fertility rates at or below replacement. Cuba, Iran, Mauritius, Thailand and Tunisia have fertility rates of less than two births per woman. And Addis Ababa's is also less than two births per woman, while ETHIOPIA's rural fertility rate remains above six. In much of rural Bangladesh, despite widespread poverty, fertility is now at the replacement rate. And family sizes have fallen as rapidly in Iran as they have in China, but without government limits on family size.

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ETHIOPIA

In Bolivia 27 percent of the multidimensionally poor have unmet need for family planning, more than twice the share among the nonpoor (12 percent), and in ETHIOPIA unmet need among the multidimensionally poor (29 percent) is almost three times the share among the nonpoor (11 percent). Fertility is also affected by women's education. A recent study covering more than 90 percent of the world's people found that women who have never gone to school average 4.5 children, those with even a few years of primary school average just 3, and those with one or two years of secondary school average 1.9.

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ETHIOPIA

FIGURE 3.7 unmet contraceptive need is higher among the multidimensionally poor Population with unmet contraceptive need (percent) *Note:* Data are for most recent year available during 2000–2010 and are based on the Demographic and Health Survey second definition of unmet need (DHS 2008). *Source:* Calculated based on data on MPI from statistical table 5 and from Demographic and Health Surveys.

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ETHIOPIA

TABLE 4.2 Social protection for adaptation and disaster risk reduction: benefits and challenges *Source:* Adapted from Davies and others in OECD (2009).

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ETHIOPIA

Sweden recognizes the right of public access through its constitutional "Don't disturb; don't destroy" policy: people have the right to roam freely in the countryside as long as they do not inconvenience others. Kenya's 2010 Constitution grants the right to a clean environment and requires the government to maintain its natural resources. At least 31 other African countries express environmental rights in their constitutions, and some - such as ETHIOPIA and NAMIBIA - also stress that economic development should not harm the environment. The enforceability of environmental rights in Africa is largely untested, however, except in South Africa. Some countries have structural impediments.

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ETHIOPIA

Since 1972 more than half of UN member states have added constitutional guarantees concerning the environment (Earthjustice 2007). Article 44 of the 1994 Constitution of the Federal Democratic Republic of ETHIOPIA says that "government shall endeavor to ensure that all ETHIOPIANS live in a clean and healthy environment" and Article 92 that "the design and implementation of programmes and of development shall not damage or destroy the environment." Constitution of the Republic of Cameroon 1996, Article 47(2).

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ETHIOPIA

Notes: The ILO (2008) estimates the cost would not exceed 0.5 percent of GDP in Bangladesh, Cameroon, Guinea, India, Pakistan, Senegal and Viet Nam, for example; while for Burkina Faso, ETHIOPIA, Kenya, Nepal and Tanzania the costs are 0.7-0.8 percent of GDP. 97 See Cichon and Hagemeyer (2006). 98 "Adaptive social protection" is a term coined by researchers at the Institute of Development Studies, Sussex, to bring together thinking about social protection, disaster risk reduction and climate change adaptation (Davies, Oswald and Mitchell 2009).

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ADDIS ABABA

Every country, developed or developing, that offers women a full range of reproductive health options has fertility rates at or below replacement. Cuba, Iran, Mauritius, Thailand and Tunisia have fertility rates of less than two births per woman. And ADDIS ABABA's is also less than two births per woman, while Ethiopia's rural fertility rate remains above six. In much of rural Bangladesh, despite widespread poverty, fertility is now at the replacement rate. And family sizes have fallen as rapidly in Iran as they have in China, but without government limits on family size.

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GABON

Land degradation reduces arable land and crop yields and increases the frequency of flooding. Specifically:

- Loss of fertile topsoil is reducing land productivity, with estimated yield losses as high as 50 percent in the most adverse scenarios. Sub-Saharan Africa (especially Angola, GABON and Swaziland) and East Asia and the Pacific (especially China, Indonesia, Malaysia and Myanmar) are hit hardest.
- Drylands, home to about a third of the world's population, are threatened by desertification.

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GABON

FIGURE 3.7 unmet contraceptive need is higher among the multidimensionally poor Population with unmet contraceptive need (percent) *Note:* Data are for most recent year available during 2000–2010 and are based on the Demographic and Health Survey second definition of unmet need (DHS 2008). *Source:* Calculated based on data on MPI from statistical table 5 and from Demographic and Health Surveys.

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GAMBIA

FIGURE 3.4 the share of the population with environmental deprivations rises with the MPI but with much variation around the trend MPI Share of multidimensionally poor with at least one deprivation (percent) Share of multidimensionally poor with three deprivations (percent) *Note:* Survey years vary by country; see statistical table 5 for details. The figures depict deviations from the trend for the regression exercises described in the text. *Source:* HDRO calculations based on Gallup World Poll data (www.gallup.com/se/126848/worldview.aspx).

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GAMBIA

TABLE 3.1 ten countries with the lowest share of environmental deprivations among the multidimensionally poor, most recent year available for 2000-2010 Lowest share of multidimensionally poor with at least one deprivation Lowest share of multidimensionally poor with all three deprivations *Note:* Countries in bold are on both lists. *Source:* HDRO calculations based on data in statistical table 5.

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GHANA

The economic costs of the health impacts of environmental factors, including malnutrition, are also large. The World Bank recently estimated them at close to 6 percent of GDP in GHANA and more than 4 percent in Pakistan. Adding the longer term effects on education and income boosts the annual cost for each country to as much as 9 percent of GDP.²⁷ The WHO's study of the global burden of disease underlines the importance of environmental factors.

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GHANA

FIGURE 3.5 Deaths attributable to environmental risks are associated with high MPI levels Deaths due to environmental causes (per million people) *Note:* Excludes very high HDI countries. Survey years vary by country; see statistical table 5 for details. *Source:* Calculations based on data from statistical table 5 and Pruss-Ustun and others 2008.

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GHANA

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GHANA

Case studies suggest that traditional values can protect natural resources. Over three decades in the Zambezi Valley of Zimbabwe, for instance, forests considered sacred lost less than half the cover of those that were not. In GHANA conservative traditions and practices led to the designation of sacred areas and to periodic restrictions on farming, harvesting and fishing. Local knowledge also informs natural disaster responses. Chile reported only 8 fisher victims out of an estimated population of about 80,000 following the February 2010 tsunami, thanks mostly to lessons from previous tsunamis passed down through elders' stories and neighbours' evacuation alerts.

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GHANA

Policy measures to respond to such concerns, such as exemptions and compensation, can be costly, and the distributional impacts need to be understood. Alternatives, such as more effective consultations and public communications, should also be contemplated.²⁰ Consumption and production profiles can shape distributional effects. Two examples from the energy sector: • GHANA's electricity sector was draining the government budget. In 2002 public utility company deficits approached 11 percent of government spending, or 4 percent of GDP. Distributional analysis found that subsidies benefited mainly middle-class urban customers: only 7 percent of the rural poor used electric light.

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GHANA

The MPI reflects deprivations across three dimensions, each weighted equally, and 10 indicators. For more details, see Technical note 4. However, low poverty may conceal poverty that exists subnationally. In GHANA, for instance, poverty is 10 times higher in Greater Accra than in Northern GHANA, and other countries also exhibit sharp area-based differences. And in Europe and Central Asia, groups such as Roma are likely to be much more deprived than national poverty measures would suggest.

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GHANA

Notes: 14 See www.opensecrets.org/influence/index.php. 15 World Bank 2010c. 16 Transparency International 2011. 17 Rodrik, Subramanian and Trebbi 2004; Iyigun and Rodrik 2004. 18 Speck 2010. 19 Willenbockel 2011. 20 OECD 2010c. 21 GHANA Ministry of Energy and World Bank 2004. 22 World Bank 2008b. 23 Wang and others 2011. 24 Gearty 2010. No such right has been recognized in the Universal Declaration of Human Rights or the International Covenant on Economic, Social and Cultural Rights.

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ACCRA

Funding architecture is complex and fragmented, reducing its effectiveness and making spending hard to monitor. There is much to learn from earlier commitments to aid effectiveness made in Paris and ACCRA. Although the evidence on needs, commitments and disbursements is patchy and the magnitudes uncertain, the picture is clear. The gaps between official development assistance spending and the investments needed to address climate change, low-carbon energy, and water and sanitation are huge - even larger than the gap between commitments and investment needs.

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ACCRA

Given this fragmentation, climate finance must incorporate the lessons of aid delivery to improve how assistance is organized and delivered. The 2005 Paris Declaration on Aid Effectiveness and the 2008 ACCRA Agenda for Action agreed on principles to promote country ownership, aid alignment and harmonization, results, and mutual accountability. The 2007 Bali Action Plan shows how these principles can be incorporated into climate change finance.

