

UNITED NATIONS FOUNDATION

PRACTICAL STRATEGIES FOR IMMEDIATE PROGRESS ON CLIMATE CHANGE

BUILDING BLOCKS FOR A GLOBAL AGREEMENT

Forging an effective response to climate change is one of the international community's highest priorities. Governments have pledged to conclude a global agreement under UN auspices by the end of 2009 in Copenhagen. Reaching an agreement that is both effective and fair will be a major political challenge, and bringing it to life through a workable set of rules, institutions, policies, and programs will require concerted effort by all countries in the years ahead.

Fortunately, the most urgent actions that countries must take to combat climate change are neither politically controversial, nor must they await establishment of a new international climate framework. The basic "building blocks" of an effective climate policy can be constructed more rapidly and are politically attractive because they deliver other economic, security, and environmental benefits. Energy efficiency, development and deployment of low-carbon energy technologies, sustainable land management, and enhanced resilience to climate change are goals that countries are pursuing already for a variety of strategic national interests. Translating this positive confluence of interest into practical policy commitments and action plans will make an immediate contribution to solving the climate problem and lay the groundwork for a successful agreement in Copenhagen and effective implementation afterwards.

Success in Copenhagen must include, among other outcomes, (1) agreement by developed countries on ambitious targets for emissions reductions, (2) meaningful commitments by developing countries to low-carbon development through nationally appropriate mitigation actions (NAMAs); and (3) new and additional financing from developed countries to support developing countries with both mitigation and adaptation.

Clear strategies by both developed and developing countries on the building blocks of energy efficiency, renewable energy, sustainable land use, and adaptation will help to facilitate all of these outcomes. Simply put, focusing on goals that countries want to pursue in their own economic self-interest will help mobilize political will for commitments they might otherwise prefer to avoid. Focusing now on the substance of these building blocks can also help to accelerate implementation after Copenhagen by specifying national goals and reporting arrangements and establishing institutional structures for technology cooperation.

Several key international meetings leading up to the Copenhagen conference provide an opportunity to put these building blocks in place. The Major Economies Forum on Energy and Climate, with a leaders meeting following the G8 Summit in July, and the Secretary-General's high-level meeting on climate, before the UN General Assembly in September, will bring together heads of state to lay the groundwork for success in Copenhagen. These meetings, along with negotiating sessions of the UN Framework Convention on Climate Change, provide an opportunity for leaders to assemble building block strategies into meaningful national commitments.

Energy Efficiency

Energy efficiency is the most immediate and cost-effective opportunity to reduce global greenhouse gas emissions. Numerous studies have shown that improving energy efficiency can provide more than 50 percent of needed emissions reductions by 2020. It is one of the few large-scale mitigation options that yields a positive economic return while providing a wide range of other social, environmental, and security benefits. Energy efficiency is attractive in all nations and especially in developing countries, where it allows existing energy sources to serve a larger population and so facilitates universal access to modern energy services—a key requirement for poverty reduction and sustainable development. The McKinsey Global Institute found that additional annual investments of \$170 billion through 2020 could cut global energy demand growth in half, provide an average internal rate of return of 17 percent, and yield energy savings ramping up to \$900 billion annually by 2020. Nineteen U.S. states have set energy efficiency standards and a national efficiency standard is now under consideration in Congress. The EU has set a target of cutting energy demand 20 percent by 2020, and China has a target of reducing its energy intensity by 20 percent in five years.

But energy efficiency faces an array of market barriers that currently inhibit full deployment, and pricing carbon alone will not be sufficient to overcome these well documented market barriers. Several countries have experimented with innovative implementation strategies – e.g., building codes, appliance standards, and regulatory incentives for utilities to finance end-use efficiency improvements. The International Energy Agency has documented 25 policies that nations can adopt to achieve widespread deployment of energy efficiency measures, but few countries have taken strong steps in this direction.

