



SUSTAINABLE DEVELOPMENT
SOLUTIONS NETWORK
A GLOBAL INITIATIVE FOR THE UNITED NATIONS

An Action Agenda for Sustainable Development

REPORT FOR THE UN SECRETARY-GENERAL

6 June 2013

Prepared by the Leadership Council of the
Sustainable Development Solutions Network



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CONTENTS

Executive Summary	viii
I. The Four Dimensions of Sustainable Development	1
II. Updating the Millennium Declaration and the MDGs	2
III. Business-as-Usual Trajectory Versus a Sustainable Development Path	4
IV. Ten Priority Challenges of Sustainable Development	8
1. End extreme poverty including hunger	9
2. Achieve development within planetary boundaries	10
3. Ensure Effective Learning for All Children and Youth for Life and Livelihood	12
4. Achieve Gender Equality, Social Inclusion, and Human Rights for All	14
5. Achieve Health and Wellbeing at All Ages	15
6. Improve Agriculture Systems and Raise Rural Prosperity	16
7. Empower Inclusive, Productive, and Resilient Cities	18
8. Curb Human-Induced Climate Change and Ensure Clean Energy for All	19
9. Secure Ecosystem Services and Biodiversity, Ensure Good Management of Water and Other Natural Resources	21
10. Transform Governance for Sustainable Development	23
V. Framing Sustainable Development Goals	26
Annex 1: Proposed Sustainable Development Goals (SDGs) and Targets	28
Annex 2: Illustrative contributions of the proposed SDGs to the four dimensions of sustainable development	32
Annex 3: Questions and Answers (Q&A) on the proposed SDGs	34
Annex 4: Further reading	43

Executive Summary

The Millennium Declaration and the Millennium Development Goals (MDGs) have successfully focused world attention and action on ending extreme poverty in all its forms and reducing gender inequality. The fifteen-year MDG period will be completed at the end of 2015. The Rio+20 Summit in June 2012 resolved to finish the job of ending extreme poverty and hunger as a matter of urgency. It also endeavored to place poverty reduction within the broader context of sustainable development.

As part of UN Secretary-General Ban Ki-moon's initiatives to promote sustainable development,ⁱ the UN Sustainable Development Solutions Network (SDSN) was launched in 2012 to mobilize global scientific and technological knowledge on the challenges of sustainable development, including the design and implementation of the post-2015 global sustainable development agenda. The SDSN has had extensive worldwide consultations with its Leadership Council and a broader network of [thematic groups](#) on the key issues of sustainable development. As a body comprising scientific and operational expertise on the broad range of sustainable development challenges, the Leadership Council has explored what an integrated, concise, science-based, and action-oriented agenda for the world might look like. This document, prepared by the Leadership Council of the SDSN, summarizes the main conclusions of these discussions and the emerging work of the SDSN's thematic groups. It also integrates the large number of comments received on an earlier draft during a two-week public consultation.ⁱⁱ

The SDSN fully supports the Rio+20 vision of sustainable development as a holistic concept addressing four dimensions of society:ⁱⁱⁱ economic development (including the end of extreme poverty), social inclusion, environmental sustainability, and good governance including peace and security. Societies aim to achieve all four dimensions. Failures in one area, such as environmental sustainability or gender equality, can undermine progress in others, such as the eradication of poverty. Poor governance and insecurity can all too easily undermine progress on economic, social, and environmental objectives.

The world has changed profoundly since 2000 when the Millennium Declaration and the MDGs were adopted. In particular, five shifts will make the coming fifteen-year period, 2015-2030, different from the MDG period ending in 2015: (i) the feasibility of ending extreme poverty in all its forms, (ii) a drastically higher human impact on the physical Earth, (iii) rapid technological change, (iv) increasing inequality, and (v) a growing diffusion and complexity of governance.