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ACCRA

The MPI reflects deprivations across three dimensions, each weighted equally, and 10 indicators. For more details, see Technical note 4. However, low poverty may conceal poverty that exists subnationally. In Ghana, for instance, poverty is 10 times higher in Greater ACCRA than in Northern Ghana, and other countries also exhibit sharp area-based differences. And in Europe and Central Asia, groups such as Roma are likely to be much more deprived than national poverty measures would suggest.

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GUINEA

TABLE 3.2 Average time per week spent fetching wood and water, rural areas of selected Sub-Saharan AFRICAN countries (hours) *Source:* HDRO calculations based on data from Bardasi and Wodon (2009) (Guinea); Blackden and Wodon (2006) (Madagascar); Beegle and Wodon (2006) (Malawi); and Wodon and Ying (2010) (Sierra Leone).

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GUINEA

TABLE 3.2 Average time per week spent fetching wood and water, rural areas of selected Sub-Saharan AFRICAN countries (hours) *Source:* HDRO calculations based on data from Bardasi and Wodon (2009) (Guinea); Blackden and Wodon (2006) (Madagascar); Beegle and Wodon (2006) (Malawi); and Wodon and Ying (2010) (Sierra Leone).

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GUINEA

FIGURE 3.6 Gender equality and contraceptive prevalence are closely linked Contraceptive prevalence rate (percent) Gender Inequality Index *Note:* Contraceptive prevalence rates are for the most recent year available from the World Health Organization for each country during 2000-2008; see statistical table 4 for details.

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GUINEA

FIGURE 3.7 unmet contraceptive need is higher among the multidimensionally poor Population with unmet contraceptive need (percent) *Note:* Data are for most recent year available during 2000–2010 and are based on the Demographic and Health Survey second definition of unmet need (DHS 2008). *Source:* Calculated based on data on MPI from statistical table 5 and from Demographic and Health Surveys.

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GUINEA

Notes: 14 See www.opensecrets.org/influence/index.php. 15 World Bank 2010c. 16 Transparency International And while 75 percent of people over age 64 receive some kind of pension in high-income countries, less than 20 percent do in low-income countries, with a median of just over 7 percent (see ILO 2010). 95 OECD 2010b. The ILO (2008) estimates the cost would not exceed 0.5 percent of GDP in Bangladesh, Cameroon, GUINEA, India, Pakistan, Senegal and Viet Nam, for example; while for Burkina Faso, Ethiopia, Kenya, Nepal and Tanzania the costs are 0.7-0.8 percent of GDP. 97 See Cichon and Hagemeyer (2006).

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KENYA

The city now has the highest rate of public transport use in Brazil (45 percent of all journeys) and one of the country's lowest rates of air pollution. • KENYA's Ministry of Energy adopted a feed-in tariff in 2008 to supply and diversify electricity generation sources, generate income and employment and reduce greenhouse gas emissions. The tariff covers biomass, geothermal, small hydroelectric, solar and wind power.

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KENYA

This year we use the Multidimensional Poverty Index (MPI) to reveal trends in the multiple deprivations that batter poor people at the same time for seven countries - Bolivia, Colombia, Jordan, KENYA, Lesotho, Madagascar and Nigeria - and find that poverty declined in all of them (see figure). The decline was fastest in absolute terms in Bolivia, Nigeria and Lesotho, while annualized percentage reductions were greater in Bolivia, Colombia and Jordan, where low poverty means that small reductions translate into large relative declines.

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KENYA

Box 3.1 Trends in multidimensional poverty - Reduction in the MPI and in the multidimensional poverty headcount and intensity in seven countries, various years (average annual percent change) *Note:* Values in bold are MPI levels for the most recent year available. *Source:* Alkire, Roche and Santos forthcoming; Demographic and Health Surveys (www.measuredhs.com).

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KENYA

Headcount refers to the percentage of the population that is multidimensionally poor; intensity refers to the average percentage of deprivations experienced by people in multidimensional poverty. *Source:* Alkire and others forthcoming. Underlying the overall drops in poverty, different patterns emerge. For example, multidimensional poverty fell at a similar rate in KENYA and Nigeria, but KENYA's progress was driven by improvements across all standard of living indicators, whereas Nigeria progressed most in water, sanitation and child mortality. Poverty reduction was widely distributed across KENYA.

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KENYA

For example, multidimensional poverty fell at a similar rate in KENYA and Nigeria, but KENYA's progress was driven by improvements across all standard of living indicators, whereas Nigeria progressed most in water, sanitation and child mortality. Poverty reduction was widely distributed across KENYA. In Nigeria, by contrast, poverty worsened in the northeast, the poorest region, while the south saw the most substantial reduction. *Source:* Alkire, Roche and Santos forthcoming; Demographic and Health Surveys (www.measuredhs.com).

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KENYA

In rural Ethiopia the probability of schooling as the main activity, especially for boys, falls as the time to reach a water source rises. A negative relationship was found between children's resource collection and their likelihood of attending school, though not the performance of those attending school. In KENYA's Central Province district of Kiambu, fuelwood collection averages more than 4 hours a day,

ranging from half an hour to 10 hours. Girls were more likely to combine resource collection and schooling.

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KENYA

Rising sea temperatures will adversely affect more men, who typically engage in deep-ocean fisheries and commercial fishing, while coastal erosion will hurt more women, who typically gather invertebrates closer to the shore. How people respond to the impacts of climate change on fisheries is likely to vary. In KENYA, for example, even with catch declines of up to 50 percent, subsistence fishers from poor households and with less diverse income sources were more likely to continue fishing than were fishers from households with more assets and diversified livelihoods.

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KENYA

For example, greater variability in rainfall increases the risk of civil conflict, particularly in Sub-Saharan Africa, where a 1°C rise in temperature is associated with a greater than 10 percent increase in the likelihood of civil war the same year. Recent episodes support the link. Competition over land contributed to postelection violence in KENYA in 2008 and to tensions leading to the 1994 genocide in Rwanda. Water, land and desertification are major factors in the war in Darfur, Sudan. In Afghanistan conflict and the environment are caught up in a vicious cycle - environmental degradation fuels conflict, and conflict degrades the environment.

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KENYA

FIGURE 3.6 Gender equality and contraceptive prevalence are closely linked Contraceptive prevalence rate (percent) Gender Inequality Index *Note:* Contraceptive prevalence rates are for the most recent year available from the World Health Organization for each country during 2000-2008; see statistical table 4 for details.

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KENYA

FIGURE 3.7 unmet contraceptive need is higher among the multidimensionally poor Population with unmet contraceptive need (percent) *Note:* Data are for most recent year available during 2000–2010 and are based on the Demographic and Health Survey second definition of unmet need (DHS 2008). *Source:* Calculated based on data on MPI from statistical table 5 and from Demographic and Health Surveys.

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KENYA

As Latvia and other countries have shown, the right legal framework can boost growth in the nonrenewable energy sector and limit emissions from traditional energy sources. Increasing efficiency is important too. And innovations are proceeding, from improved stoves - which have reduced fuelwood requirements some 40 percent in parts of KENYA and dramatically cut pollution levels and improved child health in Guatemala - to more buildings - which can reduce heating and cooling loads. Any long-run strategy for broadening energy access must include actions to promote cleaner energy. There are encouraging signs.

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KENYA

Small grants can support local community efforts to manage water resources. The United Nations Development Programme's community Water Initiative and other small grant programmes have worked with governments in Guatemala, KENYA, Mauritania and Tanzania to support community water projects. Agricultural water Agricultural water problems range from lack of access to overexploitation. But again there is cause for optimism - in efficiency gains and real-cost pricing that moves away from often regressive subsidies.

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KENYA

In many cases partnerships across different groups and with a range of service providers have brought gains. In three rural districts and two urban slums in KENYA, poor families were given vouchers to pay for reproductive health and gender-based violence recovery services. In Viet Nam a long-term collaboration of the government, provincial health institutions and several NGOs has led to dramatic improvements in the quality of reproductive health services, provision of new services and establishment of a sustainable clinical training network in reproductive health.

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KENYA

Sweden recognizes the right of public access through its constitutional "Don't disturb; don't destroy" policy: people have the right to roam freely in the countryside as long as they do not inconvenience others. KENYA's 2010 Constitution grants the right to a clean environment and requires the government to maintain its natural resources. At least 31 other African countries express environmental rights in their constitutions, and some - such as Ethiopia and NAMIBIA - also stress that economic development should not harm the environment. The enforceability of environmental rights in Africa is largely untested, however, except in South Africa.

