



# Resource efficiency

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United Nations Environment Programme



# An overview

Economic growth and social development cannot be sustained with our current consumption and production patterns. Globally, we are extracting more resources to produce goods and services than our planet can replenish, while a large share of an increasingly urban world population is still struggling to meet basic needs.

Resource efficiency represents a critical opportunity to address this unsustainable path, building green economies in which economic growth is decoupled from environmental harm. By enabling the design and production of low-impact products and services, resource efficiency can help us meet human needs while respecting the ecological carrying capacity of the earth.

UNEP defines resource efficiency from a life cycle and value chain perspective. This means reducing the total environmental impact of the production and consumption of goods and services, from raw material extraction to final use and disposal.

UNEP's Resource Efficiency sub-programme works to ensure natural resources are produced, processed and consumed in a more environmentally sustainable way, paving the way towards the Green Economy. This is an economy which uses opportunities for cleaner investments and green jobs to address poverty and enhance human well-being.

From governments to the research community to business and consumer groups, UNEP uses its expertise, experience and convening power to create tools and build partnerships that accelerate the transition to the Green Economy and resource efficient societies.

## Our goals

The Resource Efficiency sub-programme focuses on reducing the adverse environmental impacts of producing, processing and using goods and services, while also meeting human needs and improving well-being. The sub-programme has four key goals:

- **Assessing critical trends:** To strengthen the knowledge base on Resource Efficiency, UNEP assesses and reports on trends in how resources are extracted, processed, consumed, and disposed of in our global economy.

- **Building capacity for policy action:** UNEP works closely with partners from government, city authorities and the research community to develop and roll out policy tools and instruments that accelerate the shift towards more resource efficient societies.
- **Seizing investment opportunities:** UNEP builds on its assessment and policy work to forge expert networks and industry partnerships. These collaborations help small and large businesses adopt resource-efficient technologies, products and services in developing markets.
- **Stimulating demand for resource efficient goods and services:** UNEP develops consumer and procurer information tools, market incentives and public-private initiatives to promote sustainable lifestyles and value chains.

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## Poverty alleviation

Wasteful use of resources – be it water, land, biomass, energy or materials – undermines the ability of societies worldwide to reduce the poverty gap. As countries seek to boost economic growth and job creation, an ongoing challenge remains the need to decouple such growth from environmental degradation. Using scarce resources more efficiently is a key building block in meeting the needs of a growing and increasingly urban world population. Cleaner production practices and technologies also provide opportunities for small business development and creation of green jobs, which are critical to addressing poverty. This is the promise that sustainable resource consumption brings, addressing basic needs such as food security and building the Green Economy.



UNEP uses its expertise, experience and convening power to create tools and build partnerships that accelerate the transition to resource-efficient societies.

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# Our vision for 2010-2013

What if the need to reduce waste could drive the design and manufacture of better products and services? What if cleaner investments could support sustainable incomes, create green jobs, and reduce poverty? And what if consumers and businesses alike had the knowledge and skills needed to make environmentally friendly, informed choices every day?



UNEP's Resource Efficiency sub-programme is working to make this vision a reality during the 2010-13 period of UNEP's Medium-term Strategy. UNEP recognises that investment in a new generation of environmentally sound technologies, cleaner industrial processes, and greener cities has the power to positively transform economies and societies.

UNEP's vision is based on delivering:

## Improved productivity and less waste

Using expertise in science, policy, environmental engineering, economics and financing, UNEP will continue to offer governments, businesses and others the advice and tools needed to optimise resource use and minimize waste.

## Cleaner investments

UNEP plays a leadership role in advancing the business case for resource efficiency. Through effective public and private sector collaborations, UNEP will champion investment in efficient production methods in resource intensive sectors such as construction, manufacturing and food.

## More sustainable lifestyles

Sustainable lifestyles are an opportunity to provide a better quality of life for us and for future generations. UNEP works to promote responsible consumption, ensuring individual and organizational choices favour more resource-efficient, environmentally friendly products.



