

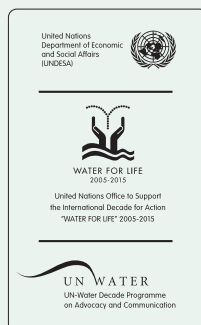
Water and the Green Economy Reader

UN-Water Decade Programme on Advocacy and Communication (UNW-DPAC)

Produced by the UN-Water Decade Programme on Advocacy and Communication (UNW-DPAC), this reader is intended for all those interested in getting familiar with issues related to water and the green economy. The reader provides basic references for easy reading and some of the latest and most relevant United Nations publications on the issue. Links are provided when the publication is available online.

United Nations Office to Support
the International Decade for Action
'Water for Life' 2005-2015

www.un.org/waterforlifedecade



An overview

■ **Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication. Chapter on Water**

United Nations Environment Programme (UNEP). February 2011 (version updated in August 2011)

<http://bit.ly/obZfRO>

This report is aimed at providing practical guidance to policy makers on what reforms are needed to unlock the productive and employment potential of a green economy. Chapter 3 “Water: investing in natural capital” has three broad aims. First, it highlights the importance of providing all households with sufficient and affordable access to clean water supplies as well as adequate sanitation. Second, it makes the case for early investments in water management and infrastructure, including ecological infrastructure. Third, the chapter provides guidance on the suite of governance arrangements and policy reforms, which, if implemented, can sustain and increase the benefits associated with making a transition to the green economy.

■ **The Transition to a Green Economy: Benefits, Challenges and Risks from a Sustainable Development Perspective. Report by a Panel of Experts to 2nd Preparatory Committee Meeting for UN Conference on Sustainable Development**

United Nations Department of Economic and Social Affairs (UNDESA) Division for Sustainable Development, United Nations Environment Programme (UNEP), United Nations Conference on Trade and Development (UNCTAD). 2011

<http://bit.ly/oQhlek>

This document contains three papers. The first paper examines the macroeconomic policy implications of the transition to the green economy; the second focuses on the interlinked issues of trade, investment and technology; the third considers the risks that this concept generates for developing countries and the domestic and

international policies necessary to promote the green economy in these countries according to the principles of sustainable development. This summary presents the major policy conclusions derived from these contributions. The issues of financing and technology development, transfer and cooperation are particularly highlighted by this report. The chapter on ‘Challenges of the green economy concept and policies in the context of sustainable development, poverty and equity’ describes the risks of misusing the green economy concept as well as policies and measures for promoting sustainable development and green economy. The critical role of water is highlighted through different examples.

■ **The Road to Rio+20. For a development-led green economy**

United Nations Conference on Trade and Development (UNCTAD). 2011

<http://bit.ly/pwfmGc>

The aim of this publication is to contribute to the green economy debate through a collection of essays that provide different perspectives on how to increase the benefits and reduce the risks associated with the transition to a development-led green economy. The report also assesses potential measures for achieving the green economy and the sectors, including the water sector, where these measures might be particularly important.

■ **Green Economy Report: A Preview**

United Nations Environment Programme (UNEP). 2010

<http://bit.ly/plx0DG>

This preview provides a snapshot of the different sectors covered in UNEP’s ‘Towards a Green Economy’ report. The report uses economic analysis and modelling approaches to demonstrate that greening the economy across a range of sectors can drive economic recovery and growth, and lead to future prosperity and job creation, while at the same time addressing social inequalities and environmental challenges. The section on

water highlights main opportunities and challenges. It introduces a set of enabling conditions which, if adequately implemented, will facilitate improved water management while addressing poverty alleviation. The publication provides graphical illustrations of the current situation and future trends.

■ **Water in the Transition to a Green Economy. A UNEP Brief**

United Nations Environment Programme (UNEP). 2010

<http://bit.ly/mPn9SP>

The aim of this brief is to introduce the objective of UNEP's Green Economy approach to sustainable development. This approach is based on a recognized need for interventions that mobilize and refocus the global economy towards investments and expenditures in economic sectors that can catalyze the creation of decent jobs and livelihoods, sustained economic development, poverty reduction, and the regeneration of life-sustaining natural resources. The issue of water is introduced in the context of the green economy, describing main challenges and enabling conditions.

