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# YOUTH X CHANGE

TRAINING KIT ON RESPONSIBLE  
CONSUMPTION FOR **AFRICA**



United Nations  
Educational, Scientific and  
Cultural Organization

FIRST REGIONAL ADAPTATION

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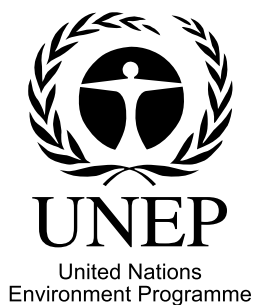
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# YOUTH X CHANGE

## TRAINING KIT ON RESPONSIBLE CONSUMPTION FOR AFRICA



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The *YouthXchange Training Kit on Responsible Consumption for Africa* is the first regional adaptation of the original training kit. The adaptation was initially undertaken by the Partnership for Education and Research about Responsible Living (PERL) - **Carme Martinez-Roca** (South Africa) and **Victoria Thoresen** (Norway) – under the supervision of UNEP DTIE and UNESCO's Division for Inclusion, Peace and Sustainable Development. It was coordinated, edited and finalized by **Khairon Abbas**, consultant at UNEP DTIE, under the supervision of **Fanny Demassieux**, former UNEP Resource Efficiency Subprogramme Coordinator, **Garrette Clark**, Programme Officer, at UNEP DTIE, and **Bernard Combes**, Information Officer, at UNESCO. Special thanks to **Mari Nishimura**, Associate Programme Officer, UNEP DTIE, for facilitating the finalization of this publication.

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## FOREWORD

Africa is rich in natural, mineral, agricultural and marine resources that drive economic growth. However, by 2025, the continent's cities will be home to 85 per cent of the population and, by 2050, the expected doubled population will have increasing difficulty to meet their basic needs. With more under-20s than anywhere else in the world, Africa also has a wealth of talent and entrepreneurial spirit available to tackle these issues. That is why this first regional training kit aims to engage Africa's young people to shape a more sustainable future.

Young people from all walks of life play a critical role in delivering the 17 goals of the 2030 Agenda for Sustainable Development, particularly in areas like education, lifestyle and responsible consumption and production. As the consumers of today and decision-makers of tomorrow, they define the demand for goods and services and have the power to drive economic prosperity, environmental sustainability and social equality.

This approach underpins the YouthXchange Initiative, which contributes to the Global Action Programme on Education for Sustainable Development and aligns with the goals of the 2030 Agenda. The initiative promotes equitable, informed and efficient consumption, while the training kit supports that effort with clear, reliable and compelling information. As well as outlining the relationship between the environment, the economy and social justice, the kit uses case studies to showcase the available opportunities and encourage readers to take shared responsibility for their future, starting with their own attitudes and behaviours.

We hope that this kit will help Africa's young people translate their aspirations into everyday actions that bring the continent a healthy environment, with healthy people and a healthy future.



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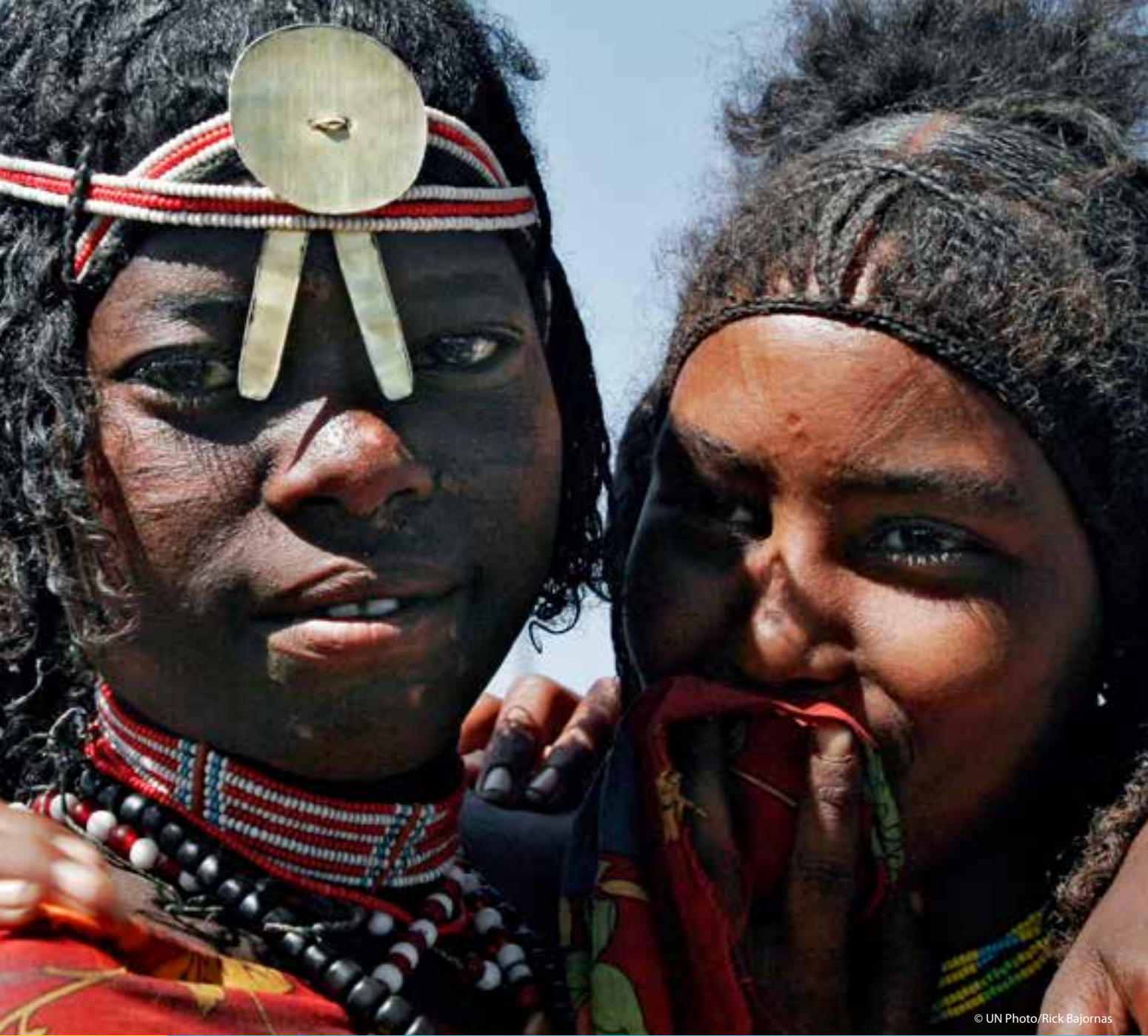




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# THE YOUTH X CHANGE INITIATIVE



**“To the young people I say, you are a gift to your communities and indeed the world. You are our hope and our future.”**

*[Wangari Maathai (1940-2011), environmental activist and Nobel Peace prize winner]*

The current world population of 7.3 billion<sup>1</sup> is projected to reach 9.7 billion by 2050, with growth mainly in developing countries.<sup>2</sup> Africa will reach about 2 billion people by then, and will account for nearly a quarter of the world’s population. More than half of the global population growth between 2015 and 2050 is expected to take place in Africa, which has the highest rate of population growth of 2.5%.<sup>3</sup> This growth, along with our growing consumption, will put immense pressure on our natural resources, biodiversity and the ecological balance of the planet and particularly Africa, one of the richest continents in terms of natural resources. 10% of the world’s wealthiest produce half of the global carbon emission from lifestyle consumption, whereas the poorest half of the world’s population is responsible for just 10% of carbon emissions.<sup>4</sup> Meanwhile, the environmental and social impacts are mainly felt in Africa, Latin America and Asia. But because we live in a complex world where what happens in one part of the world affects the other, everyone has a role to play in finding solutions and building sustainable societies.

### Why sustainable consumption and lifestyles?

Collectively, within and outside of Africa, we must consume more responsibly and sustainably in an effort to meet our needs without compromising the ability of future generations to meet their needs. This means we need to change the way we view our resources and, more importantly, how we use them, particularly since consumption is unevenly distributed, with vast imbalances between developed and developing countries. Billions in

the world today live in poverty and cannot consume enough to meet their basic needs. About 795 million people are undernourished in the world in 2014-16, and 98% of them are in developing countries.<sup>5</sup> While Asia has the largest number of hungry people (over 500 million), sub-Saharan Africa has the highest prevalence of undernourishment with one in four people – or 23.2% – estimated to be hungry.<sup>6</sup> While 91% of the global population (6.6 billion) uses an improved drinking water source, up from 76% in 1990, only 57% of people in sub-Saharan Africa have access to improved water supply sources.<sup>7</sup> In 2011, in sub-Saharan Africa, 44% of the population used either shared or unimproved facilities, and this region is the only region where the number of people defecating in the open is still increasing.<sup>8</sup>

**“Africa is the fastest urbanizing continent on the planet and the demand for water and sanitation is outstripping supply in cities.”**

*[Joan Clos, Executive Director of UN-HABITAT]*

Continuing consumption in its current unsustainable form will only worsen these challenges. Promoting sustainable consumption and responsible lifestyles is urgent now more than ever before. Sustainable consumption calls for the use of goods and services, which respond to basic needs and bring a better quality of life for all, while minimizing the use of natural resources so as not to jeopardize the needs of future generations. It is about providing access to basic needs, goods and services to the world’s poorest.

### Why youth and why Africa?

Over 40% of the world’s population is under the age of 25, with most of them living in developing countries.<sup>9</sup> Africa has the youngest population in the world;<sup>10</sup> children under the

1 According to the United Nations’ *2015 Revision of World Population Prospects* as noted on p.1 of the publication.

2 *2015 Revision of World Population Prospects*, UNDESA (2015), p. 2.

3 *2015 Revision of World Population Prospects*, UNDESA (2015), p. 3.

4 *Extreme Carbon Inequality*, Oxfam (2015), p.4.

5 *The State of Food Insecurity in the World*, FAO (2015), p.8.

6 *The State of Food Insecurity in the World*, FAO (2015), p.12.

7 *Key Facts from JMP 2015 Report* WHO (2015).

8 *Access to sanitation*, Water for Life Decade, UN,

*World Demographic Profile 2014*, CIA World Factbook (2014).

10 “Africa’s youth: a ‘ticking time bomb’ or an opportunity?” Africa Renewal Online (May 2013),



age of 15 accounted for 41% of the population in 2015 and young people aged 15 to 24 account for a further 19%.<sup>11</sup> Youth is a critical stakeholder in the global and African economy and will be the main actor and motor for change in the future. They are the decision makers and consumers of tomorrow. Thus the energy, motivation and creativity of youth are essential assets to stimulating change.

By 2050, the number of urban dwellers is expected to raise to 6.3 billion counting for 2/3 of the world population with nearly 90 per cent of the increase concentrated in Asia and Africa<sup>12</sup> African urban residents are amongst the poorest in the world and are facing challenges including high levels of urban unemployment particularly among youth.<sup>13</sup> Africa's population is expected to remain young

for decades, given its significant youth bulge. For example, 64% of South Africa's young population (aged between 15 and 34) currently live in urban areas and many of them are unemployed.<sup>14</sup> There is therefore a need to introduce practical economic, labour and social policies that will help develop Africa's urban population, including its youth.

At the same time, African youth are driving change in the continent, especially through mobile technology, which serves as a landline, ATM and email tool in one device - a game changer for Africa,<sup>15</sup> the second-biggest mobile market in the world where smartphones outsell computers four to one.<sup>16</sup> In 2012, mobile phone subscribers under 30 in sub-Saharan Africa were expected to reach 108 million.<sup>17</sup> As more African youth are getting connected, they are creating opportunities for themselves by using technology to innovate, create employment and improve their societies.

### World's youngest population in Africa

The 2015 World Population Prospects list of the top 10 countries with the youngest populations are all in Africa: Niger, Uganda, Chad, Angola, Mali, Somalia, Gambia, Zambia, Democratic Republic of Congo and Burkina Faso, all with a median age of between 14.8 and 17.0 years. According to the 2030 and 2050 prospects, these countries will continue to have the world's youngest populations, with the additions of Burundi (in 2030) and Tanzania (in 2050).<sup>18</sup>

### What is the UNEP/UNESCO YouthXchange Initiative?

The United Nations Environment Programme (UNEP) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) created the YouthXchange Initiative

11 *2015 Revision of World Population Prospects*, UNDESA (2015), p. 7.

12 *World Urbanization Prospects*. The 2014 Revision, 2015, Department of Economic and Social Affairs, United Nations.

13 *The State of African Cities 2014*, UN Habitat (2014).

14 *Cities of Hope: Young people and opportunity in South Africa's Cities*, (The Rockefeller Foundation, 2014).

15 *Africa's mobile youth drive change*, Jocelyne Sambira (Africa Renewal, UN, May 2013).

16 *African youth hungry for connectivity*, Jonathan Kalan (Africa Renewal, UN, May 2013).

17 *Young people, mobile phones and the rights of adolescents*, UNICEF (2011),

18 *2015 Revision of World Population Prospects*, UNDESA (2015), p. 32.

## Population distribution by age group: 15-24 years

Region	Population	
	Percentage of population in 2015	Percentage of population in 2050 (projected)
Africa	19.4%	18.2%
Asia	16.4%	12.4%
Europe	11.0%	10.1%
Latin America and the Caribbean	17.3%	12.2%
Northern America	13.6%	11.9%
Oceania	15.0%	13.3%

Source: United Nations Department of Economic and Social Affairs/Population Division. *World Population Prospects: The 2015 Revision*, <http://esa.un.org/unpd/wpp/> (Interactive Data "Percentage of total population by broad age group (15-24),"

in 2001 to promote sustainable lifestyles among young people through education, capacity-building, awareness-raising and dialogue. This guidebook is a toolkit to help teachers and trainers, non-governmental organizations (NGOs) and youth groups to help raise awareness about sustainable consumption and empower African youth to put theory into practice. This regional YouthXchange training kit targets urban and rural young consumers in sub-Saharan Africa.<sup>19</sup> Despite some differences between urban and rural settings, young people living in both environments are inspired by the same role models (pop stars, actors, athletes including footballers, etc.) and look at an almost homogenous planet of products and services. YouthXchange is addressed to youth of diverse professional settings, educational backgrounds and socio-economic status.

This toolkit illustrates some of the global issues that make up the world behind the goods and services we buy and highlights the importance of choosing more sustainable options. But in order for us as consumers to do this without too much effort, we need to understand issues around

consumption and how it affects the world; accurate information and capacity-building on goods and services to make informed choices; accessible sustainable products and services for a safe environment; and adequate infrastructures.

### Aims of YouthXchange Africa

Using accessible information, concrete examples and everyday language, this training kit:

- Provides facts and figures on sustainable consumption issues, highlighting the links between cultural, geographical and inter-generational factors.
- Underlines how sustainable consumption directly relates to quality of life, efficient use of resources (human and natural), waste reduction, and ethical issues like child labour, animal cruelty, and equity.
- Highlights how sustainable consumption relates to African values such as unity in diversity, empathy and care, and indigenous and traditional knowledge. In a world where about 255 million young people live in the 19 countries with the largest poverty gaps, and where 15 of these 19 countries are in sub-Saharan Africa, YouthXchange makes special emphasis on sustainable living as a part of eradicating poverty.

<sup>19</sup> "The designation sub-Saharan Africa is commonly used to indicate all of Africa except northern Africa, with the Sudan included in sub-Saharan Africa."

The chapters of this guidebook reflect the need for resource efficiency in all aspects of our lives, from the food we eat and the way we travel to the clothes we wear and the products we buy. It is estimated that if our consumption needs and production patterns remain the same by 2050, with an increasing population that could reach 9.6 billion by then, we will need almost three planets to sustain our ways of living. This toolkit emphasizes how daily actions have direct and indirect implications for our environment and how important our choice of products and services that satisfy our basic needs is in shaping the market. It touches on waste, climate change, energy, water, child labour and human rights, animal welfare and biodiversity. It looks at our use and abuse of resources, the innovative solutions to manage them more rationally, and the importance of respecting people and their potential to help society grow.

Now is the time to live in harmony with our communities and nature and foster a new generation of citizens that integrate sustainability in our daily lives. This guidebook encourages youth to lead this transition by making responsible consumption choices, and learning to responsibly manage their social and environmental impacts by improving their spending patterns and adopting sustainable lifestyles.



**Is The Future Yours?** In 2000, UNEP and UNESCO interviewed 10,000 young people (aged 18 to 25) from 24 countries, including Cameroon, Kenya, Senegal and Uganda. The respondents reported environment, human rights and health as major concerns for the future and clear understanding of the impact of their use and disposal of products on the environment but not of their shopping behaviour. The findings revealed the need for reliable, clear and accessible information on sustainable consumption for youth, which paved the way to the creation of the YouthXchange Initiative.





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### **The Global Survey on Sustainable Lifestyles (GSSL)**

– one of the first global surveys on sustainable lifestyles involving 8000 young adults from 20 countries including Egypt, Ethiopia and South Africa, found that: (1) Young adults are very satisfied with their lives but they still seek financial, social, environmental and personal security; (2) Most consider poverty and environmental degradation as today's most important global challenges but more information on how these challenges are related to lifestyles and individual actions is needed; and (3) To create the ideal environment for sustainable solutions, more trust and linkages are needed, allowing for cooperation, solidarity and collective creativity to develop.

**The YouthXchange Network** welcomes everyone everywhere. In addition to this regional guidebook, YouthXchange has thematic guidebooks that highlight global issues like climate change and the green economy, and how they are connected to our lifestyles. This Network brings together organizations and youth that actively pursue education for sustainable lifestyles using a comparable pedagogical approach. YouthXchange partners have made this initiative a living proof of how complex sustainable consumption values can be transmitted to young people, while having fun, exchanging ideas and active experiences. Contact UNEP to join YouthXchange and see how you can adapt and translate YouthXchange materials to fit various contexts and needs.



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## EDUCATION FOR CHANGE



**“Education is the most powerful weapon which you can use to change the world.”**

*[Nelson Mandela (1918-2013), South Africa's first democratically elected President and Nobel Peace prize winner]*

In December 2002, the UN General Assembly adopted Resolution 57/254 on the United Nations Decade of Education for Sustainable Development (UNDESD, 2005-2014) and UNESCO was designated as the lead agency for the Decade. As the UN's lead agency in education, UNESCO plays a key role in setting quality standards in education for sustainable development (ESD). The objective of the Decade was to mobilize everyone and see ESD implemented in thousands of local situations on the ground, involving the integration of the principles of sustainable development into a multitude of different learning situations.

The basic vision of the UN DESD was a world where everyone has the opportunity to benefit from education and learn the values, behaviours and lifestyles required for a sustainable future and for positive societal transformation. The UNDESD final assessment report outlines the growth of ESD throughout the decade and the fact that education systems are addressing sustainability issues.

Education has always been an essential part of the sustainable development agenda. In fact, the Sustainable Development Goals (SDGs) acknowledge education as critical in addressing global challenges and it runs throughout several goals in addition to SDG4 on education.

## What is Education for Sustainable Development (ESD)?

Education for sustainable development (ESD), as an enabler of sustainable development, contributes to making citizens better prepared to face the challenges of the present and the future, and to be decision-makers that act responsibly to create a viable world. As a complex and evolving concept, ESD enhances fundamental learning: learning to know, learning to do, learning to be, learning to live together, and learning to transform oneself and society.

There is no universal ESD model: each country has to define its own priorities and actions. The goals and processes must be locally defined to meet the local environmental, social and economic conditions in culturally appropriate ways.

The underlying values, which ESD must promote, are:<sup>20</sup>

- Respect for the dignity and human rights of all people throughout the world, and a commitment to social and economic justice for all;
- Respect for the human rights of future generations and a commitment to intergenerational responsibility;
- Respect and care for the greater community of life in all its diversity, which involves the protection and restoration of the Earth's ecosystems;
- Respect for cultural diversity and a commitment to build, locally and globally, a culture of tolerance, non-violence and peace.

This represents a new vision of education, one that helps people of all ages better understand the increasingly globalized world in which they live, addressing the complexity and interconnectedness of problems such as poverty, wasteful consumption, environmental degradation, urban decay, population growth, health, conflict and the violation of human rights that threaten our future. This vision of education emphasizes a holistic, interdisciplinary approach to developing the knowledge and skills needed for a sustainable future, and changes in values, behaviour, and lifestyles. This requires us to reorient education systems, policies and practices in order to empower everyone, young and old, to make decisions and act in culturally appropriate and locally relevant ways to readdress the problems that threaten our common future. This will empower people of all ages to develop and evaluate alternative visions of a sustainable future, and to fulfil these visions through working creatively with others.

YouthXchange was at the heart of the UN DESD and remains central to the Global Action Programme on ESD

<sup>20</sup> *Framework for the UNDESD International Implementation Scheme*, UNESCO (2006) (p. 16).

– the follow up to the UN DESD, as this joint initiative promotes sustainable lifestyles.

## The UNDESD in Africa

Africa launched the UNDESD and its regional Strategy of Education for Sustainable Development for sub-Saharan Africa (SSAESD) in Gabon in March 2006. This regional strategy was developed to guide sub-Saharan African countries to meet the DESD goals, spelling out the way forward and identifying the obstacles to the implementation of the DESD. The Ministerial Statement of Commitment and Call for Support and Action on the SSAESD states the importance ‘to ensure that African cultures, knowledge systems, languages, ways of life are integrated into frameworks, programmes and activities developed within the Decade.’ ESD should be used to address these following changes posed by vulnerability and risks of three kinds: **socio-economic** (poverty), **environmental** (degradation, desertification, climate change); and **cultural** (erosion of languages, traditions, faith and heritage).

The Mainstreaming Environment and Sustainability in African Universities (MESA) Partnership Programme was launched in 2004, as one of UNEP’s initiatives to enhance engagement with universities in supporting the implementation of the UNDESD in Africa. MESA, which has a membership of 95 universities in 30 African countries, supports the mainstreaming of environment and sustainability issues into teaching, research, community engagement and management of universities in Africa. MESA’s ESD Innovations Course Toolkit, which contains modules, activities and case studies, as well as the Educate the Educators ESD Innovation Course are available online. MESA has strengthened the voice of African students in ESD decision-making and provided countries with new opportunities to incorporate ESD into education reform efforts. Based on the success of the MESA programme, the 15th session of the African Ministerial Conference on Environment (AMCEN) adopted the African Environmental Education and Training Action Plan (AEETAP) 2015-2024, in Cairo, Egypt, in March 2015.

There are 149 Regional Centres of Expertise (RCEs) on ESD, which are networks of existing formal, non-formal and informal education and learning-related organizations mobilized to deliver ESD at local and regional levels. Africa is currently home to 31 of them. Successful ESD activities in Africa continue to be implemented by RCEs, governments and educational institutions, networks, projects and initiatives.

At the 2013 Africa Regional Consultation experts shared recommendations for a post-2014 ESD programme framework, such as: Increasing integration of ESD in national and regional development policies and sectoral plans; Improving the capacity of teachers to implement ESD; Developing learning materials for ESD; Increasing sustainable indigenous and faith-based knowledge, values and practices in ESD; Improving partnerships and networks to support ESD implementation; Using non-traditional media, e.g. community radios for advocacy and information sharing; and Improving planning for monitoring and evaluation of ESD implementation by different stakeholders. This is in addition to strengthening governance for ESD and engaging more regional economic communities within the region such as the Southern Africa Development Community since many countries implement regional policies of these economic communities.

## Post-2014: Global Action Programme on ESD

In November 2014 at the World Conference on ESD in Nagoya, Japan, UNESCO launched the Global Action Programme (GAP) on ESD, which seeks to generate and scale-up ESD action in all levels and areas of education and learning to accelerate progress towards sustainable development. The GAP aims to reorient education and learning so that everyone has the opportunity to acquire the knowledge, skills, values and attitudes that empower them to contribute to sustainable development and make a difference and to strengthen education and learning in all agendas, programmes and activities that promote sustainable development. One of the GAP’s priority areas is *empowering and mobilizing youth*.



**The eight Millennium Development Goals (MDGs)** – ranging from eradicating extreme poverty and achieving universal primary education to ensuring environmental sustainability by 2015 - have galvanized unprecedented efforts to meet the needs of the world's poorest. They were drawn from the actions and targets in the **Millennium Declaration** that was adopted by 189 nations in 2000. SCP emerged as a key means to achieve the MDGs. The **2014 MDG Report for Africa** says that Africa has made accelerated progress on the MDGs despite being the region with the lowest starting point. An increasing number of Africans are enjoying higher living standards, maternal and child mortality rates have declined and Africa made considerable improvements on health-related MDGs, among others.

**The Sustainable Development Goals (SDGs)** which build on the MDGs, include 17 comprehensive **goals** that cover major issues such as education, poverty, hunger, SCP and combatting climate change. Applicable to all countries, developing and developed, rich and poor, the SDGs place significant emphasis on education, particularly through **SDG4**, the only standalone goal on education. Africa was actively involved in shaping the SDGs taking into account Africa's interests and produced the **Common African Position on the post-2015 development agenda**. The Common African Position is articulated in depth in **Agenda 2063, the Africa We Want**.

**The Global Universities Partnership on Environment and Sustainability (GUPES)** aims to increase the mainstreaming of environment and sustainability practices and curricula into universities. Building on the successes of MESA, GUPES promotes the integration of environment and sustainability concerns into teaching, research, community engagement, the management of universities including greening of university infrastructure/facilities/operations, as well as to enhance student engagement and participation in sustainability activities both within and beyond universities worldwide.



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### **The Sustainable Lifestyles and Education Programme**

of the 10-Year Framework of Programmes on Sustainable Consumption and Production promotes the uptake of sustainable lifestyles as the common norm, with the objective of ensuring their positive contribution to addressing global challenges, such as resource efficiency, climate change and poverty eradication. The programme empowers individuals to adopt sustainable lifestyles through education, awareness-raising and participation. African organizations such as the Tanzania Consumer Advocacy Society and the Support for Women in Agriculture and Environment are members of this programme's Multi-stakeholder Advisory Committee.

### **The Global Action Programme (GAP) on ESD**

– the follow up to the UNDESD – aims to generate and scale up ESD action. It focuses on five areas: advancing policy, integrating sustainability practices into education and training environments, increasing the capacity of educators and trainers, empowering and mobilizing youth and encouraging local communities and municipal authorities to develop community-based ESD programmes. African countries and sub-regional blocks such as the Southern African Development Community are identifying possible GAP activities they can implement nationally, such as supporting countries without an ESD strategy to develop one. Read the [roadmap](#) for more information.



### **The Sub-Saharan Africa Statement on Education Post-2015**

also known as the **Kigali Statement / Declaration** was signed by African Education Ministers in February 2015. It includes Africa's priority action areas such as equitable and inclusive access for all, inclusive, equity and gender equality, teachers and teaching, educational quality and learning outcomes, ESD and global citizenship education, youth and adult literacy, skills and competencies for life and work.



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### **The International Training Program on Education for Sustainable Development in Higher Education**

aims to enhance capacity to initiate and support ESD development within teaching, learning, research, community involvement and management of higher education institutions. Over 140 change projects have been developed since the conception of this program in 2008, a process that involved over 120 universities in 35 countries. These projects focus on resource efficiency, climate change mitigation and adaptation, ecosystem and biodiversity conservation, and hazardous waste management.

### **The Africa Environmental Education and Training Action Plan (AEETAP) 2015-2024**

aims to enhance community environmental education and training within the continent through formal education trainings, life-long learning, and capacity-building programmes and projects. AEETAP is aligned to the African Ministerial Conference on the Environment (AMCEN) Regional Flagship Programmes (RFPs). It contributes to achieving the Action Plan of the New Partnership for Africa's Development, the Africa's Agenda 2063 and the SDGs (Goal 4) and the GAP on ESD. AEETAP was initiated by the AMCEN Secretariat and UNEP after the **2012 Arusha Declaration 18**.

### **UNEP is championing the development of national and regional Green University Networks**

which are networks of higher education institutions that incorporate environment, low carbon-climate resilience development strategies and sustainability aspects in their education, training, campus operations and enhanced student engagement. The **Kenya Green University Network** was launched in 2016, and others will be launched in Uganda, Morocco and West Africa.





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3

# INTRODUCING SUSTAINABLE CONSUMPTION



**“When deeds speak, words are nothing.”**

*[African proverb]*

Sustainable consumption is about finding workable solutions to imbalances – social, economical and environmental – through more responsible behaviour from everyone. The aim is to ensure that the basic needs of the entire global community are met, excess is reduced and environmental damage is avoided. Sustainable consumption is an integral element of sustainable development, an issue of paramount importance to the United Nations:

**“Sustainable Development is development which meets the needs of the present without compromising the ability of future generations to meet their own needs.”**

*This definition, which is still widely accepted today, originates from the Brundtland Report.<sup>21</sup>*

Any definition of sustainable consumption highlights how consuming less is often a priority, but not always just this. Consuming differently and efficiently is the key challenge. In particular, sustainable consumption is linked to production and distribution, use and disposal of products and services, and provides the means to rethink their lifecycle.

The global consumer class stands at 1.7 billion, with nearly half coming from developing countries.<sup>22</sup> Nonetheless, consumption is unevenly distributed around the world, with vast disparities between countries.

21 Gro Harlem Brundtland et al., *Our Common Future*, WCED, New York-Oxford, Oxford University Press, 1987, p. 43.

22 *The State of Consumption Today*, Worldwatch Institute (2011).

## Why sustainable consumption in Africa?

**“To promote sustainable consumption in Africa, it is very relevant to put its relevance into context. For example, given that 41% of the African population lives below the poverty line, it is essential that sustainable consumption is not automatically translating into ‘consuming less’ (...). Sustainable consumption in the African context refers to more efficient, better informed consumption, creating opportunities to meet basic needs for the ever increasing population.”**

*[African Review Report on SCP, 2009]*

Africa is rich in minerals and natural resources, such as land, water and forests, all of which support the productivity of food crops and livestock that millions of Africans depend on for their livelihood and survival. Not all African countries are endowed with such resources, with some countries facing severe droughts and desert. Agriculture alone, including subsistence farming, employs 65% of Africa’s labour force.<sup>23</sup> These natural resources are major assets on which many countries around the world depend on for economic growth and sustainable development. Resources like minerals, which are needed in the production of consumer goods, are often extracted with little benefit of staying in their countries of origin.

The challenge is to therefore provide more people in rural and urban Africa with a better quality of life without undermining the natural resource base and harming the rich African ecosystems, which everybody depends on. For example, this can be done by ensuring all of Africa has access to electricity. The African continent has enormous resource endowments for renewable energy, from geothermal and wind to solar and modern bioenergy. The lack of access to modern energy is one of the key factors

23 *Africa – Fact Sheet: The World Bank and Agriculture in Africa*.

that hinder Africa's economic development. Little of this potential has been exploited to date but there are an increasing number of renewable energy projects that are being implemented in the region.

Africa's current rate of urbanization is around 3.5% per year - the highest in the world - resulting in the rapid growth of urban agglomerations throughout the region. Africa's urban population was 373 million in 2007 and will reach 760 million in 2030.<sup>24</sup> This level of urbanization has a strong impact on the environment and consumption patterns alike. In large cities like Lagos and Nairobi, there is a growing middle class and its adoption of western consumption patterns are visible, such as private car ownership, increased meat consumption, and emergence of low-density detached housing developments in sub-urban areas. The rising car ownership numbers negatively impact air quality and cause congestion. At the same time, an increasing number of city dwellers are poor in sub-Saharan Africa, which has the third-largest number of slum dwellers. The challenge is to ensure that the poor consume enough to meet their daily needs while the growing middle class and richer populations consume responsibly.

For Africa, sustainable consumption provides many opportunities. Firstly, more efficient resource use through sustainable consumption allows poor people to meet more of their needs - or consume more - from the same resource base. And secondly, sustainable consumption provides Africa the opportunity to leapfrog and bypass inefficient, polluting and ultimately, costly phases of development by paving the way for Africa to jump straight onto a resource efficient, green and sustainable development path.

### Promoting sustainable consumption in Africa

Africa is at the forefront in implementing sustainable consumption and production (SCP). In fact, SCP activities in Africa started in the mid-1990s. In 2006, the African 10-Year Framework of Programmes (African 10YFP) on SCP was launched in Ethiopia, demonstrating the commitment to implement SCP activities in Africa. This

regional framework was supported by the Marrakech Process, a multi-stakeholder process, which promoted the development and implementation of SCP policies and initiatives and contributed to the development of the global 10-Year Framework of Programmes (10YFP) on SCP - a global framework for action on SCP that was adopted in 2012 at the United Nations Conference on Sustainable Development (Rio+20). In 2014, the African regional roadmap of the 10YFP was developed through a consultative process and aims to enhance and upscale SCP activities in Africa.

African countries, such as Burkina Faso, Ghana, Mauritius and Tanzania, have also developed and are currently implementing their own national and local SCP programmes, highlighting the importance of SCP in achieving sustainable development in Africa. For more information about SCP in Africa, read Sustainable Consumption and Production in Africa 2002-2012.

Since 2000, the African Regional network of Resource Efficient and Cleaner Production (RECP) Centres has been convening regional roundtables on SCP and in 2004, it contributed to the creation of the African Roundtable on Sustainable Consumption and Production (ARSCP), a not-for-profit regional institution that promotes SCP.<sup>25</sup> The ARSCP is a forum that facilitates information exchange and experience sharing amongst institutions and practitioners engaged in SCP. One of the objectives of the ARSCP is to encourage specialization, facilitate information exchange and experience sharing between SCP-promoting institutions and individual experts, including educators, working within Africa and internationally. SCP experts can engage in this regional initiative that also aims to facilitate further integration of SCP concepts and principles in national policy frameworks regionally. The ARSCP also holds meetings and trainings, produces publications and implements SCP programs, all of which can be beneficial for educators and consumers alike.

24 *Chapter 2: Sustainable Consumption and Production (UNECA).*

25 *The Global Outlook on SCP Policies*, UNEP (2012).

**“We are of the view that an agreement on the Global 10-Year Framework of Programmes to promote sustainable consumption and production would be a useful contribution, by Rio+20, to support the transition to green economies and help developing countries with financial and technical support, appropriate technology transfer, capacity-building and market access.”**

*[The African Consensus Statement to Rio+20 by Ministers of African States]*

### SCP as a vehicle for a Green Economy in Africa

A green economy is one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. In simple words, a green economy is low carbon, resource efficient and socially inclusive. Africa’s transition to a green, efficient and inclusive economy requires countries to promote SCP as well as resource and energy efficiency. Africa has the biggest technical potential for renewable energy and this alone could be the basis for industrialization for economic development in the region.

Green economy and SCP, both of which are important elements of sustainable development, are two sides of the same coin.<sup>26</sup> In fact, SCP and a green economy can help to secure social and economic development that is within the carrying capacity of ecosystems by de-coupling economic growth from environmental degradation in Africa.

The 2012 Arusha Declaration on Africa’s Post Rio+20 Strategy for Sustainable Development highlighted the need for Africa to capitalize on the opportunities presented by the outcomes of Rio+20, which identified the Green Economy as an important tool for realizing sustainable development and eradicating poverty in Africa. African

<sup>26</sup> *Sustainable Consumption and Production in Africa, 2002-2012*, UNEP (2012).

ministers decided to create mechanisms for a coordinated support to countries for promoting a Green Economy, including partnerships development, national strategies, promotion of regional and international cooperation and transfer of resource efficient and green technologies. Read the UNEP Green Economy assessment reports for African countries (Kenya, Burkina Faso and Senegal).

### SCP and YouthXchange

Providing tools for change is the responsibility of governments, regulatory institutions, non-governmental organizations (NGOs) and business. However, the role of the consumer and citizen is essential in pushing these groups to take action more quickly and for the better. This guidebook equips Africa’s youth with the knowledge they need to do exactly that. It outlines many of the challenges facing the continent, highlights opportunities and risks and encourages action to address these challenges through consuming responsibly and living in a more sustainable manner.

**“Sustainable consumption is about the power of individuals. Nobody is helpless. Everybody can make the choice to buy or not to buy environmentally friendly products. This will ultimately shape sustainable production patterns as well.”**

*[Kofi Annan, former Secretary-General of the United Nations]*

Through the YouthXchange Initiative and this regional publication, two United Nations agencies, UNESCO and UNEP, have joined forces to make Africa’s young people more aware of opportunities offered by sustainable consumption and lifestyles, and empower them to make a difference in their lives.



The concept of sustainable consumption is rich and its definition is sometimes hard to pin down! Most definitions have the following common features:

- Satisfying human needs;
- Favouring a good quality of life through decent standards of living;
- Sharing resources between rich and poor;
- Acting with concern for future generations;
- Looking at the 'cradle-to-grave' impacts when consuming;
- Minimising resource use, waste and pollution.

For more information: *Teaching and Learning for a sustainable future*, UNESCO, 2005.



### **The Global Outlook on SCP Policies**

provides a non-exhaustive review of policies and initiatives that are promoting the shift towards SCP patterns. It has 56 case studies ranging from global multilateral agreements and regional strategies to specific policies and shows progress achieved in promoting SCP, highlighting best practices and offering recommendations to scale up and replicate these efforts.

### **Do you want to learn more about SCP and what it means?**

Download the UNEP publication **ABC of SCP: Clarifying concepts on SCP**. It is also available in **French** and **Portuguese!**

### **The 10-Year Framework of Programmes (10YFP) on SCP**

is a global policy framework for action to enhance international cooperation to accelerate the shift towards SCP. Actors from all countries such as governments, the private sector, civil society, researchers, UN agencies, financial institutions, and major groups, including youth, can be involved in the implementation of the 10YFP activities. The 10YFP programmes, including one on **sustainable lifestyles and education** as well as **consumer information**, contribute to meeting the goals and principles of the 10YFP and responding to national and regional needs, priorities and circumstances.



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**The Global SCP Clearinghouse** is a unique online one-stop hub dedicated to advancing SCP. It is convened by UNEP and serves as the information platform of the 10YFP. It offers the opportunity to share and find information on SCP efforts from around the world, build networks, identify partners and strengthen capacities. It provides educators and youth with up-to-date information on existing SCP initiatives in Africa and beyond that can be used as case studies highlighting successful initiatives and campaigns for SCP. It also enables mutual learning, capacity-building and partnerships.





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4

# SWITCHING TO SUSTAINABLE LIFESTYLES



**“You must treat the earth well. It was not given to you by your parents. It is loaned to you by your children.”**

*[Kikuyu saying, Nyahururu, Kenya]*

What does sustainability mean to us as individuals? What can we do to become more responsible? Do we all need to do the same thing? What should we do first, save the environment or eradicate poverty? What comes first, our health or the Earth’s health? Difficult questions never have easy answers - so the ancients say!

Sustainable consumption is not just an environmental issue, but also one that promotes a dignified standard of living for everyone. Like sustainable development, sustainable consumption addresses the three pillars: economic, social and environment. Sustainable consumption is also a personal and social issue. It is also an issue in a continuing state of evolution in which the answers are rarely straightforward. Nevertheless, there are a number of basic elements that make up the whole picture. With sustainable consumption, economic undertakings need to bring economic benefit for development to continue, where profit means people get fair wages and the effort continues. Societal impacts should be positive as well.

## Africa’s environmental, economic and social profiles

To better understand the need to adopt more sustainable consumption patterns and lifestyles, let’s look at the three pillars of sustainable development in Africa.

**Environment:** Africa faces numerous environmental challenges such as extreme vulnerability to climate variability and climate change; the rapid declining of its biological resources due to habitat loss, overexploitation of resources and illegal activities; coastal and marine habitats and resources being under threat from pollution and inappropriate development in coastal zones and poor inland land management; Africa has the fastest rate of

deforestation anywhere in the world; lack of availability and low quality of freshwater are limiting development in Africa, constraining food production and industrial activities and contributing to the burden of disease; degradation of soil and vegetation resources as a result of increasing population pressures, inequitable land access, poor land management and widespread poverty; rising rates of urbanization coupled with poor economic growth and low investment in infrastructure result in proliferation of informal settlements in urban Africa.<sup>27</sup>

**Economic:** Africa has experienced high and continuous economic growth in the past decade; the average annual growth rate of real output increased from 1.8% (1980-1989) to 2.6% (1990-2000) and 5.3% (2000-2010).<sup>28</sup> Despite this fairly strong economic growth, many countries are grappling with development challenges related to the economy, such as high unemployment, poverty and inequality, commodity dependency, lack of economic transformation, environmental degradation and low integration of the continent in the global economy. In 2012, the sectoral contribution to Africa’s GDP included mining and quarrying, agriculture, wholesale and retail, finance and real estate, manufacturing, public administration, transport and communications, construction, electricity, gas and water and the service sector including tourism.<sup>29</sup> *More specific issues related to key sectors such as food, transport/mobility, communications, are explored in the upcoming chapters.*

**Social:** Sub-Saharan Africa is the world’s poorest and least developed region, with over 40% of its population living on less than \$1.90 a day in 2012.<sup>30</sup> Nearly two-thirds of its countries are amongst the lowest in the Human Development Index ranking. About 25% of African adults are illiterate, while women aged 15 years and older are 24% less likely to be literate than men in the same age group.<sup>31</sup>

27 *Africa Environment Outlook*, (UNEP, 2002).