# Delivering our vision

UNEP's work on Resource Efficiency is focused on four core services:

## Assessments to strengthen the scientific knowledge base

UNEP conducts assessments of trends in the way resources are extracted and used throughout the global economy. This work helps UNEP and UNEP's partners to understand critical resource flows between economies and industries, and improves capacity to collect and interpret data on these resource flows.

### • **International Panel for Sustainable Resource Management**

UNEP's Resource Panel conducts independent scientific assessments on the sustainable use of natural resources. These assessments help ensure policies that govern use of living and non-living resources are based on accurate science, including improved understanding of scarcities, drivers and impacts.

### • **Life Cycle Initiative**

The Life Cycle Initiative of UNEP and the Society for Environmental Toxicology and Chemistry (SETAC) is a growing international network which works to improve and promote methodologies for life cycle management.

### • **Capacity building**

UNEP supports scientists in developing countries, helping them build capacity to analyse and understand data on resource flows and scarcities.

## Taking action through governmental policies and tools

Governments look to UNEP for support in developing national policies and implementing local solutions. UNEP's work building national capacity focuses on developing countries that have highly resource intensive and inefficient industries, or are vulnerable due to their dependence on individual resources. This includes work on recommended economic instruments, policy and management tools such as the basic 3R (reduce, re-use, recycle) approach.

### • **Research and analysis**

UNEP conducts macroeconomic and policy analysis, producing global and national studies that cover key industry sectors. These studies are the foundation for UNEP's advisory services on recommended investment and growth paths.

### • **National advisory services**

UNEP uses its studies to provide guidance to national governments on policies and regulatory tools for greening their economies. UNEP also supports the implementation of national resource efficiency programmes through training, such as workshops, and helps to facilitate dialogue.

### • **Tools for resource efficient businesses and societies**

UNEP and its partners develop new strategies, policies and tools for city authorities and businesses that help to build green economies and create green jobs.

UNEP recognises that investment in cleaner industrial processes, technologies and cities has the power to positively transform economies and societies.

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## Delivering our vision continued

### Seizing investment opportunities for new markets and technologies

UNEP builds on the insights gathered from scientific and macroeconomic assessments to identify investment opportunities for alternative business models and improvements in some of the most resource intensive industries. In particular, UNEP's work focuses on three industry clusters: (i) building and construction, (ii) agriculture and food, and (iii) metals and manufacturing.

#### • Multi-stakeholder initiatives

UNEP has played a leadership role for decades in convening global partnerships that drive investment in sustainable consumption and production. Bringing networks of research experts and business leaders together, UNEP helps facilitate knowledge exchange and stakeholder dialogue on cleaner investment criteria and best practice.

#### • Network support for small businesses

Through a global network of support centers, including National Cleaner Production Centers, UNEP works with UNIDO to help small enterprises (SMEs) and entrepreneurs in developing countries capitalise on opportunities to apply improved management tools and approaches. This capacity building includes national training events.

#### • UNEP Finance Initiative (FI)

UNEP FI is a global partnership between UNEP and the financial sector. UNEP collaborates with banks, insurers and fund managers to increase investment and match public funding that supports more efficient use of water, biomass, land, energy and materials.

## UNEP plays a leadership role in advancing the business case for resource efficiency.

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### Stimulating demand for resource-efficient goods and services

UNEP has longstanding experience working with media and communications experts to raise awareness. UNEP and its partners use a variety of communications tools to help individual and institutional consumers purchase and use resource efficient technologies, products and services.

#### • Communications tools

UNEP collaborates with the International Organization for Standardization, the Global Reporting Initiative and others to advance credible communication tools such as labels, certification schemes and sustainability reporting. This includes refinement of methodologies such as footprinting.

#### • Market incentives

UNEP works to develop pricing and related market instruments that send appropriate market signals and promote changes in consumer behaviour. UNEP also collaborates with its international partners to develop responsible advertising practices and conduct events around sustainable consumption, with a special focus on youth.