Currently, energy efficiency is improving globally at a rate of 1.25 percent per year, as measured by declines in energy intensity (the ratio of energy use to economic output). With appropriate policies and financial support, the rate of energy efficiency improvement could be doubled to 2.5 percent by 2015.

Renewable Energy

Stabilizing greenhouse gases in the atmosphere at safe levels will require a 50 percent cut in global emissions by 2050 and an 80 percent reduction in industrialized countries. At the same time, achievement of the Millennium Development Goals will require the extension of modern energy services to 2.5 billion people in developing countries who currently rely on traditional biomass fuels. Achieving both of these goals will require no less than a complete transformation of the world's energy economy. A variety of low-carbon energy sources must be harnessed at scale, including existing sources such as natural gas, biomass, wind, geothermal, hydro, nuclear, and solar, as well as new technologies to reduce and sequester emissions from coal and other fossil fuels, and new technologies for non-fossil energy.

Renewable energy technologies are the most compelling alternatives to fossil fuels in the long run, as they rely on inexhaustible, domestic resources, they are environmentally friendly if appropriately sited and designed, and their production can create domestic economic development and jobs in all countries. The growth of renewable energy is constrained in the short to medium term by generally higher prices than competing—and often subsidized—fossil alternatives, although these prices are falling and are competitive with fossil fuels in some cases (e.g., in wind and solar applications off the grid).

Today, renewable sources provide about 7 percent of global energy, mostly hydro and wood. The EU has set a target of getting 20 percent of its energy from renewable sources by 2020. China has set a target of 15 percent by 2020. More than half the U.S. states have adopted renewable electricity standards (RESs) that require increased use of wind, solar, geothermal, and bioenergy. The U.S. Congress is considering a national RES that would require all states to derive 20 percent of their electricity from renewable sources by 2020, although some of that target could be met through increased energy efficiency.

Efficiencies of scale and technological improvements are steadily reducing the cost of renewable energy technologies. Additional national performance standards that create larger-scale markets will accelerate this process even further. Yet weak or perverse policies constrain private investment and limit the market share of renewable energy, especially in developing countries. A global commitment is needed to develop and deploy renewable energy technologies at a much greater scale to accelerate innovation and reduce costs. A global goal of providing access to modern energy services for all and deriving 20 percent of the world's electricity from renewable sources by 2020 would help meet the challenges of climate change and energy access for the poor at the same time.

Sustainable Land Use

Tropical deforestation produces roughly 20 percent of global CO₂ emissions. Agriculture and livestock generates another 14 percent. Taken together, these elements of land use account for one third or more of all emissions. We cannot hold greenhouse gases to safe levels in the atmosphere unless developed and developing countries reduce deforestation, increase afforestation, adopt sustainable agricultural practices, and restore vegetation on degraded lands. These low-cost carbon mitigation strategies also provide compelling social and economic benefits. Protecting and restoring healthy natural habitat provides people with a range of valuable services, including freshwater, fertile soils, crop pollination, pest control, flood prevention, food and fiber, recreation, tourism revenue, and more. Sustainable practices for low-carbon agriculture, forestry, and livestock (such as biochar soil improvement) can boost farm productivity and rural incomes, enhance soil health, conserve water, save energy, reduce pollution and runoff, and stimulate economic development, job creation, poverty reduction, and food security. Sustainable land management also helps with climate adaptation, as healthy ecosystems and farms protect watersheds, maintain regional weather patterns, and provide a buffer from extreme weather events caused by climate change.

Yet few of these good conservation practices make economic sense in today's marketplace. Ecosystem services are rarely valued in the market, so tropical forests, wetlands, and other natural habitat are often worth more dead than alive. Sustainable farming and forestry practices, while economic at scale in the long run, often entail added first costs or face other barriers that limit their uptake. National policy commitments, targeted financial incentives, and extension services to landowners are needed to scale up sustainable land management in both developed and developing countries.