28 *Economic Development in Africa, Report 2014* (UNCTAD, 2014).

29 *Chapter 2: Main drivers of Africa’s economic performance*, (AFDB).

30 *Poverty & Equality*, World Bank (2012).

31 *Adult and Youth Literacy*, UNESCO (2015).

Many economic activities are closely tied to the environment. The more we damage the environment, the more we put future generations and ourselves at risk. In Africa, deforestation, biodiversity loss, land and coastal degradation, desertification, and water scarcity are important environmental concerns, which are deteriorating natural resources and contributing to social conflicts and political upheavals that damage the prospects for a good quality of life.

Africa, which has one quarter of the world's 4,700 mammal species and more than one fifth of the world's birds' species, is home to eight of the world's 34 biodiversity hotspots.<sup>32</sup> The continent is nonetheless rapidly losing its biodiversity wealth because of population growth, agricultural expansion, increasing rates of deforestation, overgrazing, soil erosion and desertification, in addition to climate change.<sup>33</sup> In fact, according to current scenarios from the Convention on Biological Diversity, all regions of the world will continue to experience loss in biodiversity, with Africa, followed by Latin America and the Caribbean experiencing the highest losses.<sup>34</sup> This could be potentially devastating, particularly since scientists believe that plants hold keys to finding cures for many diseases, so each lost species not only causes irreparable damage to the ecosystem, but is also a lost opportunity for our future development. Because of the rising threat of biodiversity loss, which has varying implications in both urban and daily life, 49 African countries have national biodiversity strategies and action plans.<sup>35</sup> Africa has rich and varied biological resources that form the region's natural wealth on which its social and economy systems are based. These resources are essential to the region's development of agriculture, industrial activities, pharmaceutical products and construction and tourism among others.

This scenario reminds us of the urgent need to take better care of our resources and the environment, all of which will help African economies and societies. Adopting and

promoting more sustainable ways of living that are in harmony with our communities and nature has never been more crucial.

### What is a sustainable lifestyle?

A sustainable lifestyle is a way of living that is enabled both by efficient infrastructures, services and products, and by individual choices and actions to minimize the use of natural resources, emissions, waste and pollution, while supporting equitable socio-economic development and progress for all and conserving the Earth's life support systems within the planet's ecological carrying capacity.

In other words, creating sustainable lifestyles means rethinking our ways of living, how we buy and what we consume. It also means rethinking how we organize our daily life, altering the way we socialize, exchange, share, educate and build identities. It is about transforming our societies towards more equity and living in balance with our natural environment.

According to the [Global Footprint Network](#), the average African citizen currently requires 1.4 hectares (one hectare is equal to the size of a football field) to produce what she or he consumes every year and then to dispose of the waste generated. Although this is much lower than the global citizen, who requires 2.7 hectares (ha), it is close to the globally available biocapacity of 1.8 ha per person, needed to live a sustainable lifestyle.

So, are we all equally responsible then? No, not really. Disparities between countries and different areas of the world are huge. In Africa, Mauritius, which has the highest per capita footprint at 4.6 ha, together with Libya, Mauritania and Botswana, have average ecological footprints greater than the global average of 2.7 ha, while Eritrea has the lowest per capita footprint of 0.7 ha. Ten African countries have an ecological footprint greater than the global per capita available biocapacity of 1.8 ha,

32 *Africa Atlas of our Changing Environment*, UNEP (2008).

33 *Africa Environment Outlook 3*, UNEP (2013).

34 *Impacts on biodiversity and ecosystems from conventional expansion of food production*, GRID ARENDAL.

35 *State of Biodiversity in Africa*, (CBD).

leaving the rest of Africa with a level of consumption that is insufficient to meet their needs.<sup>36</sup>

In the world, however, a North American on average uses 7.9 ha per year, a European 4.7 ha, a Latin American 2.6 ha and an Asian 1.8 ha. These figures are only an average and there are also big differences between wealthier and poorer people in the same continent or country.

In 2008, the wealth of about 100 000 Africans was USD 800 billion, about 80% of the value of all goods and services produced in sub-Saharan Africa in that year. Globally, the wealth of the world's 225 richest individuals equals the annual income of the bottom 47% of the world's population, or 2.5 billion people. This tells us that the distribution of income and consumption is seriously out of balance. Africa is the world's poorest continent but it also has a rising middle class. Consumer spending in Africa is predicted to nearly double to \$1 trillion by 2020, which will in turn create unprecedented opportunities for global companies to do business in Africa.<sup>37</sup> In addition, by 2050 Africa's labour force will be the largest in the world at about 1.3 billion strong, something that is expected to help sustain Africa's economic growth rates.<sup>38</sup> The next section and chapters focus on specific issues that are part of our daily lives such as food, mobility and traveling, waste and our energy use among others.

## Our lifestyles, our food

This YouthXchange tool kit illustrates some of these contrasts and what people are already doing to make a difference. Just to give an example, let's look at food and its distribution. Many people think that the planet is not producing enough to feed its population. Wrong. Unequal distribution of food is the main reason why there are 795 million undernourished people in the world today, with



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one in nine people not getting enough food to be healthy and lead an active life<sup>39</sup>

Sub-Saharan Africa is the region with the highest prevalence (percentage of population) of hunger; one in four people in Africa is undernourished.<sup>40</sup> Three-quarters of all hungry people live in rural areas, particularly in rural Africa and Asia, where most are dependent on agriculture for their food and often have no alternative source of income or employment.<sup>41</sup>

A World Bank report entitled [Africa Can Help Feed Africa: Removing barriers to regional trade in food staples](#) says that Africa's farmers can potentially grow enough food to feed the continent and avert future food crises if countries remove cross-border restrictions on the food trade within the region.<sup>42</sup> Although Africa has enough fertile farmland, water, and favourable climates to feed itself, it imports ever-larger amounts of food from outside the region to keep up with rising demand.

## Food loss and food waste

Globally, there is also a lot of food that is lost or wasted. Have a look at the [Think.Eat.Save](#) UNEP-FAO food loss campaign to better understand how food waste is a massive global problem and what you can do to address this. In sub-

<sup>36</sup> [Africa Ecological Footprint Report](#) (World Wide Fund for Nature and AfDB – African Development Bank, 2012).

<sup>37</sup> [African Consumer Spending Expected to Double by 2020](#), The Wall Street Journal (3 Aug 2014).

<sup>38</sup> [African Consumer Spending Expected to Double by 2020](#), The Wall Street Journal (3 Aug 2014).

<sup>39</sup> [Hunger](#), World Food Programme.

<sup>40</sup> [Hunger Statistics](#), World Food Programme.

<sup>41</sup> [Who are the hungry?](#) World Food Programme.

<sup>42</sup> [Africa: Unlocking Regional Trade to Help Feed a Continent](#), World Bank (2012).





Saharan Africa, the amount of food that is lost or wasted, ranging from production to retailing stages, is 120-170 kg per person per year. This is in addition to the food wasted by African consumers, which is 6-11 kg per person per year.<sup>43</sup> In Europe and North America, the amount of food wasted during production to retailing stages is 280-300 kg per person per year, while food wasted by consumers is 95-115 kg per person per year. The impact of this waste is not just financial. Environmentally, this leads to:

- Loss of embedded resources like water and nutrients etc.;
- More fuel used for transportation; and to
- More rotting food, creating more methane, one of the most harmful greenhouse gases that contribute to climate change.

According to the UN Food and Agriculture Organization (FAO), in medium- and high-income countries, food is, to a great extent, wasted at the consumer level, where it is thrown away even if it is still suitable for human consumption. This is in addition to the loss and waste that occurs early in the food supply chain. However, in low-income countries, food is mainly lost during the early and

43 *Global Food Losses and Food Waste*, FAO (2011).

middle stages of the food supply chain, close to the farm, meaning much less food is wasted at the consumer level.<sup>44</sup>

FAO says that dietary energy measured by kcals per capita per day has been steadily increasing worldwide from the mid-1960s to the late 1990s. But this change is not equal in all regions. Per capita supply of calories has remained almost stagnant in sub-Saharan Africa from 2058 kcal per calories per day in 1964-1966 to 2360 in 2015. Africa's urban areas face numerous challenges when it comes to food and dietary patterns. Urban areas have more women in the workforce with less time to prepare meals for the family, great commuting distances and living in smaller kitchens or outdoor cooking spaces. Because of the fast paced urban lifestyle, many urban consumers rely on pre-prepared, highly processed or convenience foods, such as take away or street foods, especially for the urban poor. These foods are often high in fat, sugar and salt, which can contribute to many health problems such as obesity and diabetes. The cost of traditional staple foods is often higher in urban areas, while the cost of processed food is lower, contributing to the shift in dietary patterns in urban areas.<sup>45</sup> A study in Tanzania found that the most commonly eaten foods in urban areas were bread, cookies, vegetable oil, beef and milk, while it was sweet potatoes, cassava leaves, cassava and papaya in rural areas.<sup>46</sup>

### What can you do?

Is it feasible to reduce food waste and its environmental impact and at the same time try to tackle poverty? Yes it is, but this requires improved use of natural resources and food systems and attention to how and what we consume. Firstly, you can take steps to reduce food waste in your place of work, at school and at home. You can try to eat more diverse, healthy diets including organically and sustainably grown fruits and vegetables, as well as food that is locally grown. This has an impact on farmers who respond to market demands. Remember that if there is a demand for more diverse foods, then farmers will grow

44 *Global Food Losses and Food Waste*, FAO (2011).

45 *Food security in the context of urban sub-Saharan Africa*, FAO.

46 *Food security in the context of urban sub-Saharan Africa*, FAO.

that food. To help reduce food waste, you should also think about portion size and what types of food you consume.

Secondly, creating a more sustainable food future means seeking solutions to feed our growing population and reduce loss and waste. We all - from farmers and food companies to retailers, shipping lines, packagers, hotels, restaurants and consumers at the household level – have a role to play. We can start by urging governments and the private sector to develop a common global standard for measuring and reporting food loss and waste and setting global, national, and corporate food loss and waste reduction targets.<sup>47</sup> We can also urge our governments for higher investments in infrastructure that supports the food sector (roads, storage facilities etc.) for greater long-term benefits.



<sup>47</sup> *Cutting food loss and waste will benefit people and the environment, says new study on World Environment Day*, UNEP (2013).





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**The Ecological Footprint** is a measurement used to calculate the impact of human pressure on the planet. It can be used to compare the environmental demand of our lifestyle (e.g. eating, driving) with nature's ability to provide what people consume. Humanity uses the equivalent of 1.5 planets to provide the resources we use and absorb our waste, meaning it now takes the Earth 1.5 years to regenerate what we use in a year. Africa suffers the most when our demands on nature exceed what nature can provide. With nearly 75% of Africa's population living directly off the land, higher than in any other continent, Africa is the most vulnerable region in the world to ecological shocks.

**Think. Eat. Save: Reduce your footprint** is a global campaign by UNEP and FAO to cut food waste. Living a sustainable lifestyle involves reducing your footprint by becoming more aware of the environmental impacts of the food choices you make and empowering yourself to make informed decisions. Visit [www.thinkeatsave.org](http://www.thinkeatsave.org) for simple tips, to make food waste pledges, and to exchange ideas and create a truly global culture of sustainable consumption of food. Read the **Prevention and reduction of food and drink waste in businesses and households** for guidance on how to develop activities to prevent and reduce food and drink waste.





### **The Sustainable Rice Platform (SRP)**

is a multi-stakeholder platform established to promote resource efficiency and sustainability throughout the rice value chain from production through to consumption. Co-convened by UNEP and the International Rice Research Institute, and with the support of governments and private sector actors, the SRP is developing guidelines and criteria for environmentally sustainable and socially responsible rice production and aims to assist rice farmers in adopting these practices. The SRP helps farmers produce rice more sustainably while keeping the environment healthy, reducing greenhouse gas emissions, improving livelihoods for smallholders and enhancing food security.



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**5**

**TAKE CARE**

**“Disease and disasters come and go like rain, but health is like the sun that illuminates the entire village.”**

[African proverb]

Health is wealth, so the old saying goes. It is possible to opt for lifestyles that are more health-centred. Looking after your health should mean looking at the health of the planet too. Changes in lifestyle should benefit the planet as well as you.

## Health and the environment

Food, for example, is a key link between health and the environment. Sub-Saharan Africa accounts for 27.5% of the undernourished people in the developing world,<sup>48</sup> and 24 out of 54 African countries need external assistance to have access to sufficient food. At the same time, overweight and obesity are also becoming a challenge in Africa. South Africa, which is in the top five obese countries in the world, has the highest overweight and obesity rate in sub-Saharan Africa.<sup>49</sup>

Taking care in sub-Saharan Africa means understanding the relationship between critical challenges such as HIV/AIDS and the environment. HIV/AIDS is a long-term development challenge in Africa. Sub-Saharan Africa accounts for close to 70% of people living with HIV in the world.<sup>50</sup> The Human Immunodeficiency Virus (HIV) is a virus that attacks the immune system, resulting in a chronic, progressive illness called Acquired Immunodeficiency Syndrome (AIDS) that leaves people vulnerable to opportunistic infections.<sup>51</sup>

First, resource scarcity, often a result of unsustainable consumption and production patterns, can worsen poverty in natural resource-dependent regions like rural sub-Saharan Africa. And in some cases, poverty and challenging

48 *The State of Food Insecurity in the World*, FAO (2015), p.10.

49 *SA's the fattest sub-Saharan African nation – study*, Mail and Guardian (May 2014).

50 *Fact Sheet 2016*, UNAIDS (2016).

51 *What is HIV/AIDS?* Public Health Agency of Canada.

economic circumstances can lead individuals to engage in transactional sex for material goods and money for daily sustenance needs, which in turn, can worsen HIV infection rates.<sup>52</sup> Second, resource scarcity may also lead to food insecurity and inadequate diet, which can make it worse for HIV-positive people as they need proper nutrition, especially during HIV/AIDS treatment.

Another issue that affects health is indoor and outdoor air quality, which can lead to respiratory diseases. Indoor air quality is a huge problem in Africa due to lack of access to modern energy services. Cooking, heating and lighting are often done through the use of inefficient solid biomass. Incomplete combustion releases black carbon, a major component of particulate matter. About 4.3 million people die prematurely a year due to indoor air pollution,<sup>53</sup> many of them in Africa. More than 50% of premature deaths among children under 5 are due to pneumonia caused by particulate matter inhaled from household air pollution.

## The power of consumers

The food crisis in Africa derives from, amongst others, conflicts, increases in food prices and degradation of lands or droughts. Through sustainable consumption practices, both at individual and collective levels, African consumers can play an important role in addressing this food crisis.

The power of consumers cannot be underestimated and in fact, many countries have their own consumer protection laws and acts designed to support and protect consumers. Consumer protection is a group or association that ensure the rights of consumers, where consumers can gather relevant and accurate information to help make informed decisions in the marketplace.

The ‘Association des Consommateurs de l’Île Maurice’ (Mauritius Association of Consumers), the National Consumer Forum in South Africa and the Uganda Consumer Protection Association are just three examples of consumer groups that work to exercise this power of

52 *HIV/AIDS and the Natural Environment*, (Lori M. Hunter, PRB).

53 *Household air pollution and health*, WHO.



consumers. Consumers can demand more reliable and understandable information on the food they buy – is this fruit coming from far away? Is this imported tin of tomatoes fulfilling safety standards? Choosing products that are healthier, safer, and free of pesticides and that have been produced in an ethical manner, with minimal damage to the environment and human treatment of animals, are also sustainable consumption practices that can be applied to everyday life.

Did you know that the use of pesticides has increased over recent decades with more than 2.6 million metric tons of pesticide active ingredients used annually?<sup>54</sup> This is particularly dangerous for children, especially those engaged in agriculture or children of agricultural workers since pesticide chemicals can enter the body through eating, drinking, breathing and absorption through the skin. Unfortunately, regulations often do not explicitly consider children’s unique vulnerability to pesticide exposure.

There is power in choice, and what is important is that sufficient and quality information (ideally that is supported by consumer protection laws) is provided so that people can choose for themselves.

Eating Africa’s main commodities such as cassava, yams, maize, millet, livestock, game, or fisheries, depends on the choices people make about how they want to live, and quite often, their culture. These food choices can also be good for peoples’ health and for the environment, as many are produced in Africa and have less food miles since transporting them within the continent has a smaller environmental impact, compared to food imported from other continents. Nonetheless, with increasing globalization, African markets and supermarkets are now flooded with food imported from other countries.

It is important that we make the right choices with regard to how we manage and consume our natural resources. For example, we need 25-35 kg of cereals to produce 1 kg of red meat. Reducing meat consumption or following a meat-

free diet has few environmental impacts [water, soil, energy and so on]. Chicken has a smaller environmental impact than red meat, amounting to 15 times less environmental damage per serving. Free-range farming, where animals are allowed to roam freely instead of being contained, is quite widespread in sub-Saharan Africa. Often, free-range or ranch-raised animals are treated in a more humane manner and their diets are typically well-rounded. As a consumer, you can be confident that the meat you are consuming comes from animals in a good environment.

## International efforts

The International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) provides information on how agricultural knowledge, science and technology can be used to reduce hunger and poverty, improve rural livelihoods and human health, and facilitate equitable environmentally, socially and economically sustainable development. The process brought together governments, non-governmental organizations, the private sector, producers, consumers, the scientific community, Multilateral Environment Agreements as well as international agencies involved in agriculture and rural development to share views, gain common understanding and vision for the future.

This unique international effort evaluated the relevance, quality and effectiveness of agricultural knowledge, science and technology, seeking to answer the question “How can we reduce hunger and poverty, improve rural livelihoods, and facilitate equitable, environmentally, socially and economically sustainable development through the generation, access to, and use of agricultural knowledge, science and technology?” One of the challenges is the current low level of agricultural productivity in sub-Saharan Africa, which prevents much of the population from escaping poverty, hunger and malnutrition.<sup>55</sup> On average, livestock and crop yields are lower in this region than all other regions and this could be one of the outcomes of poor knowledge, understanding and uptake of new

54 *Issue Brief Series: Pesticides*, Healthy Environments for Children Alliance.

55 *International Assessment of Agricultural Knowledge, Science and Technology for Development: Summary for decision makers of the sub-Saharan Africa Report*, IAASTD (2009) (p.70).



Mark Winfrey/Shutterstock.com

agricultural technologies in the region. Because agriculture, health and nutrition are closely linked, increasing yields will have a direct impact on the nutritional status of the poor. The IAASTD has produced reports that educators and consumers can use to learn about food security, safety and human health and nutrition, among others.

### Taking care in Africa

Taking care in Africa means paying close attention to access and security of basic needs such as water and food. Climate change impacts, including severe droughts, affect Africa's food security and there is a need to find a way to adapt. In Africa, where food waste is negligible and population growth is high, increased and sustainable production is needed for food security. Countries need to harness ecosystem-based adaptation in response to climatic change impacts in agriculture. Have a look at the [Africa Adaptation Knowledge Network](#) for more information on how food security is being tackled regionally.

Taking care in Africa is also closely related to having access to safe water, particularly since 70% of the urban population in sub-Saharan Africa is slum dwellers, and many use contaminated water and wastewater, both of

them associated with serious health and environmental risks.

### Improving Africa's air quality

Another issue is poor air quality, which affects the health of Africa's population in a frightening way. Rural sub-Saharan Africa relies heavily on traditional biomass energy use, such as wood resources or agricultural and animal waste, to meet basic needs such as cooking, boiling water, lighting and heating. This means that many houses are often filled with smoke that women and children breathe for hours and hours. The incomplete combustion of solid biomass often leads to health problems derived from indoor air pollution, such as infections of the respiratory track, chronic pulmonary diseases and lung cancer, as well as environmental problems such as deforestation. The lack of appropriate clean cooking alternatives, from improved cooking devices to alternative fuels, including access to electricity through mini-grids and the main grid, need to be addressed if we want to help improve Africa's air quality.

Some 4.3 million people a year die from exposure to household (indoor) air pollution, which includes a range

of health damaging pollutants such as carbon monoxide.<sup>56</sup> There are numerous alternative solutions. The largest reductions in indoor air pollution include switching from solid fuels (e.g. wood, charcoal, coal, dung, crop wastes) to cleaner and more efficient fuels and energy technologies, such as biogas, electricity and solar power. Research tells us that in poor, rural communities, where access to alternative solutions is limited and biomass is the most practical fuel, using improved stoves with a chimney can reduce indoor air pollution.<sup>57</sup> Using chimneys however, is not sufficient because the indoor air pollution then becomes outdoor air pollution, which not only also has health impacts, although less due to lower concentrations, but also impacts the environment and climate, all of which impact health. Countries must invest in modern bioenergy, which rural areas have great potential for. Bioenergy includes biogas, which is scalable from household to farm to village level, in addition to mini-grids.

Also, energy consumption is on the rise. In urban Africa, the use of modern sources of energy such as oil and gas is rising to the point that in the long term (30-50 years), some African countries' energy consumption could be the same as some industrializing countries of Asia such as South Korea or Singapore. This has detrimental consequences on our health, for example, causing asthma and allergies. Since many African countries are currently building their infrastructure, alternative sources of energy should be considered right away. In fact, this approach can allow Africa to 'leapfrog' and bypass the inefficient, polluting and costly phases of development and jump straight onto a resource efficient sustainable development path.

While the power of consumers can make a healthier future possible, the challenge lies in providing sustainable and renewable energy solutions to all. Africa has abundant renewable resources that, with the right kind of public policies and enabling frameworks in place, it can unlock a new development future and light up the lives and livelihoods of millions of people and bring important health, environmental and economic benefits. Energy

infrastructure once in place stays for at least 40 years – a real technology lock in. We must remember that energy efficiency is not a luxury; energy efficient devices need to be promoted, public policies needs to be put in place to strengthen performance standards and increase consumer choices.

Youth and consumers are encouraged to develop campaigns on sustainable energy and engage their governments and policymakers to turn to sustainable energy sources, which is better for the environment by reducing carbon emissions and necessary for good air quality. Sustainable energy sources are also economic; as resources become increasingly available, countries can do away with expensive oil imports.

Read Chapter 9 for more information about energy in Africa and what you can do!



### Stepping-stones

We should all take care of our bodies by adopting healthier behaviours:

- If you have a choice and it is safe, **walk** instead of driving, particularly for short distances.
- **Stop** or cut down on smoking.
- Remember to exercise regularly; you can't store up **fitness** for your old age.

<sup>56</sup> *Household (Indoor) Air Pollution*, World Health Organization.

<sup>57</sup> *Indoor Air Pollution Problem: Indoor Air Thematic Briefing 3*, World Health Organization.





## Stepping-stones

Eat and drink as healthily as you can: more fresh and safe food and water, fewer additives and less processed food.

- Learn about your current diet, the food you eat and where you can buy healthier food options (including organic food) in your community or city.
- Let your local market, supermarket and/or food suppliers know that you want reliable and understandable **information** and **labels**, which inform you about the food and drinks you consume.
- If you buy your food from informal markets such as open-air markets with vendors selling vegetables, ask questions about **where your food is from** and **how it is grown**.
- Prefer organic and locally grown **seasonal** foods that are not treated with pesticides.
- If you have space in your compound, grow your own vegetables free of pesticides or on **storey sack mound**, which is small vegetable garden next to the house made from a charcoal sack.
- Ask your local market or supermarket about the **safety standards** of imported food.
- Seek information about the **safety** and **quality** of the water you drink.
- Learn about the **Eco Mark Africa** sustainability label, the first pan-African and cross-sectoral eco-label, which covers the agriculture, forestry, fisheries and tourism sectors.



## Stepping-stones

There are many small steps we can take to reduce **air pollution** and our use of **chemicals**:

- Find out about **air pollution** in your neighbourhood or city, and what your city is doing to curb air pollution.
- Learn about **sustainable use** and **management** of energy sources (wood, gas, oil...).
- Inform yourself about **cleaning products**, **toiletries** and **cosmetics**, what they contain and what they do to you and the environment.
- Use **eco-friendly, cruelty-free products** whenever possible, and always use the minimum amount (in general a little bit less than recommended). Make sure they are not tested on animals.
- Think carefully about how often you need to wash your **clothes**.
- Use **pesticide-free products** as much as possible. And if you must use **pesticides**, do some research and use the least harmful ones.
- Sort out your medicine cabinet and take all the **medicines**, which have expired and those that you no longer need, to pharmacies that have take-back programs for disposal.
- Be an informed consumer and be cautious when **purchasing medication**. Often, consumers cannot verify in advance the quality of the medication and have to rely on information provided by either the pharmaceutical producer or health-care provider.<sup>1</sup>

<sup>1</sup> "Silent and Lethal: How quiet corruption undermines Africa's development efforts," The World Bank (2010), p.12.  
[http://siteresources.worldbank.org/AFRICAEXT/Resources/english\\_essay\\_adi2010.pdf](http://siteresources.worldbank.org/AFRICAEXT/Resources/english_essay_adi2010.pdf)

### **Community Environmental Action Planning**

is a participatory capacity-building process where communities analyze their situation, evaluate options for change and then plan, carry out, monitor and evaluate activities. Across Sudan, local communities are facing environmental challenges, including climate change, drought, and conflict, all of which threaten the natural resource base for livelihoods. UNEP, together with the Darfur Development and Reconstruction Agency, works to raise awareness on community-based action, to train government and NGOs in participatory and inclusive working methods, and to formulate participatory community environmental action plans. The project, which has contributed to improve community access to services, reduce resource-based conflicts in communities and improve skills to respond to effects of climate change, has benefited about 4800 households.

### **Pesticide ‘time bomb’ is ticking in Africa**

where mountains of obsolete pesticides are stockpiled. Because of problems with labelling, storage, and the supply of unsuitable products, these pesticides, including some of the most poisonous compounds ever made, e.g. DDT, dieldrin and chlordane, sit around unused, some for as long as 40 years. Some pesticides have leaked from damaged containers, contaminating water and soil. This is detrimental for a region like sub-Saharan Africa, where farmers and government regulators often lack the financial resources and technical capacity to handle pesticides safely and screen out substandard, banned and contaminated compounds. In **Ghana**, seven banned or restricted pesticides appear to still be in use, with the government failing to act, despite the fact that: ‘numerous academic studies show alarming levels of poisoning’ among farmers and the public.

**The world is phasing out some chemicals** thanks to the Stockholm Convention on Persistent Organic Pollutants (POPs), which is a global treaty to protect human health and the environment from chemicals that remain intact in the environment for long periods and become widely distributed geographically and accumulate in the fatty tissues of humans and wildlife. Fifty African countries are signatories to this convention, which entered into force in 2004. Africa has four regional and sub-regional centres for capacity building and the transfer of technology serving the convention in Algeria, Kenya, Senegal and South Africa.

**Organic farming for healthy food** is becoming a reality in Tanzania's dry areas, where soil depletion is one of the problems affecting food production. The use of chemical fertilizers and new farming methods has contributed to poor soils and low food production. The areas where rice is grown have been very much affected with salts that are not good for the soil due to leaching and continuous use of surface irrigated water. Some farmers like Zaddock Kitomari, an organic farmer in Nambala village, have attended the Agriculture Training Institute, where they learn about organic vegetable production and the pillars of organic farming: the use of compost, special double dugs for production, traditional medicine - herbs that can protect plants from pesticides, and friendly crops. Kitomari is now producing clean food good for human consumption and is conscious about sustainable food production that enables the soil to remain healthy.

**Enhancing food security in Matungu** one of the youngest districts in one of the poorest provinces of Kenya, is a priority for the **Youth Education Network**. Like the rest of Kenya, Matungu is prone to perennial drought and malnutrition. In order to enhance food security, the Network runs a six months course where youth look for and examine suitable solutions to help improve access to food. The trainees are then sent to work with extension workers of the Ministry of Agriculture and selected local organizations to practically utilize their knowledge and skills to help communities improve food access.

**The air quality in African cities** is deteriorating because of increased economic activities, rapid urbanization and motorization. Africa's urban air pollution is a key threat to health, environment, economy and quality of life of millions. It is predicted that by 2030, most Africans will live in cities. African ministers have identified key areas for intervention to improve air quality in the region, including clean fuels and vehicles and public transport. **Mauritius**, with its rapidly growing vehicle fleet (400,900 vehicles in 2011, compared to 244,000 vehicles in 2000), is the first sub-Saharan African country to switch to ultra low sulphur diesel in its effort to encourage cleaner fuels consumption and help minimize air pollution. Land transport accounts for about 25% of the total carbon dioxide emissions in Mauritius, ranking second to the industrial sector.

**The UNEP-WHO Health and Environment Strategic Alliance (HESA)** is a country-driven initiative that coordinates action by health and environment sectors and effectively uses the health and environment inter-linkages in protecting and promoting public health and ecosystem integrity. African ministers of health and environment committed to establish HESA in 2008 through the Libreville Declaration. **HESA's website** has situation analyses and needs assessment reports of some African countries highlighting how this declaration is being implemented.





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6

## GETTING AROUND

**“Africa’s international competitiveness and ability to meet its trade potential depend on improvements in transport, energy and communications infrastructure.”**

*[Kofi Annan, former Secretary-General of the United Nations]*

Mobility is a key feature and an area of constant change and improvement in human activity. Through the centuries, we have seen modes of transport multiply, grow in size and power, and of course speed up.

**“Cities in the developing world grow ten times faster than in the North. Motorised transport will grow, resulting in a huge demand for oil and fossil energy.”**

*[People and Mobility, UN Habitat, 2011]*

Between 2000 and 2010, Ghana, Liberia, the Democratic Republic of Congo, Mozambique, Angola and Ethiopia were part of the world’s 10 fastest-growing economies. People in these countries might want to increase their individual mobility as they become more prosperous. As a result, the demand for cars might increase and the negative environmental, social and economic impacts of growth in motorized transport might be huge.

## Urban transportation

In Africa, between 50-70% of all trips are made by foot, often over long distances. And, there are just 29 passenger cars per 1000 population. A lack of reliable public transport, and the increasing availability of cars have made us more and more dependent on personal motorised transport and this is not a sustainable pattern for African cities. While cars are not the most efficient means for making short urban trips, they can be useful for certain types of trips and ideally when the car occupancy is greater than just one person.

More responsible modal choices for making trips can bring further improvements, making cities cleaner, healthier and safer to live in. Short journeys by car add to pollution levels. For example, a five kilometres (about three miles) journey made by car emits 10 times more carbon dioxide per passenger than a bus and 25 times more than a train.<sup>58</sup>

There are, however, other challenges for getting around in Africa. In many countries, people do not have access to safe and reliable urban public transport. Vehicle’s overcrowding, unreliable service and unsafe driving are some of the situations that commuters face daily. Another key problem is many vehicles are often old and ill-maintained and the main consequences of this are lower fuel efficiency, higher CO2 emissions and in case of vehicles that use diesel, black carbon emissions, all of which contribute to outdoor air pollution.

Africa is also said to have the most dangerous road network in the world. Road accident fatalities are a leading risk for death, and cause up to 27 deaths per 100 000 population.<sup>59</sup> Africa is home to less than 3% of the world’s vehicles and 16% of the world’s road deaths.<sup>60</sup> Limited and inefficient use of urban road space is also a challenge leading to traffic jams, and with it increased fuel consumption and air pollution. Urban air pollution globally, is linked to approximately one million deaths and one million pre-natal deaths each year. Over 90% of air pollution in cities is attributed to vehicle emissions,<sup>61</sup> which shows us how transport is one of the biggest contributors to GHG emissions and climate change.

## Africa’s transport infrastructure

If business continues as usual, Africa’s road fatalities are expected to increase 80% by 2020, due to numerous factors including increased urbanization, with more than 300 million residents to be added to African cities in the

<sup>58</sup> Clayton, Caroline, *Dirty Planet: the Friends of the Earth Guide. To pollution and what you can do about it*, London, Livewire Books, 2000.

<sup>59</sup> *Death on the Roads*, WHO (2015).

<sup>60</sup> WHO, 2013.

<sup>61</sup> UNEP, 2014.



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next 25 years alone.<sup>62</sup> In a continent where the majority of people walk, often in unsafe conditions and over long distances, it is crucial to build cities with integrated, multi-modal sustainable transport systems, providing quick, safe, convenient and healthy ways to travel for all. These facilities such as footpaths, bus rapid transit, cycling paths and safe road crossings cost a fraction of other road infrastructure investments, and contribute to a building a healthier population and creating a cleaner, low-carbon and safer urban living environment. The challenge for many African countries is in allocating sufficient funds to safely accommodate non-motorized transport such as cycling and walking, making it a more convenient way to make daily trips. Establishing a sustainable transport system is at the heart of a green economy and to achieving the goals of the [UN Decade of Action for Road Safety](#) (2011-2020) as well as the Sustainable Development Goals, which builds on the Millennium Development Goals.

Every mode of transport holds specific advantages and suitability to certain trip types. It is therefore essential to choose the most appropriate and efficient form of mobility. We must consider specific traffic situations and personal transport needs. If you want to help create a future worth living, go for sustainability by fighting for your rights to affordable, safe, quality and environmentally sustainable

mobility services, and re-thinking your personal mobility habits. Your individual contribution may be a small effort but it will have a huge effect. Just try it out!



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62 *High Time to Change Road Investment Patterns in Africa*, in Urban World, UN-Habitat's quarterly magazine (2010).





## Stepping-stones

Congestion, polluted air, noise and traffic accidents ... our cities are becoming more and more uninhabitable. What can we do?

- **Walk or cycle** safely, whenever possible. Walking and cycling are not something that you do because you do not have financial means; they are the most energy-efficient means of transportation and highly used around the world. When you chose to walk or cycle, you are doing your city and community a favour by being environmentally friendly and not polluting.
- Be a **safe pedestrian** and **road user**, not endangering your own or other people's safety. Do not spill out onto roads, remember to respect traffic signs, use your seat belt, and do not place children in the front seats. Remember to put your phone down while driving. If you must use your phone, use the hands-free settings.
- Find out if there are any **sustainable mobility or transport initiatives or programmes** in your city. If there are none, develop a plan to start one and share this with policymakers and your local government.
- **Car share/car pool** whenever you can. Car sharing enables several people to use one car. Car-pooling puts one or more cars at the disposal of a group of people who organize themselves to share the car. Both alternatives reduce road traffic, save petrol and cut pollution levels, energy use per passenger and car disposal costs.
- **Participate in campaigns demanding the increase of safe public transport systems.** Trains and buses are generally the greener options as they carry more people, pollute less and use less energy per passenger.
- Buy **environmentally friendly** motor vehicles and **maintain** them well. Before you buy your car, scooter, or bike, check its energy efficiency, pollution performance, ability to take unleaded petrol and life expectancy.
- **Drive carefully and safely.** Avoid sudden acceleration and braking. Aggressive driving leads to considerably higher fuel consumption and more pollution. Switch the motor off if waiting longer than 30 seconds, and do not wait too long before changing gears.
- **Demand taxi and bus drivers to drive safely.** Ask them to stop in areas that are safe for you and for other passengers, and to comply with road safety regulations.





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**South Africa's transport sector** is the most rapidly growing source of greenhouse gas (GHG) emissions and is the second most significant source of greenhouse emissions nationally. Nearly all activities, including transportation, have an impact on the environment. Although transportation is vital for the economy and daily activities, it is also responsible for a large amount of GHG emissions into the environment. About 25% of global carbon dioxide (CO<sub>2</sub>) emissions are attributed to transport, such as cars, but also aviation and shipping emissions. If no new policies are put in place to curb these transport emissions, transport energy use and related CO<sub>2</sub> emissions are projected to increase by nearly 50% by 2030 and by more than 80% by 2050.

**Bumper-to-bumper traffic jams** are the norm for many Africans, whether in private cars or cramped public transport. In 2011, IBM Corporation conducted its Commuter Pain Survey, which ranked Nairobi fourth and Johannesburg fifth in terms of the amount of pain commuters suffer getting to and from work. According to this survey, two out of three people in Kenya's capital say that congestion has a negative impact on their work, family and health. Traffic jams in Nairobi cost the Kenyan economy about 50 million Kenyan shillings (US\$600,000) per day due to the time wasted on the road, including lost productivity, fuel consumption and pollution.

**Boda Boda** or bicycle taxi, is the main form of transport in Kisumu, Kenya's third largest city. With more than 11,000 boda boda, the transport needs of many residents are met in an affordable manner. Boda boda, which can carry up to 40 kilograms of load, are convenient as no time is wasted in traffic jams and allow passengers to be picked up and dropped off anywhere, including picking up and dropping off school children. They can go to places where busses and other transport means cannot reach like informal settlements or villages that do not have formal road networks. Boda boda provide employment to young people who would otherwise have no source of income.

The project **Promoting Sustainable Transport Solutions for East African Cities** aims to reduce growth in private motorized vehicles, thus decreasing traffic congestion and GHG emissions in the three capital cities of Ethiopia, Uganda and Kenya, in East Africa – a region where cities are expanding at unprecedented rates and are facing continuous population growth, higher motorization rates, rapidly worsening traffic congestion, and increasing health problems. The project also plans to develop strategies for better public transport services, improve infrastructure for pedestrians and cyclists, and implement other measures to reduce the need for motorized travel in metropolitan areas. It emphasizes sustainable urban mobility as a critical element for successful sustainable cities.

**Share the Road** is a UNEP Initiative bringing together environment and safety agendas in urban transport in the developing world where most people who move by foot or bicycle, are disadvantaged on the road. The aim is to advance investments in road infrastructure for non-motorized transport (NMT), as a systematic allocation in all urban transport projects, particularly in Africa where a small fraction of the population own or have access to a car. Africa is the first region of focus for this initiative, with ongoing projects in Kenya, Uganda, Rwanda and Burundi. Since its launch in 2010, **Uganda** developed a NMT policy and **Kenya** adopted a policy change to integrate walking and cycling facilities on all new urban road projects. Visit the Share the Road [website](#) for engaging short films and publications.

Did you know that Africa's current rate of urbanization is the fastest the world is yet to see and that more than a quarter of the 100 fastest-growing cities in the world are in Africa? Investments made in road, rail and energy networks are needed to further boost Africa's urban economies. Created by UNEP and the World Bank in collaboration with UN-Habitat, the **Africa Sustainable Transport Forum** provides a platform for policy dialogue on access to environmentally sustainable transport in Africa. It aims to integrate sustainable transport into the region's development and planning processes and increase the amount of funding going to sustainable transport programs in Africa – to improve access to transport, reduce air pollution and climate emissions, and improve road safety and health.





**7**

**GETTING AWAY**

**“Travel teaches how to see.”**

[African proverb]

Mobility means more than just getting around. It means getting away, travelling, be it for study, work or pleasure. Tourism has a huge impact on our planet and is one of the world's largest industries. But are some choices more sustainable than others?

*More information on the issue:*

[www.unep.org/greenpassport](http://www.unep.org/greenpassport), [www.ecotourism.org](http://www.ecotourism.org),  
[www.fairtrade.travel](http://www.fairtrade.travel), [www.responsibletravel.com](http://www.responsibletravel.com),  
[www.thetravelfoundation.org.uk/](http://www.thetravelfoundation.org.uk/),  
<http://sustainabletrip.org/>

## Why tourism matters

We travel for pleasure, to discover new horizons, to relax, to meet people and to learn about different cultures. Globally, tourism accounts for 10% of GDP and one in 11 jobs. But rarely do we think about the impact of our holiday on our destination or the planet. Yet tourism accounts for 5% of global CO<sub>2</sub> emissions, and projections show that by 2035, if we take no action now, emissions could triple. By 2030, the UN World Tourism Organization (UNWTO) forecasts international tourists to reach 1.8 billion.<sup>63</sup>

There is tremendous variation across tourism segments and within individual trips. For instance, long-haul travel account for just 2.7% of all tourist trips, but contributes 17% to global tourism emissions, and 34% of all trips are made by coach and rail, yet these make up just 13% of emissions. While technological innovation (particularly in energy efficiency) has considerable potential to reduce the impact of tourism, given the high growth rates of the industry, it will not be enough to achieve absolute reductions in energy use and emissions. Both structural change of the industry and behavioural change of tourists are necessary.

63 *International tourists to hit 1.8 billion by 2030*, World Tourism Organization, 11 Oct 2011.

There are many ways of planning your trip; you can go to a travel agency, search the Internet, read travel guides, and much more. Looking around, you will find many terms that are used by independent travellers, travel agencies and tour operators such as *sustainable, responsible, green, eco, smart, slow, pro-poor, fair trade, ethical tourism*. All these have the same objective: to make your holidays more fulfilling for you, but also making sure that it is good for the people, cultures and destinations you visit.

## Tourism in sub-Saharan Africa

In 2014, international tourist arrivals reached 1,138 million, 51 million more than in 2013.<sup>64</sup> Between 2008 and 2010, international tourist arrivals in Africa jumped almost 8%, which made the region the second fastest-growing in the world after East Asia and the Pacific.<sup>65</sup> However, in 2014, sub-Saharan Africa's international tourists arrivals were up by 2% to 56 million tourists, despite challenges such as the Ebola disease outbreak in West African countries.<sup>66</sup>

*For further details see:*

[www.unep.org/re/tourism/](http://www.unep.org/re/tourism/),  
[www.wttc.org](http://www.wttc.org), <http://www.unwto.org>

Research shows that sub-Saharan Africa receives more tourists than the Caribbean, Central America and South America combined.<sup>67</sup> Sub-Saharan Africa's travel and tourism industry is growing. In 2014, a total of 65.3 million international tourists visited the continent, a steep growth from 17.4 million in 1990.<sup>68</sup> The World Bank says that tourism accounted for one in every 20 jobs in sub-Saharan Africa in 2011, and is one of the few industries on the continent where women are well represented as employees and managers.<sup>69</sup>

64 *Over 1.1 billion tourists travelled abroad in 2014*, UNWTO, 27 Jan 2015.