#### • Greening public sector operations

UNEP works with public agencies, including those from government and the UN, to advance sustainable procurement and green facilities management. This includes the delivery of guidance and training events to improve application of new tools.



# Our key projects

Project title	Project brief	Budget (2010-2011)
<b>Assessments to strengthen the scientific knowledge base</b>		
<b>Scientific Assessments and Reports on Resource Flows at Macro, Meso and Micro levels</b>	Improving understanding of resource productivity, developing recognised methodologies and delivering scientific assessments and reports on resource flows under the Panel for Sustainable Resource Management.	\$3 million
<b>Assessments of Scarcities, Pressures and Impacts</b>	Using findings from scientific assessments to inform and support the design of appropriate policies and management approaches.	\$3.2 million
<b>Macroeconomic Policy Assessment, Analysis, Instruments</b>	Providing research and advice on greening national economies to ensure policymakers recognise the value of environmental investments to development and job creation.	\$12.7 million
<b>Technology Assessment, Technology Policy</b>	Advancing resource efficiency through the adoption of environmentally sound technologies, for example in water and waste management.	\$6 million
<b>Building capacity for policy action</b>		
<b>Policy, Law and Regulatory Enforcement</b>	Supporting the development and application of laws and integrated regulatory approaches to advance RE/SCP and the Green Economy.	\$2.2 million
<b>Regional Policies</b>	Supporting the elaboration of an internationally recognised Framework on Sustainable Production and Consumption (SCP), developing work of Task Forces and regional roundtables under the Marrakech Process, and preparing for the Rio+20 Conference.	\$2.3 million
<b>National Policies and Tools</b>	Supporting the mainstreaming of resource efficiency and cleaner and safer production into national development planning and implementation processes.	\$3 million
<b>City Policies and Tools</b>	Promoting resource efficient cities, best practices for sustainable urban development, appropriate infrastructure and the use of environmentally sound technologies.	\$4.9 million
<b>Policies and Tools Outside Cities</b>	Advancing efficient and integrated management of natural resources in rural areas, demonstrating the application of new approaches and tools for water and land management in Asia and Africa.	\$3.9 million
<b>Management Tools at the Enterprise Level</b>	Enhancing knowledge and use of management tools for increasing resource efficiency, contributing to best practices along product chains in the agrifood and manufacturing industries.	\$3.7 million
<b>Seizing investment opportunities</b>		
<b>Making the Business Case</b>	Demonstrating the business case for resource efficiency to public and private sector decision-makers, supporting entrepreneurial innovations.	\$2.8 million
<b>Mobilising Financial Investment</b>	Through the UNEP Finance Initiative, understanding and illustrating how the financial sector and capital markets can improve their risk and opportunity strategies.	\$1.2 million
<b>Building Network Opportunities to Help Small Enterprises</b>	Strengthening the capacity of the UNEP/UNIDO National Cleaner Production Centres and similar institutions in developing countries to support resource efficiency in government institutions and business, especially SMEs.	\$2.8 million
<b>Facilitating Global Partnership Opportunities</b>	Strengthening and initiating global partnerships to advance RE investments and management practices throughout global value chains, especially in resource intensive industry clusters.	\$2.6 million
<b>Stimulating demand</b>		
<b>Price and Market Signals</b>	Mobilising the role of the public sector in setting appropriate market signals, focusing on removing existing market distortions and introducing incentives.	\$3.2 million
<b>Recognised Information Tools</b>	Advancing unified and credible information tools and certification schemes, common global principles and other criteria in the market.	\$3.5 million
<b>Marketing and Communications</b>	Advancing communications on Resource Efficiency, SCP and the Green Economy, and engaging target social groups such as youth in the promotion of sustainable lifestyles.	\$3.7 million
<b>UN/Public Institutions Changing Consumption Behaviour</b>	Promoting tools, knowledge, networks and policies for more sustainable management systems at UN facilities, led by the Sustainable United Nations (SUN) initiative.	\$6.5 million

# Factsheets in this series

Climate change

Resource efficiency

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