Through such programs, countries could feasibly reduce the annual rate of tropical deforestation 50 percent by 2020 and significantly increase the amount of land under sustainable management (habitat restoration and sustainable agriculture, livestock, and forestry practices).

Adaptation

The latest assessment report of the Intergovernmental Panel on Climate Change concluded that climate change is already under way and that developing countries, especially in Africa, are most vulnerable to its early impacts, including droughts, floods, water shortages, more intense tropical storms, increased disease ranges, coral bleaching, and more. Since the Bali conference in 2007, it has become clear that the next global climate agreement must offer significantly more resources to developing countries to plan and implement adaptation measures. Several adaptation funds have been established, at the World Bank and UNDP as well as under the UNFCCC itself. These funds have yet to mobilize significant resources, however, adding to the North-South tensions in the current negotiations.

As a trust-building measure, OECD countries should contribute \$1-2 billion over the next three years (2010-2012) for implementation of National Adaptation Programs of Action (NAPAs) by the least developed and most vulnerable countries in the context of their poverty reduction strategies. Preference in use of the funds should be given to community-level organizations and NGOs to enhance local resilience in the context of sustainable development, supporting access of villages and rural populations to infrastructure, renewable energy, education, health care, and ecosystem conservation—all designed with the likely impacts of climate change taken into account. The funds provided should be new and additional to existing ODA commitments. These funds would be focused on reducing vulnerability and the planning and additional investments necessary to adapt national development programs to the expected impacts of climate change. The funds could be provided as a special window in the GEF with a modified governance structure that balances developing and developed country interests. Its funding would be additional to GEF's fifth replenishment.

Immediate Steps to Put the Building Blocks in Place

The goals and strategies described above for energy efficiency, renewable energy, sustainable land use, and adaptation provide the building blocks for a meaningful set of commitments in Copenhagen. They would support significant emissions reductions in developed countries, enable developing countries to commit to low-carbon development through NAMAs, and provide the basis for rapid implementation of financing and technology cooperation between developed and developing countries. Bringing the building blocks to life in time for Copenhagen will require immediate action on several fronts:

Funding: New and additional financing commitments are a necessary outcome in Copenhagen. But even prior to agreement on a full, long-term financing package, existing programs of international cooperation should be scaled up to fund initial deployment of building block strategies in developing countries. This should include replenishing the Global Environment Facility at a higher level with needed reforms, mainstreaming low-carbon development and adaptation into the lending programs of the World Bank and other international financial institutions, and increasing bilateral aid programs. The focus of this additional assistance should be on immediate action and capacity building. Longer-term financing for implementation of low carbon development strategies will need to come from other sources (e.g. carbon markets, special funds, etc.) and will need to be negotiated through the UNFCCC process. Public funds should be used to leverage much larger flows of private-sector investment, stimulate innovation, build institutional capacity, and provide funds for technology research and development and early-stage demonstration.

Institutions: To meet the need for low-carbon development and improved access to modern energy services, a network of national and regional energy technology centers should be organized to help developing countries deploy energy efficiency and renewable energy technologies. Such a network might build on the successful Consultative Group on International Agricultural Research (CGIAR) and be made up of existing institutions or new ones in some cases. The existing CGIAR agriculture and forestry centers could be scaled up and tasked with helping developing countries deploy sustainable land use practices.

Implementation Protocols: The Copenhagen agreement will need to include rules for monitoring, reporting, and verification (MRV) to ensure that developed countries meet their emissions reduction targets and to provide confidence that financing for mitigation and adaptation actions by developing countries is effectively deployed. While these rules must be negotiated under the UNFCCC, there are private, voluntary standards in a number of key sectors that could provide valuable technical input to the negotiations. Two in particular that merit additional attention and support are energy efficiency standards under development by the International Organization for Standardization (ISO) and land-based carbon standards under development by the Climate, Community & Biodiversity Alliance (CCBA).