65 *Tourism in Africa: Harnessing Tourism for Growth and Improved Livelihoods*, World Bank (2014), p. xvii.

66 *Over 1.1 billion tourists travelled abroad in 2014*, UNWTO, 27 Jan 2015.

67 *Tourism in Africa is slowly coming of age*, United Nations' Africa Renewal Magazine (2012).

68 *The Africa Tourism monitor*, the African Development Bank (AfDB) (2016), p.5.

69 *Africa's Tourism set to boost economic growth, create new jobs and now outpace other regions for new tourism investment*, World Bank (2013).

## Tourism and economic growth

The size and growth of the sector and its capacity to attract significant investment, generate jobs, increase exports and adopt new and emerging technologies makes it an important pillar for economic growth and development, particularly for Least Developed Countries (LDCs) and Small Islands Developing States (SIDS). UNWTO says that tourism is the first or second source of export earnings for nearly half of LDCs and the largest source of foreign exchange for more than half of SIDS. In addition, tourism creates jobs and wealth not only in the sector, but also in many other sectors such as agriculture, construction and handicraft.

The International Labour Organization (ILO) estimates that one job in tourism creates 1.5 jobs in the economy. This represents a good opportunity to link the tourism sector with national poverty reduction goals or goals linked to expanding the creative economy, which frequently target small businesses and persons at the bottom of the pyramid. ILO says that women make up between 60% to 70% of the tourism work force, with half of these aged 25 or younger. The [UNWTO/UN Women Global Report on Women in Tourism](#) shows that the tourism sector employs twice as many women in comparison to other sectors.

## Tourism impacts

Unless tourism is well managed, it causes serious environmental damage. According to [Tourism Concern](#), an independent UK charity that campaigns for better tourism, scientists predict that by 2015, half of the annual destruction of the ozone layer will be caused by air travel. Air travel is also a major contributor of greenhouse gases in the atmosphere, which contribute to climate change. Not all air travel can be attributed to tourists, of course, but tourists do contribute substantially to the problem.

At the same time, numerous environmental challenges, such as soil and water degradation and climate change, are also affecting Africa's tourism. Coastal erosion is a major problem for Africa. In northwest Africa, the coasts are economically important since a large part of the GDP is derived from coastal activities such as tourism, fishing and commerce. This explains why many people are concentrated



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along the coastline, with a rate of urbanization slightly higher than the interiors. Along the northwest coast of Africa, the average rates of coastal retreat are between one and two metres per year. However, more serious rates of up to hundreds of metres per year have been observed locally, especially when the process has been created by human activities.<sup>70</sup> Less tourism is just one of the impacts of coastal erosion, whose devastating effects include the loss of infrastructure, relocating people away from the coastline, salinization of water and soil, without forgetting degradation of ecosystems and flooding.

Tourism has contributed to environmental degradation such as the creation of mounting waste and pollution, and the unsustainable use of water. For example, WHO says that between 50 and 100 litres of water per person per day are needed to ensure that most basic needs are met.<sup>71</sup> However, most people in Africa get along with just 20 litres of water per day,<sup>72</sup> while tourists generally use an

<sup>70</sup> [Coastal erosion major threat to West Africa](#), UNESCO (2012).

<sup>71</sup> [The Human Right to water and sanitation](#), UN.

<sup>72</sup> [Water Consumption](#), Institute Water for Africa.



estimated 84 – 2,000 litres per day.<sup>73</sup> All this is in addition to the impacts of tourism on indigenous peoples, where some local communities have been moved from their lands, in addition to economic dislocation and some breakdown of traditional values.

Africa's tourism industry also has human and societal costs. For example, some African towns, such as Kenya's coastal town of Malindi, are tackling sex tourism involving young children and women engaged in prostitution.<sup>74</sup> Nonetheless, countries are showing commitment to tackle this issue. For example, the South African tourism and hospitality industry is dedicated to putting an end to child sex tourism especially after signing the Tourism Child Protection Code of Conduct, which is signed by more than 1,000 companies in 35 countries.<sup>75</sup>

### Tourism and safeguarding biodiversity

Tourism and conservation are recurrent themes in the southern Africa region mainly due to major safari, wildlife and ecotourism attractions. South Africa, Tanzania, Botswana and Namibia are particularly well known for the tourism and conservation brand and the 'big 5' game animals, protected areas, game reserves and related tourism activities. The islands of Mauritius and Zanzibar in the Indian Ocean also have world class, sun-sea-sand tourism reinforced by enabling policy and more investor-friendly environments. Tanzania is also famous for its UNESCO World Heritage sites e.g. Stone Town in Zanzibar, Mount Kilimanjaro and the Serengeti National Parks.

South Africa in particular, is an important source of visitors and investment to its closest neighbours. The country accelerated its tourism development from 1994 post-apartheid, with the promotion of 'responsible tourism' development as part of its economic strategy. This had a catalysing effect across the southern Africa region and among neighbouring countries, which began the process

73 *Tourism and water: Interrelationships and management*, Global Water Forum.

74 *Kenya's hidden sex tourism*, BBC News, 15 May 2014.

75 *UNICEF applauds tourism industry's commitment to stop child sex tourism*, UNICEF, 9 June 2010.

of defining new development strategies based on the principle of 'responsible tourism'.

Nonetheless, we still need to improve the sector's sustainability. The years of conflict and exploitation of minerals and metals have had a heavy toll on the region's biodiversity, natural and cultural assets. Apart from these impacts, biodiversity loss is also attributed to tourism activities such as lodging, camping, off-road driving and infrastructure development. Poaching of big game species is a major problem. The last decade has seen much progress on protected areas including national parks and wildlife reserves, transfrontier conservation areas (TFCAs) identified as key tourism development zones for their rich biological and cultural resources, and World Heritage sites. Protected area management (especially TFCAs) is however, often hampered by poor land use and conservation practices, lack of effective and harmonized institutional arrangements across the many national jurisdictions, as well as ineffective monitoring and control of illegal wildlife trading and poaching. These problems and activities threaten the very resources upon which regional populations and the tourism sector depend.

### Increasing sustainability in tourism

There is an urgent need to improve sustainability practices in the tourism sector and address pressing challenges such as litter and waste management - an issue that is further exacerbated by tourism flows and irresponsible tourists behaviour that contribute to transforming pieces of paradise on Earth into rubbish dumps. So, what are the challenges facing tourism in Africa and what alternatives are there?

The main challenge facing tourism in Africa, and other parts of the world, is how to mainstream sustainability in all types of tourism (e.g. rural, urban, adventure, ecotourism, heritage, business, etc.) and ensure that profits from tourism actually benefit the local communities, which is what a lot of the tourist experience is based on. A new international programme called the 10YFP Sustainable Tourism Programme aims to address this challenge by catalyzing a shift to more sustainable tourism, including eco-tourism.



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**“Tourism has been identified by UNEP as one of the ten economic sectors best able to contribute to the transition to a sustainable and inclusive green economy. This important initiative is about steering the industry onto a truly sustainable path – one that echoes to the challenge of our time: namely the fostering of a global Green Economy that thrives on the interest, rather than the capital, of our economically important nature-based assets.”**

*[Achim Steiner, UNEP Executive Director]*

As tourism grows, it will continue to add pressures on the environment and wildlife. Without proper management and protection, as well as investments in greening this tourism sector as a whole so that it is more sustainable, ecosystems and thousands of species will suffer. This will also contribute to the depletion of natural resources that can lead to water shortages, loss of biodiversity,

land degradation and contribute to climate change and pollution.<sup>76</sup>

Improving the sustainability of mainstream tourism activities and efforts is important for Africa, where many tourists come to experience the African experience such as learning about African culture (including fashion, food etc.). This community involvement is crucial in sustaining tourism in the region and increasing sustainability can also ensure that what is earned from tourism can be shared with the community.

<sup>76</sup> *Harnessing the Power of One Billion Tourists for a Sustainable Future*, UNEP (Nov 2014).

## What is sustainable tourism?

**Sustainable tourism can be defined as ‘tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities.’**

*[Making Tourism More Sustainable – A Guide for Policy Makers, UNEP/UNWTO, 2005]*

Nowadays, an increasing number of sustainable holiday and travel options are available (conservation and restoration projects, voluntary aid projects, teaching abroad, etc.). Check the Internet where you’ll find hundreds of ideas and options for sustainable tourism, but be careful as some websites promote packages that are not as sustainable as they claim!

Sustainable tourism is about respecting the socio-cultural authenticity of host communities, conserving their built and living cultural heritage and traditional values and contributing to inter-cultural understanding and tolerance. Sustainable tourism involves being more energy efficient, more “climate sound”, consuming less water, minimizing waste, conserving biodiversity, cultural heritage and traditional values, supporting intercultural understanding and tolerance and generating local income and integrating local communities with a view to improving livelihoods and reducing poverty.<sup>77</sup> Sustainable tourism should maintain a high level of tourist satisfaction and ensure a meaningful experience to the tourists, raising their awareness about sustainability issues and promoting sustainable tourism practices.

Sustainability can always be featured in holiday choices people make. The main tourist activities in Africa are resort and coastal tourism, adventure tourism, such as visiting the game reserves and national parks dedicated to wildlife, cultural tourism dedicated to learning about

indigenous cultures such as the Maasai in eastern Africa, and business tourism. Trans-frontier Conservation Areas (TFCA), large areas between two or more countries, which cover natural systems and protected areas, may also become fashionable tourist attractions. A number of TFCAs contain some of southern Africa’s 38 World Heritage Sites, such as ZIMOZA (Mana Pools National Park, Mozambique, Zambia, Zimbabwe) and Maloti-Drakensberg (uKhahlamba/Drakensberg park, Lesotho, South-Africa). The Southern African Development Community (SADC), an inter-governmental organization, which aims to enhance socio-economic, political and security cooperation among 15 southern African countries, sees the TFCAs as an option for developmental and sustainable tourism, as it may foster biodiversity conservation and improve livelihoods of local communities. Besides that, responsibly managed and locally-run hotels, lodges, or bed & breakfasts and camping sites are more likely to boost the local economy, and respect the environment and culture more than some international hotel chains.

## Ecotourism: an opportunity for Africa

There is also eco-tourism, which embraces the principles of sustainable tourism. Eco-tourism is responsible travel to natural areas that conserves the environment and improves the well-being of local people - another alternative for travellers in Africa.<sup>78</sup> Eco-tourism is the fastest growing tourism product in the world and Africa, for its natural endowments. It constitutes an obvious destination in countries such as Uganda, Rwanda, Tanzania and Kenya. Eco-tourism can play a role in the protection and management of wildlife and heritage sites. UNEP’s [Green Economy report](#) says that ecotourism, nature, heritage and cultural, and “soft adventure” tourism are predicted to grow rapidly over the next two decades; it is estimated that global spending on ecotourism is increasing about six times the industry-wide rate of growth.<sup>79</sup> Ecotourism provides numerous opportunities for Africa; not only is it a job generator, but also an important source of income for many.

77 *Tourism: Investing in energy and resource efficiency*, UNEP (2011).

78 *What is Eco-tourism?* The International Ecotourism society.

79 *Tourism: Investing in energy and resource efficiency*, UNEP (2011).



Newer forms of tourism, such as community-based tourism, where tourists immerse in the day-to-day lives of locals while helping them to preserve environmental and cultural heritage, is another option for sustainable tourism.<sup>80</sup>

Sub-Saharan Africa's tourism industry is expected to spur economic growth for the continent, which means more jobs. Around 20.5 million people are working directly or indirectly for the tourism industry across the African continent, accounting for 7.1% of all jobs in Africa.<sup>81</sup> Given this growth, educators and youth in Africa are encouraged to engage learners and their peers in sustainable tourism learning activities, such as producing local guides or tips for tourists on sustainable and eco-tourism in their cities, and finding ways to engage the local people in tourism activities so that the benefits of tourism can be reaped by all, including at the community levels.

#### By traveling responsibly, you can contribute to.<sup>82</sup>

- Alleviating poverty, especially in rural areas. By offering alternative or supplementary sources of income, sustainable tourism can improve the livelihoods of people;
- Reducing carbon emissions from tourism and promote a cleaner and healthier environment;
- Protecting cultures and biodiversity and preserve historic sites;
- Financing nature reserves;
- Helping visitors and communities learn about conservation and biodiversity; and
- Promoting resource-efficient and cleaner tourism products.

There are many websites with information about sustainable tourism and the impacts of your holiday choices: [www.unep.org/re/tourism/](http://www.unep.org/re/tourism/), [www.survivalinternational.org](http://www.survivalinternational.org), [www.tourisminsights.info](http://www.tourisminsights.info)

To learn more about sustainable tourism, have a look at UNESCO's multimedia teacher education programme [module](#) on sustainable tourism.

When travelling, our efforts and attention need doubling. You are not only going to a place where the culture is often unfamiliar to you, but you are also going to somebody else's home and everybody appreciates a well-behaved and considerate guest.



80 *African Review Report on SCP*, African Roundtable on Sustainable Consumption and Production (ARSCP) (July 2009).

81 *Africa's Tourism set to boost economic growth, create new jobs and now outpace other regions for new tourism investment*, World Bank (2013), p.9.

82 *7 Priority Themes. The Global Partnership for Sustainable Tourism*.



## Stepping-stones

There are several things that African youth travellers can do to reduce their impact as tourists:

- Think about **where you want to go** and the kind of a holiday you want and find out more about how to do it sustainably.
- Research where you are going, including sustainability issues and consider sustainable travel options. With every decision you make, make sure it produces the greatest benefit for the **host population**.
- Think about using **green hotels** when travelling. Have a look at [www.ecohotelssoftheworld.com](http://www.ecohotelssoftheworld.com), <http://www.fairtrade.travel/> and [www.environmentallyfriendlyhotels.com](http://www.environmentallyfriendlyhotels.com)
- Read about the country you are visiting before travelling - it will help you understand and respect the **local culture** and open doors for you. In many countries, loose and lightweight clothes are preferable to revealing ones.
- Taste **seasonal** and **local cuisine**. Look for restaurants and markets that supply local products.
- Educate yourself about **carbon offsetting**, which allows you to pay a contribution based on the amount of carbon you are emitting while traveling. You can learn more about it at [www.carbonfund.org](http://www.carbonfund.org) and [www.terrapass.com](http://www.terrapass.com) and [www.coolclimate.berkeley.edu](http://www.coolclimate.berkeley.edu).
- **Reduce waste** and leave unnecessary food and equipment packaging at home before travelling.
- Save precious **natural resources**. Don't waste water and energy. Avoid using pollutants such as detergents in streams or springs.
- Dispose of **toxic waste** such as used batteries, ointment tubes, aerosols and photographic film packaging properly, or take it back to your home country.
- Use **local transport**, e.g. boda boda (Kenya) or dala dala (Tanzania), water taxis (Egypt). This is fun and at the same time, it provides the local communities with an additional source of livelihood.
- If you have to use tour companies, research those that have won eco-tourism awards or have ecotourism certifications as they are likely to follow codes of conduct in national parks and games reserves that do not threaten the ecosystem in any way.
- **Plants** should be left to flourish in their natural environment. Taking cuttings, seeds and roots is illegal in many parts of the world.
- Respect **land rights**. When on tribal lands, you should behave as you would on private property.
- Make sure that your **souvenirs** are produced locally and respect the environment.
- Respect the country's cultural and natural **heritage**: don't take away ancient relics.

## Planning your next holiday?

Remember to take your [Green Passport](#), which shows you some things you can do to help make tourism sustainable. Through travel guides, websites and other activities, UNEP's Green Passport campaign encourages tourists to minimize their footprints by choosing the least polluting form of transport, finding low-impact accommodation options, improving their energy efficiency at their destinations, offsetting the inevitable carbon emissions of their trip and acting to help improve livelihoods in host communities. During the 2010 FIFA World Cup in South Africa, many visitors received Green Passports during their stay. The [Green Passport website](#) is now available in English, Chinese, French, Greek, German, Portuguese.



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**8**

**REDUCE WASTE**





**“You cannot use a wild banana leaf to shield yourself from the rains and then tear it to pieces later when the rains come to an end.”**

*[Kenyan Proverb]*

We live in a world driven by consumption, which in turn creates waste. While the 3Rs of Reduce-Reuse -Recycle encourage us to *recycle*, we often forget to *reduce* our consumption or *reuse* our products. The issue is not so much about waste, but the fact we consider it as such in the first place. We need to rethink waste by realizing that there is no waste, only unallocated resources that we need to start valuing and reusing.

In recent years, population growth, urbanization, industrialization, rising living standards and modernization of agriculture in Africa have made waste management a source of growing concern. The changing lifestyles and consumption patterns of the continent’s growing middle class is changing the way people live, what they buy and what they throw away. On average, every person living in African cities throws away from 300 grams to 1.9 kg of rubbish every day.<sup>83</sup> Unfortunately, there is not much information available on the amount of waste produced in

83 *Africa Review Report on Waste Management – Executive Summary*, United Nations Economic Commission for Africa (2009).

Africa, making it more difficult to understand the severity of this waste problem and what we can do to address it.

**“Waste generation rates, available only for select cities and regions, are approximately 0.5 kilograms per person per day—in some cases reaching as high as 0.8 kilograms per person per day. While this may seem modest compared to the 1-2 kg per person per day generated in developed countries, most waste in Africa is not collected by municipal collection systems because of poor management, fiscal irresponsibility or malfeasance, equipment failure, or inadequate waste management budgets.”**

*[Environmental Guidelines for Small-Scale Activities in Africa, 2009]*

## Waste in Africa

What we know is that more than half of the waste produced in African cities is often dumped in their outskirts, in sewer lanes or rivers, contaminating surface and ground water and posing major health hazards. We must stop and reverse this, if we want to avoid being overwhelmed by rubbish. We have to find long-term ways of preventing waste and to properly collect it for two crucial reasons:

- The more **waste**, the more potential **pollution**; and
- Garbage is full of materials that can be **reused** and **recycled** – less waste, more money!

There is still a lot to be done in order to prevent, collect, reuse and recycle waste in Africa. And much of it starts with raising awareness on the issue and what can be done about it. One key issue is waste management in slums – which are a big part of many African cities – and rural areas. This is compounded because most African countries do not have the required services to separately sort special waste, such as waste from construction, pharmaceutical products,

chemical companies, or electronics. There is also the issue of waste collection and closed, managed landfills from where landfill gas is captured and can be used as a source of energy.

## Rethinking waste

So, how can we rethink waste? First, let us not think of it as waste, but as resources that someone needs to use. Its generation should be thought of from the point of view of the next user too, and we need to put policies in place to impede resources being used only once.

Then, we need to generate less! One of the most important challenges facing the world is reducing resource consumption. In other words, we must stop thinking of the Earth's natural resources – be they fossil fuels, water, natural gases or trees – as a never ending supply. How can we meet our needs differently using fewer resources? This can include enhancing goods and services to do more and last longer as well as to change how we get things done all together. Instead of buying a good, like a washing machine, a washing service can get the job done and potentially use less water and more efficient appliance use and create jobs. In addition, recycling plays a crucial role.

If we do not want to exhaust our supply of natural resources, the 3 R's – reduce, reuse and recycle – need to become second nature to us. This will help to:

- **Minimize** and **prevent** further environmental damage, such as deforestation and the extraction of virgin raw materials from the earth;
- **Avoid** unnecessary use of our natural resources; and
- **Conserve** energy and **bring down** pollution levels.

## Life cycle approach

The life cycle approach or thinking asks us to be mindful of our daily activities and their impact on the environment by using a holistic approach of a product. This means understanding that the impacts of consumption come from every stage of a product's lifecycle from the sourcing

of raw materials, the energy required during use to the waste produced after we throw it away.

For example, consider the packaging of the drinks we consume daily. Life cycle thinking can be used in the packaging design of products to optimize their efficiency and effectiveness by ensuring that the packaging has reduced environmental burdens in its value chain. A life cycle approach can be part of the policymaking process because it lets policymakers understand environmental problems and find policy solutions. This can allow policymakers to further engage those impacted by the policy, like designers and product development teams that work on packaging.

## Waste pickers: protecting the environment through recycling

Waste pickers collect, sort and process recyclable materials in cities, providing widespread benefits to communities and the environment. In some countries, waste pickers are the only ones involved in solid waste collection. The [Global Alliance of Waste Pickers](#) says that this service creates jobs for millions of workers worldwide — an estimated 15 million, mainly in developing countries.<sup>84</sup> Waste pickers offer real solutions towards climate change mitigation and socially inclusive solid waste management. They help improve public health and sanitation, conserve natural resources and energy, by removing waste from urban areas, including areas that are not served by municipal garbage collection.

Waste pickers often do this work informally. Although waste pickers contribute to local economies, public health and safety, and environmental sustainability, authorities rarely acknowledge these contributions. As a result, waste pickers face low social status, deplorable living and working conditions, with little support from local governments. Governments are best positioned to formalize this sector by introducing policies and proper waste management plans that turn these often highly dangerous jobs into more modern and safer ones.

84 Global Alliance of Waste Pickers: [Who are we?](#)



Peter Grosch/Shutterstock.com

Some organizations, such as ENDA and its Informal Waste Pickers and Recyclers (IWPAR) project, are dedicated to addressing the concerns of waste pickers. The IWPAR project (2011-2013), active in some African countries including Ethiopia and Madagascar, reinforced the organizational abilities of waste pickers, valuing their profession and giving them access to adequate and long-lasting social protection. In Antananarivo, Madagascar, thousands of families live on what they earn from waste collection sorting, and selling of recyclable materials from the 460 municipal bins. ENDA supports 200 waste pickers (42% women) and 99 street recyclers (57% women). While waste picking is not a sustainable job, it brings in some income that thousands of families depend on.

### What about electronic waste?

**“Electronic waste is a term used to cover items of all types of electrical and electronic equipment and its parts that have been discarded by the owner as waste without the intention of re-use.”**

[STEP Initiative]

Computers and mobile phones contribute to sustainable consumption, particularly by helping people to communicate with one another more sustainably and instantly, no matter how far you are from one another. Africa has more than 650 million mobile phone subscribers, which is more than the United States, or even, the European Union.<sup>85</sup> The World Bank says that between 2000 and 2012, the mobile phone market has grown 40-fold in Africa from 16.5 million.<sup>86</sup> Mobile phones, as part of ICTs, are delivering home-grown development solutions in Africa, while facilitating networking among sustainable development actors. At the same time, electronic goods are generating harmful waste. Electronic waste (e-waste) is both a valuable source for secondary raw materials, yet toxic if treated and discarded improperly. On the other hand, research such as computer supported collaborative e-waste management research, which aims at developing a national e-waste management strategy in Kenya, is an example of actions developed in the region to move towards sustainable management of e-waste.<sup>87</sup>

Common e-waste includes TV appliances, computers, laptops and tablets, mobile phones and white goods such as fridges, washing machines, dryers, home entertainment

<sup>85</sup> *Africa has more mobile phone users than the US or the EU*, Quartz (2012).

<sup>86</sup> *ICTs Delivering Home-Grown Development Solutions in Africa*, World Bank (2012).

<sup>87</sup> *Kenya*, UNESCO.



and stereo systems and toys, etc. In Africa, the growing domestic consumption of new and used computers, televisions and mobile phones are creating a rising tide of e-waste, a problem that requires urgent and effective management. Domestic consumption makes up the majority (up to 85%) of waste electronic and electrical equipment (WEEE) produced in the region.<sup>88</sup> This problem is exacerbated by an increasing flood of used equipment from industrialised countries, which are thrown away on unsupervised dumpsites across Africa. The United Nations estimates that Africa could have more e-waste than Europe by 2017, not only because of an increase in discarded lap tops, mobile phones and other products from Europe, but also due to increased demand in Africa for new electronic devices. It is therefore important for countries to respect the Basel Convention (1989) on the control of trans-boundary movements of hazardous waste and their disposal to help curb this problem. This Convention was adopted in response to a public outcry in the 1980s, following the discovery of deposits of toxic wastes, which were imported from abroad, in Africa and other parts of the developing world. It aims to protect human health and the environment against the adverse effects of hazardous wastes.

To learn more about how to solve the e-waste problem, visit the STEP Initiative's website at [www.step-initiative.org](http://www.step-initiative.org) for useful data on e-waste across the world, as well as capacity building materials.

### What can you do?

Do you know about the 3Rs: **Reduce**, **Reuse** and **Recycle**? These are the three things you can do on a daily basis to better manage waste.

- ▶ **Reduce and Reuse:** One way to reduce waste is not to create it. Making new products requires raw materials and energy and the product must be transported to where it was made to your hands. Reducing and reusing are effective ways that you as a consumer can save natural resources, protect the environment and

save money at the same time. Reusing and reducing are key tools to reducing waste. As a shopper, you can use your spending power to make a difference. Take care, as some products' labels just indicate that parts of their contents (see %) are recycled and other labels inform you that a product's components are easily recyclable.

- ▶ **Recycle:** Recycling can also play a major role in reducing solid waste by reusing it to manufacture new products. Look for the recycling logo. For every ton of paper recycled, 17 trees and 21.000 litres of water are saved. In addition, air pollution is reduced by 30 kg and landfill waste by 2.3 m<sup>3</sup>.

To find out more, visit:

[www.wastewatch.org.uk](http://www.wastewatch.org.uk), [www.recycle.net](http://www.recycle.net)

For the eco-wise consumer, looking for products made of recycled goods has become a part of everyday shopping. For example, you can find a range of items - including clothing, furniture and toys - all made from recycled material. Africa is already doing a lot of this. You can also consider the product's design. Redesigning products to minimize or even prevent creating waste must also be part of the solution.



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88 *Domestic Consumption is Main Contributor to Africa's E-Waste*, UNEP (2012).



## Stepping-stones

These are simple ways to reduce the amount of waste we produce in our everyday lives.

- Examine the waste you generate at **home, work** and **in your community**. Being aware can help you focus on what actions you can take and how to reduce your waste.
- **Take care** of the area you live in, work or study, by not littering or dumping waste illegally.
- Participate in local/community **waste reduction** and recycling projects.
- Inform the authorities regarding **illegal dumping** and littering.
- Make an effort to **separate waste** at home, work and school.
- **Encourage** your municipality to **collect waste** and recycle it.
- As much as you can, buy **products that comply with environmental ethics**.
- **See garden waste as a compost source** and introduce home composting.
- **Maintain and repair** things like clothes and appliances rather than throwing them away.
- Buy **used products** and products with **less packaging**.
- Whenever possible, **rent, borrow** and **share** products.

**The International Environmental Technology Centre (IETC)** supports countries in developing waste management strategies and action plans at local and national levels. Based within UNEP, the IETC is producing a *Waste Management Outlook for Africa* publication and a formulation of an Academic consortium of African universities to develop curricula on holistic waste management. The IETC serves as the secretariat of the **Global Partnership on Waste Management**, which enhances and strengthens awareness, political will and capacity to promote resource conservation.

**Making toys from waste** is something some African children and youth are doing. For example, to help address the shortage of educational toys available in South Africa's less fortunate children, a non-profit organization called Singakwenza (which means "We can do it") has developed toys and teaching aids made purely from recycled goods. Waste like bread bags become skipping ropes, vegetable trays become puzzles, yoghurt containers become shape sorters and margarine containers become cars. Singakwenza runs workshops that teach caregivers how to make toys and what skills each toy develops.

**Katchy Collections** is an East African company that show commitment to bettering the lives of the communities they work with while using waste in their products. Based in Kenya, this company makes sustainable fashion accessories, containers and flowerpots made from recycled plastic bags. It has translated the rich and colourful Masai beaded jewellery tradition into intricately beaded ornaments made entirely from waste products – recycled plastic bags.

**Solid waste management in Ethiopia's Bahir Dar involves** the City's Administration and diverse private, public and non-governmental organizations. Dream Light, a private company, which provides waste management services, Amhara regional state, youth and women associations and the Chamber of Commerce have partnered to clean up the city and create employment. Some of the projects developed by youth associations are production of smoke-free charcoal, bio-gas and recycling plastic. The United Nations Development Programme provides technical know-how and financial support to the project.

**Innovative plastic pipe bins** are used in a waste removal project – the first of its kind in South Africa – to clear discarded fishing lines from beaches along the country's coastline. Fishing lines in the marine environment entangle wildlife and are often mistakenly eaten by birds and animals, resulting in their injury or death. The bins form part of the Dyer Island Conservation Trust pilot project in Dyer Island - home to large numbers of sea and shore birds, and also an important breeding site for vulnerable birds such as African penguins, endangered bank cormorant and roseate tern. The bins are placed adjacent to Blue Flag beaches (clean, safe and environmentally-friendly beaches) to encourage correct disposal and to provide a platform for education.

**Fuel from everyday agricultural and commercial residues** is changing lives in Tanzania. Briquettes, often used for fuel, are made from every day agricultural and commercial residues such as weeds, leaves, rice husks, and scrap paper. In Arusha, Tanzania, briquettes are made relatively quickly, at a low cost and can be adapted and applied in many settings, making them appropriate, sustainable and renewable. Women in Arusha used to walk more than five kilometres away from their homes to collect firewood to make charcoal, but since they started making and using the briquettes, they have reduced their walking distance thanks to EARD-Community Initiatives, which has successfully introduced the use of briquettes in Arusha. The briquettes help the environment, as there is no need to cut trees for firewood while allowing the women to generate income through making and selling the surplus of briquettes.

**Used car tyres are making self-sustainable employment** a possibility for some young women in Kibera, the largest slum in Nairobi, Kenya, by transforming cleaned used car tyres into handicrafts such as earrings, necklaces, anklets and sandals. These fashionable items are skilfully designed and later sold through word of mouth. They are also uploaded online through partnerships with blogs where they are shared on various networks for sale. Proceeds are given to the youth, hence supporting the young people and organizations involved.



**Africa's Call for Action on E-Waste** was issued by African states, the United Nations, the private sector and other groups during the *Pan-African Forum on Electronic Waste* held in March 2012 in Nairobi, Kenya, the first of its kind on the continent. It outlines a set of priority actions to better manage e-waste in Africa and to support the development of a regional approach for the legal trans-boundary movements and the environmentally sound management of e-waste for the African continent to protect human health and the environment, promote opportunities for social and economic development and create green jobs. Increasing domestic consumption of electronic products, and the ongoing import of waste electronics, such as used mobile phones, into Africa from other regions, means that the continent could generate a higher volume of e-waste than Europe by 2017.

**Enviro Mentors** at South Africa's Sakhile High School tackled climate change issues through a recycling campaign offered by Remade, a local recycling company. During the recycling campaign, the chosen mentors gave meaningful and inspirational speeches to the entire school about their planned projects, which motivated all learners to participate and assist. One of the activities was to visit a recycling depot, where they learnt about can and paper recycling processes. This activity involved 16-18 year old students at the school.

**Usafi Waste Manager** is a garbage collection group that was created in 2003 by five young men in Nairobi, Kenya, who decided to create a group that ensures the cleanliness of the estate they live in because they are tired of seeing garbage all over. Once they received a van that carried the garbage to the dumping sites, as well as the government permit that allows them to collect garbage, they expanded their service to more houses. Residents pay a small fee for garbage collection twice a week, along with disposable bags that are supplied to them.

**ALMODO** offers training and waste management services to municipalities and civil societies. Created in 2005 in Niger, it collects, centralises and ecologically recovers waste, which is then transformed into products useful for the local community such as school slates, paving stones, bricks, latrines or organic fertilisers. The innovative project targets low-income communities who suffer from poor sanitation in their living environment. ALMODO reduces municipal costs for solid waste management and contributes towards alternative income since local people collect and recycle solid waste for remuneration.

**The Recycle Swop Shop** project is an empowerment initiative in Du Noon, an under-resourced community in the Western Cape of South Africa. The community relies heavily on government provisions due to lacking infrastructure, basic amenities, and sanitation. To combat these issues, residents collect recyclable items such as tins, plastic and paper and exchange them at "the Swop Shop" for essential personal and household items, school supplies and toys. Since its creation in 2011, the Swop Shop has contributed to a cleaner environment and less waste.

**Uganda's Green Heat** is an enterprise that installs and markets biogas digesters that turn decaying organic material from toilets and agricultural waste into biogas fuel for cooking and heating. This fuel is made available to urban and rural households, schools, prisons, hospitals and tourist lodges in Uganda. It helps the recipients reduce their dependence on firewood and charcoal, improve their waste management systems and help reduce deforestation and greenhouse gas emission rates.



© UN Photo/Christopher Herwig

**9**

**OPTIMIZE ENERGY**

**“Energy resources facilitate the development of income-generating activities for the poorest segments of the population, in particular, women.”**

*[Paul Biya, Cameroonian politician]*

For centuries, humankind has used the Earth’s resources as if there was no tomorrow. Since the Industrial Revolution in the late 1700s, economic growth has been tied to increased use of energy. Africa’s use of energy varies. Whilst there are areas, such as southern Africa and northern Africa, which have a growth in energy consumption similar to industrialized countries in Asia, other areas in sub-Saharan Africa are faced with limited access to energy resources. Africa has the world’s lowest energy consumption level. While energy demand in sub-Saharan Africa grew by around 45% from 2000 to 2012, this region accounts for only 4% of global demand despite being home to 13% of the global population.<sup>89</sup> The largest energy demand centres are Nigeria and South Africa, which account for more than 40% of total energy demand. The key challenge many African countries are facing is not to increase energy consumption per se, but to ensure access to cleaner energy services, preferably through energy efficiency and sustainable renewable energy for all.

## Energy in Africa

The main energy source in Africa is solid biomass, such as fuel wood and animal waste. While counted as renewable, this use is neither efficient nor sustainable. In fact, bioenergy, mostly fuel wood and charcoal, accounts for more than 60% of energy demand, coal makes up 18%, followed by oil (15%) and natural gas (4%). Modern renewables account for less than 2% but are growing quickly.<sup>90</sup> Coal and oil are fossil fuels and burning fossil fuels releases carbon dioxide into the atmosphere and causes acid rain in addition to

contributing to other environmental challenges such as climate change.

Although sub-Saharan Africa’s contribution to greenhouse gas (GHG) emissions is considered insignificant<sup>91</sup> compared to the world’s top emitters such as China, the United States and the European Union countries, these emissions are expected to rise particularly if its fast developing countries increase their reliance on fossil fuels for energy. This poses a major threat to not only air quality but also sustainable consumption in Africa and highlights the great need to invest in and develop clean and renewable energies. Also, a growing middle class will have an increasing energy demand, possibly supported by GDP growth projections and industry development accelerated in many African countries. The right time to act is now, before an energy system relying on fossil fuels has been established.

The overuse of fossil fuels results in a dramatic increase in the concentration of GHGs in the atmosphere, which contributes to climate change. How? Too much heat is trapped in the atmosphere: the planet warms up and this disrupts the natural climate system, which has negative consequences at all levels.<sup>92</sup>

We have to reduce our dependence on the earth’s exhaustible natural resources. Because of the carbon cycle – a biogeochemical cycle whereby carbon is exchanged on Earth and helps make the Earth capable of sustaining life (together with the water cycle and nitrogen cycle) - we should not burn fossil fuels as this interrupts the system contributing to climate change. Increasing reliance on wood contributes to deforestation, and since we need forests to capture carbon dioxide from the atmosphere and release oxygen, this is not a feasible option.

The time to gain access to reliable, affordable, and environmentally-friendly renewable energy resources is now. The good news is that Africa has seen a surge in new renewable energy installations. The Renewables 2015 Global Status Report reveals that South Africa was

89 World Energy Outlook 2014 Factsheet: *Energy in sub-Saharan Africa today*, IEA.

90 World Energy Outlook 2014 Factsheet: *Africa energy outlook*, IEA.

91 *African emissions: African major sources of GHG, emissions per capita, and comparison with emissions from other countries*, GRID ARENDAL.

92 *International Energy Agency*.



among the top 10 solar PV markets for the first time (ranked 9<sup>TH</sup>), ahead of India and led the continent in new wind installations. Kenya installed more than half of the world's new geothermal capacity and Rwanda significantly increased its total generating capacity with the addition of new hydropower capacity.<sup>93</sup>

Nonetheless, renewable energy sources are still not widely used across the region. Why? The mechanisms that regulate the price of energy are complex. For example, the prices of fossil fuels are artificially cheap; they do not take into account the full environmental and social costs associated with their extraction, distribution and use. The price of fossil fuels should reflect the true costs to society of producing and using them. Subsidies that keep the price artificially low are typically used to help the poorer segments of society have access to energy. Yet, these subsidies often do not benefit the poorest, and instead these public funds could be put into support for renewables.

On the other hand, carbon-free sources of energy, which are environmentally preferable, have traditionally higher prices. This is because they are a relatively recent solution, and they are not yet used widely enough to bring down the cost. But change is on the horizon. For example, solar PV is starting to play a substantial role in electricity generation in some countries as rapidly falling costs have made unsubsidised solar PV-generated electricity cost-competitive with fossil fuels.<sup>94</sup>

We also need rural energy development programmes that promote indigenous energy resources such as off-grid systems and improve biomass systems. Africa's shift to using renewable energy sources such as wind, solar, geothermal, modern bioenergy and hydro is also economic; energy is an enabler for economic activities and renewables are a means to use local resources.

## Sustainable energy for Africa

Sustainable development is not possible without sustainable energy. Electricity is needed for children to study after dark, for water to be pumped for crops and foods and medicines to be generated and refrigerated, amongst many other tasks. Access to modern energy is crucial in facilitating social and economic development and offering opportunities for improved lives and economic progress in Africa.

There is a lot of potential for sustainable energy in sub-Saharan Africa, where in the last five years alone, nearly 30% of world oil and gas discoveries were in this region; however, the challenge is to turn these discoveries into production and the resulting revenue into public benefits.<sup>95</sup>

We need policies that encourage the public and private sector to invest in renewable sources of energy in order to expand the market and lower their cost. Renewable sources of energy are those that can be replenished in a short period of time, such as wind, water, the sun, biomass and geothermal energy, as opposed to non-renewable sources of energy. Renewable energy is clean and inexhaustible and it provided an estimated 19.1% of global final energy consumption in 2013, and growth in capacity and generation continued to expand in 2014.<sup>96</sup>

Sustainable energy – energy that is accessible, cleaner and more efficient – can power opportunities for a continent like Africa. Not only can it help grow economies, light up homes, schools and hospitals and empower women and communities, it can also help pave the path out of poverty, for example through the creation of jobs in the green economy. It is a key element in sustainable development. Benefits of using renewable energy in Africa include enhanced energy security, technology transfer, and income from exports of electricity, private sector development and job creation.<sup>97</sup> There are also sustainable off-grid energy solutions – where you generate energy through natural

93 REN 21, *Renewables 2015 Global Status Report*, p. 31.

94 REN 21, *Renewables 2015 Global Status Report*, p. 21.

95 World Energy Outlook 2014 Factsheet: *Africa energy outlook*, IEA.

96 REN 21, *Renewables 2015 Global Status Report*, REN 21, p.6.

97 UNEP Green Economy Report, *Chapter 6, Renewable Energy*, p. 238.

resources (e.g. water, wind, solar) – that can also help deliver major development and climate benefits.

Consumers International's Energy Charter (2008) was developed in recognition of the fact that energy is of fundamental importance to public welfare and the well-being of consumers worldwide. It promotes universal access to sustainable energy services for all consumers, and it sets out the responsibilities and rights that suppliers, governments, regulators and consumers must embrace to achieve this goal.<sup>98</sup>

Energy is essential for almost all our activities, such as cooking, heating our houses and providing power for our industries. It is possible to have access to sustainable energy through projects like the one developed in Ibadan (Nigeria), which expects to provide sustainable energy to 2000 households by using methane produced by the degradation of animal waste.<sup>99</sup>

The most prevalent national renewable energy policy in the world is feed-in tariff - a policy instrument that makes it mandatory for energy companies or "utilities" responsible for operating the national grid to purchase electricity from renewable energy sources at a pre-determined price that is sufficiently attractive to stimulate new investment in the renewables sector. Kenya, for example, adopted a feed-in tariff in 2008. Since Kenya's greatest renewable energy potential is in its rural areas, the effects of this tariff policy are expected to trickle down and stimulate rural employment (through the building of power plants and in the context of agro industries especially sugarcane).<sup>100</sup>

The increasing energy demand must be met with modern energy (electricity), in order to protect health (e.g. no use kerosene lamps), allow for education (light to study, spending less time collecting wood) and economic development (small enterprises become operational, women get the chance to escape from archaic role models). The right path for Africa involves having the right technology to meet its energy demand with renewable

98 Consumers International's Energy Charter.

99 Cows to Kilowatts, Nigeria: Turning Waste into Energy and Fertiliser.

100 UNEP Green Economy Success Stories, Feed-in tariffs in Kenya.

energy from on- and off-grid solutions as this can decouple economic growth from carbon dioxide emissions and raise standards of living. Africa needs to focus on developing and investing in renewable energy, which will help power a green economy, foster economic growth, create jobs and improve energy security for all countries, all while mitigating climate change.

