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POLICY SUPPORT

Indicators for a Resource Efficient and Green Asia and the Pacific

Measuring progress of sustainable consumption and production, green economy and resource efficiency policies in the Asia-Pacific region

UNITED NATIONS ENVIRONMENT PROGRAMME



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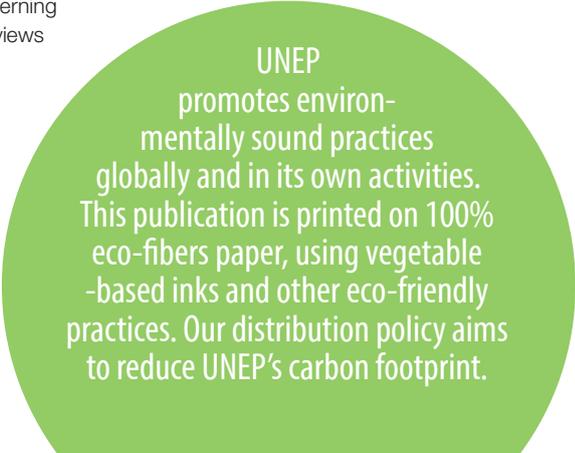
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List of abbreviations

ADB	Asian Development Bank
AMI	Adjusted Material Intensity (also referred to as Material Footprint Intensity)
CO ₂ -eq	Carbon Dioxide equivalent
CSIRO	Commonwealth Scientific and Industrial Research Organisation (Australia)
DE	Domestic Extraction
DMC	Domestic Material Consumption (also referred to as Material Use)
EEA	European Environmental Agency
EF	Energy Footprint
EI	Energy Intensity
ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
FAO	Food and Agriculture Organization of the United Nations
GDP	Gross Domestic Product
GHG	greenhouse gas
GHGF	GHG emissions footprint
GHGI	GHG intensity (also known as carbon intensity)
IEA	International Energy Agency
IMF	International Monetary Fund
MF	Material Footprint
MI	Material Intensity
MJ	Megajoules
MRIO	Multi-Regional Input-Output
OECD	Organisation for Economic Co-operation and Development
PJ	Petajoules
PPP	Purchasing Power Parity
PTB	Physical Trade Balance
SCP	Sustainable Consumption and Production
SEEA	System of Environmental-Economic Accounting
TPES	Total Primary Energy Supply (also referred to as Energy Use)
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organization
WF	Water Footprint
WI	Water Intensity

List of units

Tonne (t)	1,000 kg
Kilotonne (Kt)	1,000 t
Megatonne (Mt)	1,000,000 t
Gigatonne (Gt)	1,000,000,000 t
Kilojoule (kJ)	1,000 J
Megajoule (MJ)	1,000,000 J
Gigajoule (GJ)	1,000 MJ
Terajoule (TJ)	1,000,000 MJ
Petajoule (PJ)	1,000,000,000 MJ
Cubic meter	1,000 L
Kilolitre (KL)	1,000 L
Megalitre (ML)	1,000,000 L

Foreword

At Rio+20 in 2012, heads of State called for “protecting and managing the natural resource base for economic and social development”.

This statement was a recognition that we need to use natural resources efficiently if we want to achieve and maintain our economic and social development goals, especially poverty eradication. Today, natural resources are often used inefficiently and indiscriminately in both industrialized and developing countries because environmental impacts are externalized. The current development paradigm focuses mainly on monetary growth, with a mentality towards resource use as out-of-sight, out-of-mind, that assumes resources will always be abundant and that there is no cost for disposal and contamination.

Understanding how efficiently we use natural resources is a vital step for designing policies to tackle inefficiencies. Indicators play a critical role for policy makers and stakeholders. Over the past three years, the Asia Pacific region has been engaged in a consultative and science-based process to develop a framework of indicators to measure and monitor resource use and understand how it contributes to economic and social development. At the request of governments and other stakeholders, and with the support of the European Union-funded SWITCH-Asia Regional Policy Support Component, the United Nations Environment Programme (UNEP), Australia’s national science agency CSIRO, and the Asia Pacific Roundtable on Sustainable Consumption and Production launched a process to develop science-based indicators that come to fruition through the publication of this report.

This report paints a clear picture of the path taken by the countries in the region over the past 40 years in their resource use. Today, the region dominates global resource use, comprising more than 50 per cent and consumption is rapidly rising as economies grow, infrastructure is built and the middle class expands. But even accounting for economic growth, resource efficiency in the region lags far behind the rest of the world, and varies dramatically between countries. As an illustration, developing countries in the region use an average of 5kg of resources for every dollar they produce, ten times that used by industrialized countries. This begs the question of where we should seek the fastest and best improvements in efficiency and where the Asia Pacific region can find the “low-hanging fruit” to achieve resource efficiency in this high-tech age.

The report and the datasets on which it is based are invaluable tools for countries as they develop their systems and processes for implementing and reporting on the post-2015 development agenda and the new Sustainable Development Goals (SDGs). Resource efficiency and secure access to natural resources and food feature prominently in the proposed SDGs: 13 of the 17 goals refer to the need to sustainably manage natural resources.

As a next step, UNEP will integrate the dataset of 118 indicators into UNEP Live so that it is publicly available. UNEP will also work directly with countries to support national processes to measure progress on resource efficiency and to integrate this vital data into the relevant policy processes including the SDGs.

I would like to thank the CSIRO and the Asia Pacific Roundtable on SCP for their substantive support in developing this report. The report provides the science to drive policies that will help us respond effectively to

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