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## **With resource use expected to double by 2050, better natural resource use essential for a pollution-free planet**

- International Resource Panel Report says material resource use expected to reach nearly 90 billion tonnes in 2017, and may more than double from 2015 to 2050
- Without greater resource efficiency, Sustainable Development Goals will not succeed
- Resource efficiency policies and initiatives can cut resource use 26 per cent, and reduce greenhouse gas emissions by an additional 15-20 per cent, by 2050

**3 December 2017** – Extraction of material resources – biomass, fossil fuels and non-metallic minerals – from the Earth could reach 88.6 billion tonnes in 2017, or three times that used in 1970, according to estimates from the International Resource Panel.

Since global material resource use is likely to then more than double by 2050 on current trends, the global economy must embrace resource efficiency to achieve the Sustainable Development Goals, the report says.

With 19 million premature deaths estimated each year due to environmental and infrastructure-related risk factors linked to natural-resource use, the report suggests that better and more efficient extraction and use of natural resources could be one of the most effective, and cost-effective, ways to reduce environmental impacts, including pollution, while at the same time advancing human well-being.

*Assessing Global Resource Use* was released at the Science-Policy-Business Forum, a preliminary event to the UN Environment Assembly, which runs from 4-6 December at UN Environment headquarters in Nairobi. The assembly unites over 2,000 heads of state, ministers, business leaders, UN officials and civil society representatives to tackle the global menace of pollution.

The International Resource Panel is a group of eminent scientists specializing in resource management issues established by UN Environment in 2007. It was asked by the second session of the United Nations Environment Assembly to make available information on the state, trends and outlook of sustainable consumption and production.

“The amount of natural resources used is closely linked to the amount of final waste and emissions generated through their use,” said International Resource Panel co-chairs Janez Potocnik and Izabella Teixeira in a joint statement. “Effective pollution control must also look to minimize raw material use, thereby decreasing final waste and emissions.”

Everyone on earth is affected by pollution, according to [The Executive Director's Report: Towards a Pollution-Free Planet](#), which the UN Environment Assembly is using as the basis for laying out new action areas. Over a dozen resolutions are on the table at the assembly, including new approaches to tackle air pollution, which is the single biggest environmental killer, claiming 6.5 million lives each year.

The report focuses on material resources. Subsequent reports, including one slated for 2019, will assess the footprints of all natural resources (materials, land, water, and greenhouse gas emissions).

“Growing material use is driven by expanding populations, consumption trends in mainly developed economies and the transformation of developing economies,” the report says. “Demand for resources has shifted from renewable to non-renewable resources, reflecting the global trend away from traditional towards modern technologies, and from agriculture-based economies to urban and industrial economies.

“This creates new waste flows – thereby increasing emissions and pollution. For example, data show that the steep increases in demand for ores, like iron, have contributed to sharp rises in greenhouse gas emissions, acidification, aquatic eco-toxicity and emissions of smog-forming substances.”

Efficiency in the way resources are extracted and manufactured by industry, used and re-used by people, and recycled and disposed of by all are essential for a sustainable and pollution free planet, the report says.

Research by the Panel has found that, compared with business as usual trajectories, resource efficiency policies and initiatives could:

- Reduce natural resource use globally by 26 per cent by 2050, in combination with ambitious global action on climate change, as well as keep per capita resource use at current levels in high-income countries.
- By using technically and commercially viable solutions, improve water and energy efficiency by 60-80 per cent in construction, agriculture, transport and other key sectors, while saving \$2.9 - \$3.7 trillion a year by 2030.
- Reduce greenhouse gas emissions by an additional 15-20 per cent by 2050 (for a given set of greenhouse policies), with global emissions in 2050 falling to 63 per cent below 2010 levels.
- More than offset the economic costs of ambitious climate action.
- Deliver annual economic benefits of \$US 2 trillion globally by 2050, relative to existing trends, while helping to put the world on track to limit climate change to 2 degrees Celsius or lower.

But the reports says: “Resource efficiency alone is not enough ... What is needed is a movement from linear to circular material flows through a combination of extended product life cycles, intelligent product design, and standardization, reuse, recycling and remanufacturing. Business models aiming at offering high-quality services as an alternative to selling more products would be another important component.”

The report recommends a systems approach to natural resource management.

“Focusing on single resources, single economic sectors, or single environmental and health impacts will not

achieve the collective visions of the Sustainable Development Goals,” it says. “... A systems approach connects the flow of resources – from extraction through to final waste disposal – with their use and impact on the environment, economies and societies at each stage of the life-cycle.

“The approach can be used to identify key leverage points; develop resource targets; design multi-beneficial policies that take into account trade-offs and synergies; and steer a transition towards sustainable consumption and production and infrastructure systems.”

Such an approach is demonstrated in the report’s special feature on air pollution and cities, which includes two in-depth case studies of developing and emerging economy cities.

A case study of Delhi, India, demonstrates how a bundle of strategies that take a systems approach can deliver basic services to about 7 million additional people while consuming less than 5 per cent of the total amount of cement and electricity used in the city today. Such strategies would also avoid over 22 per cent of greenhouse gas and air pollution (PM2.5) emissions and prevent more than 2,500 premature deaths from dirty cooking fuel use alone.

Based on data from over 600 Chinese cities, the special feature demonstrates how circular economy policies combined with urban planning that promotes the exchange of materials and energy across different industry and infrastructure sectors could contribute an additional 15 to 36 per cent towards national greenhouse gas mitigation and avoid between 25,500 - 57,500 premature deaths through air-pollution reduction.

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#### **NOTES TO EDITORS**

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For information on the Science-Policy-Business Forum click [here](#)

For more information on the UN Environment Assembly, and the many events taking place, visit the [website](#)