## Access to energy

Globally, over 1.3 billion people – or 20% of the world's population - lack access to electricity and more than 95% of them live in sub-Saharan Africa or developing Asia and 84% are in rural areas.<sup>101</sup> The energy access gap is greatest in Africa, where more than half of the population, live off the grid.<sup>102</sup> The 2014 World Energy Outlook says that more than 620 million sub-Saharan Africans (two-thirds of the population) are without access to electricity.<sup>103</sup> While sub-Saharan Africa makes up about 14% of the total population of developing countries, it accounts for almost 40% of the population without electricity access.<sup>104</sup> A person in sub-Saharan Africa has the lowest energy consumption in the world, consuming just one-thirtieth of the energy of an average North American.<sup>105</sup> Access to electricity also varies dramatically among countries in the same region. In sub-Saharan Africa, for example, more than 95% of people lack electricity access in Chad, Liberia and Burundi, while 25% do in South Africa, and less than 1% does in Mauritius.<sup>106</sup> Poor electricity reliability is also an issue, for example, African manufacturing enterprises experience power outages on average 56 days per year and losses can be as high as 20%.<sup>107</sup>

Africa also faces high electricity costs, with the average tariff of USD 0.13 per kilowatt-hour (2 to 3 times more than

101 Energy poverty, IEA.

102 Energy access for all in Africa: does enterprise hold the key? The Guardian (2013).

103 World Energy Outlook 2014 Factsheet: Africa energy outlook, IEA.

104 WHO and UNDP (2009), The Energy Situation in Developing Countries: A Review Focusing on the Least Developed Countries and Sub-Saharan Africa, p.11

105 African Rural Energy Enterprise Development (AREED), UNEP, p.45.

106 The Energy Access Situation in Developing Countries and sub-Saharan Africa, WHO and UNDP (2009), p.11.

107 Fact Sheet: The World Bank and Energy in Africa.

in the rest of the developing world).<sup>108</sup> This high price, in addition to a reliable grid connection, makes it challenging for all Africans to be able to afford electricity. As a result, many end up using kerosene lanterns as alternatives, but this is only good for lighting. While Africa's per capita energy consumption is growing fast at 4.1% growth, thanks to improved infrastructure and inward investments,<sup>109</sup> less than one in six rural Africans is connected to a national electricity supply. In Africa's more developed nations, many are still off the grid, e.g. 84% of Kenyans and 81% of Ugandans.<sup>110</sup>

Policies and programs that address energy poverty and pave the way to accessing modern energy services that are environmentally and socially sustainable for Africa's urban and rural populations are critical in Africa, where many people need to access significantly more energy. In 2000, UNEP launched the *African Rural Energy Enterprise Development* (AREED) programme in Senegal, Ghana, Mali, Tanzania and Zambia, which supports innovative energy entrepreneurs with business development services and access to capital. Through AREED, more than 500 entrepreneurs have received enterprise development training to create or improve their businesses. Close to \$2 million has been invested in 31 businesses that provide energy services for water pumping, water heating and cooking and more than 224,000 people in 44,000 households now have access to cleaner energy.

## What can be done?

The main challenges facing Africa is achieving universal energy access through improved management of current energy systems and the use of renewable and clean energy to extend the grid. There is also the need to improve energy efficiency and thus offer more services with the same amount of generated electricity.. Energy-efficient appliances such as lighting and air-conditioners can help to reduce global energy demand. In fact, shifting global markets to efficient appliances can reduce global electricity

consumption by more than 10% and save US\$ 350 billion on electricity bills per year.<sup>111</sup>

Electricity for lighting accounts for about 15% of global power consumption and 5% of worldwide GHG emissions. Switching to efficient on-grid and off-grid lighting globally would save more than \$140 billion and reduce CO2 emissions by 580 million tonnes every year. Visit the en.lighten initiative's [Country Lighting Assessments](#) for more information on how much your country could save just by transitioning to energy efficient lighting. In Tanzania, the annual savings would be US\$ 17.9 million while in South Africa, it would be US\$ 456.6 million!

Buildings is another focus area, particularly since about 40% of global energy is used in buildings, 25% of global water and 40% of global resources, and because buildings emit a third of all greenhouse gas emissions.<sup>112</sup> Greening the building sector and new green construction yield enormous opportunities. That is why projects such as [Promoting Energy Efficiency in Buildings in East Africa](#), are beneficial for the region. This project aims to work with Kenya, Uganda, Rwanda, Burundi and Tanzania to improve energy efficiency, energy saving and conservation measures in its buildings while mainstreaming energy efficiency measures into housing policies, building codes and building practices.

Optimizing energy use and working together to gain access to energy is a big issue that calls for global, community and individual solutions. There are many things we can do every day to cut down on the energy we use. Remember that saving energy can save you money too!

108 The en.lighten initiative: *Lighting the Future We Want*. A powerpoint presentation by Gustau Manez, UNEP (Sept 2013).

109 *Africa's energy consumption growing fastest in world*, CS Monitor (Jan 2013).

110 Ibid.

111 UNEP Efficient Appliances and Equipment – Global Partnership Programme.

112 *Why Buildings?* UNEP SBCI.



**“We will not achieve the transformation we want if we do not increase the quantity of power, reduce its cost and ensure its regular supply. You cannot fight poverty when you do not have power to run an economy with industries to create jobs and create wealth ...”**

*[Uhuru Kenyatta, President of Kenya, during the opening of the 140MW geothermal power plant in Kenya]*



## Stepping-stones

Here are some examples of how to save energy at home:

- Research what your **energy issues are at home and at work**. What can you do in the short term (e.g. turning off lights) and medium term (e.g. buying more energy efficient appliances) to improve your energy consumption?
- Make sure old household appliances are replaced by **energy efficient** ones.
- Demand **product labelling**. Energy efficiency labels are affixed to products, describe their energy performance and provide the consumer with the necessary information they need to make informed choices.
- Connect **appliances** to the mains whenever possible. Discarded batteries are highly polluting. If you need to use batteries, make sure they are rechargeable ones.
- **Turn it off!** A TV set on standby can still use 1/4 of the energy it uses when it's on.
- **Switch off** all electrical equipment in stand-by mode, and unplug adaptors that hold cell phone chargers or bedside lights.
- Whenever you can, buy energy-efficient **light-bulbs**. Switch off **lights** in empty rooms.
- Turn down the **thermostat** by a few degrees and keep room temperatures between 18°C and 22°C. If you **feel cold** put on another layer instead of turning up the central heating.
- **Close** fridge doors as quickly as possible.
- **Switch off the water heater** all the time until a few minutes before you need to take a bath or shower.
- Take **showers** instead of baths. Don't use more hot water than needed: cool showers keep you young! Take the **stairs**, not the lift; it's a great way to get fit!

**Sustainable Energy for All** is a global initiative launched by the United Nations Secretary-General, which aims to make sustainable energy for all a reality by 2030. It aims to provide universal access to modern energy services, double the global rate of improvement in energy efficiency and double the share of renewable energy in the global energy mix.

**The en.lighten Initiative** is a public-private partnership between UNEP, OSRAM, Philips Lighting and the National Lighting Test Centre (China), with the support of the Global Environment Facility and the Australian Government. It aims to accelerate the global transition to efficient lighting by developing a coordinated international strategy and providing technical support for the phase-out of inefficient lighting. Over 60 countries have joined this voluntary programme and committed to put in place policies and standards to phase-out inefficient incandescent lamps by the end of 2016. About 23 African countries, including the **ECOWAS region**, have successfully launched regional/national efficient lighting strategies, cutting electricity bills, improving grid reliability, reducing fuel and energy imports, and increasing their economies competitiveness.

**The Sustainable Building and Climate Initiative** (SBCI) is a partnership of major public and private sector stakeholders in the building sector, working to promote sustainable building policies and practices. One of SBCI's objectives is to develop a common language for performance assessment of energy efficient and low carbon buildings, which is a basis for consistent global reporting of building related GHG emissions. SBCI's **Common Carbon Metric** is a protocol for measuring energy use and reporting GHG emissions from building operations, which is widely used around the world, including Africa.

**The Sustainable Social Housing Initiative (SUSHI)** was created by UNEP to promote the use of resource and energy efficient building solutions in social housing programs in developing countries. Buildings put a tremendous strain on our environment; they are the source of more than 30% of GHG emissions. SUSHI, implemented in Brazil, Thailand, Bangladesh and India since 2009, provides evidence and opportunities for social housing to contribute to the sustainable buildings agenda and deliver positive environmental, social and economic impacts. SUSHI developed **guidelines** to support social housing decision-makers wishing to integrate sustainable solutions in their projects in developing countries.

**Fuel-less cooking bags in Cameroon** allow women to save more than 50% of firewood through “heat retention” cooking and avoiding the need to reheat. UNESCO, in cooperation with the NGO Mbororo Social and Cultural Development Association, seeks to reduce pressure on forest resources, in particular in the Sahelian zone of Cameroon. A meal is transferred in the cooking bag after having been started on a stove, and will continue to cook inside the bag as long as the temperature exceeds 75°C, which can be several hours. The bag also serves as a food thermos, thereby eliminating the need to reheat meals for those eating later. The bag can be sewn by hand or machine with 2m<sup>2</sup> of cloth. The insulating filling can be cotton, dried agricultural residues or packaging waste (polystyrene).

**Learning about alternative energy equipment** such as solar cookers and ovens, solar electricity, solar water heaters, fuel efficient stoves) through first-hand experience is what some Namibian youth are involved in at the Namib Desert Environmental Education Trust (NaDEET) Centre. Youth learn about protecting Namibia’s environment by educating people to live sustainable lifestyles. Activities cover energy, waste and water issues, allowing them to gain knowledge, skills and confidence. They are also taught how they can reduce waste and recycle material to be used for various purposes (recycled paper fire bricks, plastic bag waste bins) and how to implement water saving methods.





**The solar electrification project in Ethiopia** brings together women organizations in Tigray that are protecting the environment and building long-term income generation through renewable energy. Rural young women are trained to set up, operate, repair and maintain solar photovoltaic generators, which can meet local needs. The women have installed 213 solar generators, of which 120 have been installed in female-headed households and 16 in schools, health sites, local administration and churches. The generators enable children to study at night, community members to charge mobile phones and for people to have better access to information through radio. This project is funded by the Global Environment Facility and implemented by the United Nations Development Programme.

**Poo-powered prisons** are one way of reducing energy costs of Rwanda's prisons. The country's 14 prisons have introduced biogas burners, which are 75% powered by the inmates' own waste. The biogas is produced by combining the inmates' waste from the prison toilets with cow dung from the jail's farm cows and water. The prisoners' diet is not rich enough to produce top quality gas on its own but the pungent cocktail of human and animal waste produces premium gas. One of the prison's has seen an 85% reduction in energy costs since switching to biogas, which translates into a US\$1.7m saving on energy costs for all of Rwanda's ultra-green poo-powered prisons.

**Embracing African traditions in buildings** is particularly useful in the dry areas of sub-Saharan Africa because of desertification and loss of forest areas, where the traditional construction method of roofing made out of timber supported by mud walls is difficult. The Association for Voute Nubienne (AVN) promotes a roofing technique called "the Nubian Vault" – an affordable, sustainable and ancient African architectural technique, which uses earth as a raw material to form dried mud bricks and mortar, used for constructing walls and arched, vaulted roofs without timber. The roofs are also supported with a plastic waterproof sheeting to keep water off during the heavy rainy seasons. AVN is training villagers in Mali, Senegal and Togo to build houses this way through their "Earth roofs in the Sahel" programme.



### **The African Rift Geothermal Development Facility (ARGeo)**

project focuses on supporting the development of the large untapped geothermal resource potential in the Eastern Africa region while reducing the risks linked to resources' exploitation. ArGeo aims to demonstrate that the resource is reliable, cost effective and indigenous, compared to other sources of power in the region.

IndustryAndTravel/Shutterstock.com

### **The South African Bureau of Standards**

has introduced a product labelling standard for electrical and electronic appliances like dishwashers and televisions. These energy efficiency labels empower consumers to make more informed decisions when purchasing or renting appliances. The South African National Standard 941, for energy efficiency of electrical and electronic equipment, is a voluntary standard that would be regulated by the National Regulator for Compulsory Specifications in the near future, through the implementation of the Energy Efficient Standard and Labelling Programme, by the Department of Trade and Industry and the Department of Energy.

### **The Clean Energy and Technology Club of Karambi Secondary School**

in Uganda has constructed a biogas unit that supplies cooking gas to the school kitchen. The school, which has tapped the same biogas and used it for lighting in the boys' dormitory, has also constructed energy saving stoves that use less fuel wood. The school club constructs stoves for the community, which they sell and are able to generate income. The students have formed an organization in their community that promotes use of energy saving stoves. Before the introduction of the energy saving stoves, the school was spending UGShs 10.8 million a year on fuel wood. The school has had this cost reduced to UGShs 4.3 million a year on fuel wood.



**10**

# THE ATMOSPHERE



**“Perhaps the single most successful international agreement to date has been the Montreal Protocol.”**

*[Kofi Annan, former Secretary-General of the United Nations]*

The damage to the Earth’s atmosphere and climate is such a massive problem that our initial reaction is to ask: what difference can one person make? Change is needed urgently and this requires all of us to act individually and collectively. The two major issues involved are ozone depletion and climate change, which are two different problems. They are linked, because they both relate to the quality of our atmosphere and have a direct impact on our health and on the health of our entire planet. If nothing is done, the consequences for the Earth will be disastrous. This chapter looks at ozone depletion and the next chapter talks about climate change.

## The Ozone Layer: how it protects us

Ozone is a gas that is poisonous at ground level. But 25km above the ground, a fine layer of ozone surrounds the planet and protects us from the sun’s rays. This layer is crucial to life on Earth. It soaks up almost all of the sun’s damaging ultraviolet (UV) light, which causes skin cancers and eye diseases, and harms plants and animals. Ozone-depleting gases remain active and harmful in the stratosphere for up to 111 years. The depletion of the ozone layer is a serious environmental concern, which will have serious health and social consequences.

*These ozone-depleting substances (ODS) or gases were first used as the working fluid in fridges and later in air-conditioning units. For more information, visit [www.unep.org/ozonaction/](http://www.unep.org/ozonaction/)*

In 1985, scientists found a hole in the ozone layer. This hole is above Antarctica and it is now about the same size as Africa. So far, about 10% of the earth’s ozone shield has been destroyed. Chlorofluorocarbons (CFCs) are responsible for destroying much of the ‘missing’ ozone

layer. In 2011, African countries embarked on an ambitious plan to phase-out the use of ozone-depleting chemicals, and the “Ozone2Climate” campaign will contribute to achieving the goal.

*UNEP, UNESCO and the World Health Organization developed the OzonAction Education Pack, primary school curricula to educate students about the protective role of the ozone layer and the causes and consequences of its depletion.*

*Ozzy Ozone: Defender of our Planet provides information on issues concerning the ozone layer, and an interactive section with educational games for children.*

Hydrofluorocarbons (HFCs) – mainly used in refrigeration and air conditioning - were introduced to replace ozone-depleting CFCs and hydrochlorofluorocarbons (HCFCs) because they do not deplete the stratospheric ozone layer. However, some HFCs are potent greenhouse gases with long atmospheric lifetimes,<sup>113</sup> all of which have an impact on climate change.

## The Montreal Protocol

An international agreement known as the Montreal Protocol on Substances that Deplete the Ozone Layer and its Vienna Convention for the Protection of the Ozone Layer, which, as of 2009, were the first treaties in the history of the UN to achieve universal ratification. Through this protocol, governments agree to eventually discontinue production of CFCs, halons, carbon tetrachloride and methyl chloroform and industry has now developed more ‘ozone-friendly’ substitutes.<sup>114</sup>

Without the action prompted by this agreement, atmospheric levels of ozone-depleting substances would grow 10-fold by 2050. The resulting exposure to the sun’s ultraviolet radiation would likely have led to up to 20 million additional cases of skin cancer and 130 million more

<sup>113</sup> *Overview of Greenhouse Gases*, US Environmental Protection Agency.

<sup>114</sup> *Science: Ozone Basics*, NOAA.

cases of eye cataracts; it would also have caused damage to human immune systems, wildlife and agriculture. For much of the world, the time it takes to get sunburned would have been dramatically reduced, due to a 500-per cent increase in DNA-damaging ultraviolet radiation.<sup>115</sup>

### Every action counts

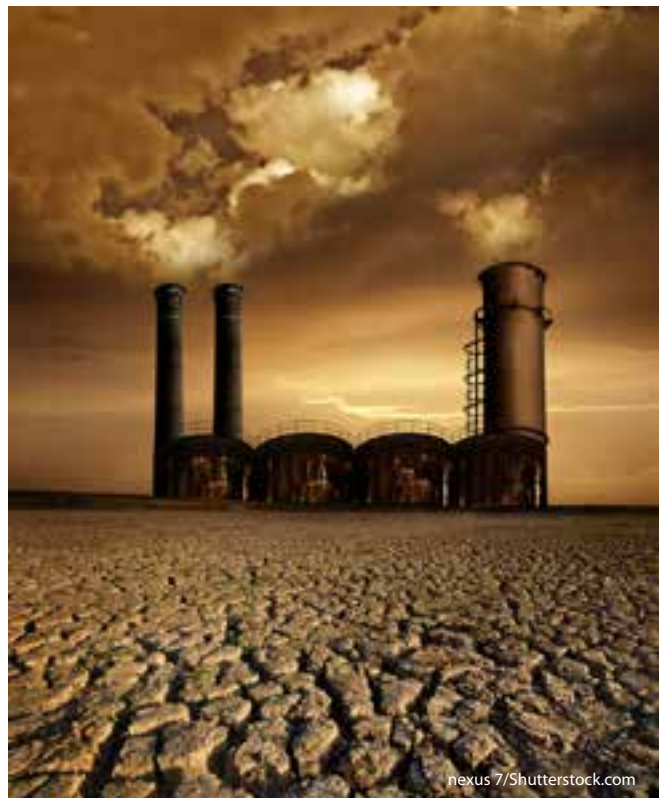
It's never too late to take action. The ozone layer will recover if we all use less ozone destroying substances. Africa has successfully phased out 25,000 tons of CFCs and other ozone depleting chemicals ahead of the date stipulated in the Montreal Protocol. However, if these ozone-destroying substances were all banned tomorrow, it would take 40 years for the ozone layer to heal.

Did you know that Africa has awards that recognize action towards ozone depletion? For example in 2012, UNEP launched the [African Ozone Protection Award](#), which recognize Customs and Enforcement Officers who manage to prevent illegal trade in ozone-depleting substances and equipment.

On 16 September every year, the world celebrates the [International Ozone Day](#) commemorating the date of the signing, in 1987, of the Montreal Protocol on Substances that Deplete the Ozone Layer. Taking action involves raising awareness and communicating the importance of the Ozone Layer. Listen to the [Ozone Song](#) and visit the UNEP Ozone Secretariat [website](#) for campaign products that you can use.

**“As we look forward to the adoption of the 2030 Agenda for Sustainable Development, and the effort by governments later this year in Paris to forge a new, collective path forward on climate change, the Montreal Protocol’s success should inspire us. It shows what we are capable of when nations act together on a global challenge.”**

*[Ban Ki-moon, United Nations Secretary-General’s Message on the International Day for the Preservation of the Ozone Layer, 16 September 2015]*



hexus 7/Shutterstock.com

<sup>115</sup> Extract from June 2010 report on Millennium Development Goals, p.54.



## Stepping-stones

How can you protect the ozone layer? Prevention is key\*:

- ▶ **Be informed** about where you can find ozone-depleting chemicals (refrigerators, air conditioning systems, spray cans, fire extinguishers, pesticides).
- ▶ Buy and use **ozone-friendly products** without Ozone Depleting Substances (ODS): no CFCs, no halons, no methyl bromide,
- ▶ When repairing your appliances, ask certified mechanics to repair or take care of used appliances that contain ODS.
- ▶ **Avoid staying in the sun** without good protection during the peak hours. If you must be outdoors, seek shade and wear protective clothing, a hat and sunglasses.
- ▶ Help create a new source of **shade** by planting trees in your schoolyard or community.

\* For more tips like these, read the [OzonAction Education Pack](#).

### **The African Network of Ozone Officers**

helps English-speaking African countries to meet and sustain compliance with the Montreal Protocol by providing countries with regular updates and guidance on compliance requirements and the necessary phase-out activities. The Network currently supports countries to be in compliance with methyl bromide consumption to ensure total phase-out is achieved by 2015 and is continually raising awareness of the Montreal Protocol through national activities.

### **The Ghanaian Environmental Protection Agency (EPA)** is **sensitizing students on ozone layer depletion**.

The students are expected to act as ambassadors in their schools and communities by teaching others about the need to avoid negative human activities that could lead to ozone layer depletion. These trainings involved urging students to regularly check the control devices such as the thermostat in refrigerators to help conserve energy, and stressing the need for fridges to be kept about 30 centimeters away from the wall to help conserve energy. If you want this kind of training in your country, contact your Ministry of Environment.

**Tobacco companies are joining to save the ozone layer** in Zimbabwe, where they have introduced environmentally-friendly technologies and chemicals. For example, farmers now have access to a group loan scheme to help them adopt a float tray technology system, which helps farmers produce seedlings free of nematodes, reducing the use of pesticides. Methyl Bromide was used to fumigate the seedlings for tobacco and when the chemical goes in the air it forms bromide oxide, which depletes the ozone layer.





Sangoiri/Shutterstock.com

**11**

# CLIMATE CHANGE

**“Climate change is rapidly advancing and it is essential for young people to understand fundamental concepts about climate change and its wide-reaching impact.”**

*[Rejoice Mabudafhasi, former Deputy Minister of Water and Environmental Affairs, South Africa]*

## Our changing climate

Many factors influence our climate such as natural processes within the climate system and human activities. The climate change we are experiencing today is very likely (greater than 90 per cent chance) due to human activities. The Intergovernmental Panel on Climate Change (IPCC) tells us that the planet is getting warmer because humans, using fossil fuels to power millions of factories, cars, heating and air conditioning plants, are pumping more ‘greenhouse gases’ (GHG)- carbon dioxide (CO<sub>2</sub>), methane, nitrous oxide, and fluorinated gases - into the atmosphere than ever before. Although Africa only contributes 4% of global GHG emissions, Africa’s increasing reliance on fossil fuels, particularly in some fast developing countries, is concerning.

- *Greenhouse gases are called this because they make an insulating layer around the earth, like the glass in a greenhouse, which traps the heat of the sun’s rays. Find out more: Intergovernmental Panel on Climate Change: [www.ipcc.ch](http://www.ipcc.ch), UN Framework Convention on Climate Change: [www.unfccc.int](http://www.unfccc.int), World Meteorological Organization: [www.wmo.ch](http://www.wmo.ch), UNEP/GRID: [www.grida.no](http://www.grida.no) and Green Peace: [www.greenpeace.org/international/en/campaigns/climate-change/](http://www.greenpeace.org/international/en/campaigns/climate-change/)*

Solving climate change requires all of the world’s citizens and governments to act together. Over the last 100 years, average global temperatures have increased by around half a degree Celsius (½°C). In Africa, climate change might lead to an increase of temperature ranging from 0.2 °C to more than 0.5 °C every 10 years. The warming will be higher in some parts of the Sahara and in central southern Africa.

The most visible phenomenon related to this is ice melting: glaciers are melting and shrinking everywhere. The glaciers of Africa’s highest mountain, Mount Kilimanjaro, are fast disappearing most likely because of climate change. In fact, according to the Byrd Polar Research Center of Ohio State University, Kilimanjaro has lost 82% of the icecap it had when it was first carefully surveyed in 1912.<sup>116</sup> The glaciers of Mount Ruwenzori in Uganda and Mount Kenya are also under threat.

## Africa’s climate change challenge

As the leaders of tomorrow, African youth must be well aware of Africa’s climate change challenge and explore ways to tackle the impacts of climate change. Africa depends on rain-fed agriculture, and in a time of climate change where changes in precipitation is one of the expected effects, this may be detrimental to the region. These changes can include the risk of drought in sub-Saharan Africa and serious flooding in coastal regions, all of which will have negative impacts on Africa’s poorest people, who are the most dependent on agriculture for survival. This will affect food availability, particularly in drought or flood-prone areas. Drought and flooding combined with poor sanitation can also give rise to pervasive health threats; flooding allows water to become contaminated with human and animal excrement, while drought reduces the amount of water available for washing and sanitation. Under these circumstances, cholera, typhoid and diarrhoea diseases can flourish. When combined with higher temperatures, people will be increasingly exposed to health risks such as vector-borne diseases like malaria, which already kills over 1.2 million people annually, mostly African children under the age of five.<sup>117</sup>

In 1992, countries joined an international treaty, the United Nations Framework Convention on Climate Change (UNFCCC), to consider what they could do to limit average global temperature increases and the resulting climate change, and to cope with whatever impacts were, by then, inevitable. Negotiations to strengthen the global response

<sup>116</sup> *Vanishing Icecap of Mount Kilimanjaro. UNEP DEWA.*

<sup>117</sup> *World Youth Report (2010). Vector-borne disease. The Impact of Climate Change in Africa.*

to climate change led to the adoption of the Kyoto Protocol, which represents a global commitment to reduce CO<sub>2</sub> emissions by 5% (compared to 1990 level) by the period 2008-2012. The protocol entered into force in February 2005, and in 2015, it was ratified by 192 States with 54 of them from Africa.<sup>118</sup> The Protocol's first commitment period started in 2008 and ended in 2012. The second commitment period began on 1 January 2013 and will end in 2020.<sup>119</sup> During the COP21 meeting in December 2015 in France, the goal is to achieve a new international agreement on the climate applicable to all countries that will be adopted in 2015 and implemented from 2020.

## Addressing climate change

Africa, as a continent, is a small emitter of GHG emissions, but with more economic growth and development, this will likely change. We can still limit damage caused by climate change provided that we consume and produce in a sustainable way. Reduction is one of the key steps ahead. Experts say that global cuts in CO<sub>2</sub> emissions of 60 to 80% (using 1990 as benchmark) will be necessary by 2050. In fact, most technologies for climate change adaptation needed in the short-to-near-term already exist but more efforts are needed to accelerate the use of these critical technologies.<sup>120</sup> The [UNEP Adaptation Gap report](#) provides some actions that address near-term warming in parallel to long-term warming.

The costs of stabilizing the concentration of GHGs in the atmosphere to levels that do not disrupt our climate should amount to 3% of world GDP by 2030. Doing nothing would be much more expensive: without special efforts to adapt to the effects of climate change, a 2.5°C increase in temperature is likely to reduce GDP by an average of 0.5% to 2%, with higher losses in most developing countries. According to the IPCC, making this kind of immediate reduction in CO<sub>2</sub> emissions is impossible but it indicates the kind of pollution cut that's needed to put the brakes on global warming. However, because some changes will be irreversible, experts are working on 'adaptation', in other

words, developing strategies and initiatives to manage the impacts caused by the climate change that society is already facing.<sup>121</sup>

Developing countries including those in Africa are considered the most vulnerable to climate change because they have fewer resources to adapt socially, technologically and financially and are often very reliant on natural systems. Addressing climate change means finding solutions to adapt the way we live to the new environmental conditions resulting from climate change. We can also slow down these changes, which calls for us to change our behaviours to help reduce GHG emissions. This is called mitigation.

## Climate change impacts

The Africa chapter of the 2014 IPCC report on climate change impacts, adaptations and vulnerability says warming in Africa, consistent with anthropogenic (resulting from human activity) climate change, has risen over the last 50 to 100 years.<sup>122</sup> African ecosystems are being affected by climate change and climate change will amplify existing stress on water availability in the region, which will affect agricultural systems.

We are all responsible for addressing climate change through our daily actions, raising awareness about the issue and calling for and supporting policies that help address climate change and its impacts. One of the most important steps we can take at the individual level is to adopt more sustainable ways of living that are in harmony with our communities and nature as this can help to reduce our impact on the environment. Can you list some tips that you can share with your peers, family and colleagues about living sustainably? View the stepping-stones for some ideas.

The IPCC estimates that if no action is taken, average surface temperatures will rise by up to 6.4°C by the end of this century. This increase could trigger serious consequences,

118 [Status of Ratification of the Kyoto Protocol](#).

119 [Background on the UNFCCC](#): The international response to climate change.

120 [UNEP Adaptation Gap Report – Executive Summary](#), p. xiv.

121 [United Nations Fact Sheet on Climate Change. A report of Working Group I of the IPCC. Climate change 'can be tackled'](#) (BBC).

122 [Climate Change 2014: Impacts, Adaptation and Vulnerability](#), IPCC, 2014.





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including the melting of glaciers. The resulting 18 to 59 cm rise in sea levels would flood coastal areas and small islands. Extreme weather events such as hurricanes, floods or droughts would become more frequent and severe. Africa will be particularly affected. By 2085, between 25% and over 40% of species' habitats could be lost altogether, affecting agriculture, water supply and diseases.

### Adaptation and mitigation

No continent will be struck as severely by the impacts of climate change as Africa.<sup>123</sup> These impacts will affect the livelihoods of millions across Africa, including sectors such as agriculture. Africa has faced severe droughts recently, which have serious impacts on water, land, soil and other resources. Rising temperatures pose a serious challenge to sustainable development, particularly as the economies of most African countries depend on climate-sensitive sectors such as agriculture, fisheries, energy and tourism.<sup>124</sup>

Climate change impacts are real and we need technical and financial resources, social organizations and political structures to reduce the causes (mitigation) and effects (adaptation) of climate change. We must find solutions

<sup>123</sup> *Fact Sheet: Climate Change in Africa – What is at Stake?*

<sup>124</sup> *UNEP launches new initiative to support climate change adaptation in Africa.*

to adapt the way we live to the new environmental conditions resulting from climate change. Africa needs to build resilience to such impacts, and adapt accordingly. Numerous adaptation efforts around the continent are taking place, including mainstreaming climate change adaptation into national development policies, such as in Malawi, as well as ecosystem-based adaptation, which helps people and communities adapt to the negative effects of climate change at local, national, regional and global levels. Adaptation in Africa revolves around engaging policymakers and communities, capacity-building, natural resources management including water and soil, crop diversification, land resources use as well as integrating indigenous and scientific knowledge.

Have a look at the [Africa Adaptation Knowledge Network](#) – a hub for knowledge, research, successful initiatives and collaborative partnerships on climate change adaptation, such as:

- *Sea level rise and coastal erosion:* sharing adaptation techniques to climate change related to topsoil erosion in Africa such as Mozambique.
- *Mainstreaming climate change adaptation into national policies:* sharing information on how countries are streamlining climate change into national policies, such as Malawi.

- *Capacity enhancement*: sharing information on how some countries like Rwanda and Malawi are improving the awareness of individuals, the public sector, the private sector, local communities, media and civil society on the developmental impacts of climate change and how these impacts will influence their work.

Have a look at the latest [Africa's Adaptation Gap Report](#), which talks about Africa's adaptation costs, which could rise to USD 50 billion per year by 2050, and even more, if the world does not manage to turn away from the current levels of global warming that could lead to more than 4°C warming by 2100.

The 2014 IPCC report says national policies and strategies across African countries are now mainstreaming climate change adaptation into sectoral planning. But this is easier said than done; it is often incomplete, under-resourced and there are low levels of adaptive capacity.

The challenge for Africa is to optimise the access and use of renewable and clean energy sources. We must invest more time, money and human energy to make renewable energy sources a viable alternative to fossil fuels and Africa could



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lead the way in this. Today, thanks to heavy investments and to a growing interest of consumers, renewable energy accounts for 18% of the energy mix. This figure is predicted to rise to 23% by 2050, up to 34% in the most optimistic scenario.<sup>125</sup>

## The role of youth and consumers

Responsible consumers have a key role in addressing and combating climate change: through your positive actions, the 'sustainability-fan club' will grow! Powerful multinationals will have a hard time maintaining their success if they ignore your concerns. Ask them about their CO2 policies! And do not forget to watch your own lifestyle!

- *Nike, Sony Polaroid and others joined WWF Climate Savers Program – a voluntary initiative to reduce greenhouse gas emissions:*  
[http://wwf.panda.org/what\\_we\\_do/how\\_we\\_work/businesses/climate/climate\\_savers/](http://wwf.panda.org/what_we_do/how_we_work/businesses/climate/climate_savers/)

Youth are pivotal in tackling climate change, particularly in Africa, which is home to 200 million people aged between 15 and 24, making it the region with the youngest population in the world.<sup>126</sup> Understanding the impacts of climate change makes you aware of what is to come and how you can adapt by changing your lifestyles and purchasing habits into more sustainable ones. Have a look at the stepping-stones for ideas on steps you can take at home.

Every action you take for climate change counts, whether it is in the classroom, at home or at work. Do some research, look at how climate change affects your city or town, country and region, and find some interesting campaigns to take part in to raise awareness about this issue. Have a look at these websites and the Greenpeace campaign for some inspiration. Even better, create your own campaign about climate change and educate those around you about it! For some inspiration, have a look at the [Climate](#)

<sup>125</sup> *Energy Technology Perspectives – scenarios and strategies to 2050*, International Energy Agency (2006).

<sup>126</sup> *Africa's youth: a ticking time bomb or an opportunity?* Online Africa Renewal (May 2013).



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Hero Awards: the first awards in South Africa and Africa that recognize, reward, motivate and celebrate leaders (youth, communities, schools, individuals and businesses) that are engaged in tackling climate change.<sup>127</sup>



## Stepping-stones

Doing my bit to control climate change and ozone depletion\*:

- How do your **purchasing habits** affect climate change?
- Learn about the products you buy and whether they contain **polluting chemicals**. Find out what environmentally-friendly alternatives/products are available.
- Join an organization that **promotes sustainable consumption and production** in your country/region.
- Find out what your municipality and/or your country are doing to **address climate change**.
- Buy **local** and **seasonal** products wherever possible. Producing crops out of season means either growing them in greenhouses or importing them, sometimes by air.
- Turn **lights** off! For comparison, lighting an empty office overnight can waste the energy required to heat water for 1,000 cups of coffee.
- **Unplug** equipment once fully charged. Appliances such as mobile phones and shavers keep drawing electricity even when the battery is full.

\* Also refer to the 'Stepping stones' in the chapter 'Optimize energy'.

127 Climate Hero Awards.



### **The Lima Ministerial Declaration on Education and Awareness-raising**

was adopted by parties at the 20th session of the Conference of the Parties to the UNFCCC (COP 20) in December 2014 in Lima, Peru, where climate change education and training was high on the agenda. This declaration encourages “governments to develop education strategies that incorporate the issue of climate change in curricula and to include awareness-raising on climate change in the design and implementation of national development and climate change strategies and policies in line with their national priorities and competencies.” It calls on governments to include climate awareness into national development and climate change plans.

### **The Tanzania Youth Environmental Network (TAYEN)**

is helping young Tanzanians better understand climate change through debates, discussions, screening films and essay writing competitions in youth environmental clubs in schools and communities. This allows the youth to learn about climate change impacts and address adaptation techniques, e.g. through tree planting activities. Members develop and establish community tree nurseries, train youth to establish their own tree nurseries and conduct tree-planting campaigns in deforested areas.



**UNESCO's educational kit on combating desertification** was developed in collaboration with the Secretariat of the United Nations Convention to Combat Desertification (UNCCD). Part one looks at the situation by providing a general presentation of desertification and Part two looks at the solutions to solve the problems of desertification. It is available in Arabic, Chinese, English, French, German, Hindi, Mongol, Russian and Spanish.

**The African Climate Policy Centre** forward-looking policy think-tank established by the UN Economic Commission for Africa – addresses the impact of climate change by assisting African countries to mainstream climate change into their development strategies and programmes. It also aims to contribute to poverty reduction in Africa through policy formulation and analytical studies on adaptation and mitigation of climate change impacts on Africa.

**The Mulunguzi Aspanet Club on fighting climate change** in Malawi is addressing climate change through tree planting activities. The student members of this club have been involved in planting about 300 trees on the school campus. A blog is set up to raise awareness about how to tackle environmental problems affecting our globe.

**The Green Friends** of the Youth Education Network (YEN) are working with students in urban and rural schools to increase youth involvement in tackling climate change. YEN's "Green Friends of YEN" consists of students of all ages who learn, discuss and share knowledge about the environment among themselves and their communities so that positive sustainable behaviour can be created among people that enhance peaceful living. The group expresses themselves through song, drama and writing about sustainable consumption as a means of tackling climate change. An essay competition was organized among the youth in Kibera slums in Nairobi so that their views about climate change were captured.



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**12**

**SAVE WATER,  
SAFE WATER**



**“A fish is the last to acknowledge the existence of water.”**

*[West African proverb]*

We drink water and we use to wash ourselves, our dishes, our clothes, our homes and for those who have cars, our cars. The human body is largely made up of water. Food crops won't grow without it. In fact, water is vital to the survival of all living organisms. You can do without food for about one month, but only five to seven days without water.

About 97% of the Earth's water is ocean water, unusable to man. Less than 1% of the world's water is available for drinking and other purposes, including agriculture and industry. This supply comes from rivers, dams and ground-water sources. Given the importance of water, the United Nations proclaimed 2005-2015 as the International Decade for Action 'Water for Life'.<sup>128</sup> The challenge of this decade is to focus attention on action-oriented activities and policies that ensure the long-term sustainable management of water resources, in both quantity and quality, and include measures to improve sanitation.

### Access to water in sub-Saharan Africa

Many African countries are facing water shortages due to natural and human factors, which are further exacerbated by high population growth. An estimated 61% of sub-Saharan Africa's population have access to improved water supply sources and over 40% of all people globally who lack access to drinking water live in sub-Saharan Africa.<sup>129</sup> By 2020, some 75-250 million Africans will live in water-stressed areas, while an increase in extreme rainfall events will adversely affect soils and settlements, including cities. In some parts of Africa, women and children carry up to 20 litres of water, often for more than five hours, from the nearest water supplies. Most Africans living in rural areas use 30 to 40 litres of water per day. In an urban South

128 *Why a 'Water for Life' Decade?* United Nations Department of Economic and Social Affairs.

129 *Millennium Development Goal drinking water target met.* UNICEF/WHO (March 2012).

African household of five people, the average usage can raise up to 250 litres. Meanwhile, in industrialised countries such as the United States, an urban home of 4.6 people uses 640 litres of water per day.<sup>130</sup>

Africa accounts for 10% of the total global freshwater supplies, but the water is not distributed evenly, with many African countries suffering from frequent water shortages. Some 14 African countries, mostly in the Sahel region and the Horn of Africa, suffer from water scarcity, and 11 additional countries will join them in the next 25 years. On the other hand, the volume of underground water is 100 times the amount existent in the surface, and sub-Saharan Africa only uses 5% of its annual renewable freshwater.<sup>131</sup> Yet, Africa's access to water supplies is the lowest in the world, in rural and urban settings.

### Water and agriculture

Africa is highly dependent on water:

**“The economies of most African countries depend largely on rain-fed agriculture as the major driver of economic growth. It represents about 20% of the region's GDP, 60% of its workforce, 20% of its export goods, and 90% of rural incomes. Agriculture is by far the largest user of water, accounting for about 87% of total water withdrawals. Investing in agriculture, and especially in irrigated farming, is at least four times as effective at raising poor people's incomes as is investment in other sectors”.**

*[UN World Water Development Report, 2012]*

Another challenge that needs urgent attention in Africa is inefficient irrigation. For example, irrigation in Southern Africa, which represents 69% of total water consumption,

130 *Water Web: Directory of water websites.* *Global Environmental Outlook 5*, UNEP (2012). *Water consumption in Africa*, and *Typical household water consumption*,

131 *Huge water resource exists under Africa*, BBC News (2012).



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is estimated to be less than 50% efficient.<sup>132</sup> If irrigation practices could be made just 10% more efficient across the region, 2.5 billion cubic meters would be saved annually. These savings could provide water to supply additional people in the region who currently do not have access to water services.

Africa's agricultural productivity is the lowest in the world, in part because of the under-usage of irrigation. Less than 5% of Africa's agricultural lands – some 6 million hectares concentrated in a handful of countries – are equipped for irrigation.<sup>133</sup> In this small land area, almost a quarter of the total value of Africa's agricultural output is produced, showing the high potential of irrigation to improve the region's agricultural productivity.

## Water and industry

Industries and businesses also consume a lot of water in Africa, particularly the African beverages industries. African breweries alone are consuming 75-200% of water above

<sup>132</sup> *The Potential for Water Conservation in Southern Africa*, (IRN, EMG, GEM, Jan 2000).

<sup>133</sup> *Africa's agricultural productivity is lowest in the world – in part because of the underuse of irrigation*, African Development Bank Group.

the global benchmark. The African Beverage Industry Water Savings Initiative (ABIWSI) is implemented in 18 companies in seven countries (Egypt, Ethiopia, Kenya, Rwanda, Tanzania, Uganda and Zimbabwe). Participating breweries managed to reduce their water consumption from an average of 16-22 hL water/hL beer to 8-11 hL water/hL, and participating soft drinks companies have reduced the water consumption to an average of 4.5 hL water /hL beverage.<sup>134</sup>

Companies use different water awareness and reduction measures that work for them, for example, Uganda's Crown Beverages Limited does continuous monitoring of leaks and stopping them as soon as they are found, reduces water usage in toilets by reducing the volume per flush and has a water use awareness campaign programme.

