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Imperative for Resource Efficiency

Challenges

- Earth's natural resources (water, land, materials and energy) are fundamental for human survival, prosperity and well-being.
- On current trends, a growing and increasingly affluent and urban global population is projected to see:
 - Annual **material** extraction more than double from current level to reach 183 billion tonnes by 2050.
 - Demand for **food and fibre** increase by 60% and 80–95% respectively by 2050, with very limited potential for cropland expansion within a 'safe operating space'.
 - Global demand for **water** to be 50% higher than currently accessible, reliable supplies by 2030.
- Current trends of intensive, inefficient and unsustainable use of Earth's finite resources will affect their future availability and accessibility, as well as accentuate ecological destruction, thereby endangering the very systems that provide the basis for sustainable development.



Responses

- **Resource efficiency** has the potential to allow humanity to continue to expand its use of the services derived from resources, while reducing the actual quantity of resources deployed (resource decoupling), along with the associated environmental impacts from that deployment (impact decoupling).

Examples

These Policy Briefs call for policy-making, capacity development, and multi-stakeholder initiatives at international, regional and national levels for more sustainable and efficient use of resources, reducing waste, emissions, costs of environmental degradation and poverty, and creating decent jobs.

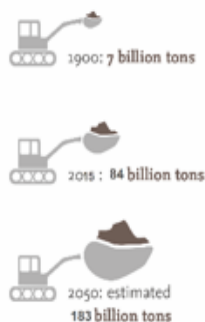
10-Year Framework of Programmes on Sustainable Consumption and Production Patterns (10YFP)

What?

- The 10YFP is a UN-led global framework for action to accelerate the shift towards sustainable consumption and production in both developed and developing countries.
- 6 thematic multi-stakeholder programmes have been established (consumer information, sustainable lifestyles & education, sustainable public procurement, sustainable buildings & construction, sustainable tourism, sustainable food systems) to deliver support for this shift.

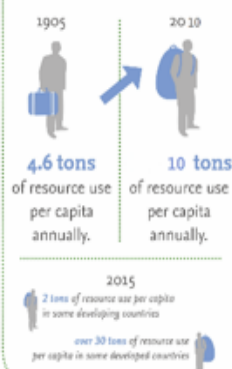
DEMAND FOR RESOURCES

Annual material* extraction rate



* Materials = fossil fuels, minerals, metals and biomass.

Increase in resource use per capita annually



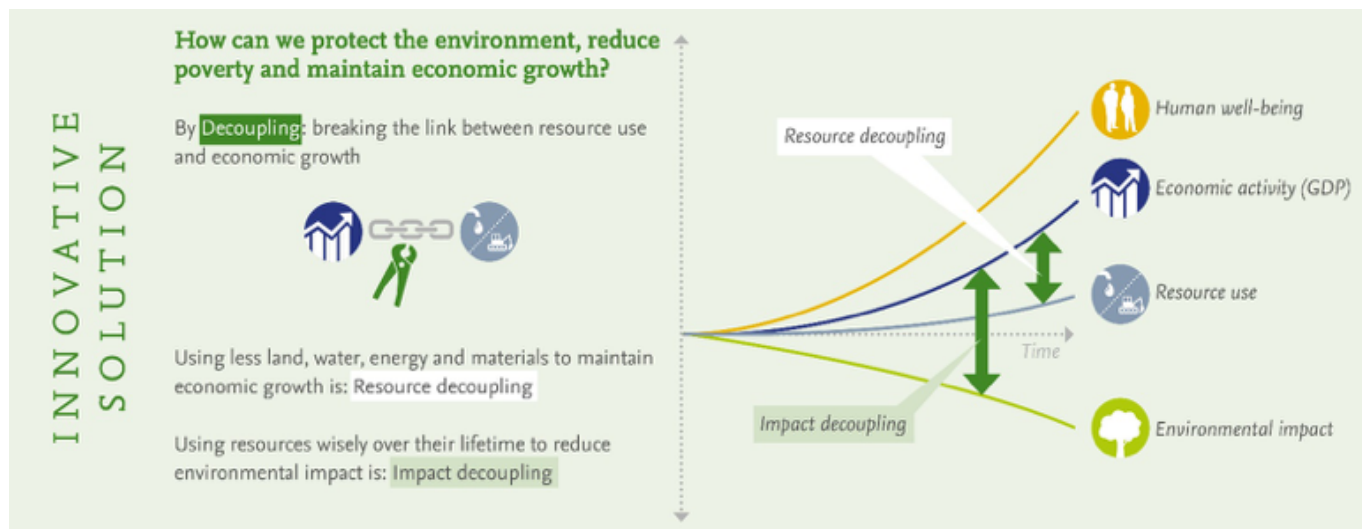
Drivers for resource demand

- **Growing population** from 7 billion today to 9 billion by 2050
- **Economic development** and increasing global trade
- **Increasing consumption of biomass**
- **Growing middle-class with changing consumption patterns**

Results of resource demand

- **Increasing resource extraction**
- **Greenhouse gas emissions**
- **Increasing resource scarcity**
- **Land degradation**
- **Price increases and volatility**
- **Water pollution**
- **Loss of biodiversity**
- **Air pollution**

Impact on human health



Success factors

- The multi-stakeholder programmes generate collective impact, through developing, replicating and scaling up policies and initiatives on sustainable consumption and production, and enhancing resource efficiency, at national and regional levels.
- The 10YFP delivers focused capacity building, including technical and financial assistance for developing countries.

Results

- A total of more than 450 institutions are engaged as actors in the six programmes, each of which have dedicated staff from three or four lead organisations, and are guided by multi-stakeholder advisory committees.
- More than 20 small and large scale projects are already underway, with more under development, responding to increasing demand from national focal points in more than 120 governments.

European Commission’s Circular Economy Strategy

What?

- In 2015 the European Commission adopted a Circular Economy Package to stimulate the transition of European businesses and consumers towards a circular economy.
- It includes an Action Plan for the circular economy, highlighting broad areas for action, including production (e.g. product design and Extended Producer Responsibility), consumption (e.g. labelling), waste management (targets for recycling and landfill), and markets for secondary materials (e.g. quality standards for secondary raw materials recovered from waste).

Success factors

- A mix of regulation and incentives to encourage greater recycling and reuse of resources (including legislative measures, communications and reports, implementation and enforcement, guidance and best practices, indicators, standards, support, and financing instruments).

Results

- Adoption of waste legislation, including targets for preparing 65% of municipal waste for re-use and recycling by 2030, and for limiting landfill to 10% of municipal waste.

3R initiative (Reduce, Reuse, and Recycle) and Kobe 3R Action Plan

What?

- G8 countries endorsed the 3R initiative (Reduce, Reuse, and Recycle) in 2004 and adopted the Kobe 3R Action Plan in 2008 to promote resource productivity and sustainable material management.

Success factors

- The Action Plan’s resource management strategy involves a holistic understanding of throughputs of material resources over the life cycle of products, from raw material extraction to final disposal.

Results

- Japan is one of few countries where material consumption has decreased in the past three decades, while the economy expanded. Now the Japanese sound material-cycle society (SMCS) policy sets out five steps in order of priority: reduce, reuse, recycle, energy recovery and final disposal.

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