Sustainable Development in action
United Nations Commission on Sustainable Development
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Energy for Sustainable Development

Growing fears about energy insecurity, heightened by concerns over the rising price of oil and gas have dominated headlines across the globe. The question is, will countries continue to have access to a steady supply of affordable energy?

At the same time, concern about climate change is increasing. Polar ice is melting, average temperatures are rising, and storms are increasing in intensity.

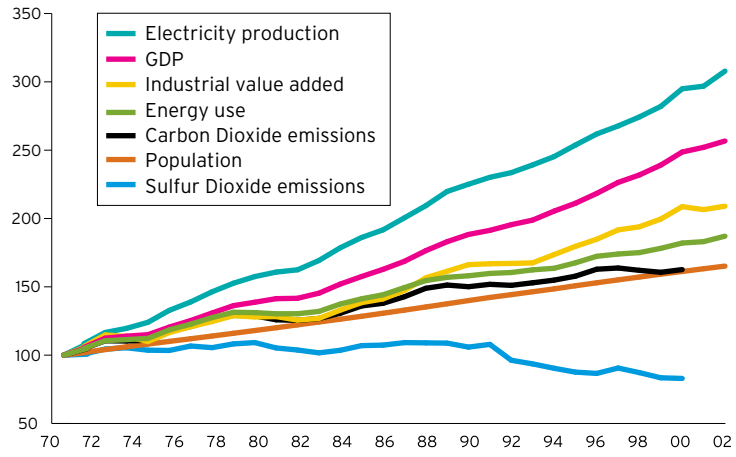
There are 1.6 billion people in the world who still don't have access to electricity and there are 2.4 billion people, more than a third of the world's people, who still cook and heat with traditional fuel sources such as wood or dung and who suffer from indoor and outdoor air pollution. More, and cleaner, energy sources are needed to support the kind of economic development that is needed to improve the lives of hundreds of millions of people who are presently living in extreme poverty.

Often reported or discussed as distinct or only casually related phenomena, these issues are inextricably linked to one another in a manner that goes to the very heart of the most commonly used definition of sustainable development: meeting the needs of the present without compromising the ability of future generations to meet their own needs.

But confronting all three of these challenges requires a common approach, a global approach, and it requires that countries integrate their energy policies into comprehensive planning for sustainable development. On this basis, the Commission on Sustainable Development will meet in New York from 1-12 May to identify problems and obstacles to workable solutions that will allow countries to meet their particular needs in a global framework.

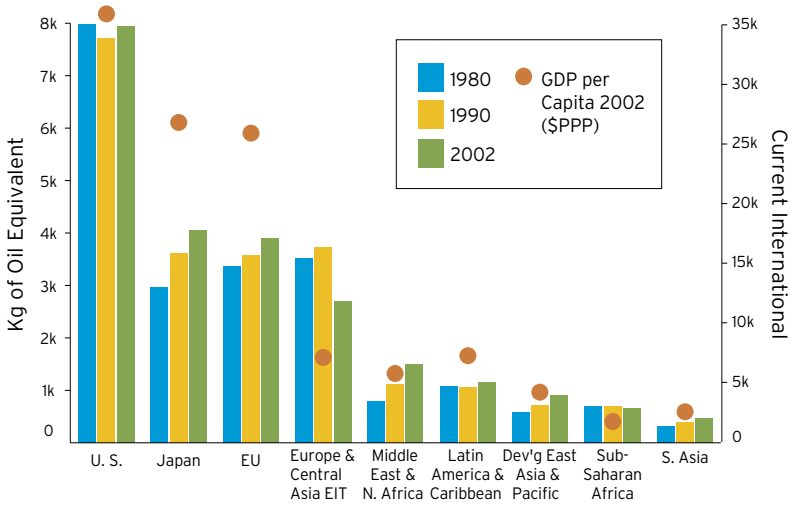
"Sustainable development means that we have to tackle the problems of poverty, consumption and the environment as a package," says JoAnne DiSano, Director of the UN Division for Sustainable Development. Speaking in advance of the May meeting, she adds, "Through discussions on good policies and best practices, the Commission on Sustainable Development can help countries adopt the best approaches for themselves and our planet."

Global Trends: Growth in Economy, Energy & Emissions



Note: Index: 1971=100
Source: UNDESA-DSD, based on data from World Bank, World Development Indicators 2005, and Stern, D., 2005.

Energy Use per Capita & GDP per Capita



Note: Europe & Central Asia EIT (Economies in Transition) excludes EU accession countries.
Source: World Bank, World Development Indicators 2005.

But she warns that the Commission is not a place to look to for quick fixes. "The Commission provides an opportunity for real consideration of the issues based on real situations."

Global approaches have worked. Due to a concerted effort, countries have largely eliminated ozone depleting chemicals and leaded gasoline. New technologies, as well as a shift from sulphur-containing fuels, have contributed to large reductions in sulfur dioxide emissions.