## Sanitation in Africa

In 2011, there were 2.5 billion people who did not use an improved sanitation facility worldwide. Sanitation coverage is lowest in sub-Saharan Africa, where 70% of people do not have access to improved sanitation.<sup>135</sup> In fact, sanitation coverage only increased from 35% in 1990 to 40% in 2010. In 2012, one in five people in Africa practiced open defecation, compared to one in three in 1990.<sup>136</sup>

Inadequate sanitation causes many health problems, including diarrhea. Globally, diarrhea is the leading cause of illness and death, and 88% of diarrheal deaths are due to a lack of access to sanitation facilities.<sup>137</sup> In sub-Saharan Africa, diarrhea is the third biggest killer of children under five years old.<sup>138</sup>

<sup>134</sup> *ABIWSI programme*.

<sup>135</sup> *Water, Sanitation and Hygiene*, UNICEF.

<sup>136</sup> *A Snapshot of drinking water and sanitation in Africa – 2012 Update*.

<sup>137</sup> *Water, Sanitation and Hygiene*, UNICEF.

<sup>138</sup> *Statistics*, WaterAid.

**“Lack of sanitation facilities is an even greater challenge to water management in Africa. Many water bodies and other sources are polluted with microbiological organisms from indiscriminate disposal of excreta, impairing human health through waterborne diseases such as diarrhoea, cholera, trachoma, and others. Water-related vector-borne diseases, such as malaria, are also a major health concern.”**

*[UN World Water Development Report, 2012]*

### The way forward

Water must be managed very wisely, especially now that climate change and population growth can make things worse in the near future. By 2025, two thirds of the world’s population could be facing serious water shortages. Recent studies draw attention to the economic value of freshwater ecosystems such as wetlands, lakes and rivers. Despite their importance, freshwater ecosystems are seriously threatened. In South Africa, 82% of the rivers are threatened and 44% are critically endangered.<sup>139</sup> In the Cape Floristic Region, agriculture (pesticides, clearing of vegetation), wastewater discharges related with urbanisation growth, and dam constructions, are some of the threats facing freshwater ecosystems.<sup>140</sup> Every day, people put the ecological balance in peril by pumping pollution into different stages of the water cycle: from dumping sewage into the sea to pouring dangerous chemicals into our rivers.

These statistics are shocking enough, and there is every possibility that we will have a disaster of unprecedented proportions on our hands unless water conservation and management are taken seriously. Appropriate wastewater reuse practices might be one way to do it, and some



© UN Photo/Ky Chung

<sup>139</sup> *The Status and Distribution of Freshwater Biodiversity in Southern Africa*, IUCN.

<sup>140</sup> *WWF Freshwater Statistics, Identifying and protecting threatened freshwater ecosystems in the Cape Floristic Region, South Africa*, (2007).



northern African countries, along with Namibia, Zambia and South Africa are pioneers in it.

- Are you still thirsty for knowledge on water? Visit UNESCO'S Water Portal at [www.unesco.org/new/en/natural-sciences/environment/water](http://www.unesco.org/new/en/natural-sciences/environment/water) or other relevant sites such as: [www.thewaterpage.com](http://www.thewaterpage.com) and [www.gpa.unep.org](http://www.gpa.unep.org)

**“The achievement of all the Millennium Development Goals... hinges on the quality and quantity of available water as water plays a disproportionately powerful role through its impact on, among other things, food production and security, hygiene, sanitation and health and maintenance of ecosystem services.”**

*[Achim Steiner, Executive Director of UNEP]*



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## Stepping-stones

We can make a difference by making efforts to change how we use water. What can we do to save water?

- Consider your **daily water use** and how you can improve it.
- Learn about **hygienic methods** to keep water safe.
- **Don't dump** anything into rivers or into the sea.
- Participate in **community actions** to help gain access to safe running water in your house.
- Learn about **cooperative models of water management** in communities.
- Explore the possibility of **rainwater harvesting** at home or at school. Rainwater harvesting involves collecting rainwater, which is stored in tanks and often used for gardening or domestic use.
- Have a **shower**, not a bath. On average, a bath uses twice as much water as a shower.
- When replacing **toilets** and **washing machines**, ask for models with low water-use.
- Wash **clothes** less often. Sometimes clothes are not really dirty, they just need airing or freshening up. Your clothes will last longer too.
- Get information about the companies that **pollute** a lot and participate in campaigns to request them to have more sustainable water practices.
- If you are involved in **agriculture**, explore ways to make water consumption more sustainable through efficient irrigation.
- Don't flush but throw away your **tampons, sanitary towels, diapers and condoms**, especially if you live in an area where sewage is pumped untreated into the sea. Think about that next time you go for a swim in the river or ocean!
- Never pour **household chemicals** (such as oil, turpentine and paint remover) down the drain.

### **The Economics of Ecosystem and Biodiversity's Water and Wetlands Report**

(2013) highlights the urgent need to focus on wetlands as natural solutions to the global water crisis. Although wetlands, which cover more than 131 million hectares in Africa alone, provide clean drinking water, facilitate irrigation for agriculture and support biodiversity, they are destroyed at an alarming rate. An estimated 50% of wetlands were lost in the 20th century alone because of intensive agricultural production, water extraction, urbanization, infrastructure and pollution. This report explains how investing in wetlands is a crucial part in the future development agenda for water.

### **The Democratic Republic (DR) of Congo**

is Africa's most water-rich country, possessing over half of Africa's water reserves, yet 74% of its population (51 million people) lacks access to safe drinking water. UNEP conducted a water assessment between 2009-2011 and found that inadequate water and sanitation in DR Congo's rapidly expanding urban centers is due to insufficient, aging and overloaded networks. In 2012, UNEP launched a pioneering water initiative to protect the supply of safe water to Kinshasa. This project allows communities to lead the discussion and coordinate water priorities and implement practical measures to protect their water supplies.

**The Water Project** is a non-for-profit organization working in Burkina Faso, Kenya, Rwanda, Sierra Leone, South Sudan and Uganda to help communities find access to safe water and sanitation by funding water wells, building small dams, collecting rain-water in large tanks, and undertaking other safe water projects. The Water Project has developed **teaching tools and resources** about water for Grades K-12

### **Enhancing sustainable livelihoods of communities living next to the Niger River in Mali**

is a project developed by UNESCO and financed by the European Commission. It encourages local communities, which live close to the River Niger, to take care of the river by not polluting it and by learning sustainable ways of fishing.

### **Participatory land and water management in Ed Debba Community**

brings together local communities in the Northern State of Sudan with the Forest National Corporation to protect their environment and enhance their quality of life. Local people who live on flat land along the Nile River, which is surrounded by the desert, have been trained to grow shelterbelts, stabilize mobile dunes, to protect farm lands and homes from burial by sand and to protect the water from the river.



Perkin Oleksii/Shutterstock.com

**13**

**PURCHASE  
WITHOUT PAIN**



**“If you are neutral in situations of injustice, you have chosen the side of the oppressor.”**

*[Desmond Tutu, Nobel Peace Prize winner]*

We live in an unequal society where some people have the economic means to buy as much as they want and others live under the poverty line; they cannot consume enough to meet their basic needs. Sustainable consumption is not just about the environmental cost of the way we produce and consume; human and social costs must be considered too.

Many of the materials used for countless items that end up in the shops around the world are from Africa and other parts of the developing world. Africa is one of the richest continents in the world in terms of natural resources, many of which are extracted in Africa and transformed into products in other parts of the world. Products are also produced in Africa and this is because multinationals often find cheap labour in developing countries. But the deal has to be fair to everyone. Sustainable consumption has to uphold social justice and respect basic human, social and economic rights, which should be available to everyone and exclusive to no one.

## What is child labour?

Child labour is a clear example of why it is necessary to look at the conditions and the basic rights of the people involved in producing and manufacturing goods. The term “child labour” is often defined as work that deprives children of their childhood, their potential and their dignity, and that is harmful to physical and mental development.<sup>141</sup> The United Nations defines youth as those aged between 15 and 24 and children are those aged under the age of 14. However, Article 1 of the United Nations Convention on the Rights of the Child defines ‘children’ as persons up to the age of 18 because it was hoped that the Convention would provide protection and rights to as large an age group as

141 *What is Child Labour*, ILO.

possible and because there was no similar United Nations Convention on the Rights of Youth.<sup>142</sup>

According to the International Labour Organization (ILO), 168 million children worldwide are in child labour; that’s 11% of the child population as a whole. More than half of them, 85 million, are in hazardous work, which is work that jeopardizes the physical, mental or moral well-being of a child. While the largest absolute number of child labourers is found in Asia and the Pacific, sub-Saharan Africa is the region with the highest incidence of child labour with more than one in five children in child labour.<sup>143</sup>

In Africa alone, numbers are rising by 1 million children a year and are on course to top 100 million by 2015. As a matter of fact, Africa has the greatest incidence of economically active children with 41% of Africa’s children at work, and more than 30% of children between the ages of 10 and 14 as agricultural workers.<sup>144</sup> ILO reports that in Africa, 38.7 million children aged 5 to 17 are in the worst forms of child labour, which include child trafficking, use of children in armed conflict, small-scale mining, hazardous work in agriculture, industry and services, in the informal economy, commercial sexual exploitation and domestic labour.<sup>145</sup>

The Minimum Age Convention (1973) set the general minimum age for admission to employment or work at 15 years (13 for light work) and the minimum age for hazardous work at 18 (16 under strict conditions. This Convention No. 138 provides the possibility of initially setting the general minimum age at 14 (12 for light work) for countries with economies and education facilities that are insufficiently developed.<sup>146</sup>

142 *Youth FAQs: What does the UN mean by youth and how does this definition differ from that given to children?* United Nations Department of Economic and Social Affairs (DESA).

143 *Marking progress against child labour: Global estimates and trends 2000-2012*, (ILO), vii.

144 *Child Labour in Africa*.

145 *Child labour in Africa*, (ILO).

146 *International Labour Standards on Child Labour*, (ILO).



## Tackling child labour

The strong link between poverty and child labour is one of the factors that lead many children, including African children, to work to support their families. In 2005, during the peak coffee picking season in Kenya, it was estimated that up to 30% of the pickers were younger than 15.<sup>147</sup> In many African countries like Zimbabwe, many children work in the mining sector. Subcontractors often use child labour to mine items like chromium and gold panning. Most of the time, safety standards are non-existent and no protective clothing is available for workers. However, this is not just a problem in Africa.

Some figures about the situation of child labour in Africa show the big magnitude of the problem: Rwanda has an estimated 400,000 child workers. In Tanzania, some 4,600 children are estimated to be working in small-scale mining. In Kenya, 1.9 million children, between the ages of 5-17, are working children, and only 3.2% of them have attained a secondary school education. Zimbabwe has more than 5 million children that are forced to work.<sup>148</sup>

<sup>147</sup> *Child Labour in Africa.*

<sup>148</sup> *Child Labour in Africa.*

In some countries, children are also sometimes involved in labour-intensive work that does not require specific skills but where small hands are an asset, such as carpet weaving, sewing and making matches. They are often exposed to dangerous working conditions and, being physically vulnerable, often fall ill. They work long hours, often receive little or no schooling and are paid a small amount.

The sad fact is that there are many poor families in Africa and worldwide who depend on the earnings of their children. Many African countries are experiencing an increase in the number of child-headed households, mainly because of diseases such as HIV/AIDS that continue to take the lives of adults and parents, leaving millions of African children playing the adult role. This involves acting as heads of households under the weighty burden of economic challenges. Many children are out of school, having to work to be able to provide for their siblings and bed-ridden parents. Some policymakers believe that work plays an important and positive role in children's lives and in their relations with their families. Tackling child labour is complex but any workable solution must not only include the families of the children involved, it must also ensure that the child comes first.

Child labour declined by 3% between 2006 and 2010 and the largest reduction was among 5-14 years old children, especially girls. But, this decline is slow particularly if the goal of eliminating worst forms of child labour by 2016 has to be met, even more in the case of Africa, which is the region with less progress. Governments can play a vital role to meet the goal by providing access to quality education, and helping families so they keep their children at school.<sup>149</sup>

## A missed opportunity

Working has an impact on a child's physical health and safety. It often means their rights are ignored and, crucially, they are deprived of their chance to receive an education. In sub-Saharan Africa, 47 million youth (aged 15-24) are illiterate, 21 million are not in school, and 32 million

<sup>149</sup> *The State of Child Labour Today*, (ILO).

primary education aged children are not in school.<sup>150</sup> As a matter of fact, half of the world's out-of-school children live in sub-Saharan Africa.<sup>151</sup> One of the UN Millennium Development Goals (MDGs) strives to achieve universal primary school by 2015. In 2010, enrolment in primary education in developing countries reached 90%, up from 82% in 1999, which means more children than ever are attending primary school.<sup>152</sup>

While sub-Saharan Africa has made striking progress towards education, for example, 17 of 41 countries with data in sub-Saharan Africa have achieved gender parity in primary education, there is still one challenging reality. The majority of the world's out-of-school children (53%) are girls,<sup>153</sup> and this is the case in sub-Saharan Africa too where almost 12 million girls may never enrol.<sup>154</sup> Girls face a unique set of barriers to education, such as child marriage, early pregnancy, and expectations related to domestic labour, unsafe travel and a lack of sanitary facilities.<sup>155</sup> Getting girls into schools involves changing attitudes towards girls and household practices as well as keeping girls in school once they reach puberty.

Without education, the chances of young people escaping low-paid jobs and poverty are drastically reduced, which reduces the 'human capital' needed to help economies and societies to grow. Providing every child in the world with a primary education would cost an extra US\$6 billion, the same as four days of global military spending.<sup>156</sup>

Adults also suffer from lack of education that hinders their opportunities to break the circle of poverty that they and their families live in. About 773 million people, one in four adults in the developing world, cannot read or write.

150 *Education for All Global Monitoring Report 2010: Reaching the marginalized. Regional fact sheet – Sub-Saharan (2010) Africa.*

151 *Education for All Global Monitoring Report: Policy Paper 04 (2012).*

152 *Millennium Development Goals: Goal 2: Achieve Universal Primary Education.*

153 *Education for All Global Monitoring Report: Policy Paper 04 (2012) (p.5).*

154 "Education for All Global Monitoring Report 2010," UNESCO (2010), Table 5. p. 1. <http://unesdoc.unesco.org/images/0018/001866/186606E.pdf>

155 *Global Education First Initiative.*

156 "UNESCO Institute for Statistics," [www.uis.unesco.org/Pages/default.aspx](http://www.uis.unesco.org/Pages/default.aspx)



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Two thirds of them are women. In sub-Saharan Africa, 176 million adults cannot read and write.<sup>157</sup>

## Consumer awareness

Consumer awareness, challenging the policies of governments and companies, and not buying products unless we are convinced they have been ethically produced, free of child labour, can all make a difference. Consumers can also turn to the growing presence of fair trade organizations, which guarantee that their products are both environmentally friendly and produced without exploitation.

Think about the products that African youth consumers are buying and. Let's look at some characteristics based on insights from a 2012 survey of 13,000 African youth consumers in 10 countries, with a concentration on the largest African cities:<sup>158</sup>

- *Online and tech-savvy:* Mobile technology is important to African youth, with 98% of them having an

157 "Adult and Youth Literacy: Global Trends in Gender Parity," UIS Fact Sheet, September 2010, No. 2, UNESCO Institute for Statistics [www.unesco.org/education/ild2010/FactSheet2010\\_Lit\\_EN.pdf](http://www.unesco.org/education/ild2010/FactSheet2010_Lit_EN.pdf)

158 *Daring dreamers: Today's (and tomorrow's) African youth consumers*, McKinsey & Company (2012).



active SIM card and 58% having an Internet-capable phone. African youth are increasingly purchasing **electronics**, like phones that have features such as cameras, Bluetooth and music players.

- *Image-conscious:* About 42% of those surveyed say they always buy the latest fashion items in **clothing** even if it costs more.
- *More brand conscious:* More than 54% of those surveyed base their **grocery** (food) purchasing decision on brand loyalty, due to the belief that popular brands are of higher quality.

Child labour is just a part of the broader issue of working conditions, human rights, gender inequality and the need to respect developing countries' right to a dignified and sustainable existence. Keep these in mind as you consume.

There is a strong link between sustainable consumption, the need to secure basic human rights and promote development. Poverty and environmental damage (through deforestation and overgrazing, for example) feed off each other and have a domino effect on human rights and development for current and future generations.

There are several initiatives on the Internet to help stop child labour. To find out more about human rights, what they encompass and what's going on and where, visit: [www.amnesty.org/en/how-you-can-help](http://www.amnesty.org/en/how-you-can-help), [www.hrw.org](http://www.hrw.org), [www.ituc-csi.org/](http://www.ituc-csi.org/).

Governments have a duty to protect all the rights of their citizens. The private sector as well is increasingly cognizant that their right to operate is based on working with the community. Corporate Social Responsibility actions are becoming increasingly mainstreamed in global companies. Sadly, there are all too many instances where human rights are still abused and ignored. Increasing awareness means that more people are beginning to question exploitative labour practices.

The boycott, as a campaigning tool, is gaining popularity via the web. Before boycotting, it is important to inform



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yourself on the possible outcomes and whom it will hit the hardest: is it the company or the workers you are trying to protect? Demanding transparency and full disclosure from companies is fundamental to ensuring that they don't just move and carry on unfair practices elsewhere. The call for transparency can channel consumer action towards sharing responsibility and common aims .

*For more information successful boycotts:*

[www.ethicalconsumer.org/boycotts/successfulboycotts.htm](http://www.ethicalconsumer.org/boycotts/successfulboycotts.htm)



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## Stepping-stones

The following suggestions are intended to help you shop ethically:

- Consider your **purchasing habits**: is child labour used in some of the items?
- Choose goods made and/or distributed by manufacturers and retailers with clear ethical policies and **codes of conduct**. Make sure that the **standards of the International Labour Organization are respected**: freedom of association, the abolition of forced labour, equality and elimination of child labour.
- Keep your favourite brands under continuous **scrutiny**; contact your local consumer group to find out more about them. Join web campaigns to improve manufacturing employment practices.
- Take into consideration the **ethical policy** of companies. Inform yourself about producers who underpay their workers or use slave labour, or whose suppliers support **slavery**. Check anti-slavery organizations' publications and websites such as [www.antislavery.org](http://www.antislavery.org).
- Whenever possible, choose products/services labelled '**NO child labour**'.
- Whenever possible, choose products/services labelled '**NO animal testing**'. (See following chapter.)
- Develop your critical sense towards products/services that use **misleading claims**. (Against human and animal dignity (e.g. promoting violence, sexual exploitations, slavery, etc.).)
- Exchange **information** and **experiences** about ethics and goods with other consumers.
- **Buying locally produced goods** often avoids the impacts of long distance transport, and also helps support local jobs and communities.





### **Combating child labour in the cocoa industry**

was made a reality through the 2010 Joint Declaration to Support Implementation of the Harkin-Engel Protocol, which was signed by the governments of Ivory Coast and Ghana and by cocoa industries. The declaration commits to reduce the worst forms of child labour by 70% by 2020. Such forms of child labour include slavery, trafficking and prostitution. Some of the projects to be developed include conducting child labour surveys, educational programmes and enforce laws to protect the children from the worst forms of child labour.

### **Building a future for former child soldiers**

is one of the goals of the International Rescue Committee, which works to reintegrate child soldiers into their families and society. Since 1999, it has helped some 2000 former child soldiers in Sierra Leone, and reunified 1157 of them with their families. To help them integrate in their communities, the organization offers skills training workshops, vegetable gardening, youth clubs and cultural performance groups. In Uganda, the International Rescue Committee, together with local communities, traces families and involve them in reintegrating and accepting the children.



**Malawi's Mphamvu Kwa Achinyamata Clubs** ("Power to the Youth" clubs) is a school-based HIV and AIDS prevention education programme. Club activities include community drama and action plans for communities to increase enrolment in school for AIDS orphans, girls, children with disabilities, and out of school youth. Additional activities include vocational skills training in beekeeping, animal farming, demonstration gardens, compost manure making, maintaining and cleaning health centres, and providing food, clothing and shelter to the needy to promote community health. Every club has an average of 50 members, and in 2008 there were more than 175 clubs spread across the country.

**The Seeds for a better future** pilot project in Kenya, Uganda, and Tanzania is a good example of a successful, community-based child labour programme. Children living on or near agricultural plantations in East Africa stop going to primary school in order to work on plantations, look after their families, or to find other jobs in neighbouring towns. Since the project was set up by the American Centre for International Labour Solidarity's in 1999, many children have gone back to school. To help families with the related costs, over 150 local self-help groups based on micro credits have been set up. Changing attitudes about child labour at the grassroots level is key to this project's success. By involving families, village communities, teachers, employers and trade unions, the aim is to create an anti-child labour culture and a monitoring system that is community-based.

**Teaching children about their rights** is part of a children's board game, which UNICEF distributes amongst children in Benin, to help them learn their rights to education and to protection from exploitation. The game mixes parts of Monopoly and Trivial Pursuit, and competitions are organized among the 21 primary schools. UNICEF also works to prevent child labour by partnering communities and religious leaders, and improving education by providing schools with supplies, furniture, and latrines.

**Single teenage mothers of Uganda are going back to school** thanks to the African Rural Development Initiative, which created a project where a goat is provided to girls for income generation. After six to eight months of giving the girls a goat, the first-born female goat is returned and the girl keeps the others. The project offers diverse benefits: economic gains from selling of the goats, nutritious milk from the animals for the girls and their children, and activities such as group meetings aimed at offering counselling to raise awareness about the importance of going back to school and on how to make it possible. So far, 36 girls went back to school, and one of them reached the university level.



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**14**

**LIVE AND LET LIVE**

**“When elephants fight, the grass gets hurt.”**

[Swahili proverb]

The right to a dignified existence is not exclusive to humans. An awareness of our interrelationship with nature including wildlife, and the consequences of human activity for ecosystems, is a key element in understanding sustainable development.

This section explains the consequences of these unsustainable practices in Africa. It is up to individuals to take decisions in line with their lifestyle choices and priorities within the context of sustainability. Our human activities affect wildlife and ecosystems in multiple ways; e.g. streams full of toxic chemicals from industrial processes and pollution that poisons soils and waterways, while killing plants and animals.

## Unsustainable human practices

First, unsustainable human practices have immense impacts on animals and plants and their health and survival. Urban, industrial and agricultural expansion is causing problems to the migration patterns of many birds, thereby endangering their survival. An increase in pollutants, electricity power lines and a degraded habitat are at the core of this problem. This habitat loss, combined with droughts and excess hunting, is threatening the lives of diverse animal species, such as the long-necked antelope in Somalia, Ethiopia and Kenya. Logging and mining in forests are also a big threat to animals and wildlife such as monkeys in Congo and more than 20 species of primates in the forests of West Africa. The use of animal skin such as the leopard for dressing also causes enormous pressure on wild life.

According to Havocscope, which provides global black market information, illegal wildlife trade value is \$19 billion, and nearly 100 African elephants are poached per day.<sup>159</sup> About 95% of the elephant population had been killed during the last 100 years and at the end of 2013,

159 *Wildlife Trafficking*, Havocscope.

an estimated 500,000 African elephants were living in the world. The ivory collected from elephants in Africa is sold in markets in Asia, where ivory is sold for \$850 per kilo and elephant tusks are sold for \$1,800 per kilo in Vietnam.

Second, unsustainable human practices have disastrous consequences on land and river systems. Lake Victoria, the largest freshwater lake in Africa and the second in the world, has areas under threat because of human-caused pollution. Forests are reduced and degraded due to their transformation into farmland. This is the case for the Mau Forest, which is considered the largest forest left in Kenya and the most important of Kenya’s five major “water towers,” with some 30 million people depending on the water sources originating in the Mau. But in the past 15 years, more than 100 000 hectares - one quarter of the protected forest reserve - have been settled and cleared, triggering drought and drying the rivers that flow from the forest, which affects Kenya’s harvests, cattle farms, hydro-electricity and so forth.<sup>160</sup> For many years, UNEP has been supporting the Government of Kenya in improving the management of the Mau Forest Complex. Through UNEP’s activities, with funding from the United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation (UN REDD), more than 21,000 hectares of forest have been repossessed and 10,000 hectares have been rehabilitated in the Mau, while alternative livelihoods are also being promoted.<sup>161</sup>

Third, unsustainable human practices have impacts on plant diversity and degrade forests. Extreme temperatures that last longer than usual contribute to desertification and the destruction of vegetation. About 69% of the plants found in the Namib Desert can only be found there. These plants are currently under threat due to increased grazing, agriculture and mining. The uncontrolled harvesting of medicinal plants is also threatening its survival and the maintenance of the soil and vegetation cover. Many Atlas Mountain areas in northern Africa are suffering from this problem. The losses are not only ecological; cultural practices and indigenous knowledge related to the use of plants for medicine, food or tools risk disappearing

160 *Kenya’s heart stops pumping*, BBC News (2009).

161 *UNEP Portrait of Kenyan Forest Activist among Winners of First International Forest Photograph Contest*, UNEP (2013).





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together with biodiversity. Properly regulated and valued plants and forests are a relevant economic source for communities, and are also a source of spiritual, mental and physical well-being.

## Protecting the forests

**“Every single one of us, all seven billion, has our physical, economic and spiritual health strongly tied to the health of our forest ecosystems...people and our collective actions are the key to a sustainable future.”**

*[Jan L. McAlpine, Director, United Nations Forum on Forests, 2011]*

Farming, human settlements, mining, and large-scale logging are at the core of massive deforestation in Africa. For example, the once extensive Mau Forest has suffered serious degradation. In fact, the situation is so severe that it has threatened the existence of game reserves such as the Masai Mara, and drying rivers such as the Sondu Miriu and the Mara. The exploitation of forests also has an impact on hundreds of animal species, which are put at risk of

disappearing together with their natural habitat, such as the Seychelles Scops Owl (Syer) in the Seychelles Islands.

The importance of forests on the global economy is growing, due to the use of forest products in industries such as pharmaceuticals or timber. Forests cover one third of the earth’s landmass, performing vital functions around the world. In fact, 1.6 billion people depend on forests for their livelihoods.<sup>162</sup> They play a key role in our battle against climate change. Forests feed our rivers and are essential to supplying water for nearly 50% of our largest cities. Forests are the most biologically-diverse ecosystems on land, home to more than half of the terrestrial species of animals, plants and insects. They also provide shelter, jobs and security for forest-dependent populations. Forests are very important for the economies of numerous African countries, as they contribute to tourism and timber or cottage. Yet despite their priceless ecological, economic, social and health benefits, we are destroying the very forests we need to survive. Global deforestation continues at an alarming rate - 13 million hectares of forest are destroyed annually, equal to the size of Portugal.<sup>163</sup>

The UNESCO Regional Postgraduate School for Integrated Management and Landscaping of Tropical Forests (École régionale post-universitaire d’aménagement et de gestion intégrés des forêts tropicales (ERAIFT) trains around 30 African specialists each year on how to manage tropical forests in a manner that is sustainable for both the environment and for the local communities.<sup>164</sup>

## Taking action

As consumers, we need to adopt sustainable practices in our treatment of farm animals and in our overall respect and responsibility towards species diversity. People are increasingly concerned about how animals are treated during the production process of goods (factory farming, cosmetics testing, etc.). Cruelty can be avoided by following some fundamental principles. Treat animals respectfully:

<sup>162</sup> *About Forests*, UNEP.

<sup>163</sup> *About Forests*, UNEP.

<sup>164</sup> *Regional Post-Graduate Training School of integrated management of tropical forests and lands*, UNESCO.

provide adequate food and shelter, ensure basic veterinary care and sanitary living conditions and never beat or force-feed.

Food production affects us all. We can choose to refuse products that have not been produced in a humane way. Choosing free range eggs and meat is better for the animal, but also better for the consumer: the hygiene and quality of meat and other products coming from industrial farms can sometimes be substandard.

We need to be concerned with our overall respect and responsibility towards species diversity. Humans share this planet with at least 15 million other species. All species play a role in building and maintaining the complex ecosystems that support all forms of life. Species are disappearing at an alarming rate. The current rate of extinction is unclear, but scientists put it at between 1,000 and 10,000 times more than it would be without uncontrolled industrial development. Visit [www.iucn.org](http://www.iucn.org) for more about this crisis.

The threat of extinction appears for a variety of linked reasons. Over-harvesting of plants and animals and their habitats, climate change, pollution, the introduction of alien species to ecosystems as well as disease all threaten the ecological balance between species.

Diversity is a precious resource: the interplay and interdependence of different species need careful management. Nearly 30% of all medicines found in pharmacies have been developed from wild plants and animals. Many of these exist in unique and, unfortunately, threatened ecosystems. Maintaining biodiversity is pertinent at many levels: paradoxically, the areas of the world with the richest biodiversity, such as Africa, often also have the world's poorest populations. The challenge of this century is to preserve biodiversity while eliminating poverty.

## African wildlife and tourism

Tourists come to Africa to enjoy its cultures, food and, of course, its diverse wildlife. Through conservation tourism, people can experience wildlife in its own natural



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habitat. Tourism has also had a positive effect on wildlife preservation and protection efforts. In Africa, where many animal and plant species have already become extinct, countries have established protected wildlife reserves and put in place strict laws protecting the animals. Thanks to these measures, many endangered species are thriving again,<sup>165</sup> and tourists have the opportunity to learn about this when they visit the wildlife reserves.

For example, mountain gorillas, found in the Democratic Republic of Congo (DRC), Rwanda and Uganda, have endured uncontrolled hunting, war, disease, destruction of its natural habitat and capture for the illegal pet trade.<sup>166</sup> As a result of conservation efforts, the population of mountain gorillas increased from 620 in 1989 to 880 today. Uganda's Bwindi Impenetrable National Park and DRC's Virunga National Park are the main habitats harbouring mountain gorillas. In Uganda, thanks to gorilla tracking permits, which cost \$250, just three habituated gorilla groups of about 38 individuals can generate more than \$3 million in

<sup>165</sup> *Tourism and Environmental Conservation*, UNEP.

<sup>166</sup> *Mountain Gorilla*, WWF.



revenue per year.<sup>167</sup> This kind of valuable tourism revenue source can help to protect these critical habitats.

## Managing our resources

The world's leading scientists have developed the Convention on Biological Diversity (CBD), which favours a holistic approach and has been ratified by 192 countries. The convention, which has been ratified and accepted by all African countries, except for the newly created South Sudan, calls for international cooperation to conserve biological diversity, the use of biological resources in a sustainable manner, and to ensure that the benefits arising from their use are distributed fairly. The United Nations declared 2011-2020 as the UN Decade on Biodiversity.

Effective resource management means rethinking many sectors of human activity such as agriculture, fishing, tourism, education and health care. Protecting biodiversity does promote sustainable societies, particularly among indigenous peoples who best know the ecosystems closest to them.

Limiting the trade in wildlife is one way of protecting species. Only the trafficking of drugs and weapons exceeds the worldwide illegal trade in wildlife. The demand for

exotic pets, foods and medicines (such as tiger bone and rhino horn) fuels this trade and depletes populations. The Convention On The International Trade In Endangered Species of Wild Fauna and Flora (CITES) aims to ensure that trade in wild plants and animals does not pose a threat to their survival. CITES, which came into force in 1975, is an international agreement to which 179 Parties (countries) adhere voluntarily. Since the Convention entered into force, more than 30,000 species of animals and plants have been listed on its Appendices, from tigers and elephants to mahogany and orchids.<sup>168</sup>

*To find out more, visit TRAFFIC, the wildlife trade monitoring network:*

[www.traffic.org/trade](http://www.traffic.org/trade) and [CITES at www.cites.org](http://www.cites.org).

There are some success stories where species extinction or decline has been prevented: the African elephant is a well-known example. Between 1979-1989, poachers cut the African elephant population from 1.3 million to 625,000.<sup>169</sup> In 1989, CITES banned international trade in ivory to combat illegal trade in ivory, which caused dramatic declines in elephant populations throughout most of Africa in the 1970s and 1980s. This ban was successful in eliminating some of the major ivory markets, leading to reduced poaching and allowing some populations to recover.<sup>170</sup> Concerted government and wildlife protection group action has made possible an increase of elephant population in southern and eastern Africa, but other countries such as Chad and Democratic Republic of Congo, numbers still decrease. Other species also remain under threat, like the rhino. South Africa has been at the epicentre of rhino poaching. Despite increased law enforcement efforts, a record 448 rhinos were poached in South Africa in 2011 alone.

*For information on these and other species visit:*

[www.eia-international.org](http://www.eia-international.org)

Another important resource that we need to properly manage is fish. As the most traded commodity in the world,

<sup>168</sup> CITES: ensuring that species are not threatened by international trade, WWF.

<sup>169</sup> Time Europe, April 17, 2000 Vol.155 No.15.

<sup>170</sup> CITES: ensuring that species are not threatened by international trade, WWF.

<sup>167</sup> *Tourism and Environmental Conservation*, UNEP.





fish is extremely important to Africa's economic development, providing an important source of livelihoods. At the same time, the fish trade is also said to lead a decline in food security and a decrease in the availability of fish for the local population.<sup>171</sup> With about 80% of the world's fish stocks reported as fully exploited or overexploited,<sup>172</sup> there is an urgent need to have sustainable fisheries, particularly in a region like Africa, where an estimated 10 million people are involved in fishing and related activities.<sup>173</sup> Sustainable fishing practices will help restore damaged marine ecosystems, generate employment and provide livelihoods for millions.<sup>174</sup>

171 Béné, C. (2008), *Global Change in African Fish Trade: Engine of Development or Threat to Local Food Security?* OECD Food, Agriculture and Fisheries Papers, No. 10, OECD Publishing (p.2).

172 *General facts regarding world fisheries*, UN (2010).

173 *Achieving poverty reduction through responsible fisheries*, FAO (2008).

174 *Trade and Environment Briefings: Sustainable Fisheries*, UNEP (2012).



## Stepping-stones

The following suggestions are intended to help you shop without damaging biodiversity:

- Think about **what you buy** and make informed choices.
- Remember that some 'natural' products are not things to buy! These include **plants** or **animals** taken from the wild or goods derived from endangered species.
- When on holiday, check before you buy plant and animal products. Don't buy ornaments or other goods made from coral, tortoiseshell or other **endangered species**.
- When travelling abroad, think before you eat. It's a great part of the travelling experience to try **exotic foods**, but find out where the meat comes from, and avoid meat that comes from endangered animals.
- Are you crazy about seafood? Consider consuming less fish, or learn to choose your fish wisely – remember that nearly 70% of the world's fish stocks are now fully fished, over fished or depleted! In fact, according to scientists, the world's stocks of seafood will have collapsed by 2050 at present rates of destruction by fishing.
- Choose '**fair trade**' products (e.g. a number of manufacturers now offer chocolate and coffee that conserve the forest, don't use child labour or chemicals, and give the farmer a fair price).
- Buy products of the season or, if you can, buy **organic seasonal** produce. This will avoid pesticides that threaten both your health and the ecosystem.
- Learn about the existing **biodiversity in your area**, and how its protection can be economically productive for your community.
- Participate in **campaigns** to protect the biodiversity existing in your community.
- Dispose of household **chemicals**, waste oil and paint correctly: never dispose of them down the drain but use your local council's disposal facilities if possible.
- Compost waste: as well as reducing the burden on landfill sites, **compost heaps** can provide valuable **habitats** for wildlife.
- Whenever possible, choose **wood products** bearing the Forest Stewardship Council label, which shows they come from well-managed forests.

**The Green Belt Movement (GBM)** was created by Professor Wangari Maathai in 1977 to respond to the needs of rural Kenyan women who noticed that their streams were drying up, their food supply was less secure, and they had to walk further to get firewood. GBM encourages the women to work together to grow seedlings and plant trees to bind the soil, store rainwater and provide food and firewood. GBM communities have planted over 51 million trees in Kenya.

**Join the Billion-Tree Campaign and plant a tree!** This campaign, which involves hundreds of people, communities, business, civil society organizations and governments, aims to plant at least one billion trees world wide each year! Visit [www.plant-for-the-planet-billiontreecampaign.org](http://www.plant-for-the-planet-billiontreecampaign.org) to learn more!

**Africa Organics** shows us that beauty and sustainability can go hand in hand. Africa Organics' 100% natural hair and body care products use Africa's powerful natural and organic plant ingredients, such as Aloe Vera, Marula oil from the fallen fruit of the Marula tree or honey bush. The products are biodegradable and have not being tested on animals. When using such products, remember to keep them in a cool and dark place, and to use them with clean fingers. Since they are natural, they are less strong than those with chemicals!

**Madagascar's first community-run marine protected area** is a result of a solid partnership among the local community, international NGOs and research institutions working together to help promote biodiversity and natural resource management together with sustainable tourism by employing sustainable fishing practices in Andavadoaka. This village and its offshore islands have some of the most remote and bio diverse coral habitats in the region. The sustainable practices have helped to protect coral reefs, mangroves, sea grass beds and other threatened habitats along Madagascar's southwest coast. Now, there are 23 villages that have partnered to develop a wide network of community-run marine and coastal protected areas that span more than 800 kilometres of protected area in southwest Madagascar.

**All Pure Nature** makes natural cosmetic products for both skin and hair care. Based in Ghana, the company embraces environmental responsibility and is committed to being green while providing eco-friendly products, from its ingredients to its packaging. Their products are made from all natural ingredients like sheabutter, cocoa butter, formulated with pure natural oils and herbs. The company contributes to the community by providing continuous income to Shea butter farmers in northern Ghana.

**Mali's Biosphere Reservation Boucle du Baoulé** develops traditional practices to preserve animals and plants, such as identifying animals that are culturally important. Totem, sacred animals, and others that are not hunted or eaten are protected. There are also sacred trees and forests. The cultural and religious beliefs related to animals and plants play an important role for its protection. One example is the project on preserving biodiversity and elephants of Gourma, which led to the harmonious cohabitation between shepherds, farmers and habitat preservation.

### **Promoting ecotourism in Boma National Park, South Sudan**

is made possible through a partnership between the U.S. Agency for International Development, Wildlife Conservation Society, the South Sudanese Ministry of Wildlife Conservation and Tourism Wildlife. Together, these partners promote security and economic growth in South Sudan's Jonglei State. Boma National Park has one of the largest intact savannah ecosystems in eastern Africa, and the agreement trains local governments and communities to initiate ecotourism activities, and to preserve the area and its wildlife from unplanned development or wildlife poachers among others.

### **Good news for mountain gorillas in Rwanda.**

In 1985, there were less than 300 of these primates in Rwanda, but now, the number has grown to 800. These animals are now seen as a touristic attraction that brings income to the community, and as a result, there is an interest in protecting them, although traps for other animals or collectors willing to buy their body parts still put them at risk. Former Rwanda National Parks and the Tourism Office and the Rwanda Development Board have united their efforts to help educate former poachers to stop their activities and realize the economic benefit of keeping gorillas alive.

### **Beyond Expectation Environmental Project (BEEP)**

introduces youth back to nature, awakens and sustains their interest and concerns for our environment through a two-day environmental experiential learning on Table Mountain National Park in South Africa. Activities create access to the natural environment and educate youth about water conservation, preservation of forests, and climate change, and the scourge of litter and their own obligations to counter this threat. By encouraging youth to conserve natural resources and take pride in their environment, they are less likely to drift into gangster behaviour, as the natural settings can provide tangible health benefits and play a significant role in deterring crime.

### **The Green Economy in Biosphere Reserves (GEBR)**

project is a three-year UNESCO project that focuses on ensuring long-term conservation of biodiversity in three biosphere reserves in Africa - the Bia (Ghana) and Omo (Nigeria), and the East Usambara (Tanzania). With people living within, or in close proximity to the three sites, GEBR seeks to integrate their developmental needs and conservation objectives. In Tanzania, UNESCO introduced extracurricular activities through safe spaces/clubs that involve youth training in activities such as learning about biodiversity and tree planting. This will enhance knowledge to students who will be future custodians of environmental conservation.

### **The WWF ESD East Africa Programme**

works with youth community based organizations (CBOs) in the Lake Victoria Basin and Lamu Landscapes. In the Lake Victoria region, youth groups have formed river basin networks that drain into Lake Victoria to ensure the sustainable conservation and management of the catchment regions that drain into these rivers, which eventually drain into Lake Victoria. In Uganda, the youth CBOs from both upstream and downstream of the Katonga River have formed the Katonga Basin Youth Organisation to promote the conservation of the river basin. In Kenya, the Lake Victoria Youth Conservation Network and Busia County Youth Network have been established that have helped the youth have a voice in local and national forums to influence and support decisions that lead to sustainable management of natural resources.