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KENYA

Indonesia's Master Meter Scheme uses microcredit to connect the urban poor to water, and the Coca-Cola Company and the United States Agency for International Development sponsored the installation of locally made rope pumps in Zinder, Niger. In KENYA an innovative combination of commercial finance (through a microcredit institution) and a subsidy that ties public funding to achieving specified goals has improved water supply and connected poor households to piped water.

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KENYA

Notes: 14 See www.opensecrets.org/influence/index.php. 15 World Bank 2010c. 16 Transparency International 14 Under the New Policies Scenario world primary energy demand increases some 36 percent between 2008 and 2035, or 1.2 percent a year. More than 80 percent of electricity demand is from non-Organisation for Economic Co-operation and Development (OECD) countries (IEA and others 2010: 4 and 8). 15 OECD 2010c. 16 On KENYA, Okello (2005); on Guatemala, Bruce and others (2004). 17 AGECC 2010. 18 Renewable Energy Policy Network for the 21st Century 2010. 19 Eberhard and others 2008. 20 Around 80 percent of renewable power generated in 2010 came from hydropower, which also accounted for around a third of new renewable capacity added between 2010 and 2011.

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KENYA

Notes: 14 See www.opensecrets.org/influence/index.php. 15 World Bank 2010c. 16 Transparency International www.ehproject.org/phe/phe.html. 60 Grandia 2005; Guatemala Instituto Nacional de Estadística 1999, 2009. 61 Mansour, Mansour and Swesy 2010. 62 Bangladesh Ministry of Health and Family Welfare 2004; UNDESA 2009. 63 KENYA National Coordinating Agency for Population and Development 2008. 64 www.pathfind.org/site/PageServer?pagename=Programs_Vietnam_Projects_HIV_RH_Integration.htm 65 Roudi 2009. 66 UNFPA 2010. 67 Lopez Carr and Grandia 2011.

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KENYA

Every person has the right to a clean and healthy environment, which includes the right to have the environment protected for the benefit of present and future generations through legislative and other measures (Constitution of KENYA 2010, Chapter 5, Part 2). Since 1972 more than half of UN member states have added constitutional guarantees concerning the environment (Earthjustice 2007). Article 44 of the 1994 Constitution of the Federal Democratic Republic of Ethiopia says that "government shall endeavor to ensure that all Ethiopians live in a clean and healthy environment" and Article 92 that "the design and implementation of programmes and of development shall not damage or destroy the environment." Constitution of the Republic of Cameroon 1996, Article 47(2).

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KENYA

The ILO (2008) estimates the cost would not exceed 0.5 percent of GDP in Bangladesh, Cameroon, Guinea, India, Pakistan, Senegal and Viet Nam, for example; while for Burkina Faso, Ethiopia, KENYA, Nepal and Tanzania the costs are 0.7-0.8 percent of GDP. 97 See Cichon and Hagemeyer (2006). 98 "Adaptive social protection" is a term coined by researchers at the Institute of Development Studies, Sussex, to bring together thinking about social protection, disaster risk reduction and climate change adaptation (Davies, Oswald and Mitchell 2009).

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LESOTHO

FIGURE 2.4 high HIV/AIDS prevalence rates in Southern Africa stall improvements in health inequality Loss in the health component of the HDI due to inequality, 1970-2010 Atkinson inequality index *Note:* See Technical note 2 for definition of the Atkinson inequality index. Each observation represents a five-year average. *Source:* HDRO calculations based on life expectancy data from the United Nations

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LESOTHO

This year we use the Multidimensional Poverty Index (MPI) to reveal trends in the multiple deprivations that batter poor people at the same time for seven countries - Bolivia, Colombia, Jordan, Kenya, LESOTHO, Madagascar and Nigeria - and find that poverty declined in all of them (see figure). The decline was fastest in absolute terms in Bolivia, Nigeria and LESOTHO, while annualized percentage reductions were greater in Bolivia, Colombia and Jordan, where low poverty means that small reductions translate into large relative declines.

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LESOTHO

Box 3.1 Trends in multidimensional poverty - Reduction in the MPI and in the multidimensional poverty headcount and intensity in seven countries, various years (average annual percent change) *Note:* Values in bold are MPI levels for the most recent year available. *Source:* Alkire, Roche and Santos forthcoming; Demographic and Health Surveys (www.measuredhs.com).

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LESOTHO

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LIBERIA

Today, there are more than 900 cars per 1,000 people of driving age in the United States and more than 600 in Western Europe, but fewer than 10 in India. US households average more than two television sets, whereas in LIBERIA and Uganda fewer than 1 household in 10 has a television set. Domestic per capita water consumption in the very high Human Development Index (HDI) countries, at 425 litres a day, is more than six times that in the low HDI countries, where it averages 67 litres a day.

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LIBERIA

FIGURE 3.5 Deaths attributable to environmental risks are associated with high MPI levels Deaths due to environmental causes (per million people) *Note:* Excludes very high HDI countries. Survey years vary by country; see statistical table 5 for details. *Source:* Calculations based on data from statistical table 5 and Pruss-Ustun and others 2008.

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LIBERIA

Some studies link fertility decisions to deforestation and difficult access to water, which require women and children to spend more time collecting fuelwood and water. Unmet need is often high - more than 30 percent of people in some countries, including Haiti, LIBERIA, Mali and Uganda, would like to use family planning but do not. Multidimensional poverty is correlated with unmet need for contraception.

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MADAGASCAR

And these countries typically have above average environmental poverty - about 6 percentage points higher than if the environmental deprivations they face equalled their weight in the MPI. For example, 65 percent of the population in MADAGASCAR lack access to clean water. The repercussions are extensive. Most schools in MADAGASCAR have no running water for adequate hygiene and sanitation, so pupils fall sick regularly, missing classes and underperforming.

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MADAGASCAR

Most schools in MADAGASCAR have no running water for adequate hygiene and sanitation, so pupils fall sick regularly, missing classes and underperforming. Diarrhoea causes an estimated annual loss of 3.5 million school days in MADAGASCAR. There is also good news, sometimes reflecting successful outreach by governments and nongovernmental organizations (NGOs). For example, South Asia stands out for having a relatively low share of its population (less than 15 percent) deprived in access to water.

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MADAGASCAR

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MADAGASCAR

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MADAGASCAR

Better lighting allows for more study time, and electricity at home and school increases the time children and adults spend reading and keeps children in school longer. In northwestern MADAGASCAR electricity made it easier for girls to do their homework and for their mothers to help them in the evening after household tasks were done. In Bangladesh the time children spent in school was correlated with access to electricity, even after controlling for family wealth (landholdings).

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MADAGASCAR

But households specializing in agriculture benefit, and many in Latin America and the Caribbean and elsewhere in Asia are lifted from poverty. • Another recent study of nine countries (Bolivia, Cambodia, MADAGASCAR, Malawi, Nicaragua, Pakistan, Peru, Viet Nam and Zambia) found that rising food prices increased income poverty overall, even if rural food producers did better. Similarly, food price hikes increased the incidence and intensity of poverty in Indonesia, the Philippines and Thailand.

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MADAGASCAR

TABLE 3.2 Average time per week spent fetching wood and water, rural areas of selected Sub-Saharan AFRICAN countries (hours) *Source:* HDRO calculations based on data from Bardasi and Wodon (2009) (Guinea); Blackden and Wodon (2006) (Madagascar); Beegle and Wodon (2006) (Malawi); and Wodon and Ying (2010) (Sierra Leone).

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MADAGASCAR

Chile reported only 8 fisher victims out of an estimated population of about 80,000 following the February 2010 tsunami, thanks mostly to lessons from previous tsunamis passed down through elders' stories and neighbours' evacuation alerts. Though such knowledge is often downplayed and overlooked, traditional values have also informed policy. In Andavadoaka, a small fishing village in MADAGASCAR, the community initiated a sustainable octopus fishing initiative that inspired other villages and became the country's first locally managed marine area, involving 24 villages. And in Afghanistan the government is drawing on elements of long-standing mirab systems - in which locally elected leaders manage water rights - in creating water use associations.

MADAGASCAR

In Ghana, for instance, poverty is 10 times higher in Greater Accra than in Northern Ghana, and other countries also exhibit sharp area-based differences. And in Europe and Central Asia, groups such as Roma are likely to be much more deprived than national poverty measures would suggest. UNICEF MADAGASCAR Water Sanitation and Hygiene 2007. The exercise was also carried out with controls for HDI group and regional fixed effects, but they were not jointly significant and thus were dropped.

MALAWI

Particularly striking were the changes in these countries relative to others at a similar HDI 40 years earlier. For instance, in 1970 Tunisia had a lower life expectancy than the Democratic Republic of the Congo and fewer children in school than MALAWI. Yet by 2010 Tunisia was in the high HDI category,

with an average life expectancy of 74 years and most children enrolled through secondary school. The recent pro-democracy protests across the Arab States began in Tunisia and Egypt, driven in both cases by educated urban youth.

