



‘Whole System’ Approach Needed to Cut Greenhouse Gas Emissions, Experts Say at Climate Meeting

Appropriate Management of Natural Resources at Centre of Solutions to Climate Change, Says International Resource Panel

Paris, France, 30 November 2015 – Decoupling economic growth from escalating resource use should be an integral part of climate policy, according to a group of the world’s most renowned natural resources scientists.

As nations gathered at COP21 in Paris for their first day of deliberations to determine a new, global climate regime, the IRP said a “whole system perspective” was crucial when considering climate policy.

Releasing its *Ten Messages on Climate Change* today, the International Resource Panel (IRP) said natural resource management and climate change were intrinsically linked, with a large part of global energy use, and therefore greenhouse gas (GHG) emissions, tied directly to the acquisition, processing, transport, conversion, use and disposal of resources.

Raising resource productivity through improved efficiency and reducing resource waste could lower resource consumption and GHG emissions, bringing economic gains and promoting more equitable access to resources, the IRP said. Moreover, through decoupling, developing countries could cut the increase in annual energy demand by more than half over the next 12 years, while realizing their development goals.

“Policy changes aimed at mitigating GHG emissions affect not only the stability of the climate, but also other environmental aspects and resource use, positively or negatively,” the IRP co-chair, Janez Potočnik, said. “A whole system approach that connects production, consumption and their impacts on the environment and resources helps prevent adverse unintended consequences of GHG emission mitigation”.

This argument is further underpinned by the new IRP report, *Green Energy Choices: the Benefits, Risks and Trade-offs of Low-Carbon Technologies for Electricity Production*, also released today. This assesses nine low-carbon energy technologies, which will be essential for meeting 2°C objective and growing energy demand.

For the first time, countries making the decision about which renewal energy technology to use have clear, comparative science-based information about not only their GHG reduction benefits but also about other positive and negative environmental, human health, and natural resource use impacts.



Achim Steiner, Executive Director of UNEP, said, “Clean energy technologies such as photovoltaic and wind power have clear benefits in terms of tackling climate change and air pollution, and providing access to clean and affordable energy.

“These technologies will be critical to keeping global warming under 2C, but we need to remain cognizant of their effects on the environment, such as their higher use of metals like steel and copper in manufacturing. As countries look to meet their energy needs while combatting climate change, this report can help identify the most sustainable mix of energy technologies to accomplish that goal.”

Global demand for energy is expected to require an estimated investment of \$US 2.5 trillion a year over the next 20 years in new energy installations and energy conservation initiatives. This report presents a unique opportunity for countries to carefully select the electricity production technologies in which they invest.

Key findings of *Green Energy Choices* include:

- Coal- or gas-fired systems with carbon capture and storage (CCS) reduce GHG emissions, but increase other pollution problems by 5-80 per cent, and create higher human health and environmental impacts.
- Electricity generated from renewable sources causes 70-90% less pollution harmful to ecosystems and human health than coal power. Greenhouse gas emissions are commonly 90-99% lower.
- Wide-scale deployment of a mix of low-carbon electricity generation technologies, as foreseen in mitigations scenarios such as the IEA’s *Blue Map* Scenarios, helps to stabilize or reduce pollution such as eutrophication, acidification, particulates, photochemical smog, and toxicity.
- Renewable power sources have lower pollution-related human health and ecological impacts per unit of power produced than coal-fired power plants or the current electricity mix, but require more metals and other minerals.
- Sound sustainability criteria should be used as a basis for making sound decisions about future energy choices and investments.

NOTES TO EDITORS

To download *Ten Messages of the International Resource Panel on Climate Change*, and *Green Energy Choices: the Benefits, Risks and Trade-offs of Low-Carbon Technologies for Electricity Production*, please visit www.unep.org/resourcepanel.

About the International Resource Panel

The International Resource Panel is hosted by UNEP in the Division of Trade, Industry and Economics. It was established in 2007, as a scientific body that provides independent policy-relevant scientific assessments to governments and other stakeholders on the



efficient and effective use of natural resources over the whole life-cycle. By providing up-to-date information and best-science available, the IRP contributes to a better understanding of how to decouple human development and economic growth from environmental degradation. The IRP's reports and assessments aim to be policy-relevant and support policy-framing, and planning. Through its reports to date, the IRP is able to demonstrate a growing impact on policy-development at international, regional and national levels. The IRP's reports have been used by and referred to by international organizations, national governments, think-tanks and research organizations, academia, industry and civil society, in their discussions and planning for new policies that take into consideration resource efficient and sustainable consumption and production.

About UNEP

Created in 1972, UNEP represents the United Nations' environmental conscience. Based in Nairobi, Kenya, its mission is to provide leadership and encourage partnership in caring for the environment by inspiring, informing and enabling nations and peoples to improve their quality of life without compromising that of future generations. UNEP's Division of Technology, Industry and Economics – based in Paris – helps governments, local authorities and decision-makers in business and industry to develop and implement policies and practices focusing on sustainable development. The Division leads UNEP's work in the areas of climate change, resource efficiency, and chemicals and waste.

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