Economic instruments and policies

■ **Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication. Chapter on Enabling conditions**

United Nations Environment Programme (UNEP). February 2011 (version updated in August 2011)

<http://bit.ly/oSMTfn>

This chapter focuses on the changes that could feasibly be introduced in the short to medium term to support a transition to a green economy. It includes measures which can be taken by governments at all levels, from the executive power to particular ministries (such as those responsible for

environment, finance and the general economy), and provincial and local authorities. It begins with a discussion of five key areas of policy-making: 1) how public investment and spending can be used to leverage private investment, including public infrastructure projects, green subsidies and sustainable public procurement; 2) how market-based instruments, such as taxes and tradable permits, can level the playing field and provide market incentives in order to promote the greening of key sectors; 3) how subsidy reform should be implemented in areas that deplete natural capital; 4) how a country's regulatory framework of legislation, institutions and enforcement can be designed to channel economic energy into environmentally and socially valuable activity; and 5) how international frameworks that regulate economic activity can play a role in driving a green economy. The chapter concludes with a discussion of additional supporting measures that may be required, namely, capacity building and investment in training and education.

■ **Driving a Green Economy through Public Finance and Fiscal Policy Reform**

United Nations Environment Programme (UNEP). 2010

<http://bit.ly/n82NBu>

This working paper explores the linkage and options available to policy-makers considering ways to drive and accelerate the transition to greener, more resource-efficient and socially-inclusive economic growth. It explores economic policy issues related to transitioning to a green economy, with a particular focus on fiscal instruments and public finance. *Section II* discusses the key economic issues and principles related to the green economy. *Section III* provides an overview of policy reform issues, including those related to the coordination of different measures. *Section IV* discusses the critical role of green taxes in influencing the prices of goods and services affecting environmental conditions and natural resource use, focusing on lessons from previous environmental fiscal reforms, key

policy design and implementation issues, and reform priorities. *Section V* discusses the role of expenditure policies in promoting the transition to a green economy, including green subsidies, direct government expenditure (for example on infrastructure) and the reform of environmentally harmful subsidies.

Green jobs

■ **Promoting Decent Work in a Green Economy. ILO Background Note to Towards a Green Economy**

International Labour Organization (ILO). 2011
<http://bit.ly/r3IB1u>

This Background Paper expands on and complements UNEP's Green Economy Report by focusing on the importance of decent work creation and poverty reduction in the transition towards a green economy. The paper discusses the implications of introducing new forms of production for the labour market and highlights the provisions needed to better prepare the labour force. It provides guidance on how the transition can induce the creation of more productive employment and also calls for the development of inclusive social protection systems and the promotion of social dialogue for strategic stakeholders engagement. *Section III* covers key aspects of green jobs in selected sectors, including water provision.

Sustainable financing

■ **Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication. Chapter on Finance**

United Nations Environment Programme (UNEP). February 2011
<http://bit.ly/n40fE1>

This report is aimed at providing practical guidance to policy makers on what reforms are needed to unlock the productive and employment potential of a green economy.

The chapter 'Finance: supporting the transition to a global green economy' examines how the green economy is currently being financed, and explores the priorities and potential methods for increasing this investment. The chapter seeks to make the case for scaling up financing and amplifying the financial sector's role as an agent of change. The analysis emphasises investing, lending by banks, and insurance, focused primarily on private sector sources of finance. Reference is also made to the enabling and complementary role of governments, DFIs and other non-private sector actors. This chapter also examines the main challenges, opportunities and key enabling conditions for progress.

Protecting biodiversity

■ **Decoupling Natural Resource Use and Environmental Impacts from Economic Growth. A Report of the Working Group on Decoupling to the International Resource Panel**

United Nations Environment Programme (UNEP). May 2011
<http://bit.ly/iBFpCh>

This report presents basic facts and figures on natural resource flows worldwide. Drawing on this data, the report attempts to outline the issues that now need to be addressed to decouple these material and energy flows from social and economic progress. The objective of this study is to provide a foundation for the concept of decoupling, defining key terms and concepts and indicating its many applications to resource management. It assesses whether decoupling is already taking place, and identifies the driving factors, both technological and economic. This report also aims to provide some indications of the kinds of policy measures and considerations that may be needed to stimulate decoupling. Four country studies embedded in the report show that consumption of natural resources such as

water is still rising rapidly. The case of South Africa specifically analyzes the water and sanitation sector.