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MALAWI

And in Viet Nam communes connected to the electric grid between 2002 and 2005 saw school enrolment increase 17 percent for boys and 15 percent for girls. Having access to electricity and other modern fuels can reduce the time spent collecting biomass fuel. In MALAWI children often collect fuelwood and other resources, and their likelihood of attending school falls as time allocated to this work rises. In rural Ethiopia the probability of schooling as the main activity, especially for boys, falls as the time to reach a water source rises.

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MALAWI

But households specializing in agriculture benefit, and many in Latin America and the Caribbean and elsewhere in Asia are lifted from poverty. • Another recent study of nine countries (Bolivia, Cambodia, Madagascar, MALAWI, Nicaragua, Pakistan, Peru, Viet Nam and Zambia) found that rising food prices increased income poverty overall, even if rural food producers did better. Similarly, food price hikes increased the incidence and intensity of poverty in Indonesia, the Philippines and Thailand.

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MALAWI

Time-use surveys illuminate this burden, showing how tasks are allocated within households and how they can be affected by environmental degradation. Studies in India have found that fuelwood collection time has increased markedly in recent decades: in Kumaon, Uttar Pradesh, women and children travelled on average 1.6 hours and 1.6 kilometres to collect wood in the early 1970s and 3-4 hours and 4.5 kilometres in the 1990s. Women and children have primary responsibility for fetching wood and water. A recent study of seven low HDI countries found that 56-86 percent of rural women fetched water, compared with 8-40 percent of rural men. In rural MALAWI, for instance, women spend more than eight times what men do fetching wood and water, and girls spend about three times what boys do on these chores (table 3.2). Collecting fuelwood and water has been linked in women to spinal damage, complications during pregnancy and maternal mortality. The demands on time can also have a high opportunity cost in forgone schooling or leisure time for children and labour market activity for adults.

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MALAWI

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MALAWI

Some countries have overcome siloed arrangements through medium-term plans that allow cross-sectoral coordination across government agencies and with development partners. Senior core ministries - such as finance and planning - are often critical, as are line agencies, especially working with other ministries. In MALAWI the Ministry of Agriculture helped create demand for measures to reduce poverty and protect the environment, and in Rwanda the Ministry of State, Lands and the Environment garnered presidential and cabinet support for integrating environmental concerns into the country's Economic Development and Poverty Strategy.

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MALAWI

Of course the environmental gains depend on carbon footprints at the individual level. For instance, an average citizen in Australia or the United States accounts for as much carbon dioxide emissions in two days as an average citizen of MALAWI or Rwanda in a year. Reproductive health and family planning are

critical in MALAWI and Rwanda—where women still have an average of five children— but will not significantly reduce carbon dioxide emissions.

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MALAWI

Provides a guaranteed income to combat seasonal variations in income • Ensuring adequate benefits • Accountability and transparency • Increasing awareness to ensure high participation • Controlling costs and avoiding the risk of exclusion Weather-based crop insurance Government of MALAWI and partners: weather-indexed crop insurance for groundnut production • Guards against risk-taking associated with insurance • Frees up assets for investment in adaptive capacity • Can be linked to trends and projections for climate change

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MALI

Dimensions of disadvantage can interact, Compounding adverse impacts - for example, the intensity of health risks is highest where water and sanitation are inadequate, deprivations that often coincide. Of the 10 countries with the highest rates of death from environmental disasters, 6 are also in the top 10 in the MPI, including Niger, MALI and Angola. Impeding education advances for disadvantaged children, especially girls. Despite near universal primary school enrolment in many parts of the world, gaps remain. Nearly 3 in 10 children of primary school age in low HDI countries are not even enrolled in primary school, and multiple constraints, some environmental, persist even for enrolled children.

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MALI

And personal characteristics are also important: poor and disadvantaged groups, including people with mental or physical disabilities, need greater access to public goods and services to achieve equality of capabilities. Despite conceptual differences, inequity and inequality in outcomes are closely linked in practice - because inequalities in outcomes are largely the product of unequal access to capabilities. A MALIAN can expect to live 32 fewer years on average than a Norwegian because the possibilities for people in MALI are far narrower on average than those for people in Norway. In this case, clearly the inequalities between MALI and Norway are also inequitable.

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A MALIAN can expect to live 32 fewer years on average than a Norwegian because the possibilities for people in MALI are far narrower on average than those for people in Norway. In this case, clearly the inequalities between MALI and Norway are also inequitable. Moreover, we can measure inequality in key outcomes, whereas we cannot readily observe the distribution of capabilities. So, in this Report we use inequality as a proxy for inequity, pointing out the exceptions where the relationship is not straightforward.

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MALI

FIGURE 3.5 Deaths attributable to environmental risks are associated with high MPI levels Deaths due to environmental causes (per million people) *Note:* Excludes very high HDI countries. Survey years vary by country; see statistical table 5 for details. *Source:* Calculations based on data from statistical table 5 and Pruss-Ustun and others 2008.

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MALI

Gender inequality and contraceptive prevalence are closely linked (figure 3.6). Where women have greater standing, as in Japan, the Netherlands and Norway, most couples use some form of contraception. But where gender inequality is high, as in MALI, Mauritania and Sierra Leone, contraceptive prevalence is below 10 percent. Data collected between 2000 and 2009 show that fewer

than 3 in 10 women of reproductive age in low HDI countries use modern contraception, compared with 88 percent in Norway and 84 percent in the United Kingdom.

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MALI

Some studies link fertility decisions to deforestation and difficult access to water, which require women and children to spend more time collecting fuelwood and water. Unmet need is often high - more than 30 percent of people in some countries, including Haiti, Liberia, MALI and Uganda, would like to use family planning but do not. Multidimensional poverty is correlated with unmet need for contraception. The incidence of people living in households with unmet family planning needs is always higher among

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MALI

FIGURE 3.6 Gender equality and contraceptive prevalence are closely linked Contraceptive prevalence rate (percent) Gender Inequality Index *Note:* Contraceptive prevalence rates are for the most recent year available from the World Health Organization for each country during 2000-2008; see statistical table 4 for details.

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MALI

FIGURE 3.7 unmet contraceptive need is higher among the multidimensionally poor Population with unmet contraceptive need (percent) Among the poor Among the nonpoor *Note:* Data are for most recent year available during 2000-2010 and are based on the Demographic and Health Survey second definition of unmet need (DHS 2008).

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MAURITANIA

Nearly half the households in low HDI countries, mostly in Sub-Saharan Africa, spend more than 30 minutes a day collecting water. The burden is especially high in rural areas. Trips average 82 minutes in Somalia, 71 minutes in MAURITANIA and 65 minutes in Yemen. Widespread environmental stress

increases time burdens for households, with adverse implications for their well-being. Time-use surveys illuminate this burden, showing how tasks are allocated within households and how they can be affected by environmental degradation. Studies in India have found that fuelwood collection time has increased markedly in recent decades: in Kumaon, Uttar Pradesh, women and children travelled on average 1.6 hours and 1.6 kilometres to collect wood in the early 1970s and 3-4 hours and 4.5 kilometres in the 1990s. Women and children have primary responsibility for fetching wood and water.

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MAURITIUS

This is important because in countries where effective control of reproduction is universal, women have fewer children, with attendant gains for maternal and child health and reduced greenhouse gas emissions. For instance, in Cuba, MAURITIUS, Thailand and Tunisia, where reproductive healthcare and contraceptives are readily available, fertility rates are below two births per woman. But substantial unmet need persists worldwide, and evidence suggests that if all women could exercise reproductive choice, population growth would slow enough to bring greenhouse gas emissions below current levels.

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MAURITIUS

More broadly, an estimated 215 million women in developing countries have unmet need for family planning. Every country, developed or developing, that offers women a full range of reproductive health options has fertility rates at or below replacement. Cuba, Iran, MAURITIUS, Thailand and Tunisia have fertility rates of less than two births per woman. And Addis Ababa's is also less than two births per woman, while Ethiopia's rural fertility rate remains above six.

MOZAMBIQUE

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MOZAMBIQUE

In Kenya an innovative combination of commercial finance (through a microcredit institution) and a subsidy that ties public funding to achieving specified goals has improved water supply and connected poor households to piped water. Other financing schemes include blended grants and repayable financing (as funded by the World Bank in Senegal and the European Investment Bank in MOZAMBIQUE), revolving funds for water and sanitation (as funded by the World Bank, Denmark and Finland in Viet Nam and by UFUNDIKO, a small nongovernmental organization, in Tanzania) and pooled funds (as in Tamil Nadu, India), which disbursed bond-issue funds to municipalities as sub-loans.