Record-breaking events

2005 was a record-breaking year for oil prices, which spiked to US $70 a barrel (in current dollars), making the energy marketplace jittery and raising concerns about the outlook for a stable, affordable and sustainable energy supply. Although oil prices retreated in the months since Hurricane Katrina, in April 2006 they reached new highs, and any drop in price is likely to be a far cry from the 2004 low of $32 a barrel.

And never before has the earth's atmosphere contained as much greenhouse gas as it did in 2004, the last year for which such statistics are available according to the World Meteorological Organization. The build-up of these gases, which cause the earth to retain more heat, is largely the result of emissions from burning fossil fuels such as oil, coal and natural gas.

Largely due to human activity, the earth's temperature has increased by 0.6°C during the 20th century according to the Intergovernmental Panel on Climate Change, and northern hemisphere data indicates that the temperature increase of the last century was the biggest jump in the last 1,000 years. NASA scientists have confirmed that 2005 was the hottest year since measurements began to be recorded in the 19th century. Between 1990 and 2100, the IPCC forecasts, the surface temperature of the earth could rise by 1.4 to 5.8°C.

"The projected rate of warming is very likely to be without precedent during at least the last 10,000 years, based on paleo-climate data," said Dr.R. K. Pachauri, Chairman of the Intergovernmental Panel on Climate Change.

Most of the build-up in greenhouse gases has been the result of more than a century of activity in the world's most industrialized nations, which still consume the most energy and cause the most emissions. In developing countries today, per capita energy consumption ranges from one-third to one-fifteenth what it is in developed countries. And even in developed countries, Europe and Japan are considerably less energy intensive – that is they require less energy to produce a unit of economic output – for their income levels than is the US.

Energy Needs Growing

As more people in more countries pursue a better standard of living, more energy is used and, consequently, the amount of emissions increases. The IEA forecasts that energy use in 2030 will be at least 50 percent higher than it is today, with more than two-thirds of this increase occurring in developing countries. During this same time, carbon dioxide emissions are likely to grow by 62 percent.

Nevertheless, energy consumption has increased more slowly than economic growth due to improved energy efficiency and as economies have moved toward less energy intensive industries and services. China has more than doubled its energy efficiency between 1980 and 2002 and carbon dioxide emissions are increasing at a lower rate than overall energy use, due in part to energy efficiency, increased reliance

on natural gas, and to a lesser extent, to nuclear and renewable energy.

But greenhouse gas emissions due to strong economic growth have more than offset any emissions reductions in North America, and in Asia, booming economies largely fueled by coal combustion have resulted in a tripling of emissions compared with 1980.

The world presently uses the equivalent of 230 million barrels of oil a day, and if present trends continue, oil use is expected to increase by 50 percent over the next 25 years.

"The world remains perilously wedded to oil and other fossil fuels," United Nations Secretary-General Kofi Annan said in speech this February in the United Arab Emirates. He added that "we must look ahead, beyond the finite life of fossil fuels, and promote clean, alternative, renewable sources of energy such as solar, wind and biofuel. The soaring demand for oil is concentrating the minds of the world as never before. Today's high oil prices make the economic and environmental arguments even more mutually supportive."

Feeling the Energy Pinch

Energy issues have again climbed to the top of the international agenda, and energy is one of the main issues before the G8 Summit that will be held this July in St. Petersburg in the Russian Federation. Russian Federation President Vladimir Putin has called the lack of stability in the hydrocarbon markets a real threat to the global energy supply. "In order to stabilize the situation in this field, coordinated activities of the entire world community are needed."

Energy was a major theme for United States President George W. Bush, who called for "energy independence" in his major address to Congress in 2006. Indian Prime Minister Manmohan Singh, explaining in an interview with the Washington Post why India was looking at new energy partnerships said, "We are terribly short of our energy supply and we desperately need new sources of energy." And China, which has seen its imports of oil increase dramatically, has adopted a 15-year plan to improve conservation, the use of renewable energy sources and cleaner coal.

High oil prices may help promote energy conservation and reductions in greenhouse gas emissions and could provide the economic impetus to turn to alternative energy sources such as renewable energy. But high oil prices take a toll on the pocketbooks of consumers in developed countries and can be devastating to non-oil producing developing countries, which often have to dip into reserves to pay for energy imports. Energy price volatility poses major problems for sustainable development in both energy exporting and importing countries.

Oil industry officials maintain that there is still plenty of oil in the ground to meet rising demand for many years to come. A minority of commentators and analysts have aroused controversy by arguing that oil extractors will in the near future "peak" and decline thereafter. Others maintain that rises in the price of oil will spur investment, technological innovation and tapping the harder to get oil resources, such as tar sands.

"There is no shortage of oil and gas in the ground," says Claude Mandil, Executive Director of the International Energy Agency, "but quenching the world's thirst for them will call for major investment in modern technologies."