■ **Advancing the Biodiversity agenda. A UN system-wide contribution**

UN Environment Management Group (EMG), United Nations Environment Programme (UNEP). 2010

<http://bit.ly/q9Xfa>

This report presents the case of why biodiversity matters to all sectors, and how the different policy sectors can help maintain biodiversity and ecosystem services. The first section of the report sets out why biodiversity matters to development, why mainstreaming of biodiversity into social and economic sectors is important for halting the loss of biodiversity, and how the UN system can help to achieve this. The second section presents the perspectives of selected policy sector areas. The third section presents opportunities for synergies and collaboration among agencies, funds and programmes to help halt the loss of biodiversity. The report finally presents some conclusions and an outlook for further work. Chapter 3 focuses on climate change, land and water related issues.

■ **Supporting Local Action for Biodiversity. The Role of National Governments**

United Nations Human Settlements Programme (UN-Habitat), Convention on Biological Diversity (CBD). 2010

<http://bit.ly/nBRtKD>

This report presents biodiversity decision-makers at the national level with practical information and advice on how to support and encourage biodiversity action at the local level. The report contains nearly 50 case studies from around the world and provides a consolidated series of actions toward implementing the CBD COP10 Plan of Action. Examples of ecosystem services management, including moderation of extreme events such as floods or droughts, water purification and wastewater treatment, etc. are included among the cases provided.

■ **TEEB - The economics of ecosystems and biodiversity for international and national policy makers. Executive summary: responding to the value of nature**

TEEB, United Nations Environment Programme (UNEP). 2009

<http://bit.ly/rfY1Q9>

This report builds on real examples from across the world that show how appreciating the value of biodiversity has led to policy changes, how investment in natural capital can be more cost-effective than man-made solutions and how conservation can deliver a range of economic benefits. It provides concrete examples of ways to make policies work, whether this involves reform of subsidies, charges for resource use or payments for ecosystem services. Practical guidance for better managing the transition during policy reform is provided, based on lessons learnt in different countries. The report is a compendium of practice, a synthesis of insights and a source of ideas for ways forward.

Technology

■ **World Economic and Social Survey 2011. The Great Green Technological Transformation**

United Nations Department of Economic and Social Affairs (UNDESA). 2011

<http://bit.ly/pJMvrK>

The World Economic and Social Survey is the annual flagship publication on major development issues prepared by the United Nations Department of Economic and Social Affairs (UNDESA). The 2011 edition of the Survey introduces collective efforts to achieve a much-needed technological transformation to a greener, cleaner global economy. The Survey illustrates the feasibility of such a transformation with data, analysis and careful projections. Chapter II, 'The Great Green Technological Transformation' focuses on the clean energy technological transformation; solar

water heater and micro-hydroelectricity are highlighted as one of the best examples of green energy technology. Chapter III 'Towards a truly green revolution for food security' explains watershed development with the case study of India, and the water sanitation issue is also described in Chapter IV 'Reducing human harm from natural hazards'.

■ **The Bioenergy and Water Nexus**

United Nations Environment Programme (UNEP), Oeko-Institut and IEA Bioenergy Task 43. August 2011

<http://bit.ly/ndYEHg>

This report, building on the work of various new initiatives including UNEP's International Resource Panel, provides recommendations and outlines options in respect to bioenergy in support of a Green Economy. The report primarily addresses the following two questions: 1) how are the production and use of bioenergy products likely to influence the future state of water resources? 2) how can society mitigate impacts and guide development towards sustainable use of these resources, including groundwater, rivers, and riparian and wetland systems? In considering the ways in which bioenergy can impact water resources, the report identifies appropriate tools for assessing effects at different spatial and temporal scales. A number of indicators and assessment tools have been developed to include the water perspective in analyses and to assist strategy development and land use planning. Ideally, such indicators and assessment tools will help not only to reduce risks and avoid undesirable development, but also to identify opportunities and synergies.

Green economy and...

Agriculture

■ **Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication. Chapter on Agriculture**

United Nations Environment Programme (UNEP). February 2011

<http://bit.ly/rv1JSc>

This report is aimed at providing practical guidance to policy makers on what reforms are needed to unlock the productive and employment potential of a green economy. The chapter on 'Agriculture: investing in natural capital' makes a case for investing in 'greening' the agriculture sector, emphasizing the potential global benefits of making this transition. It provides evidence to inspire policymakers to support increased green investment and guidance on how to enable this transformation, which aims to enhance food security, reduce poverty, improve nutrition and health, create rural jobs, and reduce pressure on the environment. The chapter begins with a brief overview of agriculture at the global level, followed by a discussion on conceptual issues including two predominant farming-practice paradigms. The section ends with a brief description of key characteristics of the green agriculture paradigm. *Section 2* presents the major challenges and opportunities related to the greening of the agriculture sector and *Section 3* discusses a wide range of sustainable agriculture practices, mostly using examples and evidence from the organic sector, which is relatively rich in data. *Section 4* shows how global and national policy as well as capacity building and awareness raising can facilitate necessary investments and encourage changes in agricultural practices.