NAMIBIA

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NAMIBIA

Conserving biodiversity while promoting equity In recent years perceived trade-offs between preserving livelihoods and maintaining biodiversity have been replaced by a clearer understanding of the potential synergies. For instance, preserving natural ecosystems and biodiversity can help secure livelihoods, food, water and health. Many countries (including Botswana, Brazil and NAMIBIA) and international organizations (including the United Nations Development Programme) are calling for investments to preserve biodiversity for its potential development benefits. One instrument is to assign and enforce protected area status to ecosystems, putting in place measures to avert or reverse land degradation and ecotourism.

NAMIBIA

The primary challenge is to ensure equitable participation, including by women. A recent survey found that nature-based tourism is one of several conservation mechanisms that can reduce poverty. In NAMIBIA, for example, an ecotourism programme has protected nearly 3 million hectares of land and marine areas housing great biodiversity. Especially important for equity, the programme has improved livelihoods immensely. And with roughly 29 percent of the wealth generated by these protected areas going to labour and another 5 percent to traditional agriculture, the programme shows the potential of protected areas to reduce poverty as well.

NAMIBIA

Sweden recognizes the right of public access through its constitutional "Don't disturb; don't destroy" policy: people have the right to roam freely in the countryside as long as they do not inconvenience others. Kenya's 2010 Constitution grants the right to a clean environment and requires the government to maintain its natural resources. At least 31 other African countries express environmental rights in their constitutions, and some - such as Ethiopia and NAMIBIA - also stress that economic development should not harm the environment. The enforceability of environmental rights in Africa is largely untested, however, except in South Africa. Some countries have structural impediments.

NAMIBIA

At least 31 other African countries express environmental rights in their constitutions, and some - such as Ethiopia and NAMIBIA - also stress that economic development should not harm the environment. The enforceability of environmental rights in Africa is largely untested, however, except in South Africa. Some countries have structural impediments. In Cameroon citizens do not have the right to appeal to the country's constitutional council, which limits enforceability. And in NAMIBIA environmental rights can be enforced only by someone with a private interest, barring claims in the public interest. Several Latin American countries, including Chile, Costa Rica, Ecuador and Peru, have recognition of equal rights to a healthy, well-functioning environment, enabling institutions are needed, including a fair and independent judiciary and the right to information from governments enforceable environmental rights.

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NAMIBIA

Notes: Article 44 of the 1994 Constitution of the Federal Democratic Republic of Ethiopia says that "government shall endeavor to ensure that all Ethiopians live in a clean and healthy environment" and Article 92 that "the design and implementation of programmes and of development shall not damage or destroy the environment." Constitution of the Republic of Cameroon 1996, Article 47(2). 35 Constitution of the Republic of NAMIBIA 1990, Article 25(2). 36 Bruch, Coker and Van Arsdale 2007. 37 Costa Rica, El Salvador and Honduras do not recognize environmental rights for indigenous peoples, and the constitutions of Guatemala, Panama, Paraguay and Peru refer to land but not natural resources (Aguilar and others 2010).

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NIGER

Dimensions of disadvantage can interact, Compounding adverse impacts - for example, the intensity of health risks is highest where water and sanitation are inadequate, deprivations that often coincide. Of the 10 countries with the highest rates of death from environmental disasters, 6 are also in the top 10 in the MPI, including NIGER, Mali and Angola. Impeding education advances for disadvantaged children, especially girls. Despite near universal primary school enrolment in many parts of the world, gaps remain. Nearly 3 in 10 children of primary school age in low HDI countries are not even enrolled in primary school, and multiple constraints, some environmental, persist even for enrolled children.

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NIGER

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NIGER

This underlines the importance of investments in health and education in furthering reproductive health choices. The reported unmet demand for family planning is very low in Chad, the Democratic Republic of the Congo and NIGER (below 5 percent), alongside very high average fertility. This can happen because of cultural or religious objections by women, their husbands or other family members; a lack of knowledge of contraceptive methods or fear of their side effects; or preference for larger families.

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NIGER

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NIGER

Indonesia's Master Meter Scheme uses microcredit to connect the urban poor to water, and the Coca-Cola Company and the United States Agency for International Development sponsored the installation of locally made rope pumps in Zinder, NIGER. In Kenya an innovative combination of commercial finance (through a microcredit institution) and a subsidy that ties public funding to achieving specified goals has improved water supply and connected poor households to piped water.

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NIGER

Notes: O'Neill and others 2010. 167 Wire 2009. 168 Of 6.2 births per woman for Chad, 4.4 for the Democratic Republic of Congo and 7.1 for NIGER; see statistical table 4. 169 Mills, Bos and Suzuki 2010. 170 Filmer and Pritchett (2002) find a partial correlation between indicators of fuelwood scarcity and fertility in Pakistan, and Biddlecom, Axinn and Barber (2005) link poorer environmental quality and a greater reliance on public natural resources with higher fertility in Western Chitwan Valley, Nepal.

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NIGERIA

For example, in 2007 the United States recycled less than 20 percent of e-waste from obsolete televisions, cell phones and computer products. The rest was disposed in landfills, mostly in developing countries such as China, India and NIGERIA. Nevertheless, e-waste recycling has become a dynamic economic sector, particularly in China and India, where recovering, repairing, and trading materials from discarded electronic devices provide an important livelihood for poor people.

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NIGERIA

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NIGERIA

Box 3.1 Trends in multidimensional poverty - Reduction in the MPI and in the multidimensional poverty headcount and intensity in seven countries, various years (average annual percent change) *Note:* Values in bold are MPI levels for the most recent year available. *Source:* Alkire, Roche and Santos forthcoming; Demographic and Health Surveys (www.measuredhs.com).

Headcount refers to the percentage of the population that is multidimensionally poor; intensity refers to the average percentage of deprivations experienced by people in multidimensional poverty. *Source:* Alkire and others forthcoming. Underlying the overall drops in poverty, different patterns emerge. For example, multidimensional poverty fell at a similar rate in Kenya and NIGERIA, but Kenya's progress was driven by improvements across all standard of living indicators, whereas NIGERIA progressed most in water, sanitation and child mortality. Poverty reduction was widely distributed across Kenya. In NIGERIA, by contrast, poverty worsened in the northeast, the poorest region, while the south saw the most substantial reduction.

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RWANDA

FIGURE 3.5 deaths attributable to environmental risks are associated with high MPI levels Deaths due to environmental causes (per million people) *Note:* Excludes very high HDI countries. Survey years vary by country; see statistical table 5 for details. *Source:* Calculations based on data from statistical table 5 and Pruss-Ustun and others 2008.

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RWANDA

For example, greater variability in rainfall increases the risk of civil conflict, particularly in Sub-Saharan Africa, where a 1°C rise in temperature is associated with a greater than 10 percent increase in the likelihood of civil war the same year. Recent episodes support the link. Competition over land contributed to postelection violence in Kenya in 2008 and to tensions leading to the 1994 genocide in RWANDA. Water, land and desertification are major factors in the war in Darfur, Sudan. In Afghanistan conflict and the environment are caught up in a vicious cycle - environmental degradation fuels conflict, and conflict degrades the environment.

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RWANDA

Senior core ministries - such as finance and planning - are often critical, as are line agencies, especially working with other ministries. In Malawi the Ministry of Agriculture helped create demand for measures to reduce poverty and protect the environment, and in RWANDA the Ministry of State, Lands and the Environment garnered presidential and cabinet support for integrating environmental concerns into the country's Economic Development and Poverty Strategy. And crucial at the local level are strong institutions, particularly those that pay attention to disadvantaged groups and promote community management.

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RWANDA

Of course the environmental gains depend on carbon footprints at the individual level. For instance, an average citizen in Australia or the United States accounts for as much carbon dioxide emissions in two days as an average citizen of Malawi or RWANDA in a year. Reproductive health and family planning are critical in Malawi and RWANDA—where women still have an average of five children— but will not significantly reduce carbon dioxide emissions.

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RWANDA

Greater worldwide availability and adoption of reproductive health and family planning services raise the prospect of a win-win-win for sustainability, equity and human development RWANDA - where women still have an average of five children - but will not significantly reduce carbon dioxide emissions. By contrast, innovative programmes such as Family PACT in California, which reimburses physicians for providing reproductive healthcare to low-income women and prevents almost 100,000 unintended births each year, not only improve the lives and health of women and their families but also reduce the future carbon footprint by some 156 million tonnes a year. Reproductive rights include choosing the number, timing and spacing of one's children and having the information and means to do so.