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15

LOOKING COOL AND FAIR

**“African fashion industry is open and ready for business – and it can do this business differently – sustainably”.**

*[Hub of Africa Fashion Week 2012, Addis Ababa]*

For centuries, individuals or societies have used clothes and other body adornments as a form of non-verbal communication to indicate culture, occupation, rank, gender, sexual availability, geographic origin, class, wealth, and group affiliation. Fashion and lifestyles are therefore part of every culture. Specifically in Africa, clothes also have messages in their designs: history, symbolisms and/or commemorations are imprinted on them.

What we wear, how and when we wear it, provides others with shorthand to subtly read the surface of a social situation. When it comes to its commercialization, what we wear becomes fashion, which is also a language of signs and symbols. It is an international language, a sort of common art, through which a culture examines its notions of beauty and goodness.

*For more information;*

[www.fashion-era.com/sociology\\_semiotics.htm](http://www.fashion-era.com/sociology_semiotics.htm),

*Joanne Finkelstein, Chic Theory, in Australian Humanities Review, 1997: [www.australianhumanitiesreview.org/archive/Issue-March-1997/finkelstein.html](http://www.australianhumanitiesreview.org/archive/Issue-March-1997/finkelstein.html) and Roland Barthes, The Language of Fashion, Berg Publishers, Oxford (UK), March 2006, pp. 224.*

## What is fashion?

Fashion does not concern only clothing. Fashion is everywhere; it's what is happening all around us: it constantly deals with our ideas and behaviours. In fact, fashion embraces clothes, accessories, jewellery, hairstyles, beauty, body art, architecture and design, art and craft, music, and so on.

Fashion, by definition, changes constantly. The changes may occur more rapidly than in most other fields of human activity (language, thought, etc.). For some, modern

fast-paced changes in fashion embody many of the negative aspects of western societies: it results in waste of resources and encourages people to buy things they do not need. Others, especially young people, enjoy the diversity that changing fashion can apparently provide, seeing the constant change as a way to satisfy their desire to experience 'new' and 'interesting' things and of 'being smart.'

## What are clothes made of?

Most of the clothes in our wardrobes contain polyester, elastane or lycra. These cheap and easy-care fibres are becoming the textile industry's miracle solution. However, their manufacture creates pollution and they are hard to recycle (nylon takes 30 to 40 years to decompose). The 'natural' fibres like cotton are not 'clean' either: while cotton accounts for less than 3% of the world's farmed land, it consumes almost a quarter of insecticides and 10% of herbicides. The Pesticide Action Network says that cotton accounts for 22% of all insecticides used in agriculture – about US\$2.5 billion worth worldwide yearly.<sup>175</sup>

Sub-Saharan Africa, which grew almost 10% of the world's cotton production in 2012, is the world's fifth largest cotton exporter following the United States, India, Australia and Brazil.<sup>176</sup> In West and South-East Africa, around 2.2 million smallholder farmers cultivate cotton. Altogether, up to 15.4 million Africans directly depend on cotton farming for their livelihood.<sup>177</sup> In other cotton producing countries, cotton is grown on large plantations that are irrigated and it is harvested with machines. In sub-Saharan Africa, however, cotton is almost exclusively grown and harvested by hand by farmers, most of which are smallholders. Cotton is an important cash crop providing income for everything from education, health and housing to transportation. Cotton serves as a catalyst for industrialization and rising social welfare.<sup>178</sup>

<sup>175</sup> *Organic Cotton: A new Development Path for African Smallholders?* IIED (2005) (p.3).

<sup>176</sup> *Competitive African Cotton Initiative, Background Information.*

<sup>177</sup> *Competitive African Cotton Initiative, Background Information.*

<sup>178</sup> *The Importance of Cotton in Africa*, International Cotton Advisory Committee (2006).





## Young people and fashion

Everywhere - and sometimes despite very poor living conditions - young people are strongly influenced by fashion trends. Clothes and accessories encourage a feeling of social belonging within their group of peers of reference. And the advertising and fashion industries know very well how to exploit youngsters search for an identity.

- *Take a trip with Anita Roddick, The Body Shop's co-founder, into the worlds of activism, ethical business, human rights, environmentalism.*

Globalisation, and the universal icons it 'produces' through internet, cinema, magazines and music, plays a crucial role in this process: it allows major brands and names to advertise and - some would say - impose certain lifestyles and fashion expressions. As a result it seems that people - especially youngsters - wear, eat, act the same way everywhere. Nevertheless, this is not always the case.

In Africa, there are a number of regional fashion shows - 16 in 2011 alone - which showcase fashion from different parts of the region. One example is The Hub of Africa Fashion Week. Its 2012 theme was "Unite the Fashion Industry for Sustainable Development." Designers from Ethiopia, Nigeria, Mozambique, Angola, Democratic Republic of Congo, Ghana, Kenya, Uganda, Somalia and Tanzania created designs that emphasised eco-fashion

and sustainability.<sup>179</sup> The International Festival of African Fashion (Festival International de la Mode Africaine, FIMA) is also an expression of African fashion trends, which celebrated its ninth edition in 2012. The festival gathers some of the most renowned African designers, such as Tanzania's Mustafa Hassanali and Burkina Faso's Pathé Ouedraogo (Pathe'O), and also introduces Africa's young talents to the industry.<sup>180</sup>

## African fashion trends

Africa is also influencing global fashion trends and is experiencing a growth on the global market. African prints, motifs and textiles are increasingly used by international and well-renowned designers, such as Burberry, Gucci, Balenciaga and Vivian Westwood. *The African Fashion Week* has been brought to the renowned New York Fashion Week. *Vogue*, one of the most influential fashion magazines, recently featured two African women in its American version of its magazine, to highlight their African inspired wear: these include Ethiopian Julia Sarr-Jamois, fashion editor of *The Wonderland Magazine* and Nigerian Oroma Elewa, editor of *Pop Africana Magazine*.<sup>181</sup> The Internet is also playing an important role in promoting African Fashion on a global scale, with websites such as BellaNaija.com, from Nigeria, and ifashion.co.za, from South Africa.

For-profit joint ventures and partnerships are also emerging. *Indego Africa* has partnered cooperatives of women artisans in Rwanda with Nicolle Miller, an American clothing brand, in order to export the textiles and accessories they produce.

## Must I have it?

In places where consumption levels allow it, the need to pass the fashion test means spending your life dipping into a circle of diet, fitness, cosmetic surgery and other regimes, shopping in search of the ultimate clothing, mobile phones, iPod, cars, etc. These status symbols can be 'out' in

179 *Ethiopia's Hub of Africa Fashion Week's big focus*, The Africa Report (2012).

180 *FIMA 2011*.

181 *The Rise of the African Fashion Industry: Africa Dans La Mode*, Afribiz (2012).





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a season, and fashion victims are then pushed to buy the latest models within six months.

We should all be asking ourselves the question: Must I have it? Read Chapter 12 for some information on what many African youth consumers are buying. Here are some hints: electronics (mobile phones, which are the main source of Internet access) and clothing/apparel. African youth form a large percentage of the rising middle class and are increasingly seeking a wider choice of food, consumer goods and entertainment.<sup>182</sup> In fact, despite low-income levels, many young African consumers, who are progressively brand conscious, believe the quality of products is more important than pricing, and for fashion and cosmetics, quality is often linked with international brands.

182 *The Deloitte Consumer Review: Africa – A 21st century view*, (2014-15).

- *Do you want to look 'cool and fair'? Several 'sustainable fashion' magazines are available online: get inspired! [www.sustainablestyle.org](http://www.sustainablestyle.org), [www.lucire.com](http://www.lucire.com), [www.treehugger.com](http://www.treehugger.com), [www.springwise.com/want-more-fashion\\_beauty/](http://www.springwise.com/want-more-fashion_beauty/)*

At a first glance, nothing seems to be more opposed to one another than fashion and sustainable living: the first one is the symbol of superficiality, resources wastage, etc. and the second is strongly related to complex (and often 'unfashionable') issues like 'simple living,' preferring long-lasting goods, etc. But forgetting our prejudices, we discover that a strong link between fashion and sustainability is possible and helpful for both, making fashion a bit less superficial and sustainability a little more seductive.

### What is sustainable fashion?

Sustainable fashion, also known as eco-fashion, corresponds to a modern, holistic and ethical way of thinking. Sustainable goods can be as cool, competitive and appealing as the other goods. According to several surveys, more and more consumers appreciate this conscious approach, especially when purchasing high quality goods.

However, in many countries of sub-Saharan Africa, people with less economic resources, from both urban and rural areas, buy second-hand clothing sent to Africa from developed countries, particularly from North America, Europe and Asia. This is a practice that provides affordable clothing to millions of Africans and it also provides work to local people that collect and commercialise the clothes. Recycling also provides additional opportunities for many Africans, who create a number of everyday products from recycled goods, such as footwear made from recycled car tires, bags made from recycled t-shirts fabric, or jewellery made from recycled wires.

The clothing industry has a major impact on our lives and lifestyles as consumers. Whatever you wear, from your clothes to your shoes, connect you to the people who made them (wherever they live, close to you or far away). Clothes are culture and also a creative industry that opens

doors to economic development and enhancement of cultural diversity.

**“Linking business, culture and technology, the creative economy holds great potentials for developing countries to mobilize and transform untapped creative resources into growth.”**

*[The Creative Synergy Esprit Effect, UNIDO, 2011]*

With capacity building, facilitation of fair access to global markets, and international collaboration, a creative industry such as clothing could make its contribution to enhance sustainable livelihoods in the African continent. As a matter of fact, nowadays the clothing industry is concentrated mainly in developing countries, but in many cases, the objective is not sustainable development. Garment workers often have to work under poor conditions with a low standard of health and safety. About 90% of garment workers are women, working in factories, sweatshops or as home-workers. Many are teenagers and some are even younger. Their wages are often below minimum survival levels. Their working hours are long and often they have to work overtime and are refused the right to organise or join unions.

### Weaving change

Coalitions of NGOs, designers and trade unions like the Clean Clothes Campaign (CCC) seek to improve these conditions as much as possible by organising campaigns and other awareness-raising events, which draw the attention of both the media and the general public to the workers' conditions. CorpWatch, a non-profit investigate research organization, which seeks to advocate for multinational corporate accountability and transparency, is a good starting point for those that want to become more informed.

Thanks to these initiatives, many consumers have become aware of the problems that exist along the production



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chain. Workers in the production sector have also started defending their own interests. Unfortunately, real improvements in the working conditions of garment and sportswear supply chains have increasingly been limited to safety and health conditions in the first tier of suppliers.

International networks have been established amongst stakeholders with the aim of creating further improvements. More and more, organisations believe that codes of labour conduct can only make an effective and credible contribution to the working conditions if their implementation involves a broad range of stakeholders, including governments, trade unions, and employers' associations.

The clothing industry is also a cultural and creative industry that opens doors to economic development and enhancement of cultural diversity.

Many indigenous workers in developing countries have gotten together to form cooperatives to grow and manufacture their goods and products. Educational centres can also play a role: Fashion design schools ESMOD (Germany), LISOF (South Africa), Johari (Kenya),

the Buru Buru Institute (Kenya) and CPUT (South Africa), in cooperation with Trade Foundation, are organizing the "Cotton made in Africa Fashion Contest 2012" for the first time. The contest combines fashion and sustainability through innovating art made of raw cotton.

And what about companies with respect to sustainable consumption and production? Corporate Social Responsibility (CSR) has become a slogan entering the global debate. As companies have started to become more powerful worldwide, it is generally recognised that they have a social responsibility and that rules and regulations should be issued. Consumers now believe that companies should take responsibility for the labour conditions of their suppliers and for the environmental impacts of production all along the production chain, and put that policy on paper, usually in the form of a *Code of conduct*.

### Using organic materials

Some African cultures, which are still very active, such as the Swazi and Zulu, heavily rely on the use of animal skin such as the leopard, which has caused enormous pressure on wild life. In addition to having a major impact on our lives and lifestyles as consumers, the clothing industry has tremendous impacts on the environment. The textile industry is shared between natural fibres such as wool, silk, linen, cotton and hemp, and man-made ones, the most common of which are synthetic fibres made from petrochemicals.

**Synthetic fibres are made of polymers that do not occur naturally but instead are produced entirely in the chemical plant or laboratory, almost always from by-products of petroleum or natural gas. These polymers include nylon and polyethylene terephthalate, but they also include many other compounds such as acrylics, polyurethanes, and polypropylene. Synthetic fibres can be mass-produced to almost any set of required properties. Millions of tons are produced every year (in 2004, global production reached 34.6 million tons, up 8.9% compared to 2003).**

[[www.britannica.com/EBchecked/topic/361113/man-made-fibre](http://www.britannica.com/EBchecked/topic/361113/man-made-fibre) and [www.marketresearch.com](http://www.marketresearch.com)]

The new eco-friendly fabrics are made with materials that are claimed to cause less harm to the environment, like organic cotton and wool produced without synthetic chemicals and pesticides, or hardy, fast-growing plants like bamboo and hemp that are produced with relatively little pesticides and fertilisers.<sup>183</sup> In Africa, cotton is almost exclusively grown by smallholder farmers in Benin, Zambia, Burkina Faso, Malawi, Mozambique and Cote d'Ivoire. Given the number of brands using organic cotton is growing worldwide, African cotton might have good opportunities to be a part of this growing industry.

In the same way that we can farm organic livestock for food, we can also produce organic wool. Since pesticides used in sheep production puts both human health and the environment at risk, it's not surprising that the demand for organic wool, which reduces the overall exposure to toxic chemicals from synthetic pesticides, is increasing. In 2005, M+R Strategic Services undertook a survey for the Organic Trade Association, concerning organic wool production and markets in the United States and Canada. Responses

183 *Simon Ferrigno, Organic Cotton Fiber Report – Spring 2006*, Organic Exchange, Oakland, April 2006.





to the survey indicated that 19,152 pounds (8,705 kilos) of organic wool were grown in the United States and Canada in 2005.<sup>184</sup>

There are also other new materials like biopolymers made from corn and soy. Another is *Ingeo* by Cargill-Dow, a natural synthetic fibre made by distilling sugar from plant starches such as corn. Biopolymers are polymers produced by biotechnological processes. The basic products are mostly, but not necessarily, natural products (agricultural crops, bio-waste...). Biopolymers do not necessarily differ from conventional polymers produced by petrochemical processes. And finally, not all biopolymers are biodegradable or may be composted.<sup>185</sup>

Unfortunately, there are many obstacles to eco-friendly garments. Supply, for example, has been difficult. In many cases, companies had to develop sources from scratch. Price is another issue. Generally, organic cotton costs more to grow than conventional cotton, but the difference in price depends on variables like quality and location.



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<sup>184</sup> *Organic Wool Fact Sheet*, Organic Trade Association.

<sup>185</sup> *Research on the suitability of biopolymers textile and packaging applications*, CENTEXBEL (2011).



## Stepping-stones

You decide how to spend your money. Use your purchase power to send a clear, strong message to stylists, manufacturers, and retailers:

- ▶ **Think** before you buy. Think about what you really need and want: do not purchase your clothes and accessories just because everybody else has it or are pushed by an aggressive marketing campaign: buy **fewer** and more **durable** clothes.
- ▶ Next time you go shopping, ask yourself what are your sustainability related options? Consider visiting **second-hand clothing stores**, where you can find some good quality recycled clothing, often cheaper than new clothing.
- ▶ **Mend** clothes where it's possible to make them last longer.
- ▶ Read the labels: if they don't give you enough **clear information**, don't be afraid to ask.
- ▶ Choose goods made/distributed by manufacturers and retailers with clear environmental and ethical policies and related **codes of conduct**.
- ▶ Participate in **clothing exchanges**, where you exchange your old clothing, jewelry and/or shoes with your friends, colleagues and neighbours. Remember, old is gold!
- ▶ Don't throw away your old clothing – try to **give them away** to people who may need them in your local community.
- ▶ As much as possible, prefer **eco-labelled** and ethical-labelled products and services. Avoid products/services that use misleading claims.
- ▶ Rather than always buying new clothes, consider buying some **locally produced fabric** and get it tailored. This will bring out the designer in you!
- ▶ Keep your favourite brands under continuous **scrutiny**; contact your local consumer group to find out more about them. Join web campaigns to improve manufacturing employment practices.
- ▶ **Buy directly** from the producer: if you have access to the Internet, shop 'virtually' whenever possible and cut down the distribution chain. By doing so, you'll contribute to reducing transport-linked pollution while benefiting local small producers.

**Wildlife Works** promotes wildlife conservation through eco-fashion production and selling. Wildlife Works' Kukhanga Collection, for instance, includes tops, scarves, sweaters, and jackets made from certified-organic, fair trade cotton from an eco-factory in the African Bush run by local Kenyans. The organization also offsets its carbon emissions throughout the entire process through the UN's Reducing Emissions from Deforestation and Forest Degradation (REDD+), which also aids local wildlife protection.

**Lemlem preserves the art of hand weaving in Ethiopia** by selling handcrafted collections of women and children's clothes and accessories, which are woven by Ethiopian women out of organic materials such as natural cotton. Ethiopian model and actress Liya Kevede created the company in 2007. In one of her trips to her home country, she realized local demand for traditional weavers was declining, and built up her company to export and preserve the art of hand woven and hand embroidered clothing, and to foster economic independence for weavers.

**Up-cycling** is an eco-friendly brand dedicated to creating fashionable bags and accessories from locally recycled materials. It started when South Africa's Nina Bloom, its founder, designed student lunch bags out of used vinyl fabric. Up-cycling consists on transforming used and refused items into products that are more valuable than the original ones. It also uses advertising and marketing waste such as vinyl billboards to create bags, and by doing so, finds original uses to waste that otherwise would end up in landfills.

**The Business Code of Conduct for Combating Corruption in Malawi** refers to companies' policy statements that define ethical standards for its conduct. Public and private sectors and civil society of Malawi decided to create this new Business Code of Conduct to enable the country to achieve its MDGs by improving the stability, and reliability, as corruption practices such as bribery, theft, or misuse of position undermine the possibilities for sustainable growth and development..



### **The Charter of Fundamental Social Rights**

in the Southern African Development Community (SADC) provides a framework for regional labour standards, consistent with ILO conventions. Introduced in 2003, The Charter requires the 14 member states to create an enabling environment to ensure the equal treatment for men and women, the protection of children and young people, and the improvement of living and working conditions, among others.

### **Kinabutu**

is ethical fashion that promotes women's empowerment in Nigeria. Caterina Bortolussi, founder of Kinabutu, felt driven to be a fashion designer since she was a child, and started developing her business after watching *Wasteland*, a documentary about youth empowerment in Brazil. Caterina is doing the same in Nigeria through activities such as training single mothers on hand-made Silk-screen t-shirt printing using accessible local materials. About 10% of the benefits obtained by selling the t-shirts revert to training more women. This way, the women earn a living and sustain themselves and their children.

### **The Cotton Made In Africa Initiative**

aims to improve the living conditions of smallholder cotton farmers and their families in sub-Saharan Africa. These farmers are trained in modern, efficient and environmentally friendly cultivation methods that help them improve the quality of their cotton, raise yield and therefore increase their income. As of 2013, the Initiative worked with 475,000 smallholder farmers, supporting more than 3,100,000 direct dependents. They grow their cotton exclusively using rain fed cultivation methods, without any kind of supplemental irrigation, allowing the cotton to have a considerably lower ecological footprint than conventionally grown cotton.





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**16**

**TAKE ACTION**

**“If real development is to take place, the people have to be involved.”**

*[Mwalimu Julius Kambarage Nyerere, former president of the United Republic of Tanzania]*

In Africa, new and emerging markets often do not offer enough information about their products, and too many consumers are not aware about what their rights are and what to do if those rights are not respected. Markets are scattered, and it is not easy to address the challenges consumers face to have access to affordable and quality sustainable and safe products and services. Poor populations are amongst the most vulnerable, having to face the effects of monopolies, of high prices and sometimes, poor quality of services because only one or few companies offer them. When something goes wrong, they might not have access to justice either, which makes it very difficult for them to exercise their rights as citizens. That is why it is important for consumers to be aware of their rights and to seek Consumer Protection for support or guidance.

Understanding sustainability impacts and having access to information helps make informed choices and enables citizens to take action and make a difference, both at an individual level and in the communities we live in. Sharing information to raise awareness about consumer issues, such as through this guidebook and other educational and communication materials, is one way of enabling individuals to take action.

## Ecological labelling in Africa

There are also consumer platforms, including labels, which have become one of the tools governments and organizations have to provide consumers with information on the ecological and ethical characteristics of a specific product or service. There are also a number of private initiatives that are providing information on specific issues, such as Fair Trade labels etc. In Africa, there are regional initiatives for ecolabelling, such as the East African Organic

Standard and the West African Cotton Initiatives. Ecolabels, which are voluntary labels promoting environmental excellence - are increasingly used as a long-term tool to inform consumers about products' sustainability.

Among others, the African Ecolabelling Mechanism (AEM) was created in 2007 and helps to validate and harmonize ecolabelling initiatives in the region, to better identify sustainable products and increase markets for them in Africa and beyond.<sup>186</sup> AEM developed the *Eco Mark Africa* label, the first pan-African and cross-sectorial eco-label. Eco Mark Africa reliably identifies sustainable products from the agriculture, forestry, fisheries and tourism sectors, adds to the value of African brands and improves the image of sustainable African products on international markets.

## Consumer challenges

**The poor are paradoxically often forced to purchase goods and services at a “poverty premium”, paying more than the non-poor simply because they lack options.**

*[A Guide to Developing Consumer Protection Law, Consumers International, 2011]*

One of the tasks that require urgent attention and action is increased scrutiny by the general public of corporations and governments. The more people ask companies to change and adopt sustainability in their production and marketing methods, the more likely these companies are to change. If producers want to keep consumers' trust, they have to demonstrate that they are listening to needs and concerns.

It's time for citizens to take action! The number of relevant initiatives from civil society can make a difference. First, there is a need to commit and invest in sustainable and responsible lifestyles. Second, in Africa, there is an urgent

<sup>186</sup> *Global Outlook on SCP Policies, taking action together*, UNEP (2011), p.12.





need to support sustainable lifestyles, which are crucial in helping millions of Africans meet their basic needs and have a better quality of life. Sustainable lifestyles should also reflect specific cultural, natural, economic and social heritage of each society.

### Investing in sustainable lifestyles

In planning for the future, it is crucial to take adequate steps to ensure that our investments or savings choices promote, as much as possible, more responsible lifestyles. For example, when you as a young person chose to save your money in a bank that has strong social corporate responsibility or invest in projects or social enterprises that promote environmental sustainability, you are not only sending a strong message to society and the economy but also to your own peers. If enough people do it, they can also send strong signals to companies and institutions encouraging active social corporate responsibility. Companies with responsible policies can lead by example: others will follow after having seen that it is possible both to make money and to make a difference.

For information on ethical finance, and companies that are committed to socially and environmentally responsible actions, visit:

[www.cool-companies.org](http://www.cool-companies.org), [www.ethicalconsumer.org](http://www.ethicalconsumer.org), and [www.novethic.com/novethic/french-sri/investment-ethics/sri-indices.jsp](http://www.novethic.com/novethic/french-sri/investment-ethics/sri-indices.jsp)

By investing ethically, people demand that investments produce more than profit and want companies to behave responsibly. There are many forms of sustainable investment. Buying shares in committed firms is one; others include investing in ethical pension funds, securities and community initiatives.

Ethical funds also offer the opportunity to address both global and local needs. Channelling essential capital to the village level creates microcredit and small business opportunities for entrepreneurs around the globe. More than 2.5 billion people do not have an account with a bank or financial institution, and this is the case for 76% of adults in sub-Saharan Africa.<sup>187</sup> In fact, half of adults in sub-Saharan Africa who saved in 2012 have used informal, community-based methods. The impact of microfinance is profound; families are able to purchase land, buy fertiliser or seeds to increase their harvest, start new businesses or save for an unexpected expense.

For example, CARE's Access Africa Village Savings and Loans Program was launched in 2008 as an ambitious 10-year investment that will help people fight poverty. The program is expanding to 39 countries by 2018, providing 30 million people – 70% of them women – with access to basic financial services, enabling them to break the cycle of poverty, increase their income and improve their quality of life through improved health and better education.<sup>188</sup> The Village Saving and Loans Associations is a financial literacy and savings project based on member savings and small groups. Groups of 20 women on average decide the system of savings and credits that suit their needs. They make flexible contributions on a yearly basis, and distribution of money is done when it is mostly needed, for instance, when seeds for farms have to be bought. About 95% of groups work together for at least two years, and 87% at least six years.

<sup>187</sup> *Microfinance*, CARE.

<sup>188</sup> *Access Africa: Transforming the lives of women through economic empowerment*, CARE.

Ashoka, one of the largest global associations of social entrepreneurs, and the Schwab Foundation for Social Entrepreneurship, which awards the prize of Social Entrepreneur of the Year for Africa, are two organizations that work to promote social entrepreneurship for sustainable development. Governments can also take the lead in ethical investing through their multilateral and international financing and investment decisions. Such schemes empower people facing economic and social difficulties.

**“Microcredit programmes extend small loans to very poor people for self-employment projects that generate income, allowing them to care for themselves and their families. Micro-enterprises could also offer good opportunities for entrepreneurship and sustainable livelihoods.”**

*[The Microcredit Summit]*

### What can you do?

- Here are questions to ask yourself about companies before deciding to buy their goods and services:
- What does the company do?
- What is the company's record on **social** policies and **environmental** issues? Does it communicate on any of these issues (for example, does it use alternative or renewable energy or does it have corporate social responsibility policies or programs)?
- Does it offer **information** on the environmental impact of its product 'from cradle to grave' (product lifecycle)?
- What is the company's record as an **employer**? (women, minorities, flexible hours, job-shares, etc.)
- Is the company involved in local **community projects** and initiatives?

Access to basic utilities is very important, especially in Africa. A lot of people in Africa do not have access to basic utilities, from water and electricity to clothing, food or adequate housing, because of poverty. It is very important to think how to help all people to have access to all these products and services, which at the same time are basic rights every human being is entitled to.



### Stepping-stones

You decide how to spend your money. A few pointers

- Choose **eco-friendly and more sustainable goods and services** and brands to send a strong message to supermarkets and retailers.
- Think about how you **spend your money** and the related sustainability impacts of the goods and services you buy. Are sustainable options available? If not, let retailers know your preferences.
- **Speak out** about the main abuses consumers face in your community.
- **Become part of consumer associations** that fight for the rights of consumers.
- Increase your **knowledge about your rights** and the tools you have to fight for them.
- **Learn** about your favourite brands and their commitment to a more sustainable society.
- **Think** before you buy. Think about what you need, not what you want.
- Read the **labels**: if they don't give you enough clear information, don't be afraid to ask.
- Select **eco-labelled** and **ethical-labelled** products and services whenever possible.
- When possible, buy **locally produced** and **seasonal goods**.

**Join the UNEP Tunza Initiative** which encourages children and youth to care for the environment by raising awareness and promoting positive action. 'Tunza' means "to treat with care and affection" in Kiswahili, the main language of Eastern Africa. The Tunza Youth Network is a global database of youth organizations and young activists who are working together towards environmental development worldwide. Tunza representatives around the world raise the profile of environmental issues at local levels, share their experiences, exchange information, and give feedback to UNEP. Visit <http://tunza.mobi/> and [www.unep.org/tunza](http://www.unep.org/tunza) for more information.

**Strengthening consumer protection** is a priority for African countries. Three consumer organizations (**Consumer Association of Malawi**, **Associação de Defesa do Consumidor de Moçambique** and **Zambia Consumers Association**) have united to empower members to advocate for effective consumer protection laws that address current economic justice challenges that consumers face. Some of the successes included lobbying for the Consumer Protection Legislation Act in Zambia, where the law was passed in September 2010, lobbying for consumer legislation to operate in Malawi and set up the institutions to support implementation and creating consumer awareness of consumer legislation in Mozambique. Members carried out consumer education and awareness campaigns through the media, distributing educational materials and training volunteers, thus encouraging consumers to demand their rights.

### **The African Union declares the African Youth Decade, 2009-2018**

Africa has the youngest population in the world - 65% of its total population is below the age of 35 years, and over 35% are between the ages of 15 and 35 years – and with about 10 million African youth arriving in the labour market each year, Africa's youth need to be mobilized and quipped to drive Africa's development agenda. The African Youth Decade provides an opportunity to advance the agenda of youth empowerment and development to ensure effective and more ambitious investments in youth programmes and increased support to the development and implementation of national youth policies. The Decade focuses on the priority areas outlined in the African Youth Charter, including education, employment, leadership, peace and security and environmental protection, among others. Take part in the Decade's activities and connect with fellow youth by visiting <http://africa-youth.org/home>.



**Eco Mark Africa** promotes African products within Africa and internationally through the inclusion of ecological parameters into product standards, allowing people to easily identify sustainable products from the agriculture, forestry, fisheries and tourism sectors. While this is the first continental eco-labelling label in Africa, various African countries have already recognized the importance of eco-labelling. Tunisia, for example, created national organic standards equivalent to those of the European Union, which promote environmental quality, preserve consumer health and safety and improve the competitiveness of its exports internationally. Kenya, a leading exporter of leather products, is also developing eco label standards to meet EU standards for leather in an effort to make full use of its production capacity and improve its international market trade.



**The Namibia Youth Coalition on Climate Change** is a network of youth groups, individuals, government and educational institution interested in youth actions on climate change mitigation and adaption in Namibia. The aim is to work together to build a strong foundation for tackling climate change. In 2011, the Coalition's Youth Conference raised awareness and educated the youth on climate change and helped youth realize that they can effectively contribute to sustainability in their country through urban gardening projects, multi-media competitions, making bricks or familiarizing themselves with solar cooking methods.

**Environmental activism** is at the core of the Conference of Youth (COY), which brings together a diverse group of around 500 or more youth climate and environmental activists and leaders from all over the world. Participants meet for capacity building and skill sharing between them and their organizations. COY7 was organized in Durban, South Africa in 2011, and was used to plan youth activities and campaigns during and beyond COP17. It also allowed young people to discuss as well as develop a long-term strategic plan for the International Youth Climate Movement, the main organizer of the conference. COY is about learning new skills, making friends, forging connections, and collaborating on campaigns.



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17

DISCOVER THE  
GLOBAL VILLAGE

**“If information and knowledge are central to democracy, they are conditions for development.”**

*[Kofi Annan, former Secretary-General of the United Nations]*

Today’s young people and children live in a media-rich environment, experiencing an unprecedented flood of images, messages and information from many sources. They are flooded with information on politics, current affairs, music, science, the ‘hottest’ new celebrities, fashion, and countless other topics and issues. Africa is the fastest-growing mobile market in the world,<sup>189</sup> and for many young people, access to media and all kinds of information is now at their fingertips thanks to mobile phones. The mobile phone has become the main access channel to the Internet in places where there are few computers. Today, mobile phones are as common in South Africa and Nigeria as they are in the United States.<sup>190</sup> By 2012, the number of mobile phone subscribers below the age of 30 in sub-Saharan Africa was expected to reach 108 million.<sup>191</sup> Mobile connections in Africa alone are experiencing 80% year-on-year growth.<sup>192</sup>

## Africa: The Mobile Continent

Researchers predict that Internet use on mobile phones will increase 20-fold in the next five years in Africa – double the rate of growth in the rest of the world.<sup>193</sup> Thanks to cheaper handsets and data services, using social media and cash transfer services on mobile phones are accessible to not only the growing African middle class but also the most remote rural areas.

189 *Africa’s mobile phone industry ‘booming’*, BBC (09 Nov 2011).

190 *Cell Phones in Africa: Communication Lifeline*, Pew Research Center, April 15, 2015.

191 *Young people, mobile phones and the rights of adolescents*, by Graham Brown, in UNICEF’s *State of the World’s Children 2011* report (p.36).

192 *The State of Broadband 2013: Universalizing broadband*, a report by the Broadband Commission (Switzerland, 2013), p.20.

193 *Internet use on mobile phones in Africa predicted to increase 20-fold*, The Guardian (5 June 2014).

In Africa, mobile technology is changing economic life, with many Africans using cell phones to make or receive payments. In Kenya, for example, 68% of mobile phone owners regularly make or receive payments on their phones, followed by 50% in Uganda, 29% in South Africa, 24% in Senegal and 13% in Nigeria.<sup>194</sup> In fact, mobile users in Africa show a preference for using their mobile phones for a variety of activities that are normally performed on laptops or desktops such as banking. Mobile phones provide access to many applications, such as the *MedAfrica* app, which provides basic information about health and medicine, thereby reducing the need for travel and pressure on doctors.

## Impacts of mobile phones

Given the central role of mobile phones in our lives, we need to consider the environmental impacts of these little devices and how we can reduce, reuse and repair them. Mobile phones have environmental impacts, using electricity and materials throughout their lifecycles. In developing countries, they are often dismantled and end up in rivers and soil, where they can contaminate our food and water systems because phones contain hazardous amounts of lead.<sup>195</sup> This contributes to the e-waste problem in Africa that is discussed in Chapter 8.

As a consumer, you can explore ways to use your mobile phone better so that it lasts longer. When its life is over, there are many recycling programs you can use so that phones can be refurbished and reused by others.

## The data divide: Broadband Internet access in Africa

Without an Internet connection or at least a mobile telephone, citizens are excluded from the information society. Although the Internet, which is a key tool for development, arrived in sub-Saharan Africa in the early 1990s, it is still a challenge to determine actual Internet

194 *Emerging Nations Embrace Internet, Mobile Technology*, Pew Research Global Attitudes Project (Feb 2014).

195 *The Environmental Costs and Benefits of Our Cell Phones*, Treehugger (2009).





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penetration in the region because generally, many people share an Internet subscription.<sup>196</sup> According to 2014 estimates, about 26.5% of the African population had Internet access.<sup>197</sup> Although 15.7% of the world's population lives in sub-Saharan Africa, only 9.8% of the world's Internet users do, making Internet access scarcer in this region than anywhere else in the world.<sup>198</sup>

Internet connection in sub-Saharan Africa is also more expensive than in the rest of the world, particularly for broadband connections,<sup>199</sup> due to inadequate investment in telecommunications, lack of competition in some markets and international Internet connection costs, among others. In fact, the proportion of the minimum wage represented by the broadband Internet access tariff varies from 6.75% in South Africa to 59.96% in Mali. Over

one-third (34.7%) of the minimum wage in Sudan must be spent to obtain a wired Internet broadband connection.<sup>200</sup>

Despite these challenges, Africa is the region with the largest remaining growth potential in the world in broadband subscriptions. It is estimated that the market in telecom services will grow by 1.5 billion people, almost half the remaining market worldwide, by 2050.<sup>201</sup> The growth of the mobile Internet and the rapid increase of mobile phone use in the region is good news for Africa as it minimizes the data divide, gets more people connected and helps pave the way for economic growth and social change. As an outlet for new forms of innovation, entrepreneurship and social good, the Internet can connect remote populations to markets and strengthen the delivery and efficiency of health and financial services, education and livelihoods, among others.<sup>202</sup>

## How does the media work?

How is the media organized, and how does it construct reality? Media literacy helps people develop a critical understanding of the mass media, the techniques used by media professionals, and their impact. In other words, it enables young people to make their own informed decisions.

Moreover, media literacy can help prepare young people react to the influence media exerts on their values, consumption patterns and desires. It also teaches them how to 'use' the media to 'make noise' and promote their own values and a more sustainable lifestyle - in other words - their rights as citizens and consumers.

It is imperative to be wary of the impact of the media and advertising on the way we choose to live and consume. Gigantic billboards, TV commercials, magazines... There seems to be no way to escape advertising as it spreads across Africa. Advertising messages are said to have a

196 *Study on International Internet Connectivity in sub-Saharan Africa*, a report by the International Telecommunication Union of the United Nations (ITU) (2013), p.4.

197 *Internet users and population statistics for Africa*, by *Internet World Stats*. [The internet data as of 30 June 2012].

198 *Internet users and population statistics for Africa*, by *Internet World Stats*.

199 *Study on International Internet Connectivity in sub-Saharan Africa*, a report by the International Telecommunication Union of the United Nations (ITU) (2013), p.24.

200 *Study on International Internet Connectivity in sub-Saharan Africa*, a report by the International Telecommunication Union of the United Nations (ITU) (2013), p.26.

201 *The State of Broadband 2013: Universalizing broadband*, a report by the Broadband Commission (Switzerland, 2013), p.15

202 *The Impact of the Internet in Africa*, p.8.

significant influence over people and to push to over-consumption. What mechanisms do these messages unlock? And is all advertising bad?

### The power of advertising

Some advertisements specifically target young people, using language, images and messages that strike a chord with teenagers, but which might not have the same appeal to their parents (e.g. snack food, new communications tools like mobile phones and tablets or music). Many of these advertisements encourage young people to buy more. Teenagers, in fact, are important targets because in a very competitive market, companies need to build brand loyalty from an early age.

- Advertisers want people to start using their products when they are young and continue using them for the rest of their lives.

Often, advertising delivers simplified messages using stereotypes. A stereotype rigidly confirms the belief that if you are male or female (or white or black; heterosexual or homosexual), you must conform to specific roles and have specific characteristics and features. Too often, the messages that arrive to other parts of the world about Africa are biased and reinforce negative perceptions about the continent and its people. Advertising that

involves traditional African culture is rarely at the centre of marketing; instead, advertisers promote western consumption habits dictating what food should be eaten (e.g. fast food), what music to listen to and how one should behave. This cultural and consumption homogenization is dangerous for Africa, one of the most culturally diverse regions of the world.

- UNEP has worked with the advertising sector to channel their skills to promote more sustainable lifestyles. Have a look at UNEP's [Creative Gallery on Sustainability Communications!](#)

By accepting the messages in advertisements, we risk giving up our right to make personal choices. We don't have to sit back and accept all the messages the media (especially advertising) feed us. We can 'talk back' and voice our opinions.

However, advertising is not only pushing people to buy more. Various organisations increasingly use advertising techniques to capture consumers' attention on issues of public interest, such as environmental or social causes. In particular, they tend to encourage more sustainable consumption patterns. Advertising towards sustainability means communicating lifestyle changes that are desirable to people, and responding to their search for greater significance, transparency and ethics.



## Media in Africa

Radio, television, and the Internet have become integral parts of our daily lives. Radio is the main medium of information in sub-Saharan Africa except for South Africa and Sudan, where television is the main information source.<sup>203</sup> The prices of televisions are too high for many people, and low literacy levels make it difficult for many to read newspapers or information that is on the Internet. Internet use is very low, even though there is an increase of Internet cafes in cities, making it more accessible for those that can afford it.

Radio, television and the Internet can spread cultural and class stereotypes. Minorities might be portrayed stereotypically and be undervalued compared with the dominant group. But they are not always a negative influence. A positive aspect is the opportunity they offer to learn about different lifestyles and cultures. Children today are entering school more knowledgeable than children before the TV and Internet era. Moreover, they have great entertainment value.

Radio, television, and the Internet provide us all kinds of entertainment including movies and music, filled with stars that have increasingly become the idols and models that shape our lifestyles, especially lifestyles of young people. Actors, models and sport champions sometimes provide positive role models. They share their stance for a particular cause, or participate in media acts to help raise awareness and capture the attention of the huge youth audience about a specific problem, be it HIV/AIDS, hunger or the environment. However, sometimes idols can also be an example of lavish and unsustainable consumption patterns that youth might want to imitate.

Africa's film industry and film festivals are on the rise. Nollywood, the Nigerian film industry, is the second largest film industry in the world in terms of film productions per year, only behind Bollywood, the Indian film industry. FESPACO, the Pan-African Film Festival of Ouagadougou, offers a yearly opportunity to present new films produced

<sup>203</sup> *Radio the Chief Medium for News in Sub-Saharan Africa: Many in sub-Saharan Africa rely on radio to stay up on the news*, (June 2008) by Cynthia English:

in the region. The Sahara Film Festival is aimed not only at showing new movies, but at capacity building for youth on film making, at establishing a network of video libraries in order make films available in the area during the whole the year, and to inform the international community about the Western Sahara situation. Africa also hosts international festivals such as the annual Zanzibar International Film Festival (ZIFF), which is East Africa's largest film, music and arts festival, bringing new talents together from all over the world.

Music – a universal language by definition - is probably the medium that has most consistently carried strong social messages. Internationally renowned African artists, such as Manu Dibango (Cameroon), Miriam Mabeka (South Africa) and Angélique Kidjo (Benin), continuously contribute to making Africa and its cultures known all over the world. The UNESCO Global Alliance for Cultural Diversity works for the establishment of partnerships that promote cultural industries in developing countries. One of the activities they have conducted in Africa is Nzassa, an incubator in Ivory Coast aimed at producing and disseminating music and dance and at training future artists.

Additionally, events such as Live Aid, Farm Aid, the Amnesty International Tour, Our Common Future, Greenpeace Album, etc., turn enjoying a performance into a gesture of political or humanitarian solidarity. Hip-hop is one example of music that addresses political and social issues. This kind of music, often produced and performed by young people, is growing in Africa.<sup>204</sup> West African griots, chimurenga in Zimbabwe and kwaito in South Africa bear similarities with hip-hop, and are also used by youth as a platform to express how they feel about politics, society and their lives in general.