■ **The environmental food crisis. The environment's role in averting future food crises**

United Nations Environment Programme (UNEP). February 2009

<http://bit.ly/ooF7nX>

This report provides a summary of how climate change, water stress, invasive pests and land degradation may impact world food security, food prices and life on the planet, with the proposal that we may be able to feed the world in a more sustainable manner. The objective of the report is to

provide an estimate of the potential constraints of environmental degradation on future world food production and subsequent effects on food prices and food security. It also identifies policy options to increase food security and sustainability in long-term food production.

Cities

■ **Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication. Chapter on Cities**

United Nations Environment Programme (UNEP). February 2011

<http://bit.ly/nibonB>

This report is aimed at providing practical guidance to policy makers on what reforms are needed to unlock the productive and employment potential of a green economy. The chapter on 'Cities: investing in energy and resource efficiency' describes the environmental, social and economic consequences of greening urban systems and infrastructure and provides guidance to policy makers on how to make cities more environmentally friendly. An introduction to the concept of green cities is followed by *Section 2*, which presents related challenges and opportunities. *Section 3* analyses the economic, social, and environmental benefits of city greening, while *Section 4* summarises green practices across a number of urban sectors. *Section 5* offers advice on enabling conditions for green cities.

Industry

■ **UNIDO Green Industry. Policies for supporting Green Industry**

United Nations Industrial Development Organization (UNIDO). May 2011

<http://bit.ly/qhIEsY>

This report identifies the broad range of policy measures required by national or federal governments to promote and facilitate the greening of industries. The report focuses on Small to Medium Enterprises (SMEs) in the manufacturing sector. However, the issues raised are

equally relevant for other industry sub-sectors (e.g. services and extraction sectors). Emphasis is placed on policies which impact sustainable production rather than consumption. The water issue is addressed in various chapters.

■ **Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication. Chapter on Manufacturing**

United Nations Environment Programme (UNEP). February 2011

<http://bit.ly/nSdu2Y>

This report is aimed at providing practical guidance to policy makers on what reforms are needed to unlock the productive and employment potential of a green economy. The chapter on 'Industry: investing in energy and resource efficiency' starts with a brief overview of global manufacturing, its importance to developing economies, an explanation of the choice of branches of manufacturing that are the main focus of the chapter, the environmental pressures associated with them, recent trends in 'decoupling' economic growth from those pressures, and a definition of 'green manufacturing'. *Section 2* describes the costs of failing to implement a strategy of greening manufacturing. *Section 3* describes a number of strategic approaches to encourage green manufacturing, involving investment in innovation, cleaner energy technologies, resource efficiency and a transition to green jobs. *Section 4* argues that there are many opportunities for investments that can lower costs by using less material, energy and water. The section provides numerous examples of green investments highlighting in particular their impacts on energy savings and CO₂ emissions reductions, water savings, and employment creation. *Section 5* presents the results of model-based quantitative analysis that shows how investing to improve resource efficiency in manufacturing can often be profitable to business and increase employment while reducing environmental pressure. *Section 6* discusses the enabling conditions for a green transformation in manufacturing.

■ **A greener footprint for industry. Opportunities and challenges of sustainable industrial development**

United Nations Industrial Development Organization (UNIDO). 2010

<http://bit.ly/q7mRQx>

This document describes main opportunities and challenges of the transition to the green economy for industries and introduces UNIDO's green economy initiative.

Specific audiences

Business leaders

■ **The CEO Water Mandate. Guide to Responsible Business Engagement with Water Policy**

United Nations Global Compact, Pacific Institute. November 2010

<http://bit.ly/pyL1NR>

This guide outlines five principles for responsible business engagement in water policy: (1) responsible engagement should be driven by a genuine interest in efficient, equitable, and sustainable water management; (2) there should be a clear division of public and private sector roles; (3) responsible engagement promotes inclusiveness and meaningful partnership; (4) business should recognize the connections between water and other policy arenas; and (5) companies must be transparent and accountable for their actions. The guide is tailored to both large- and small-scale commercial water users and also addresses common pitfalls of water policy engagement.