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RWANDA

The complex cross-sectoral challenges of sustainable human development have a long time horizon and require long-term commitments. Changing decisions, mobilizing investment and developing new strategic plans can take years if not decades. This may involve major institutional reforms to mainstream environmental considerations in government planning. The government of RWANDA recognized the need to integrate environmental and natural resource management plans into the country's development strategy. Its environmental Management Authority works closely with the national and local governments as well as civil society to promote sustainable development and the right to live in a clean and productive environment by requiring that all sectors of society manage the environment efficiently and use natural resources rationally.

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RWANDA

Some groups have pursued accountability of For climate change and other global environmental problems, procedural justice implies an equal opportunity for all countries to affect international negotiations, but weak capacity often means that few developing country governments are represented private corporations in emissions and climate change.⁶¹ But such concerns may be offset by other vested interests - as reported for the Russian Federation in the problems civil society faced in mobilizing public support around greening industry. And where civil society is active, as chapter 3 shows, it can bring about positive outcomes. An active press raises awareness and facilitates public participation. In RWANDA the government launched radio and television promotions highlighting national environmental issues and targeting all levels of society. Media coverage increased support from the environmental Management Agency and other government ministries to jointly explore ways to integrate environmental concerns into planning and to enhance cooperation for environmental protection.⁶³ For climate change and other global environmental problems, procedural justice implies an equal opportunity for all countries to affect the direction and content of international negotiations.

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SENEGAL

Within Haiti the proportion of people who are both multidimensionally poor and deprived of clean water in Aire Métropolitaine/Ouest is 19 percent, while in the Centre it is 70 percent. Similarly, in SENEGAL the proportion of people who are both multidimensionally poor and deprived in cooking fuel is about 4 percent in Dakar and about 88 percent in Kolda. And in India deprivations in sanitation among multidimensionally poor people range from 3.5 percent in Kerala to more than 70 percent in Bihar.

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SENEGAL

FIGURE 3.4 the share of the population with environmental deprivations rises with the MPI but with much variation around the trend MPI Share of multidimensionally poor with at least one deprivation (percent) Share of multidimensionally poor with three deprivations (percent) *Note:* Survey years vary by country; see statistical table 5 for details. The figures depict deviations from the trend for the regression exercises described in the text. *Source:* HDRO calculations based on Gallup World Poll data (www.gallup.com/se/126848/worldview.aspx).

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SENEGAL

TABLE 3.1 ten countries with the lowest share of environmental deprivations among the multidimensionally poor, most recent year available for 2000-2010 Lowest share of multidimensionally poor with at least one deprivation Lowest share of multidimensionally poor with all three deprivations *Note:* Countries in bold are on both lists. *Source:* HDRO calculations based on data in statistical table 5.

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SENEGAL

In Kenya an innovative combination of commercial finance (through a microcredit institution) and a subsidy that ties public funding to achieving specified goals has improved water supply and connected poor households to piped water. Other financing schemes include blended grants and repayable financing (as funded by the World Bank in SENEGAL and the European Investment Bank in Mozambique), revolving funds for water and sanitation (as funded by the World Bank, Denmark and Finland in Viet Nam and by UFUNDIKO, a small nongovernmental organization, in Tanzania) and pooled funds (as in Tamil Nadu, India), which disbursed bond-issue funds to municipalities as sub-loans.

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SENEGAL

Notes: And while 75 percent of people over age 64 receive some kind of pension in high-income countries, less than 20 percent do in low-income countries, with a median of just over 7 percent (see ILO 2010). 95 OECD 2010b. The ILO (2008) estimates the cost would not exceed 0.5 percent of GDP in Bangladesh, Cameroon, Guinea, India, Pakistan, SENEGAL and Viet Nam, for example; while for Burkina Faso, Ethiopia, Kenya, Nepal and Tanzania the costs are 0.7-0.8 percent of GDP. 97 See Cichon and Hagemeyer (2006). 98 "Adaptive social protection" is a term coined by researchers at the Institute of

Development Studies, Sussex, to bring together thinking about social protection, disaster risk reduction and climate change adaptation (Davies, Oswald and Mitchell 2009).

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DAKAR

Within Haiti the proportion of people who are both multidimensionally poor and deprived of clean water in Aire Métropolitaine/Ouest is 19 percent, while in the Centre it is 70 percent. Similarly, in Senegal the proportion of people who are both multidimensionally poor and deprived in cooking fuel is about 4 percent in DAKAR and about 88 percent in Kolda. And in India deprivations in sanitation among multidimensionally poor people range from 3.5 percent in Kerala to more than 70 percent in Bihar. Environmental deprivations typically rise with the MPI, but the composition of Multidimensional poverty varies, even for countries with similar poverty levels.

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SIERRA LEONE

FIGURE 3.5 Deaths attributable to environmental risks are associated with high MPI levels Deaths due to environmental causes (per million people) *Note:* Excludes very high HDI countries. Survey years vary by country; see statistical table 5 for details. *Source:* Calculations based on data from statistical table 5 and Pruss-Ustun and others 2008.

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SIERRA LEONE

In rural Pakistan, for example, difficult access to water increases women's total work burden and reduces the time they devote to market-oriented activities. 123 Thus, the gains from secure and sustainable access to these resources and more modern alternatives could be large. In SIERRA LEONE improved access to water and electricity reduced domestic work time about 10 hours a week. A study in the 1990s found that if all households in the Mbale district of Eastern Uganda had secure access to water and fuel - living 400 metres or less from potable water and no more than 30 minutes from a fuelwood source - they would gain more than 900 hours a year.

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SIERRA LEONE

TABLE 3.2 Average time per week spent fetching wood and water, rural areas of selected Sub-Saharan AFRICAN countries (hours) *Source:* HDRO calculations based on data from Bardasi and Wodon (2009) (Guinea); Blackden and Wodon (2006) (Madagascar); Beegle and Wodon (2006) (Malawi); and Wodon and Ying (2010) (Sierra Leone).

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SIERRA LEONE

Where women have greater standing, as in Japan, the Netherlands and Norway, most couples use some form of contraception. But where gender inequality is high, as in Mali, Mauritania and SIERRA LEONE, contraceptive prevalence is below 10 percent. Data collected between 2000 and 2009 show that fewer than 3 in 10 women of reproductive age in low HDI countries use modern contraception, compared with 88 percent in Norway and 84 percent in the United Kingdom.

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SIERRA LEONE

Note: Contraceptive prevalence rates are for the most recent year available from the World Health Organization for each country during 2000-2008; see statistical table 4 for details. The Gender Inequality Index is for 2011.

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SOUTH AFRICA

The gap between the rich and the poor widened over the last two decades in more than three-quarters of Organisation for Economic Co-operation and Development countries and in many emerging market economies. • Income has also become more concentrated among top earners in China, India and SOUTH AFRICA. In China, for example, the top quintile of income earners had 41 percent of total income in 2008, and the Gini coefficient for income inequality rose from 0.31 in 1981 to 0.42 in 2005.

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SOUTH AFRICA

FIGURE 2.4 high HIV/AIDS prevalence rates in Southern AFRICA stall improvements in health inequality Loss in the health component of the HDI due to inequality, 1970-2010 Atkinson inequality index *Note:* See Technical note 2 for definition of the Atkinson inequality index. Each observation represents a five-year average. *Source:* HDRO calculations based on life expectancy data from the United Nations Department of Economic and Social Affairs, Population Division, Population Estimates and Projections Section, and Fuchs and Jayadev (2011).

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SOUTH AFRICA

And rural electrification has stagnated at below 10 percent - while growing to 50 percent for developing countries as a whole.⁷ Electrification can reduce poverty by increasing productivity, employment and time spent in school and reducing environmental pressures. For instance, in SOUTH AFRICA electrification is associated with a 13 percent greater likelihood of women participating in the labour market, ⁸ while in Viet Nam it increased income, consumption and schooling outcomes. Bhutanese villagers attest enthusiastically to the difference electricity makes in their lives, citing the ability to work in the evenings and cook without wood, which reduced respiratory problems and time spent fetching fuel. Expanding energy access and mitigating climate change can be presented as trade-offs.

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SOUTH AFRICA

For instance, in SOUTH AFRICA electrification is associated with a 13 percent greater likelihood of women participating in the labour market, ⁸ while in Viet Nam it increased income, consumption and schooling outcomes. Bhutanese villagers attest enthusiastically to the difference electricity makes in their lives, citing the ability to work in the evenings and cook without wood, which reduced respiratory problems and time spent fetching fuel. Expanding energy access and mitigating climate change can be presented as trade-offs. For instance, the World Bank's recent \$3.75 billion loan to SOUTH AFRICA to build one of the world's largest coal-fired plants will expand access, but the project raised concerns about greenhouse gas emissions and environmental degradation as well as carbon lock-in when the longevity of infrastructure prolongs the use of obsolete technologies. But the prospect of win-win-win options enables us to go beyond trade-offs.