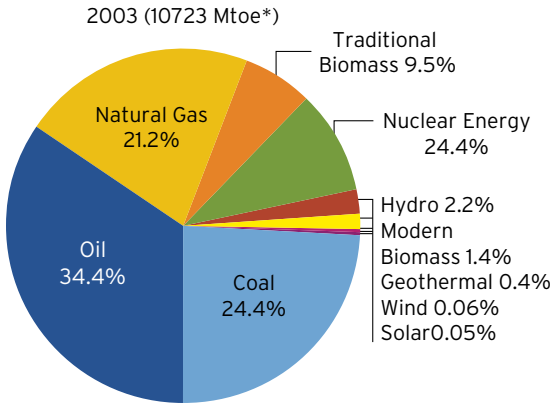
Alternative Energy Choices

Oil will remain the dominant energy source for the near future even as new technologies, such as hybrid cars, will continue to increase oil efficiency. But oil, subject to highly charged geopolitics, is a non-renewable resource and major source of greenhouse gases.

Natural gas, a far cleaner fuel than oil, presently accounts for about 21 percent of global energy use, although its price has also been increasing. There are extensive reserves of heavy emission-causing coal (24 percent of global energy use) still in the ground. Nuclear energy, the source of 6.5 percent of global energy supply, is seen as a greenhouse-gas-free alternative, but it has other drawbacks, including the rising price of uranium, the unresolved matter of radioactive waste disposal and the high cost of building nuclear plants.

Many of the two billion people who do not have access to modern energy services use combustible renewable sources of energy such as firewood, charcoal and dung, which account for 9.5 percent of energy used, but these fuels emit high levels of greenhouse gases and the pollution they cause has a severe impact on health.

World Total Primary Energy Supply by Source



*Mtoe is million tonnes of oil equivalent
Source: IEA, 2002 & 2005.

According to the IEA, modern renewable energy sources now account for 4.1 percent of the world's energy supply. Of this, hydropower accounts for 2.2 percent, modern biomass 1.4 percent, geothermal 0.4 percent and smaller fractions of a percent for other sources, such as wind and solar. But global investment in renewable energy set a new record of $30 billion in 2004 according to the Worldwatch Institute. Technologies such as wind, solar, biomass, geothermal and small hydro, the Institute reports, now provide 160 gigawatts of electricity generating capacity, about four percent of the world total, the report finds.

At the 2002 Johannesburg World Summit on Sustainable Development, countries agreed to intensify their efforts to promote the use of renewable energy, including the transfer of new technologies to developing countries.

But even if the use of renewables increases, the rate of greenhouse gas emissions is still expected to rise significantly in the coming decades, although not as much as it would if present trends continue.

There are basically two ways to limit greenhouse gas emissions: reducing emissions or capturing emissions. Greenhouse gas emissions can be curbed through greater conservation and by decreasing energy intensity—using energy more efficiently. There has been a global decline in energy intensity of more than 28 percent during the last decade. And new technologies are opening up new ways to capture carbon dioxide emissions before they escape into the atmosphere.

CSD-14 Objectives

The Commission on Sustainable Development, a unique UN body composed of 53 member states, working with intergovernmental and nongovernmental organizations, academics, business, scientists and tradespeople, will be spending its next two sessions dealing with energy issues. At this year's meeting, countries will review the global energy situation with regard to progress made since the 2002 World Summit on Sustainable Development and other important international agreements, including a look at best practices that have made a difference and can be replicated, as well as practices that have not worked. Next year, the Commission will offer concrete policy recommendations.

CSD-14 is not a substitute for negotiations that are taking place on any number of issues that are related to the session, such as in the context of the Climate Change Convention or the Montreal Protocol on ozone protection. But because the CSD encourages wide-ranging participation, it offers the opportunity to integrate discussions on topics that would not ordinarily take place in other contexts. At this year's session, governments and civil society representatives have the opportunity to diagnose energy challenges in an integrated manner—how energy choices affect the fight against poverty, the environment, industrial development and climate change.

The Commission on Sustainable Development is the United Nation's high-level forum responsible for ensuring follow up to the World Summit on Sustainable Development, and monitoring progress towards achieving internationally-agreed development goals.

For more information on CSD-14, including the full press kit and schedule of the session visit: www.un.org/esa/sustdev/csd/csd14/csd14.htm

All graphs are from "Trends in Sustainable Development, " published by the UN Department for Economic and Social Affairs. The full report can be found at http://www.un.org/esa/sustdev/publications/trends2006/index.htm.

CSD-14 will be webcast live at www.un.org/webcast

Media representatives without UN credentials who wish to attend CSD meetings should contact: Media Accreditation & Liaison Unit, UN Department of Public Information, Fax: 212.963.4642 Tel: 212.963.2318

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