■ **The CEO Water Mandate. Framework for Responsible Business Engagement with Water Policy**

United Nations Global Compact, Pacific Institute. World Wide Fund (WWF), Government of Germany. June 2010

<http://bit.ly/noLquK>

The goal of this Mandate is to make a compelling case for responsible water policy engagement and to support it with the 'Guide to Responsible Business Engagement with Water Policy'. The Mandate equates effective water policy engagement –that which integrates environmentally sustainable, economically viable, and socially equitable water management approaches– with responsible engagement. It assists companies in responsible water policy engagement, providing core principles, strategies, and operational practices.

Policy makers

■ **Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication. A Synthesis for Policy Makers**

United Nations Environment Programme (UNEP). 2011

<http://bit.ly/qT7blg>

This synthesis report presents key findings from UNEP's report 'Towards a Green Economy'. It outlines the key benefits of moving towards a green economy, in terms of wealth creation, employment, poverty eradication and long-term economic prosperity; introduces the enabling conditions for the transition to a green economy; and examines the most promising mechanisms for mobilizing finance at scale to drive the green economy transition in the coming decades.

■ **Green Economy. A Brief for Policymakers on the Green Economy and Millennium Development Goals**

United Nations Environment Programme (UNEP). 2010

<http://bit.ly/ndfFLf>

This report delivers the message that the environmental goods and services that underpin the global economy –and in particular the GDP of the poor– are shrinking at a rapid rate. It underscores how this loss of ecological infrastructure is

undermining not only the MDG7 on environmental sustainability, but most if not all of the other MDGs and their associated targets. The report gives policymakers numerous examples of 'green' strategies that are paying multiple dividends and generating new opportunities to ensure environmental sustainability.

Around the world

Arab countries

■ **Green Financing for the Arab Region: Background Paper**

United Nations Economic and Social Commission for Western Asia (UNESCWA). July 2011

<http://bit.ly/qGYEBN>

This background paper reviews the concept of green finance using the case of the Arab region. It analyzes the role of the public financial sector in Arab countries in reforming economic policies in order to facilitate the channelling of capital and stimulate a fair, advantageous and timely transition to a green economy in the region.

■ **Green Economy in the Arab Region: Overall Concept and Available Options**

United Nations Economic and Social Commission for Western Asia (UNESCWA), United Nations Environment Programme (UNEP), League of Arab States (LAS). May 2011

<http://bit.ly/ofg1Q3>

This paper presents the most significant concepts related to the green economy, existing regional challenges, and potential opportunities that must be considered when moving towards a green economy. The paper proposes a general framework to develop an Arab green economy strategy with stakeholders. The water issue is particularly addressed in chapter II. B 'Aggravating Water Scarcity'.

Europe

■ **Draft official substantive document on sustainable management of water and water-related ecosystems**

Economic Commission for Europe (UNECE), Organization for Economic Cooperation and Development (OECD). March 2011

<http://bit.ly/pQ4hpw>

The 7th Environment for Europe Ministerial Conference (Astana, 21-23 September 2011) addressed the following two themes: 'sustainable management of water and water-related ecosystems', and 'greening the economy: mainstreaming the environment into economic development'. The present draft of the official substantive document on the topic 'sustainable management of water and water-related ecosystems' aims to inform the ministerial discussion on this topic. It therefore follows the agreed questions for discussion in the multi-stakeholder round tables, describing recent trends, challenges and achievements as well as recommendations for the way forward. The different themes are illustrated by case studies submitted by governments and other stakeholders.

Latin America and the Caribbean

■ **A Green Economy: introduction to the debate and implications for Latin America and the Caribbean. Draft**

Economic Commission for Latin America and the Caribbean (ECLAC). December 2010

<http://bit.ly/p861qU>

This draft document presents the main challenges and opportunities for a green economy in Latin America and the Caribbean. It also provides some specific examples and analyzes the case of water and sanitation when discussing the issue of 'public investment in sustainable infrastructure'.

International Decade for Action 'Water for Life' 2005-2015

A Decade for Water, a Decade for Life

Towards the primary goal of the Water for Life Decade, Spain has agreed to provide resources to the United Nations to establish an Office to support the International Decade for Action. Located in Zaragoza, Spain, and led by the United Nations Department of Economic and Social Affairs (UNDESA), the Office implements the UN-Water Decade Programme on Advocacy and Communication (UNW-DPAC) aiming at sustaining the global attention and political momentum in favour of the water and sanitation agenda at all levels during the Decade.

The views expressed in this publication do not necessarily reflect the views of the United Nations Secretariat or the United Nations Office to Support the International Decade for Action (UNO-IDfA) 'Water for Life' 2005-2015.

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