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SOUTH AFRICA

Developing countries are adopting renewable energy and now have more than half of global renewable power capacity for close to 70 percent of electricity generated in Sub-Saharan AFRICA (excluding SOUTH AFRICA). According to the Renewable Energy Policy Network for the 21st Century, global energy supply reached a tipping point in 2010, as renewables accounted for a quarter of global power capacity and delivered almost a fifth of electricity supply (see statistical table 6).

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SOUTH AFRICA

Innovative approaches are under way in many countries. Some highlights: • Providing affordable access. Small-scale, needs-driven technologies can provide households with low-cost potable water. In Cameroon cheap bios and filters, developed in SOUTH AFRICA, are used to make water safe to drink. In India the international nongovernmental organization (NGO) Water for People partnered with a local university to develop simple, locally manufactured filters that remove arsenic from the water at public wellheads in West Bengal.

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SOUTH AFRICA

Similarly, in Iran efforts to introduce reproductive health services began in the late 1980s, when rapid population growth was recognized as an obstacle to development. Today, nearly 80 percent of married women use contraception - the country also has a maternal mortality ratio that is less than 8 percent of that in SOUTH AFRICA, which has a similar per capita income. In 2009 Mongolia endorsed a national strategy for reproductive health, included the services in the mid-term budget framework and committed to fully funding contraceptive supply by 2015.

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SOUTH AFRICA

Using the extensive mobile phone networks now common in developing countries - more than 76 percent of the world's population and more than 1 billion women in low- and middle-income countries currently have access - multiple initiatives, including the Mobile Alliance for Maternal Action, provide customized health information to expectant and new mothers in Bangladesh, India and SOUTH AFRICA. These approaches have enormous potential, though their widespread effectiveness has yet to be demonstrated. Concerted government efforts are needed to achieve universal access to reproductive healthcare, which yields rich dividends in lower fertility rates and better health and education outcomes.

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SOUTH AFRICA

A recent survey of social protection, disaster risk reduction and climate change adaptation schemes in SOUTH Asia revealed that few countries integrate such programmes. Of the 124 programmes surveyed, just 16 percent combined all three elements. One example is SOUTH AFRICA's Working for Water, part of an Expanded Public Works Programme launched in 2004.

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SOUTH AFRICA

When reviews of the first phase (2004-2009) found that public works programmes were too short and wages too low to substantially reduce poverty, the government set a new minimum wage for the next phase of the programme. Public works programmes need to provide options for women and for people unable to work. SOUTH AFRICA's Working for Water has quotas for women (60 percent) and for people with disabilities (2 percent). In India women and members of scheduled castes and scheduled tribes account for (an overlapping) 50 percent of participants in the National Rural Employment Guarantee Act.

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SOUTH AFRICA

Direct effects can be followed by a second round of indirect changes (see box 5.1). • Considering compensation mechanisms. Countries with well-developed tax-and-transfer systems can use income tax schedules or social benefits to offset negative effects. For example, SOUTH AFRICA provides an income tax deduction for communal and private landowners who set aside land with high biodiversity value and manage it as a protected area. 11 But where such systems are less feasible, alternative compensation or exemptions are needed.

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SOUTH AFRICA

This requires the right institutions, a political champion and systematic deliberations that engage the private sector. Country experience More countries are using distributional analysis to inform

environmental policy design. SOUTH AFRICA's plans to introduce environmental taxes as part of its fiscal reforms were informed by stakeholder analyses of likely quantitative and qualitative effects. Viet Nam announced new taxes following impact assessments simulating price and sectoral effects.

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SOUTH AFRICA

At least 31 other AFRICAN countries express environmental rights in their constitutions, and some - such as Ethiopia and NAMIBIA - also stress that economic development should not harm the environment. The enforceability of environmental rights in AFRICA is largely untested, however, except in SOUTH AFRICA. Some countries have structural impediments. In Cameroon citizens do not have the right to appeal to the country's constitutional council, which limits enforceability. And in Namibia environmental rights can be enforced only by someone with a private interest, barring claims in the public interest. Several Latin American countries, including Chile, Costa Rica, Ecuador and Peru, have recognition of equal rights to a healthy, well-functioning environment, enabling institutions are needed, including a fair and independent judiciary and the right to information from governments enforceable environmental rights.

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SOUTH AFRICA

But recent Gallup data suggest that a majority of the people in close to half of nearly 140 countries surveyed lack confidence in their judicial system and courts. This underlines the importance of implementing broader reforms and improving the context for enforcing rights. Rights to government information are spreading. At least 49 national constitutions recognize them, and at least 80 legislatures have enacted right-to-information laws. SOUTH AFRICA's 1996 Constitution guarantees all "the right of access to any information held by the state and held by another person that is required for the exercise or protection of any rights." In Argentina, Canada, France, India, Israel and the Republic of Korea higher courts have held that constitutional guarantees of free expression implicitly recognize a constitutional right of access to information.

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SOUTH AFRICA

Other financing schemes include blended grants and repayable financing (as funded by the World Bank in Senegal and the European Investment Bank in Mozambique), revolving funds for water and sanitation (as funded by the World Bank, Denmark and Finland in Viet Nam and by UFUNDIKO, a small

nongovernmental organization, in Tanzania) and pooled funds (as in Tamil Nadu, India), which disbursed bond-issue funds to municipalities as sub-loans. Market-based finance is also becoming more common. For instance, several US cities and Johannesburg, SOUTH AFRICA, have used municipal bonds to fund water infrastructure. *Source:* Nelson 2011; Coca-Cola Company 2010; World Bank 2010a; International Water and Sanitation Centre and Netherlands Water Partnership (2009); OECD 2010c. The prime candidate to close the financing gap is a currency transaction tax. Social protection Estimates put global allocations to social protection at a sizeable 17 percent of GDP. But much of this spending bypasses the most disadvantaged groups.

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SOUTH AFRICA

Notes: Duval-Diop and Rose 2008. 91 See Grosh and others (2008) and Tucker (2010). 92 UKaid-DFID 2011. 93 Fuchs 2011. 94 See Arnall and others (2010). 95 Lieu-Kie-Song 2009. 96 SOUTH AFRICA Department of Environmental Affairs and UNEP 2011. 97 UNDP 2011c. Chapter 5 1 Frankel and Bosetti 2011. 2 IPCC 2007. 3 Chang and Grabel 2004; Rodrik 2006. 4 See Aghion (2009); Rodrik (2005); Lin 2010.

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JOHANNESBURG

"It would be a gross violation of the universalist principle," they argued, "if we were to be obsessed about intergenerational equity without at the same time seizing the problem of intra-generational equity" (emphasis in original). Similar themes emerged from the Brundtland Commission's 1987 report and a series of international declarations from Stockholm in 1972 through JOHANNESBURG in 2002. Yet today many debates about sustainability neglect equality, treating it as a separate and unrelated concern. This perspective is incomplete and counterproductive. Some key definitions Human development is the expansion of people's freedoms and capabilities to lead lives that they value and have reason to value.

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JOHANNESBURG

In so doing, it identifies ways to break the pernicious link between environmental degradation and economic growth that has tainted much of the development experience of at least the past half-century and threatens future progress. This vision aligns with that of international declarations on sustainable development - including those in Stockholm (1972), Rio de Janeiro (1992) and JOHANNESBURG (2002) - which advanced the notion of three pillars of sustainable development: environmental, economic and

social. Intra-generational equity is part of the social pillar. Our call for prudence in managing the environment and basic natural resources springs from an emphasis on expanding opportunities for the most disadvantaged and from the need to consider the risks of catastrophic events.

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JOHANNESBURG

Other financing schemes include blended grants and repayable financing (as funded by the World Bank in Senegal and the European Investment Bank in Mozambique), revolving funds for water and sanitation (as funded by the World Bank, Denmark and Finland in Viet Nam and by UFUNDIKO, a small nongovernmental organization, in Tanzania) and pooled funds (as in Tamil Nadu, India), which disbursed bond-issue funds to municipalities as sub-loans. Market-based finance is also becoming more common. For instance, several US cities and JOHANNESBURG, South Africa, have used municipal bonds to fund water infrastructure. *Source:* Nelson 2011; Coca-Cola Company 2010; World Bank 2010a; International Water and Sanitation Centre and Netherlands Water Partnership (2009); OECD 2010c.