Nowadays, many young people feel more comfortable with the media. There are thousands of websites run for and by teenagers. Their commitment to promoting complex causes (e.g. human rights, environment) is proof of their

<sup>204</sup> *NY Times Op-Ed Speaks to Hip-Hop's Revolutionary Power in Africa*, (January 2012) by Afropop Worldwide:



ability not only to channel the media, but also their talents towards sustainable projects.

## Social media in Africa

Did you know that sub-Saharan Africa is the second-largest mobile technology market after Asia, and the fastest growing one with the region's mobile users expected to reach 346 million by 2017?<sup>205</sup> In 2013, 80% of urban households had at least one mobile phone, compared with 63% of rural households that have at least one mobile phone. Africans are leading a global trend: a major shift to mobile Internet use, with social media as its main driver.<sup>206</sup>

Studies show that when Africans go online (mainly with their mobile phones), they spend much of their time on social media platforms such as Facebook, Twitter, YouTube and Instagram, among others. Social media is also changing the way business is done in Africa, modifying the way in which businesses relate to each other and their customers in areas like customer relations, entrepreneurship, content development and marketing.<sup>207</sup> The 2014 "Emerging Nations Embrace Internet, Mobile Technology" report by the Pew Research Global Attitudes Project reports that approximately 78% of internet usage in Africa is for social media. This not only lays the foundation for Africa's estimated \$14-billion social media industry but it is also set to contribute to Africa's GDP. The Internet is expected to contribute a minimum of \$300 billion to Africa's GDP by 2025 and social media could contribute almost \$230 billion to Africa's remarkable growth by then.<sup>208</sup>



205 *Africa continues going Mobile*, by Gallup (1 May 2014).

206 *A social media boom begins in Africa*, Africa Renewal Online, Dec 2010,

207 *#Africa – Inside the Continent's New \$14bn Social Media Industry*, Ventures Africa, 20 June 2014.

208 Ibid.

**Internet usage in Africa** A 2016 study found that there were 333,521,659 estimated Internet users in Africa, which represents 28.6% of Africa's population. The top five African countries in Internet use are: Nigeria (92.7 million users, 51.1% population), Egypt (33.3 million users, 37% population), South Africa (26.8 million users, 49% population), Kenya (31.9 million users, 69.6% population) and Morocco (20.2 million users, 60.6% population).

**Keep your chats exactly that!** is a South African campaign organized by Women's Net and Girls' Net, aimed at preventing youth cyber harassment, bullying and violence. It offers tips such as to never give personal details (where you live, your school name) and to never send your pictures to people you do not know, even if you receive their picture first. If you chat with someone that insists on knowing your personal information, stop chatting to them. If someone abuses or harasses you, report them to the social network you are using and tell someone you trust.

**Youth Broadcasting Initiative** is a project developed by UNICEF in Somalia aimed at empowering youth to express their opinions and claim their rights through training in radio and video broadcasting. A Network of 20 youth groups produce radio and video programmes to be broadcasted in topics such as HIV/AIDS and female genital mutilation. Local media in northwest, northeast, central and southern Somalia provide the training required to produce the programmes and both equipment and information about the topics addressed are offered by UNICEF.

**Instagram entrepreneurs** are on the rise, particularly in Kenya where small start-ups are turning to Instagram – an online mobile photo-sharing, video-sharing, and social networking service – to attract customers. This helps entrepreneurs escape high set-up costs associated with starting a business, including rising rent. Instagram allows entrepreneurs to post their products online, connect with customers and sell products.

**Advertising expenditure in sub-Saharan Africa** had a 20% growth between 2005 and 2010 according to the **World Advertising Research Corporation**. This is the average for the whole region, and differences can be found amongst countries. Kenya went from US\$129 million ad spending to US\$600 million; Uganda from US\$50 million to US\$169 million; Tanzania went from US\$32 million to US\$68 million; Ghana went from US\$51 million to US\$149 million and Zambia from US\$20 million to US\$27 million. The growing middle class, political stability, and economic growth are making the region more and more attractive for advertising, and according to the advertising company Ogilvy & Mather, sub-Saharan Africa 'is one of the last great frontiers in global communications – and it will be one of the most fertile.'

**Hotspots – Africa Speaks Up On Climate Change** is a film produced by Marc Engelhardt, highlighting how Africa will be the continent most affected by climate change. The impacts of rising temperatures in farming, in increasing poverty levels, in health or in safeguarding world heritage sites that were built for specific micro climates are shown as examples that are used to demand climate justice for Africa.

**Africa Volunteers Corps** is a non-for-profit organization that matches African volunteers with African non-governmental organizations. Africans, through their cultural understanding and knowledge of African languages, can make fast and deep impact in the projects they participate in. At the same time, volunteers gain employment skills that can help them in their future job search and careers.

### **African celebrities are promoting Africa**

and using their fame to make a difference in the region. For example, former NBA Star **Dikembe Mutombo** is improving living conditions in his country, the Democratic Republic of Congo, through his charitable organization, the Dikembe Mutombo Foundation Inc. One of the fruits of his work is a 300-bed hospital on the outskirts of Kinshasa. South African actress Charlize Theron is also involved in making Africa a better place through the **Charize Theron Africa Outreach Project**, which helps community based organizations that work to prevent HIV/AIDS amongst African youth. **Singer Yossou N'Dour from Senegal** worked with diverse organizations such as the International Red Cross and the **Food and Agriculture Organisation of the United Nations (FAO)**. Cameroonian football player Samuel Eto'o works with children in Cameroon by supporting **sports skills development** and offering quality education.

### **Kony 2012 and the importance of media literacy**

*Kony 2012* is a documentary that received more than 72 million views on the Internet in only six days. Invisible Children, which is the organization that produced this film, received US\$5 million in donations within a matter of 48 hours. The documentary is intended to contribute to end the use of child soldiers in Uganda and to raise awareness about Joseph Kony, the leader of Uganda's Lord's Resistance Army. However, diverse critical voices have been raised about the documentary, pointing out issues such as the lack of accuracy of some information provided and the use of manipulative strategies to trigger its viral spread through the net. Media literacy skills such as the ability to critically reflect about the information we receive, check diverse sources to confirm accuracy of the information received and researching the reputation of the authors are very important in order to not be misled by such media campaigns.

**Labelling and Advertising of Foodstuffs in South Africa.** Upper and lower income South African youth aged 7-18 commonly eat junk and fast food. South Africa is the third most obese country in the world, with 61% of South Africans overweight or morbidly obese and one in four children struggling with weight issues. In 2012, South Africa's Minister of Health passed new regulations relating to the Labelling and Advertising of Foodstuffs in order to help consumers make informed choices, and to protect them from misleading or false information provided by manufacturers, importers or sellers. These regulations make it mandatory to support, with clear information, claims such as 'high fiber,' or 'sugar free' advertized on a particular product. It is mandatory to make consumers aware of the amount of a certain ingredient advertised in the label of a foodstuff. For instance, if a product is described as an 'olive oil spread,' the percentage of olive oil in the product must be described in the list of ingredients.



Thanks are due to the many sources used. We have tried as much as possible to acknowledge and direct readers to the various sources of information used. Find below the websites, books, etc. mentioned in this publication.

## 1. The YouthXchange Initiative

Wangari Maathai, [www.greenbeltmovement.org/wangari-maathai](http://www.greenbeltmovement.org/wangari-maathai)

"World population projected to reach 9.6 billion by 2050 – UN report," UN News Centre (June 2013). [www.un.org/apps/news/story.asp?NewsID=45165#.Ur9lihbHKfs](http://www.un.org/apps/news/story.asp?NewsID=45165#.Ur9lihbHKfs)

"Overconsumption? Our use of the world's natural resources." Friends of the Earth (2009). [www.foe.co.uk/sites/default/files/downloads/overconsumption.pdf](http://www.foe.co.uk/sites/default/files/downloads/overconsumption.pdf)

"Who are the hungry?" World Food Programme. [www.wfp.org/hunger/who-are](http://www.wfp.org/hunger/who-are)

"The State of Food Insecurity in the World," FAO (2014). <http://reliefweb.int/sites/reliefweb.int/files/resources/a-i4030e.pdf>

"Millennium Development Goal drinking water target met." UNICEF/WHO (March 2012). [www.who.int/mediacentre/news/releases/2012/drinking\\_water\\_20120306/en/](http://www.who.int/mediacentre/news/releases/2012/drinking_water_20120306/en/)

"Access to sanitation," Water for Life Decade, UN. [www.un.org/waterforlifedecade/sanitation.shtml](http://www.un.org/waterforlifedecade/sanitation.shtml)

"Adolescents Fact Sheet," State of world population 2005, UNFPA. [www.unfpa.org/swp/2005/presskit/factsheets/facts\\_adolescents.htm](http://www.unfpa.org/swp/2005/presskit/factsheets/facts_adolescents.htm)

"Sub-Saharan Africa" <http://unstats.un.org/unsd/methods/m49/m49regin.htm>

United Nations Department of Economic and Social Affairs/Population Division. World Population Prospects: The 2012 Revision, Highlights and Advance Tables (2013). New York: United Nations. [http://esa.un.org/unpd/wpp/Documentation/pdf/WPP2012\\_HIGHLIGHTS.pdf](http://esa.un.org/unpd/wpp/Documentation/pdf/WPP2012_HIGHLIGHTS.pdf) (Table 1.4, p.7)

"A Youthful Continent! Africa's position on youth," African Union, [www.africa-youth.org/Africayouth](http://www.africa-youth.org/Africayouth)

"Africa's youth: a 'ticking time bomb' or an opportunity?" Africa Renewal Online (May 2013), [www.un.org/africarenewal/magazine/may-2013/africa's-youth-"ticking-time-bomb"-or-opportunity](http://www.un.org/africarenewal/magazine/may-2013/africa's-youth-)

2014 revision of the World Urbanization Prospects (10 July 2014), [www.un.org/en/development/desa/publications/2014-revision-world-urbanization-prospects.html#more-890](http://www.un.org/en/development/desa/publications/2014-revision-world-urbanization-prospects.html#more-890)

"The State of African Cities 2014," UN Habitat (2014), [mirror.unhabitat.org/pmss/getElectronicVersion.aspx?nr=3528&alt=1](http://mirror.unhabitat.org/pmss/getElectronicVersion.aspx?nr=3528&alt=1)

"Cities of Hope: Young people and opportunity in South Africa's Cities," (The Rockefeller Foundation, 2014), [www.rockefellerfoundation.org/blog/cities-hope-young-people-opportunity](http://www.rockefellerfoundation.org/blog/cities-hope-young-people-opportunity)

"Africa's mobile youth drive change," Jocelyne Sambira (Africa Renewal, UN, May 2013), [www.un.org/africarenewal/magazine/may-2013/africa%E2%80%99s-mobile-youth-drive-change](http://www.un.org/africarenewal/magazine/may-2013/africa%E2%80%99s-mobile-youth-drive-change)

"African youth hungry for connectivity, Jonathan Kalan (Africa Renewal, UN, May 2013), [www.un.org/africarenewal/magazine/may-2013/african-youth-hungry-connectivity](http://www.un.org/africarenewal/magazine/may-2013/african-youth-hungry-connectivity)

"Young people, mobile phones and the rights of adolescents," UNICEF (2011). [www.unicef.org/sowc2011/pdfs/Young-People-mobile-phones-and-the-rights-of-adolescents.pdf](http://www.unicef.org/sowc2011/pdfs/Young-People-mobile-phones-and-the-rights-of-adolescents.pdf)

"Is the Future Yours?" UNEP and UNESCO (2001). [www.unesco.org/education/youth\\_consumption/pdf/future.pdf](http://www.unesco.org/education/youth_consumption/pdf/future.pdf)

The Global Survey on Sustainable Lifestyles (GSSL), [www.unep.org/resourceefficiency/Consumption/EducationLifestylesandYouth/SustainableLifestyles/GlobalSurveyonSustainableLifestyles/tabid/105293/Default.aspx](http://www.unep.org/resourceefficiency/Consumption/EducationLifestylesandYouth/SustainableLifestyles/GlobalSurveyonSustainableLifestyles/tabid/105293/Default.aspx)

The YouthXchange Network, [www.youthxchange.net](http://www.youthxchange.net)

## 2. Education for change

Nelson Mandela, [www.nelsonmandela.org/content/page/biography](http://www.nelsonmandela.org/content/page/biography)

UN Decade for Education for Sustainable Development: [www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-sustainable-development/](http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-sustainable-development/)

Strategy for ESD for sub-Saharan Africa: [www.esd-world-conference-2009.org/fileadmin/download/general/Africa\\_ESD\\_regional\\_strategy.pdf](http://www.esd-world-conference-2009.org/fileadmin/download/general/Africa_ESD_regional_strategy.pdf)

MESA's [ESD Innovations Course Toolkit](#)

[Educate the Educators ESD Innovation Course](#)

[Education for sustainable development \(ESD\)](#)

"Framework for the UNDESD International Implementation Scheme," UNESCO (2006) (p. 16) <http://unesdoc.unesco.org/imagenes/0014/001486/148650e.pdf>

[ESD Framework for a Draft International Implementation Scheme, UNESCO \(July 2003\)](#)

Regional Centres of Expertise on ESD: [http://archive.ias.unu.edu/sub\\_page.aspx?catID=1849&ddlID=661](http://archive.ias.unu.edu/sub_page.aspx?catID=1849&ddlID=661)

Final Assessment Report on ESD (2014): [www.unesco.org/new/en/unesco-world-conference-on-esd-2014/esd-after-2014/desd-final-report/](http://www.unesco.org/new/en/unesco-world-conference-on-esd-2014/esd-after-2014/desd-final-report/)

Education for sustainable development: <http://ccivi.org/New-SiteCCSVI/CciviOther/esd/esd-presentation.htm>

The Millennium Declaration, [www.un.org/millennium/declaration/ares552e.htm](http://www.un.org/millennium/declaration/ares552e.htm)

The Millennium Development Goals, [www.un.org/millenniumgoals/](http://www.un.org/millenniumgoals/)

Sustainable Development Goals, <http://sustainabledevelopment.un.org/?menu=1300>

Education for All, [www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-all/efa-goals/](http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-all/efa-goals/)

The Global Universities Partnership on Environment and Sustainability, [www.gupes.org](http://www.gupes.org)

The 10YFP Sustainable Lifestyles and Education Programme, [www.unep.org/10yfp/Programmes/ProgrammeConsultationandCurrent-Status/Sustainablelifestylesandeducation/tabid/106266/Default.aspx](http://www.unep.org/10yfp/Programmes/ProgrammeConsultationandCurrent-Status/Sustainablelifestylesandeducation/tabid/106266/Default.aspx)

Global Action Programme on ESD, [www.unesco.org/new/en/unesco-world-conference-on-esd-2014/esd-after-2014/global-action-programme/](http://www.unesco.org/new/en/unesco-world-conference-on-esd-2014/esd-after-2014/global-action-programme/)

### 3. Introducing sustainable consumption

[The Brundtland Report](#). Gro Harlem Brundtland et al., Our Common Future, WCED, New York-Oxford, Oxford University Press, 1987, p. 43.

"The State of Consumption Today," Worldwatch Institute. [www.worldwatch.org/node/810](http://www.worldwatch.org/node/810)

[African Review Report on SCP](#), African Roundtable on Sustainable Consumption and Production (ARSCP) (July 2009)

The Global 10-Year Framework of Programmes (10YFP) on SCP: [www.unep.org/10yfp](http://www.unep.org/10yfp)

Kofi Annan, <http://kofiannanfoundation.org/kofi-annan/biography>

"Africa – Fact Sheet: The World Bank and Agriculture in Africa. <http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/AFRICAEXT/0,,contentMDK:21935583~pagePK:146736~piPK:146830~theSitePK:258644,00.html>

Chapter 2: Sustainable Consumption and Production (UNECA), [www1.uneca.org/Portals/sdra/sdra3/chap2.pdf](http://www1.uneca.org/Portals/sdra/sdra3/chap2.pdf)

"Teaching and Learning for a sustainable future," UNESCO, 2005, [www.unesco.org/education/tlsf](http://www.unesco.org/education/tlsf)

"Women and the Environment," UNEP. [www.unep.org/Documents/Multilingual/Default.asp?DocumentID=468&ArticleID=4688&l=en](http://www.unep.org/Documents/Multilingual/Default.asp?DocumentID=468&ArticleID=4688&l=en)

Millennium Development Goals: Eight goals for 2015, UNDP: [www.undp.org/content/undp/en/home/mdgoverview.html](http://www.undp.org/content/undp/en/home/mdgoverview.html)

Sustainable Consumption and Production in Africa 2002-2012, UNEP. [www.unep.org/roa/Portals/137/Docs/pdf/SCP\\_AFRICA\\_Final\\_with\\_cover.pdf](http://www.unep.org/roa/Portals/137/Docs/pdf/SCP_AFRICA_Final_with_cover.pdf)

The Global Outlook on SCP Policies, [www.unep.org/pdf/Global\\_Outlook\\_on\\_SCP\\_Policies\\_full\\_final.pdf](http://www.unep.org/pdf/Global_Outlook_on_SCP_Policies_full_final.pdf)

ABC of SCP: Clarifying concepts on SCP, [www.unep.org/resourceefficiency/Portals/24147/scp/go/pdf/ABC\\_ENGLISH.pdf](http://www.unep.org/resourceefficiency/Portals/24147/scp/go/pdf/ABC_ENGLISH.pdf) (French, Chinese, Portuguese and Spanish)

The 10-Year Framework of Programmes (10YFP) on SCP, [www.unep.org/10yfp/](http://www.unep.org/10yfp/)

The Global SCP Clearinghouse, [www.scpclearinghouse.org](http://www.scpclearinghouse.org)

### 4. Switching to sustainable lifestyles

Africa Environment Outlook," (UNEP, 2002), [www.unep.org/dewa/Africa/publications/AEO-1/006.htm](http://www.unep.org/dewa/Africa/publications/AEO-1/006.htm)

"Economic Development in Africa, Report 2014 (UNCTAD, 2014), [http://unctad.org/en/PublicationsLibrary/aldcafrica2014\\_en.pdf](http://unctad.org/en/PublicationsLibrary/aldcafrica2014_en.pdf)

"Chapter 2: Main drivers of Africa's economic performance," (AFDB), [www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/African%20Development%20Report%202012%20-%20Main%20Drivers%20of%20Africa%E2%80%99s%20Economic%20Performance.pdf](http://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/African%20Development%20Report%202012%20-%20Main%20Drivers%20of%20Africa%E2%80%99s%20Economic%20Performance.pdf)

"Africa," UNDESA, [www.un.org/waterforlifedecade/africa.shtml](http://www.un.org/waterforlifedecade/africa.shtml)

"Literacy and non-formal education," UNESCO, [www.unesco.org/new/en/dakar/education/literacy/](http://www.unesco.org/new/en/dakar/education/literacy/)

Africa Atlas of our Changing Environment, UNEP (2008). [www.unep.org/dewa/africa/africaAtlas/PDF/en/Africa\\_Atlas\\_Full\\_en.pdf](http://www.unep.org/dewa/africa/africaAtlas/PDF/en/Africa_Atlas_Full_en.pdf)

[Global Footprint Network](#)

Africa Environment Outlook 3, UNEP (2013). [www.unep.org/pdf/aeo3.pdf](http://www.unep.org/pdf/aeo3.pdf)

Impacts on biodiversity and ecosystems from conventional expansion of food production (GRID ARENDAL). [www.grida.no/publications/rr/food-crisis/page/3569.aspx](http://www.grida.no/publications/rr/food-crisis/page/3569.aspx)

"State of Biodiversity in Africa," (CBD), [www.cbd.int/iyb/doc/celebrations/iyb-egypt-state-of-biodiversity-in-africa.pdf](http://www.cbd.int/iyb/doc/celebrations/iyb-egypt-state-of-biodiversity-in-africa.pdf)

Africa Ecological Footprint Report, World Wide Fund for Nature and AfDB – African Development Bank (2012). [www.footprintnetwork.org/images/uploads/africa\\_ecological\\_footprint\\_report.pdf](http://www.footprintnetwork.org/images/uploads/africa_ecological_footprint_report.pdf)

"African Consumer Spending Expected to Double by 2020," The Wall Street Journal (3 Aug 2014), <http://blogs.wsj.com/frontiers/2014/08/03/african-consumer-spending-expected-to-double-by-2020/>

"Hunger Statistics," World Food Programme. [www.wfp.org/hunger/stats](http://www.wfp.org/hunger/stats)

"Who are the hungry?" World Food Programme. [www.wfp.org/hunger/who-are](http://www.wfp.org/hunger/who-are)

"Africa: Unlocking Regional Trade to Help Feed a Continent," World Bank (2012) <http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/AFRICAEXT/0,,contentMDK:23298986~pagePK:146736~piPK:146830~theSitePK:258644,00.html>

"Global Food Losses and Food Waste," FAO (2011) [www.fao.org/docrep/014/mb060e/mb060e02.pdf](http://www.fao.org/docrep/014/mb060e/mb060e02.pdf)

"Footprint Calculator," Global Footprint Network: [www.footprintnetwork.org/en/index.php/GFN/page/calculators](http://www.footprintnetwork.org/en/index.php/GFN/page/calculators)

"Food security in the context of urban sub-Saharan Africa," FAO, <http://foodafrica.nri.org/urbanisation/urbpapers/GinaKennedy-Foodsecurity.pdf>

Shumei Natural Agriculture (Rodale Institute) <http://rodaleinstitute.org/our-work/shumei-natural-agriculture/>

"Cutting food loss and waste will benefit people and the environment, says new study on World Environment Day," UNEP (2013). [www.unep.org/wed/news/unep-wri-food-waste-report.asp](http://www.unep.org/wed/news/unep-wri-food-waste-report.asp)

"Factbook Charts Africa's Footprint, Human Development Trends," Global Footprint Network (2009) [www.footprintnetwork.org/en/index.php/newsletter/bv/africa\\_factbook\\_tracks\\_trends\\_in\\_footprint\\_human\\_development](http://www.footprintnetwork.org/en/index.php/newsletter/bv/africa_factbook_tracks_trends_in_footprint_human_development)

The Ecological Footprint, [www.footprintnetwork.org](http://www.footprintnetwork.org) and [www.footprintnetwork.org/en/index.php/GFN/page/calculators](http://www.footprintnetwork.org/en/index.php/GFN/page/calculators)

Think.Eat.Save: Reduce your footprint, [www.thinkeatsave.org](http://www.thinkeatsave.org)

The Sustainable Rice Platform, [www.sustainablerice.org](http://www.sustainablerice.org)

## 5. Take care

African Review Report on SCP, African Roundtable on Sustainable Consumption and Production (ARSCP) (July 2009), [www.unep.org/roa/Portals/137/Docs/pdf/Thematic/RE/SCPReport\\_2011.pdf](http://www.unep.org/roa/Portals/137/Docs/pdf/Thematic/RE/SCPReport_2011.pdf)

"Undernourishment around the world in 2012," in The State of Food Insecurity in the World 2012, FAO (2012) (p.9) [www.fao.org/docrep/016/i3027e/i3027e02.pdf](http://www.fao.org/docrep/016/i3027e/i3027e02.pdf)

"SA's the fattest sub-Saharan African nation – study," Mail and Guardian (May 2014). <http://mg.co.za/article/2014-05-29-00-sa-has-the-fat-test-sub-saharan-african-nation-study>

World Health Organization – Regional Office for Africa, Overview about HIV/AIDS. [www.afro.who.int/en/clusters-a-programmes/dpc/acquired-immune-deficiency-syndrome/overview.html](http://www.afro.who.int/en/clusters-a-programmes/dpc/acquired-immune-deficiency-syndrome/overview.html)

"What is HIV/AIDS?" Public Health Agency of Canada, [www.phac-aspc.gc.ca/aids-sida/info/index-eng.php](http://www.phac-aspc.gc.ca/aids-sida/info/index-eng.php)

"HIV/AIDS and the Natural Environment," (Lori M. Hunter, PRB), [www.prb.org/Publications/Articles/2006/HIVAIDSandtheNaturalEnvironment.aspx](http://www.prb.org/Publications/Articles/2006/HIVAIDSandtheNaturalEnvironment.aspx)

"International Assessment of Agricultural Knowledge, Science and Technology for Development: Summary for decision makers of the sub-Saharan Africa Report," IAASTD (2009) (p.70). [www.fao.org/docrep/014/i2230e/i2230e04.pdf](http://www.fao.org/docrep/014/i2230e/i2230e04.pdf)

"Addressing Indoor Air Pollution in Africa: Key to improving household health," Clean Air Initiative (2006). [www.unep.org/urban\\_environment/PDFs/IAPAfrica.pdf](http://www.unep.org/urban_environment/PDFs/IAPAfrica.pdf)

"Fuel for life: household energy and health - Section 1: Household Energy, Indoor Air Pollution and Health, WHO (2006) [www.who.int/indoorair/publications/fflsection1.pdf](http://www.who.int/indoorair/publications/fflsection1.pdf)

"Indoor Air Pollution Problem: Indoor Air Thematic Briefing 3," World Health Organization. [www.who.int/indoorair/publications/iabriefing3.pdf](http://www.who.int/indoorair/publications/iabriefing3.pdf)

### Eco Mark Africa

Additives or E numbers: [www.food.gov.uk/policy-advice/additives-branch/](http://www.food.gov.uk/policy-advice/additives-branch/)

Consumer Information Network Kenya, [www.consumersinternational.org/our-members/member-directory/Consumer%20Information%20Network%20of%20Kenya%20%28CIN%29](http://www.consumersinternational.org/our-members/member-directory/Consumer%20Information%20Network%20of%20Kenya%20%28CIN%29)

Community Environmental Action Planning, [www.unep.org/disaster-sandconflicts/CountryOperations/Sudan/Communityenvironmental-management/tabid/54240/Default.aspx](http://www.unep.org/disaster-sandconflicts/CountryOperations/Sudan/Communityenvironmental-management/tabid/54240/Default.aspx)

Chemicals are on their way out, [www.pops.int](http://www.pops.int)

Pesticide 'time bomb' ticking in Africa, [www.grida.no/graphicslib/detail/pesticides-stockpiles-in-africa\\_10b1](http://www.grida.no/graphicslib/detail/pesticides-stockpiles-in-africa_10b1)



Organic farming for healthy food, <https://sites.google.com/site/eardci/>

Youth Education Network, <http://yenkenya.org/our-projects/>

Air quality in African cities, [www.unep.org/transport/PCFV/regions/mauritiust2010.asp](http://www.unep.org/transport/PCFV/regions/mauritiust2010.asp) (Mauritius example) and [www.sei-international.org/gapforum/presentations/BelgradeSEIPresentationv3.pdf](http://www.sei-international.org/gapforum/presentations/BelgradeSEIPresentationv3.pdf)

## 6. Getting around

Kofi Annan, <http://kofiannanfoundation.org/kofi-annan/biography>

People and Mobility, UN Habitat, 2011: [www.unhabitat.org/pmss/listItemDetails.aspx?publicationID=3209](http://www.unhabitat.org/pmss/listItemDetails.aspx?publicationID=3209)

Clayton, Caroline, Dirty Planet: the Friends of the Earth Guide. To pollution and what you can do about it, London, Livewire Books, 2000.

"Sustainable Mobility in African Cities," UN Habitat (2011) [www.unhabitat.org/pmss/listItemDetails.aspx?publicationID=3082](http://www.unhabitat.org/pmss/listItemDetails.aspx?publicationID=3082)

"Global status report on road safety," WHO (2009) [www.who.int/violence\\_injury\\_prevention/road\\_safety\\_status/2009/en/index.html](http://www.who.int/violence_injury_prevention/road_safety_status/2009/en/index.html)

Sub-Saharan Africa Transport Policy Program, Working Paper n° 82, World Bank and the United Nations Economic Commission for Africa (2005) [www4.worldbank.org/afr/ssatp/Resources/SSATP-Program-Documents/SSATP-Annual-Report-2005.pdf](http://www4.worldbank.org/afr/ssatp/Resources/SSATP-Program-Documents/SSATP-Annual-Report-2005.pdf)

High Time to Change Road Investment Patterns in Africa," in Urban World, UN-Habitat's quarterly magazine (2010) [www.unep.org/transport/sharetheroad/PDF/StR\\_article\\_UrbanWorldDec2010.pdf](http://www.unep.org/transport/sharetheroad/PDF/StR_article_UrbanWorldDec2010.pdf)

UN Decade of Action on Road Safety: [www.roadsafetyfund.org/TagSymbol/Pages/default.aspx](http://www.roadsafetyfund.org/TagSymbol/Pages/default.aspx)

South Africa's transport sector, [www.climateresponse.co.za/home/gp/5.6](http://www.climateresponse.co.za/home/gp/5.6)

Africa's traffic jams, <http://edition.cnn.com/2012/04/05/world/africa/commuting-africa/index.html>

Sustainable Transport in East African Cities, [www.sutp.org/gefsustran](http://www.sutp.org/gefsustran)

Share the Road, [www.unep.org/transport/sharetheroad/](http://www.unep.org/transport/sharetheroad/) (Kenya example, Uganda example)

## 7. Getting away

[www.ecotourism.org](http://www.ecotourism.org), [www.greenglobe21.com](http://www.greenglobe21.com), [www.responsible-travel.com](http://www.responsible-travel.com)

"Regional Infrastructure Development Master Plan: Tourism (TFCAs) Sector Plan," SADC (August 2012) (p.5) [www.sadc.int/files/6813/5293/3534/Regional\\_Infrastructure\\_Development\\_Master\\_Plan\\_Tourism\\_Sector\\_Plan.pdf](http://www.sadc.int/files/6813/5293/3534/Regional_Infrastructure_Development_Master_Plan_Tourism_Sector_Plan.pdf)

"UNWTO Tourism Highlights, 2013 Edition," UNWTO (2013) (p.2, 3) [http://dtxtq4w60xqpw.cloudfront.net/sites/all/files/pdf/unwto\\_highlights13\\_en\\_lr\\_0.pdf](http://dtxtq4w60xqpw.cloudfront.net/sites/all/files/pdf/unwto_highlights13_en_lr_0.pdf)

[www.unep.org/re/tourism/](http://www.unep.org/re/tourism/), [www.wttc.org](http://www.wttc.org), [www.unwto.org/facts](http://www.unwto.org/facts)

"Tourism in Africa is slowly coming of age," United Nations' Africa Renewal Magazine (2012). [www.un.org/africarenewal/magazine/august-2012/tourism-africa-slowly-coming-age](http://www.un.org/africarenewal/magazine/august-2012/tourism-africa-slowly-coming-age)

"Sub-Saharan Africa Tourism Industry Research," World Bank (2009) (p.5) <http://siteresources.worldbank.org/INTAFRISUMAFTPS/Resources/2049902-1327506860777/FinalSSATourismRpt1118.pdf>

"Africa's Tourism set to boost economic growth, create new jobs and now outpace other regions for new tourism investment," World Bank (2013) [www.worldbank.org/en/news/press-release/2013/10/03/africa-tourism-economic-growth-new-jobs-tourism-investment](http://www.worldbank.org/en/news/press-release/2013/10/03/africa-tourism-economic-growth-new-jobs-tourism-investment)

Tourism Concern: [www.tourismconcern.org.uk](http://www.tourismconcern.org.uk)

"Environmental Impacts of Tourism - Global Level," UNEP [www.unep.org/resourceefficiency/Business/SectoralActivities/Tourism/FactsandFiguresaboutTourism/ImpactsOfTourism/EnvironmentalImpacts/EnvironmentalImpactsOfTourism-GlobalLevel/tabid/78777/Default.aspx](http://www.unep.org/resourceefficiency/Business/SectoralActivities/Tourism/FactsandFiguresaboutTourism/ImpactsOfTourism/EnvironmentalImpacts/EnvironmentalImpactsOfTourism-GlobalLevel/tabid/78777/Default.aspx)

"Coastal erosion major threat to West Africa," UNESCO (2012) [www.unesco.org/new/en/media-services/single-view/news/coastal\\_erosion\\_major\\_threat\\_to\\_west\\_africa/](http://www.unesco.org/new/en/media-services/single-view/news/coastal_erosion_major_threat_to_west_africa/)

"The Human Right to water and sanitation," UN. [www.un.org/waterforlifedecade/human\\_right\\_to\\_water.shtml](http://www.un.org/waterforlifedecade/human_right_to_water.shtml)

"Water Consumption," Institute Water for Africa, [www.water-for-africa.org/en/water-consumption.html](http://www.water-for-africa.org/en/water-consumption.html)

"Tourism and water: Interrelationships and management," Global Water Forum, [www.globalwaterforum.org/2013/07/16/tourism-and-water-interrelationships-and-management/](http://www.globalwaterforum.org/2013/07/16/tourism-and-water-interrelationships-and-management/)

Making Tourism More Sustainable - A Guide for Policy Makers, UNEP/UNWTO, 2005, [www.unep.fr/shared/publications/pdf/DTIx0592x-PA-TourismPolicyEN.pdf](http://www.unep.fr/shared/publications/pdf/DTIx0592x-PA-TourismPolicyEN.pdf)

"What is Eco-tourism?" The International Ecotourism society, [www.ecotourism.org/what-is-ecotourism](http://www.ecotourism.org/what-is-ecotourism)

"Harnessing the Power of One Billion Tourists for a Sustainable Future," UNEP (Nov 2014). [www.unep.org/10yfp/Portals/50150/downloads/10YFP\\_STP\\_Launch\\_PressRelease.pdf](http://www.unep.org/10yfp/Portals/50150/downloads/10YFP_STP_Launch_PressRelease.pdf)

"Tourism: Investing in energy and resource efficiency," UNEP (2011) [www.unep.org/resourceefficiency/Portals/24147/scp/business/tourism/greeneconomy\\_tourism.pdf](http://www.unep.org/resourceefficiency/Portals/24147/scp/business/tourism/greeneconomy_tourism.pdf)

"African Review Report on SCP," African Roundtable on Sustainable Consumption and Production (ARSCP) (July 2009) [www.unep.org/roa/Portals/137/Docs/pdf/Thematic/RE/SCPReport\\_2011.pdf](http://www.unep.org/roa/Portals/137/Docs/pdf/Thematic/RE/SCPReport_2011.pdf)

"Africa's Tourism set to boost economic growth, create new jobs, and now outpace other regions for new tourism investment," World Bank (Oct 2013), [www.worldbank.org/en/news/press-release/2013/10/03/africa-tourism-economic-growth-new-jobs-tourism-investment](http://www.worldbank.org/en/news/press-release/2013/10/03/africa-tourism-economic-growth-new-jobs-tourism-investment)

"7 Priority Themes." The Global Partnership for Sustainable Tourism. [www.globalsustainabletourism.com/About-us/30-7-Priority-Themes.html](http://www.globalsustainabletourism.com/About-us/30-7-Priority-Themes.html)

[www.unep.org/re/tourism/](http://www.unep.org/re/tourism/), [www.survivalinternational.org](http://www.survivalinternational.org), [www.tourisminsights.info](http://www.tourisminsights.info)

UNESCO's multimedia teacher education programme [module](#) on sustainable tourism.

[www.ecohotelsoftheworld.com](http://www.ecohotelsoftheworld.com) and [www.environmentallyfriendly-hotels.com](http://www.environmentallyfriendly-hotels.com)

[www.carbonfund.org](http://www.carbonfund.org) and [www.terrapass.com](http://www.terrapass.com) and <http://coolclimate.berkeley.edu/>

Green Passport, [www.unep.fr/greenpassport/](http://www.unep.fr/greenpassport/) (English, Portuguese and Spanish)

## 8. Reduce waste

"Africa Review Report on Waste Management - Executive Summary," United Nations Economic Commission for Africa (2009) [www.uneca.org/publications/africa-review-report-waste-management-executive-summary](http://www.uneca.org/publications/africa-review-report-waste-management-executive-summary)

Environmental Guidelines for Small-Scale Activities in Africa, 2009

Global Alliance of Waste Pickers: "Who are we?" <http://globalrec.org/life-and-voices/>

"Africa has more mobile phone users than the US or the EU," the Bulletin (2012), [www.smartplanet.com/blog/bulletin/africa-has-more-mobile-phone-users-than-the-us-or-eu/](http://www.smartplanet.com/blog/bulletin/africa-has-more-mobile-phone-users-than-the-us-or-eu/)

"ICTs Delivering Home-Grown Development Solutions in Africa," World Bank (2012), [www.worldbank.org/en/news/feature/2012/12/10/ict-home-grown-development-solutions-in-africa](http://www.worldbank.org/en/news/feature/2012/12/10/ict-home-grown-development-solutions-in-africa)

Kenya, UNESCO. [www.unesco.org/new/en/education/themes/strengthening-education-systems/higher-education/reform-and-innovation/brain-gain-initiative/africa-and-arab-states/kenya/](http://www.unesco.org/new/en/education/themes/strengthening-education-systems/higher-education/reform-and-innovation/brain-gain-initiative/africa-and-arab-states/kenya/)

"Domestic Consumption is Main Contributor to Africa's E-Waste," UNEP (2012): [www.unep.org/newscentre/default.aspx?DocumentID=2667&ArticleID=9022&l=en](http://www.unep.org/newscentre/default.aspx?DocumentID=2667&ArticleID=9022&l=en)

[www.wastewatch.org.uk](http://www.wastewatch.org.uk), [www.recycle.net](http://www.recycle.net), <http://grn.com>

[www.o2.org/](http://www.o2.org/), [www.wastewatch.org.uk](http://www.wastewatch.org.uk)

Making toys from waste, [www.ngopulse.org/press-release/waste-2-toys](http://www.ngopulse.org/press-release/waste-2-toys)

Katchy Kollections, [www.facebook.com/KatchyKollections](http://www.facebook.com/KatchyKollections)

Innovative plastic pipe bins, [www.dict.org.za/fishing\\_line\\_bins.php](http://www.dict.org.za/fishing_line_bins.php)

Addressing solid waste management in Ethiopia's Bahir Dar, [http://www.unep.or.jp/ietc/gpwm/data/t3/is\\_7\\_4\\_asses.pdf](http://www.unep.or.jp/ietc/gpwm/data/t3/is_7_4_asses.pdf)

Fuel from everyday agricultural and commercial residues, <https://sites.google.com/site/eardci/>

Africa's Call for Action on E-Waste, [www.unep.org/NEWSCENTRE/default.aspx?DocumentId=2676&ArticleId=9077](http://www.unep.org/NEWSCENTRE/default.aspx?DocumentId=2676&ArticleId=9077)

Used car tyres are making self-sustainable employment, <http://bay-enterpriseske.blogspot.com>

Enviro Mentors, [www.wessa.org.za/what-we-do/eco-schools.htm](http://www.wessa.org.za/what-we-do/eco-schools.htm)

ALMODO, [www.seedinit.org/awards/all/almodo.html](http://www.seedinit.org/awards/all/almodo.html)

The Recycle Swop Shop, [www.beyonded.org/projects/swopshop/](http://www.beyonded.org/projects/swopshop/)

## 9. Optimize energy

"African Review Report on SCP," African Roundtable on Sustainable Consumption and Production (ARSCP) (July 2009) <https://sustainabledevelopment.un.org/content/documents/AfricanReviewReport-on-SustainableConsumptionSummary.pdf>

Sustainable bioenergy policy framework in Africa: Toward Energy Security and Sustainable Livelihoods," UNECA (2012) (p.12). <http://www.ethioobserver.net/Revised%20Final%20draft%20Sustainable%20Bioenergy%20Policy%20Framework%20in%20Africa%2030%2001%2012.pdf>

International Energy Agency: [www.iea.org](http://www.iea.org)

"Sustainable Energy for All: Renewable Energy," [www.se4all.org/our-vision/our-objectives/renewable-energy/](http://www.se4all.org/our-vision/our-objectives/renewable-energy/)

Consumers International's [Energy Charter](#)

"Cows to Kilowatts, Nigeria: Turning Waste into Energy and Fertiliser," [www.un.org/esa/sustdev/publications/africa\\_casestudies/kilowatts.pdf](http://www.un.org/esa/sustdev/publications/africa_casestudies/kilowatts.pdf)

"Energy access for all in Africa: does enterprise hold the key?" The Guardian (2013) [www.theguardian.com/sustainable-business/energy-access-for-all-africa-enterprise](http://www.theguardian.com/sustainable-business/energy-access-for-all-africa-enterprise)

"World Energy Outlook: Energy access database" <http://www.worldenergyoutlook.org/resources/energydevelopment/energyaccessdatabase/>

The Energy Access Situation in Developing Countries and sub-Saharan Africa, WHO and UNDP (2009), p.11: <http://www.undp.org/content/dam/undp/library/Environment%20and%20Energy/Sustainable%20Energy/energy-access-situation-in-developing-countries.pdf>

African Rural Energy Enterprise Development and <http://www.unep.org/pdf/30ways.pdf>

FEDARENE: European Federation of Agencies and Regions for Energy and the Environment: [www.fedarene.org](http://www.fedarene.org)

The [en.lighten initiative](http://www.enlighten-initiative.org/portals/0/Documents/global-forum/presentations/GELF_en.lighten_GMG.pdf): Lighting the Future We Want. A powerpoint presentation by Gustau Manez, UNEP (Sept 2013). [http://www.enlighten-initiative.org/portals/0/Documents/global-forum/presentations/GELF\\_en.lighten\\_GMG.pdf](http://www.enlighten-initiative.org/portals/0/Documents/global-forum/presentations/GELF_en.lighten_GMG.pdf)

"Africa's energy consumption growing fastest in world," CS Monitor (Jan 2013), [www.csmonitor.com/World/Africa/2013/0101/Africa-s-energy-consumption-growing-fastest-in-world](http://www.csmonitor.com/World/Africa/2013/0101/Africa-s-energy-consumption-growing-fastest-in-world)

UNEP Efficient Appliances and Equipment – Global Partnership Programme.

"Why Buildings?" UNEP SBCE, [www.unep.org/sbce/AboutSBCE/Background.asp](http://www.unep.org/sbce/AboutSBCE/Background.asp)

### Sustainable Energy for All

The Sustainable Social Housing Initiative (SUSHI): SUSHI team in Thailand: short documentary presenting the concepts of sustainability to architecture and civil engineering students:

Part 1: [www.youtube.com/watch?v=qnja72oKbIA](http://www.youtube.com/watch?v=qnja72oKbIA)

Part 2: [www.youtube.com/watch?v=sQm2Y3na\\_Eg](http://www.youtube.com/watch?v=sQm2Y3na_Eg)

The Sustainable Building and Climate Initiative (SBCE), [www.unep.org/sbce/](http://www.unep.org/sbce/)

Fuel-less cooking bags in Cameroon, [www.unesco.org/fr/yaounde](http://www.unesco.org/fr/yaounde)

Learning about alternative energy equipment, [www.nadeet.org](http://www.nadeet.org)

The solar electrification project in Ethiopia, [http://sgp.undp.org/index.php?option=com\\_sgpprojects&view=projectdetail&id=14291&Itemid=205](http://sgp.undp.org/index.php?option=com_sgpprojects&view=projectdetail&id=14291&Itemid=205)

The Physically Active Youth Centre, <http://www.paynamibia.org/>

Poo-powered prisons, [www.bbc.co.uk/news/world-africa-16203507](http://www.bbc.co.uk/news/world-africa-16203507)

The South African Bureau of Standards, [www.sabs.co.za](http://www.sabs.co.za)

Rufisque Women's Centre, [www.hollmenreutersandman.com/p1\\_text.php?project\\_id=1](http://www.hollmenreutersandman.com/p1_text.php?project_id=1)

Designing new schools for a sustainable future, <http://www.kere-architecture.com/projects/primary-school-gando/>

Embracing African traditions in buildings, <http://www.lavoutenubi-enne.org/en/nv-technique>

## 10. Take care of the atmosphere

[www.unep.org/ozonaction](http://www.unep.org/ozonaction)

OzonAction Education Pack and Ozzy Ozone: Defender of our Planet

## 11. Climate change

"Climate Hero Awards," <http://climateheroawards.com>

Intergovernmental Panel on Climate Change: [www.ipcc.ch](http://www.ipcc.ch)

UN Framework Convention on Climate Change: [www.unfccc.int](http://www.unfccc.int)

World Meteorological Organisation: [www.wmo.ch](http://www.wmo.ch)

UNEP/GRID: [www.grida.no](http://www.grida.no)

Green Peace: [www.greenpeace.org/international/en/campaigns/climate-change/](http://www.greenpeace.org/international/en/campaigns/climate-change/)

"World Youth Report (2010): [www.un.org/esa/socdev/unyin/documents/WYR2010Final%20online%20version.pdf](http://www.un.org/esa/socdev/unyin/documents/WYR2010Final%20online%20version.pdf) "Vector-borne disease:" [www.who.int/heli/risks/vectors/vector/en/index.html](http://www.who.int/heli/risks/vectors/vector/en/index.html), "The Impact of Climate Change in Africa:" [www.issafrica.org/uploads/Paper220.pdf](http://www.issafrica.org/uploads/Paper220.pdf), [www.wri.org/publication/content/7691](http://www.wri.org/publication/content/7691)

"Status of Ratification of the Kyoto Protocol," [http://unfccc.int/kyoto\\_protocol/status\\_of\\_ratification/items/2613.php](http://unfccc.int/kyoto_protocol/status_of_ratification/items/2613.php)

"United Nations Fact Sheet on Climate Change." [http://unfccc.int/files/press/backgrounders/application/pdf/factsheet\\_adaptation.pdf](http://unfccc.int/files/press/backgrounders/application/pdf/factsheet_adaptation.pdf)

"A report of Working Group I of the IPCC: [www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-spm.pdf](http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-spm.pdf), "Climate change 'can be tackled' (BBC) <http://news.bbc.co.uk/2/hi/science/nature/6620909.stm>

"Climate Change 2014: Impacts, Adaptation and Vulnerability," IPCC, 2014. [www.ipcc.ch/pdf/assessment-report/ar5/wg2/WGI-AR5-Chap22\\_FINAL.pdf](http://www.ipcc.ch/pdf/assessment-report/ar5/wg2/WGI-AR5-Chap22_FINAL.pdf)

"Fact Sheet: Climate Change in Africa – What is at Stake?" [www.unep.org/roa/amcen/docs/AMCEN\\_Events/climate-change/2ndExtra\\_15Dec/FACT\\_SHEET\\_CC\\_Africa.pdf](http://www.unep.org/roa/amcen/docs/AMCEN_Events/climate-change/2ndExtra_15Dec/FACT_SHEET_CC_Africa.pdf)

"UNEP launches new initiative to support climate change adaptation in Africa," <http://www.unep.org/newscentre/default.aspx?DocumentID=2700&ArticleID=9349>

[Africa Adaptation Knowledge Network](http://www.africanadaptationknowledge.org/)

"Energy Technology Perspectives - scenarios and strategies to 2050", International Energy Agency (2006): <https://www.iea.org/publications/freepublications/publication/etp2006.pdf>

<http://climatesavers.org/>

"Africa's youth: a ticking time bomb or an opportunity?" Online Africa Renewal (May 2013), <http://www.un.org/africarenewal/magazine/may-2013/africa-s-youth-ticking-time-bomb-or-opportunity>

The Tanzania Youth Environmental Network, [www.tayen.or.tz](http://www.tayen.or.tz)

Mulunguzi Aspanet Club on fighting climate change, [www.mlzaspanet.blogspot.ca](http://www.mlzaspanet.blogspot.ca)



UNESCO's educational kit on combatting desertification, <http://unesdoc.unesco.org/images/0012/001258/125816e.pdf>

The African Climate Policy Centre, [www.uneca.org/acpc/](http://www.uneca.org/acpc/)

The Green Friends, [www.yenkenya.org](http://www.yenkenya.org)

## 12. Save water, safe water

"Why a 'Water for Life' Decade?" United Nations Department of Economic and Social Affairs, [www.un.org/waterforlifedecade/background.shtml](http://www.un.org/waterforlifedecade/background.shtml)

"Millennium Development Goal drinking water target met." UNICEF/WHO (March 2012). [www.who.int/mediacentre/news/releases/2012/drinking\\_water\\_20120306/en/](http://www.who.int/mediacentre/news/releases/2012/drinking_water_20120306/en/)

"Water Web: Directory of water websites: [www.waterweb.org](http://www.waterweb.org)," Global Environmental Outlook 5," UNEP (2012) <http://www.unep.org/spanish/geo/geo5.asp>, "Water consumption in Africa," [www.water-industry.org/Water-Facts/africa-water.htm](http://www.water-industry.org/Water-Facts/africa-water.htm), and "Typical household water consumption," [www.capewatersolutions.co.za/2010/02/06/typical-household-water-consumption](http://www.capewatersolutions.co.za/2010/02/06/typical-household-water-consumption)

"Huge water resource exists under Africa," BBC News (2012) [www.bbc.co.uk/news/science-environment-17775211](http://www.bbc.co.uk/news/science-environment-17775211)

"The 4th edition of the UN World Water Development Report (WWDR4)," UNESCO. [www.unesco.org/new/en/natural-sciences/environment/water/wwap/wwdr/wwdr4-2012](http://www.unesco.org/new/en/natural-sciences/environment/water/wwap/wwdr/wwdr4-2012)

"The Potential for Water Conservation in Southern Africa," (IRN, EMG, GEM, Jan 2000), <https://www.internationalrivers.org/resources/the-potential-for-water-conservation-in-southern-africa-4116>

Africa's agricultural productivity is lowest in the world – in part because of the underuse of irrigation," African Development Bank Group, [www.infrastructureafrica.org/key-msg/sector/africa's-agricultural-productivity-lowest-world](http://www.infrastructureafrica.org/key-msg/sector/africa's-agricultural-productivity-lowest-world)

"Water, Sanitation and Hygiene," UNICEF, <https://data.unicef.org/topic/water-and-sanitation/sanitation/>

"A Snapshot of drinking water and sanitation in Africa – 2012 Update," [www.wssinfo.org/fileadmin/user\\_upload/resources/Africa-AMCOW-Snapshot-2012-English-Final.pdf](http://www.wssinfo.org/fileadmin/user_upload/resources/Africa-AMCOW-Snapshot-2012-English-Final.pdf)

"Statistics," WaterAid, [www.wateraid.org/us/the-water-story/the-crisis/statistics?filterEEF299BDEFB04B4A89206672AC6D5578=A3F-B048185EB44808843DDFB5457BDF1#filterContent](http://www.wateraid.org/us/the-water-story/the-crisis/statistics?filterEEF299BDEFB04B4A89206672AC6D5578=A3F-B048185EB44808843DDFB5457BDF1#filterContent)

"The Status and Distribution of Freshwater Biodiversity in Southern Africa," IUCN. <http://www.rufford.org/files/23.02.06%20Detailed%20Final%20Report.pdf>

"WWF Freshwater Statistics," [www.wwf.org.za/what\\_we\\_do/freshwater](http://www.wwf.org.za/what_we_do/freshwater), "Identifying and protecting threatened freshwater ecosystems in the Cape Floristic Region, South Africa," (2007) [www.ruffordsmall-grants.org/files/23.02.06%20Detailed%20Final%20Report.pdf](http://www.ruffordsmall-grants.org/files/23.02.06%20Detailed%20Final%20Report.pdf)

UNESCO's water portal: [www.unesco.org/new/en/natural-sciences/environment/water](http://www.unesco.org/new/en/natural-sciences/environment/water)

The Economics of Ecosystem and Biodiversity's Water and Wetlands Report <http://www.teebweb.org/publication/the-economics-of-eco-systems-and-biodiversity-teeb-for-water-and-wetlands/>

UNEP project on water in The Democratic Republic (DR) of Congo

The Water Project: <http://thewaterproject.org/>

The Water Page: [www.thewaterpage.com](http://www.thewaterpage.com)

UNEP Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA): <http://www.unep.org/gpa/>

FAO-Italy project seeks to head off future problems in the Nile Basin (27 Oct 2011): [www.fao.org/news/story/en/item/93487/icode/](http://www.fao.org/news/story/en/item/93487/icode/)

Enhancing sustainable livelihoods of communities living next to the Niger River in Mali, <http://whc.unesco.org/fr/activites/23>

Participatory land and water management in Ed Debba Community, [www.helsinki.fi/vitri/publications/theses/gloverthes.pdf](http://www.helsinki.fi/vitri/publications/theses/gloverthes.pdf)

## 13. Purchase without pain

Desmond Tutu, <http://desmondtutu.worldwidecreative.co.za/time-line/>

"What is Child Labour", ILO. [www.ilo.org/ipec/facts/lang--en/index.htm](http://www.ilo.org/ipec/facts/lang--en/index.htm)

"Youth FAQs: What does the UN mean by youth and how does this definition differ from that given to children?" United Nations Department of Economic and Social Affairs (DESA). <https://www.un.org/development/desa/dspd/>

"Marking progress against child labour: Global estimates and trends 2000-2012," (ILO), vii. [www.ilo.org/wcmsp5/groups/public/---ed\\_norm/---ipec/documents/publication/wcms\\_221513.pdf](http://www.ilo.org/wcmsp5/groups/public/---ed_norm/---ipec/documents/publication/wcms_221513.pdf)

"Child Labour in Africa." <http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1009&context=child>

"Child labour in Africa," (ILO), <http://ilo.org/ipec/Regionsandcountries/Africa/lang--en/index.htm>

"Fact Sheet: Child Labour," UNICEF. [www.unicef.org/protection/files/child\\_labour.pdf](http://www.unicef.org/protection/files/child_labour.pdf)

"International Labour Standards on Child Labour," (ILO) [www.ilo.org/global/standards/subjects-covered-by-international-labour-standards/child-labour/lang--en/index.htm](http://www.ilo.org/global/standards/subjects-covered-by-international-labour-standards/child-labour/lang--en/index.htm)

The State of Child Labour Today," (ILO) [www.ilo.org/global/about-the-ilo/press-and-media-centre/insight/WCMS\\_126819/lang--en/index.htm](http://www.ilo.org/global/about-the-ilo/press-and-media-centre/insight/WCMS_126819/lang--en/index.htm)

Education for All Global Monitoring Report 2010: Reaching the marginalized. Regional fact sheet – Sub-Saharan (2010) Africa. [www.unesco.org/fileadmin/MULTIMEDIA/HQ/ED/GMR/pdf/gmr2010/gmr2010-fs-ssa.pdf](http://www.unesco.org/fileadmin/MULTIMEDIA/HQ/ED/GMR/pdf/gmr2010/gmr2010-fs-ssa.pdf)

Education for All Global Monitoring Report: Policy Paper 04 (2012) <http://unesdoc.unesco.org/images/0021/002165/216519E.pdf>

“Millennium Development Goals: Goal 2: Achieve Universal Primary Education,” [www.un.org/millenniumgoals/education.shtml](http://www.un.org/millenniumgoals/education.shtml)

“Education for All Global Monitoring Report 2010,” UNESCO (2010), Table 5. p. 1. <http://unesdoc.unesco.org/images/0018/001866/186606E.pdf>

“Global Education First Initiative,” <http://www.unesco.org/new/en/gefi/home/>

“UNESCO Institute for Statistics,” [www.uis.unesco.org/Pages/default.aspx](http://www.uis.unesco.org/Pages/default.aspx)

“Adult and Youth Literacy: Global Trends in Gender Parity,” UIS Fact Sheet, September 2010, No. 2, [www.unesco.org/education/ild2010/FactSheet2010\\_Lit\\_EN.pdf](http://www.unesco.org/education/ild2010/FactSheet2010_Lit_EN.pdf)

“Daring dreamers: Today’s (and tomorrow’s) African youth consumers,” McKinsey & Company (2012), <http://mckinseyonmarketingandsales.com/african-youth>

US Department of Labour: [www.dol.gov](http://www.dol.gov)

US Bureau of Labour Statistics: [www.bls.gov](http://www.bls.gov)

[www.amnesty.org/en/how-you-can-help](http://www.amnesty.org/en/how-you-can-help)

[www.hrw.org](http://www.hrw.org)

[www.ituc-csi.org](http://www.ituc-csi.org)

[www.ethicalconsumer.org/boycotts/successfulboycotts.htm](http://www.ethicalconsumer.org/boycotts/successfulboycotts.htm)

Combating child labour in the cocoa industry, [www.childlabor-payson.org/Tulane\\_Final\\_Report.pdf](http://www.childlabor-payson.org/Tulane_Final_Report.pdf)

Building a future for former child soldiers, [www.rescue.org](http://www.rescue.org)

Malawi’s Mphamvu Kwa Achinyamata Clubs, <http://hivhealthclearinghouse.unesco.org/library/documents/hiv-and-aids-school-club-initiative-hasci-assessment-report>

Teaching children about their rights, [http://www.unicef.org/protection/benin\\_62163.html](http://www.unicef.org/protection/benin_62163.html)

The Seeds for a better future, [www.stopchildlabor.org](http://www.stopchildlabor.org)

Single teenage mothers of Uganda are go back to school, [www.ardi-uganda.org/activities.htm](http://www.ardi-uganda.org/activities.htm)

## 14. Live and let live

UNEP Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA): <http://www.unep.org/gpa/>

“Kenya,” USAID. <http://kenya.usaid.gov/programs/environment/395>

“Wildlife Trafficking,” Havocscope, <http://www.havocscope.com/tag/wildlife-trafficking/>

“Kenya’s heart stops pumping,” BBC News (2009) <http://news.bbc.co.uk/2/hi/8057316.stm>

“Ihlathi: Woodlands and people,” by Gareth McAlister [www.bioculturaldiversity.co.za/uploads/files/abstract\\_-\\_gareth\\_mcalister.pdf](http://www.bioculturaldiversity.co.za/uploads/files/abstract_-_gareth_mcalister.pdf)

“State of Biodiversity in Africa,” UNEP. [www.cbd.int/iyb/doc/celebrations/iyb-egypt-state-of-biodiversity-in-africa.pdf](http://www.cbd.int/iyb/doc/celebrations/iyb-egypt-state-of-biodiversity-in-africa.pdf)

“UNEP Portrait of Kenyan Forest Activist among Winners of First International Forest Photograph Contest,” UNEP (2013), <http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=2713&ArticleID=9465&I=en>

“Branching out for a green economy: Reporting Forests,” United Nations Forum on Forests, 2011: [www.unep.org/forests/Portals/142/docs/IYF\\_Media\\_bro\\_web2.pdf](http://www.unep.org/forests/Portals/142/docs/IYF_Media_bro_web2.pdf)

“About Forests,” UNEP. <http://unep.org/forests/AboutForests/tabid/29845/Default.aspx>

“Regional Post-Graduate Training School of integrated management of tropical forests and lands,” UNESCO. <http://www.unesco.org/new/en/natural-sciences/environment/ecological-sciences/unesco-mab-category-ii-centres/eraift/>

“Tourism and Environmental Conservation,” UNEP, [www.unep.org/resourceefficiency/Business/SectoralActivities/Tourism/FactsandFiguresaboutTourism/ImpactofTourism/EnvironmentalImpacts/TourismandEnvironmentalConservation/tabid/78779/Default.aspx](http://www.unep.org/resourceefficiency/Business/SectoralActivities/Tourism/FactsandFiguresaboutTourism/ImpactofTourism/EnvironmentalImpacts/TourismandEnvironmentalConservation/tabid/78779/Default.aspx)

“Mountain Gorilla,” WWF, [http://wwf.panda.org/what\\_we\\_do/angered\\_species/great\\_apes/gorillas/mountain\\_gorilla/](http://wwf.panda.org/what_we_do/angered_species/great_apes/gorillas/mountain_gorilla/)

[www.iucn.org](http://www.iucn.org)

“List of Parties,” Convention on Biological Diversity. [www.cbd.int/information/parties.shtml](http://www.cbd.int/information/parties.shtml)

UN Decade on Biodiversity

“CITES: ensuring that species are not threatened by international trade,” WWF. [http://wwf.panda.org/what\\_we\\_do/how\\_we\\_work/policy/conventions/cites/](http://wwf.panda.org/what_we_do/how_we_work/policy/conventions/cites/)

TRAFFIC, the wildlife trade monitoring network: [www.traffic.org/trade](http://www.traffic.org/trade)

CITES: [www.cites.org](http://www.cites.org)

Environmental Investigation Agency: [www.eia-international.org](http://www.eia-international.org)

Time Europe, April 17, 2000 Vol.155 No.15.

Béné, C. (2008), "Global Change in African Fish Trade: Engine of Development or Threat to Local Food Security?", OECD Food, Agriculture and Fisheries Papers, No. 10, OECD Publishing (p.2). [www.oecd-ilibrary.org/content/workingpaper/230215206300](http://www.oecd-ilibrary.org/content/workingpaper/230215206300)

"General facts regarding world fisheries," UN (2010). [www.un.org/depts/los/convention\\_agreements/reviewconf/FishStocks\\_EN\\_A.pdf](http://www.un.org/depts/los/convention_agreements/reviewconf/FishStocks_EN_A.pdf)

"Achieving poverty reduction through responsible fisheries," FAO (2008). [www.fao.org/docrep/011/i0448e/i0448e00.HTM](http://www.fao.org/docrep/011/i0448e/i0448e00.HTM)

"Trade and Environment Briefings: Sustainable Fisheries," UNEP (2012). <http://web.unep.org/greeneconomy/sites/unep.org/greeneconomy/files/publications/4.pdf>

"Natural and Organic Cosmetics," ECOCERT Group. [www.ecocert.com/en/natural-and-organic-cosmetics](http://www.ecocert.com/en/natural-and-organic-cosmetics)

"All seafood will run out by 2050 says scientists," The Telegraph. [www.telegraph.co.uk/news/uknews/1533125/All-seafood-will-run-out-in-2050-say-scientists.html](http://www.telegraph.co.uk/news/uknews/1533125/All-seafood-will-run-out-in-2050-say-scientists.html)

The Green Belt Movement, [www.greenbeltmovement.org](http://www.greenbeltmovement.org)

Join the Billion-Tree Campaign, <http://www.plant-for-the-planet.org/en/treecounter/our-target>

Africa Organics, [www.africanorganics.co.za](http://www.africanorganics.co.za)

Madagascar's first community-run marine protected area, [https://www.seed.uno/images/casestudies/SEED\\_Case\\_Study\\_Blue\\_Ventures\\_Madagascar.pdf](https://www.seed.uno/images/casestudies/SEED_Case_Study_Blue_Ventures_Madagascar.pdf)

All Pure Nature, <https://www.facebook.com/AllPureNature/>

Mali's Biosphere Reservation Boucle du Baoulé, [www.unesco.org/mabdb/br/brdir/directory/biores.asp?code=MLI+01&mode=all](http://www.unesco.org/mabdb/br/brdir/directory/biores.asp?code=MLI+01&mode=all)

Promoting ecotourism in Boma National Park, South Sudan, <http://iipdigital.usembassy.gov/st/english/article/2012/03/201203152160.html#axzz28taOkSRE>

Beyond Expectation Environmental Project, <https://www.facebook.com/beyondexpectationenvironmentalproject/>

Good news for mountain gorillas in Rwanda, <http://edition.cnn.com/2012/04/13/world/africa/mountain-gorillas-rwanda-inside-africa/index.html>

## 15. Looking cool and fair

UNEP Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA): <http://www.unep.org/gpa/>

The Water Project. [www.thewaterproject.org](http://www.thewaterproject.org)

Hub of Africa Fashion Week 2012, Addis Ababa

[www.fashion-era.com/sociology\\_semiotics.htm](http://www.fashion-era.com/sociology_semiotics.htm)

Fashion and Consumption, [www.marquise.de/en/misc/fashion.shtml](http://www.marquise.de/en/misc/fashion.shtml)

Joanne Finkelstein, Chic Theory, in Australian Humanities Review, 1997: [www.australianhumanitiesreview.org/archive/Issue-March-1997/finkelstein.html](http://www.australianhumanitiesreview.org/archive/Issue-March-1997/finkelstein.html)

Roland Barthes, The Language of Fashion, Berg Publishers, Oxford (UK), March 2006, pp. 224.

"Organic Cotton: A new Development Path for African Smallholders?" IIED (2005) (p.3) <http://pubs.iied.org/pdfs/14512IIED.pdf>

"Competitive African Cotton Initiative," Background Information. [www.compaci.org/index.php/en/](http://www.compaci.org/index.php/en/)

"The Importance of Cotton in Africa," International Cotton Advisory Committee (2006). [www.agritrade.org/events/speeches/CottonConference/Townsend.pdf](http://www.agritrade.org/events/speeches/CottonConference/Townsend.pdf)

Anita Roddick: [www.anitaroddick.com](http://www.anitaroddick.com)

"Ethiopia's Hub of Africa Fashion Week's big focus," The Africa Report (2012). [www.theafricareport.com/Society-and-Culture/ethiopia-as-hub-of-africa-fashion-weeks-big-focus.html](http://www.theafricareport.com/Society-and-Culture/ethiopia-as-hub-of-africa-fashion-weeks-big-focus.html)

"FIMA 2011," [www.ciaafrique.com/2011/12/fima-2011-le-festival-international-de.html](http://www.ciaafrique.com/2011/12/fima-2011-le-festival-international-de.html)

"The Rise of the African Fashion Industry: Africa Dans La Mode," Afribiz (2012) <http://southernafrican.news/2012/04/16/going-for-all-things-african/>

"The Deloitte Consumer Review: Africa – A 21<sup>st</sup> century view," (2014-15), [www2.deloitte.com/content/dam/Deloitte/uk/Documents/consumer-business/the-deloitte-consumer-review-africa-a-21st-century-view.pdf](http://www2.deloitte.com/content/dam/Deloitte/uk/Documents/consumer-business/the-deloitte-consumer-review-africa-a-21st-century-view.pdf)

[www.sustainablestyle.org](http://www.sustainablestyle.org), [www.lucire.com](http://www.lucire.com), [www.treehugger.com](http://www.treehugger.com), [www.springwise.com/wantmore-fashion\\_beauty/](http://www.springwise.com/wantmore-fashion_beauty/)

The Creative Synergy Esprit Effect, UNIDO, 2011

Clean Clothes Campaign

CorpWatch

[www.britannica.com/EBchecked/topic/361113/man-made-fibre](http://www.britannica.com/EBchecked/topic/361113/man-made-fibre) and [www.marketresearch.com](http://www.marketresearch.com)

Simon Ferrigno, Organic Cotton Fiber Report - Spring 2006, Organic Exchange, Oakland, April 2006: <http://textileexchange.org>

"Organic Wool Fact Sheet," Organic Trade Association, [http://coral-rose.typepad.com/my\\_weblog/2008/02/organic-wool-fa.html](http://coral-rose.typepad.com/my_weblog/2008/02/organic-wool-fa.html)

"Research on the suitability of biopolymers textile and packaging applications," CENTEXBEL (2011) [www.centexbel.be/projects/bio-based-flexible-materials](http://www.centexbel.be/projects/bio-based-flexible-materials)

Pesticide Action Network International – PAN: <http://pan-international.org/>

“Status of Biotechnology and Biosafety in sub-Saharan Africa,” Forum for Agricultural Research in Africa (2009) [http://www.syngentafoundation.org/\\_temp/SABIMA\\_2009\\_status\\_report\\_publ\\_3\\_2011.pdf](http://www.syngentafoundation.org/_temp/SABIMA_2009_status_report_publ_3_2011.pdf)

“Enhancing Sustainability of Cotton Production Systems in West Africa: A Summary of Empirical Evidence from Burkina Faso,” Sustainability 2011, 3, 1136-1169; Jeffrey Vitale, Marc Ouattara and Gaspard Vognan, [www.mdpi.com/2071-1050/3/8/1136/pdf](http://www.mdpi.com/2071-1050/3/8/1136/pdf)

Wildlife Works, [www.wildlifeworks.com](http://www.wildlifeworks.com) and [www.dailycandy.com/san-francisco/article/110026/Wildlife-Works-Kukhanga-Collection-Carbon-Neutral-Tees-Tanks-and-Cover-Ups](http://www.dailycandy.com/san-francisco/article/110026/Wildlife-Works-Kukhanga-Collection-Carbon-Neutral-Tees-Tanks-and-Cover-Ups)

Up-cycling, [www.ventures-africa.com/2012/06/nina-bloom-recycling-for-fashion](http://www.ventures-africa.com/2012/06/nina-bloom-recycling-for-fashion)

Lemlem preserves the art of hand weaving in Ethiopia, [www.lemlem.com/pages/about](http://www.lemlem.com/pages/about)

The Business Code of Conduct for Combating Corruption in Malawi, [www.unglobalcompact.org/docs/news\\_events/8.1/bfc\\_web.pdf](http://www.unglobalcompact.org/docs/news_events/8.1/bfc_web.pdf)

The Charter of Fundamental Social Rights, [www.sadc.int/documents-publications/show/837](http://www.sadc.int/documents-publications/show/837)

Kinabutu, [www.kinabuti.blogspot.com](http://www.kinabuti.blogspot.com) and <http://www.ecouterre.com/kinabuti-african-inspired-fashion-that-bolsters-nigerian-communities/>

The Cotton Made In Africa Initiative, [www.cotton-made-in-africa.com](http://www.cotton-made-in-africa.com)

## 16. Take action

UNESCO Water Portal: [www.unesco.org/new/en/natural-sciences/environment/water/](http://www.unesco.org/new/en/natural-sciences/environment/water/)

The Water Page: [www.waterpage.com](http://www.waterpage.com)

UNEP Resource Efficiency Programme: [www.unep.org/resourceefficiency/](http://www.unep.org/resourceefficiency/)

“Global Outlook on SCP Policies, taking action together,” UNEP (2011), p.12. [www.unep.org/10YFP/Portals/50150/downloads/publications/Global\\_Outlook/Global%20Outlook%20on%20SCP%20Policies%20FULL.pdf](http://www.unep.org/10YFP/Portals/50150/downloads/publications/Global_Outlook/Global%20Outlook%20on%20SCP%20Policies%20FULL.pdf)

A Guide to Developing Consumer Protection Law, Consumers International, 2011

[www.cool-companies.org](http://www.cool-companies.org), [www.ethicalconsumer.org](http://www.ethicalconsumer.org), and <http://www.novethic.com/labels/novethic-sri-label.html>

The WWW Virtual Library of Microcredit and Microfinance: [www.gdrc.org/icm/](http://www.gdrc.org/icm/)

“Microfinance,” CARE. [www.care.org/work/economic-development/microfinance](http://www.care.org/work/economic-development/microfinance)

The Microcredit Summit

“Access Africa: Transforming the lives of women through economic empowerment,” CARE. [https://www.care.org.au/wp-content/uploads/2014/12/Access\\_Africa\\_report\\_March-2012.pdf](https://www.care.org.au/wp-content/uploads/2014/12/Access_Africa_report_March-2012.pdf)

Join the UNEP Tunza Initiative and <http://tunza.mobi/>

Consumer Association of Malawi, Associação de Defesa do Consumidor de Moçambique and Zambia Consumers Association

African Youth Charter, [http://www.un.org/en/africa/osaa/pdf/au/african\\_youth\\_decade\\_2009-2018.pdf](http://www.un.org/en/africa/osaa/pdf/au/african_youth_decade_2009-2018.pdf) and <http://africa-youth.org/home>

Environmental Activism, <http://durbanisyours.co.za/2011/11/conference-of-youth-7/>

Eco Mark Africa, [www.ecomarkafrika.com](http://www.ecomarkafrika.com)

The Namibia Youth Coalition on Climate Change, [www.facebook.com/youthclimatenamibia](http://www.facebook.com/youthclimatenamibia)

## 17. Discover the global village

UNESCO Water Portal: [www.unesco.org/new/en/natural-sciences/environment/water/](http://www.unesco.org/new/en/natural-sciences/environment/water/)

The Water Page: [www.waterpage.com](http://www.waterpage.com)

UNEP Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA): <http://www.unep.org/gpa/>

Kofi Annan

“Africa’s mobile phone industry ‘booming,’” BBC (09 Nov 2011), [www.bbc.co.uk/news/world-africa-15659983](http://www.bbc.co.uk/news/world-africa-15659983)

“Young people, mobile phones and the rights of adolescents,” by Graham Brown, in UNICEF’s State of the World’s Children 2011 report (p.36), [www.unicef.org/sowc2011/pdfs/Young-People-mobile-phones-and-the-rights-of-adolescents.pdf](http://www.unicef.org/sowc2011/pdfs/Young-People-mobile-phones-and-the-rights-of-adolescents.pdf)

“The State of Broadband 2013: Universalizing broadband,” a report by the Broadband Commission (Switzerland, 2013). [www.broadband-commission.org/Documents/bb-annualreport2013.pdf](http://www.broadband-commission.org/Documents/bb-annualreport2013.pdf)

“Internet use on mobile phones in Africa predicted to increase 20-fold,” The Guardian (5 June 2014). <https://www.theguardian.com/world/2014/jun/05/internet-use-mobile-phones-africa-predicted-increase-20-fold>

“Emerging Nations Embrace Internet, Mobile Technology,” Pew Research Global Attitudes Project (Feb 2014). <http://www.pewglobal.org/2014/02/13/emerging-nations-embrace-internet-mobile-technology/>



"The Environmental Costs and Benefits of Our Cell Phones," Treehugger (2009), [www.treehugger.com/clean-technology/the-environmental-costs-and-benefits-of-our-cell-phones.html](http://www.treehugger.com/clean-technology/the-environmental-costs-and-benefits-of-our-cell-phones.html)

"Study on International Internet Connectivity in sub-Saharan Africa," a report by the International Telecommunication Union of the United Nations (ITU) (2013) [www.itu.int/en/ITU-D/Regulatory-Market/Documents/IIC\\_Africa\\_Final-en.pdf](http://www.itu.int/en/ITU-D/Regulatory-Market/Documents/IIC_Africa_Final-en.pdf)

"Internet users and population statistics for Africa," by Internet World Stats. [The internet data as of 30 June 2012] [www.internetworldstats.com/stats1.htm](http://www.internetworldstats.com/stats1.htm)

"The Impact of the Internet in Africa," p.8. [www.impactoftheinternet.com/pdf/Dalberg\\_Impact\\_of\\_Internet\\_Africa\\_Full\\_Report\\_April2013\\_vENG\\_Final.pdf](http://www.impactoftheinternet.com/pdf/Dalberg_Impact_of_Internet_Africa_Full_Report_April2013_vENG_Final.pdf)

UNEP's [Creative Gallery on Sustainability Communications](#)

"Radio the Chief Medium for News in Sub-Saharan Africa: Many in sub-Saharan Africa rely on radio to stay up on the news," (June 2008) by Cynthia English: [www.gallup.com/poll/108235/radio-chief-medium-news-subsaharan-africa.aspx](http://www.gallup.com/poll/108235/radio-chief-medium-news-subsaharan-africa.aspx)

FESPACO

Sahara Film Festival

UNESCO Global Alliance for Cultural Diversity

"NY Times Op-Ed Speaks to Hip-Hop's Revolutionary Power in Africa," (January 2012) by Afropop Worldwide:

Warc – the global provider of ideas and evidence for marketing people: [www.warc.com/](http://www.warc.com/)

Internet usage in Africa, [www.internetworldstats.com/stats1.htm](http://www.internetworldstats.com/stats1.htm)

Keep your chats exactly that! <https://www.apc.org/en/system/files/GirlsNetBrochure.pdf>

Youth Broadcasting Initiative, [www.unicef.org/magic/media/documents/YBI\\_Somalia\\_background.pdf](http://www.unicef.org/magic/media/documents/YBI_Somalia_background.pdf) and [www.unicef.org/somalia/cpp\\_138.html](http://www.unicef.org/somalia/cpp_138.html)

Kurlykichana.com, [www.kurlykichana.com](http://www.kurlykichana.com)

Advertising expenditure in sub-Saharan Africa, [www.howwemade-itinafrica.com/africa-one-of-the-last-frontiers-for-advertising-industry/8085](http://www.howwemade-itinafrica.com/africa-one-of-the-last-frontiers-for-advertising-industry/8085)

Hotspots – Africa Speaks Up On Climate Change, [www.boell.de/en/navigation/africa-6299.html](http://www.boell.de/en/navigation/africa-6299.html)

Africa Volunteers Corps, [www.africavolunteercorps.org](http://www.africavolunteercorps.org) and <http://africavolunteercorps.org/join-the-movement/>

Dikembe Mutombo, <http://blogs.wsj.com/scene/2013/11/07/dikembe-mutombo-on-his-life-after-the-nba/>

Charize Theron Africa Outreach Project, [www.charlizeafricaoutreach.org/](http://www.charlizeafricaoutreach.org/)

Food and Agriculture Organisation of the United Nations (FAO) (Yossou N'Dour), [http://www.save-food.org/cipp/md\\_ip/custom/pub/content,oid,29920/lang,2/ticket,g\\_u\\_e\\_s\\_t/local\\_lang,2](http://www.save-food.org/cipp/md_ip/custom/pub/content,oid,29920/lang,2/ticket,g_u_e_s_t/local_lang,2) also explains his involvement

Sports skills development (Samuel Eto'o), [www.fundacionsamuele-too.org/en/how-we-work](http://www.fundacionsamuele-too.org/en/how-we-work)

Kony 2012 and the importance of media literacy, [www.thelampnyc.org/2012/03/14/how-the-kony-2012-campaign-throws-a-spotlight-on-media-literacy](http://www.thelampnyc.org/2012/03/14/how-the-kony-2012-campaign-throws-a-spotlight-on-media-literacy)

Labelling and Advertising of Foodstuffs in South Africa, and <http://allafrica.com/stories/201205280480.html>

## The YouthXchange Initiative

UNEP and UNESCO started the YouthXchange (YXC) Initiative in 2001 to promote sustainable lifestyles among young people (aged 15-24) through education, dialogue, awareness-raising and capacity-building. At the national and local levels, YXC training activities are secured through a diverse network of partners, with the support of a printed training kit and a website [www.youthxchange.net](http://www.youthxchange.net).

## The YXC training kit on responsible consumption

The YXC training kit provides information, ideas, tips and good practices on topics such as sustainable consumption, lifestyles, mobility, waste reduction, energy and resource efficiency, smart and responsible shopping and so forth. To date, the YXC guide has been translated into more than 20 languages, including: Arabic, Azeri, Basque, Catalan, Chinese, Filipino, Flemish, French, German, Greek, Hungarian, Italian, Japanese, Korean, Norwegian, Portuguese, Slovenian, Spanish, and Turkish. From China to Italy and Dubai to Mexico City, UNEP and UNESCO estimate that the guide has been distributed to more than 400,000 people worldwide. It is downloadable from [www.unep.org](http://www.unep.org) and [www.unesco.org](http://www.unesco.org).

## The YXC thematic guidebooks

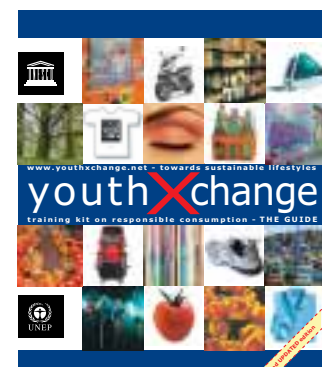
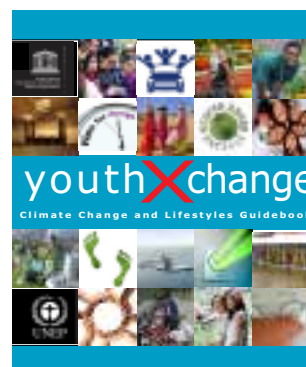
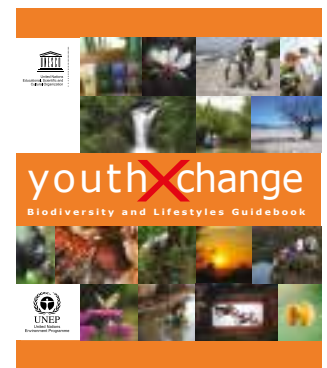
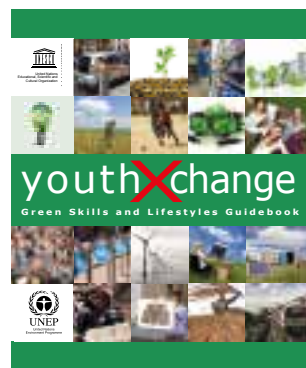
In 2011, UNEP and UNESCO embarked on the development of thematic YXC guidebooks, which present global challenges, such as climate change, to young people so they can better understand how such challenges are connected to their everyday lifestyle choices. The *Climate Change and Lifestyles Guidebook* (2011) was the first YXC thematic guidebook and it explores the challenges, opportunities and good practices of climate change. The *Green Skills and Lifestyles Guidebook* (2016) is the second YXC thematic guidebook and connects the issues of the green economy, green jobs, green societies and the skills needed to transition to the green economy to young people and their lifestyles.

## The YXC Network

YXC works with young people aged 15-24 as well as educators, non-governmental organizations (NGOs), trainers and youth leaders around the world. YXC reaches young people through a network of national partners in more than 45 countries. YXC has become a network of organizations that actively pursue education for sustainable consumption and lifestyles and work at the local level with similar materials and pedagogical approaches. Some YXC partners also have local versions of the YXC website.

## The YXC partners

The YouthXchange partners all over the world have made the project a reality and are living proof of how complex sustainable lifestyle values can be transmitted to young people, while having fun and exchanging ideas and active experiences.



## United Nations Environment Programme (UNEP)

The United Nations Environment Programme was created in 1972 as the voice for the environment within the UN system. Its mission is to provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations.

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## The United Nations Educational, Scientific, and Cultural Organization (UNESCO)

The United Nations Educational, Scientific and Cultural Organization (UNESCO) was founded on November 16, 1945. This specialized United Nations agency's mission is to contribute to the building of peace, the eradication of poverty, sustainable development and intercultural dialogue through education, the sciences, culture, communication and information.

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This publication is a contribution to:

– The Global Action Programme (GAP) on Education for Sustainable Development, which seeks to generate and scale-up ESD as the follow up to the United Nations Decade of Education for Sustainable Development. The GAP's priority action area #4 focuses on empowering and mobilizing youth.

For more information: <http://en.unesco.org/gap>

– The 10-Year Framework of Programmes on Sustainable Consumption and Production's Sustainable Lifestyles & Education Programme, which aims to foster the uptake of sustainable lifestyles as the common norm, with the objective of ensuring their positive contribution to addressing global challenges.

For more information: [www.unep.org/10yfp/lifestyles](http://www.unep.org/10yfp/lifestyles)

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