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JOHANNESBURG

Notes: 31 The priority of poverty eradication in the search for sustainable development has been reaffirmed in several UN declarations, including the 1992 Rio Declaration on Environment and Development (UN 1992), the resolution on the Programme for the Further Implementation of Agenda 21 (UN 1997) and the 2002 JOHANNESBURG Declaration (UN 2002). 32 Anand and Sen (2000: 2,038), emphasis in original. 33 Of course, some policies can be neutral in impacts, but these are omitted for simplicity. 34 See Brown (2003).

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SWAZILAND

Specifically: • Loss of fertile topsoil is reducing land productivity, with estimated yield losses as high as 50 percent in the most adverse scenarios. Sub-Saharan Africa (especially Angola, Gabon and SWAZILAND) and East Asia and the Pacific (especially China, Indonesia, Malaysia and Myanmar) are hit hardest. • Drylands, home to about a third of the world's population, are threatened by desertification. Some areas are especially vulnerable, such as Sub-Saharan Africa's drylands, where adaptive capacity is low.

SWAZILAND

FIGURE 3.7 unmet contraceptive need is higher among the multidimensionally poor Population with unmet contraceptive need (percent) *Note:* Data are for most recent year available during 2000–2010 and are based on the Demographic and Health Survey second definition of unmet need (DHS 2008). *Source:* Calculated based on data on MPI from statistical table 5 and from Demographic and Health Surveys.

TANZANIA

Small grants can support local community efforts to manage water resources. The United Nations Development Programme's community Water Initiative and other small grant programmes have worked with governments in Guatemala, Kenya, Mauritania and TANZANIA to support community water projects. Agricultural water problems range from lack of access to overexploitation. But again there is cause for optimism - in efficiency gains and real-cost pricing that moves away from often regressive subsidies.

TANZANIA

Despite some regional successes, most such programmes have not been scaled up, largely because they lack strong local leadership or interest, because skills are weak and because monitoring and evaluation are insufficient. One exception is an initiative known as the Global Scaling up Rural Sanitation Project, supported by the World Bank in rural India, Indonesia and TANZANIA, which has reached an estimated 8.2 million people over four years. Its success is traceable, at least in part, to better performance monitoring, which shifts the focus to outcomes. While most approaches focus on supply, Community-led Total Sanitation targets demand (box 4.1).

TANZANIA

Political economy factors and the influence of various actors can affect both design and implementation of policy. For instance, the oil industry in the United States spent almost \$1.5 billion on federal lobbying in 2010. And in Tanzania the proposed reform of charcoal production, trade and use highlights the

needs and influence of dealer-transporter-wholesaler networks. Policy design and implementation must address such influences and their likely impacts.

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TANZANIA

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TANZANIA

The ILO (2008) estimates the cost would not exceed 0.5 percent of GDP in Bangladesh, Cameroon, Guinea, India, Pakistan, Senegal and Viet Nam, for example; while for Burkina Faso, Ethiopia, Kenya, Nepal and TANZANIA the costs are 0.7-0.8 percent of GDP. 97 See Cichon and Hagemeyer (2006). 98 "Adaptive social protection" is a term coined by researchers at the Institute of Development Studies, Sussex, to bring together thinking about social protection, disaster risk reduction and climate change adaptation (Davies, Oswald and Mitchell 2009).

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UGANDA

Today, there are more than 900 cars per 1,000 people of driving age in the United States and more than 600 in Western Europe, but fewer than 10 in India. US households average more than two television sets, whereas in Liberia and UGANDA fewer than 1 household in 10 has a television set. Domestic per capita water consumption in the very high Human Development Index (HDI) countries, at 425 litres a day, is more than six times that in the low HDI countries, where it averages 67 litres a day.

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UGANDA

In rural areas the average is 22 percent of poverty, compared with 13 percent in urban areas. In Mongolia, Peru, Swaziland and UGANDA such deprivations account for more than 30 percent of multidimensional poverty. But there are some good performers as well, with lower shares of environmental deprivation. In several Arab States (Jordan, Occupied Palestinian Territory, the Syrian Arab Republic and the United Arab Emirates) and European and Central Asian countries (Croatia, Estonia, Russian Federation and Ukraine) such deprivations are less than half their weight in the index.

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UGANDA

In Sierra Leone improved access to water and electricity reduced domestic work time about 10 hours a week. A study in the 1990s found that if all households in the Mbale district of Eastern UGANDA had secure access to water and fuel - living 400 metres or less from potable water and no more than 30 minutes from a fuelwood source - they would gain more than 900 hours a year.

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UGANDA

Some studies link fertility decisions to deforestation and difficult access to water, which require women and children to spend more time collecting fuelwood and water. Unmet need is often high - more than 30 percent of people in some countries, including Haiti, Liberia, Mali and UGANDA, would like to use family planning but do not. Multidimensional poverty is correlated with unmet need for contraception.

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UGANDA

FIGURE 3.7 unmet contraceptive need is higher among the multidimensionally poor Population with unmet contraceptive need (percent) *Note:* Data are for most recent year available during 2000–2010 and are based on the Demographic and Health Survey second definition of unmet need (DHS 2008). *Source:* Calculated based on data on MPI from statistical table 5 and from Demographic and Health Surveys.

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UGANDA

These include a United States Agency for International Development pilot programme in Nepal covering some 14,000 community forest user groups and the PATH Foundation's Integrated Population and Coastal Resource Management Initiative in the Philippines, which show how to bring reproductive health services into existing community-run programmes. Cambodia and UGANDA have similar initiatives. ProPetén, an organization devoted to preventing deforestation in Guatemala, augmented its deforestation prevention initiatives with an integrated approach to population, health and environment that was associated with a decline in average fertility in the region from 6.8 births per woman to 4.3 over a decade.

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UGANDA

In Mount Vernon, one of the poorest communities in Jamaica, community-led disaster mapping highlighted flooding problems and led to agreement on the need for footbridges. • A community-led mapping of women's access to resources and services in Jinja, UGANDA, identified corrupt land distribution and denial of women's rights to land as impediments to women's access. Grassroots leaders responded by setting up savings clubs and rotating loan schemes, which improved women's access to land titles and helped them develop their property.

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ZAMBIA

But households specializing in agriculture benefit, and many in Latin America and the Caribbean and elsewhere in Asia are lifted from poverty. • Another recent study of nine countries (Bolivia, Cambodia, Madagascar, Malawi, Nicaragua, Pakistan, Peru, Viet Nam and ZAMBIA) found that rising food prices increased income poverty overall, even if rural food producers did better. Similarly, food price hikes increased the incidence and intensity of poverty in Indonesia, the Philippines and Thailand.

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ZAMBIA

FIGURE 3.7 unmet contraceptive need is higher among the multidimensionally poor Population with unmet contraceptive need (percent) *Note:* Data are for most recent year available during 2000–2010 and are based on the Demographic and Health Survey second definition of unmet need (DHS 2008).

Source: Calculated based on data on MPI from statistical table 5 and from Demographic and Health Surveys.

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ZIMBABWE

FIGURE 2.4 high HIV/AIDS prevalence rates in Southern Africa stall improvements in health inequality Loss in the health component of the HDI due to inequality, 1970-2010 Atkinson inequality index *Note:* See Technical note 2 for definition of the Atkinson inequality index. Each observation represents a five-year average. *Source:* HDRO calculations based on life expectancy data from the United Nations Department of Economic and Social Affairs, Population Division, Population Estimates and Projections Section, and Fuchs and Jayadev (2011).

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ZIMBABWE

In Mexico, high-impact disasters were linked to increased school attendance and reduced dropout rates for primary school, and in Mozambique, to better school performance, possibly because the opportunity cost of sending children to school fell along with market wages. Weather shocks can also affect child health, notably through increases in malnutrition. One study in ZIMBABWE found that children who were exposed to shocks (civil war and the 1982-1984 drought) at ages 12-24 months completed 0.85 grade of schooling less and were on average 3.4 centimetres shorter than those who were not.

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ZIMBABWE

FIGURE 3.7 unmet contraceptive need is higher among the multidimensionally poor Population with unmet contraceptive need (percent) *Note:* Data are for most recent year available during 2000–2010 and are based on the Demographic and Health Survey second definition of unmet need (DHS 2008). *Source:* Calculated based on data on MPI from statistical table 5 and from Demographic and Health Surveys.

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ZIMBABWE

The environmental management skills of local people may include multiuse strategies of appropriation, small-scale production with little surplus and low energy use, and a variety of custodial approaches to land and natural resources that avoid waste and resource depletion. Case studies suggest that traditional values can protect natural resources. Over three decades in the Zambezi Valley of ZIMBABWE, for instance, forests considered sacred lost less than half the cover of those that were not. In Ghana conservative traditions and practices led to the designation of sacred areas and to periodic restrictions on farming, harvesting and fishing.