Today's problems will expand dangerously without an urgent and radical change of course. The world needs an operational sustainable development framework that can mobilize all key actors (national and local governments, civil society, business, science, and academia) in every country to move away from the Business-as-Usual (BAU) trajectory towards a Sustainable Development (SD) path. Such a framework and the Sustainable Development Goals (SDGs) should identify the main objectives and strategies needed to make this shift.

ⁱ The High-Level Panel of Eminent Persons on the Post-2015 Development Agenda, which has recently submitted its report forms part of the Secretary-General's initiatives (www.post2015hlp.org).

ⁱⁱ A synthesis of the comments received during the public consultation is available on the SDSN website. Organizations who have submitted detailed comments on an earlier draft are listed on page 5.

ⁱⁱⁱ The Rio+20 outcome document refers to three dimensions of sustainable development (economic, social, and environmental) and good governance, which is sometimes described as the foundation of sustainable development. For simplicity we refer to the four societal objectives as dimensions of sustainable development.

A sustainable development path builds on a global framework for cooperation to address the four dimensions of sustainable development and should be based on four related normative concepts: (i) the right to development for every country, (ii) human rights and social inclusion, (iii) convergence of living standards across countries, and (iv) shared responsibilities and opportunities.

To be effective, a shared framework for sustainable development must mobilize the world around a limited number of priorities and associated goals – probably not more than ten. The Leadership Council of the SDSN has identified the following priority challenges, which are interconnected and each contribute to the four dimensions of sustainable development:

- **End Extreme Poverty Including Hunger:** End extreme poverty in all its forms, including hunger, child stunting, malnutrition, and food insecurity; and support highly vulnerable countries (MDGs 1-7).
- **Achieve Development within Planetary Boundaries:** All countries have a right to development that respects planetary boundaries, ensures sustainable production and consumption patterns, and helps to stabilize the global population by mid-century.
- **Ensure Effective Learning for All Children and Youth for Life and Livelihood:** All girls and boys complete affordable and high-quality early childhood development programs, primary, and secondary education to prepare them for the challenges of modern life and decent livelihoods. All youth and adults have access to continuous lifelong learning to acquire functional literacy, numeracy, and skills to earn a living through decent employment or self-employment.
- **Achieve Gender Equality, Social Inclusion, and Human Rights for All:** Ensure gender equality, human rights, the rule of law, and universal access to public services. Reduce relative poverty and other inequalities that cause social exclusion. Prevent and eliminate violence and exploitation, especially for women and children.
- **Achieve Health and Wellbeing at All Ages:** Achieve universal health coverage at every stage of life, with particular emphasis on primary health services, including reproductive health, to ensure that all people receive quality health services without suffering financial hardship. All countries promote policies to help individuals make healthy and sustainable decisions regarding diet, physical activity, and other individual or social dimensions of health.
- **Improve Agriculture Systems and Raise Rural Prosperity:** Improve farming practices, rural infrastructure, and access to resources for food production to increase productivity of agriculture, livestock, and fisheries, raise smallholder incomes, reduce environmental impacts, promote rural prosperity, and ensure resilience to climate change.
- **Empower Inclusive, Productive and Resilient Cities:** Make all cities socially inclusive, economically productive, environmentally sustainable, secure, and resilient to climate change and other risks. Develop participatory, accountable, and effective city governance to support rapid and equitable urban transformation.

- **Curb Human-Induced Climate Change and Ensure Sustainable Energy:** Curb greenhouse gas emissions from energy, industry, agriculture, built environment, and land-use change to ensure a peak of global CO₂ emissions by 2020 and to head off the rapidly growing dangers of climate change. Promote sustainable energy for all.
- **Secure Ecosystem Services and Biodiversity, and Ensure Good Management of Water and Other Natural Resources:** Biodiversity, marine, and terrestrial ecosystems of local, regional and global significance are inventoried, managed, and monitored to ensure the continuation of resilient and adaptive life support systems and to support sustainable development. Water and other natural resources are managed sustainably and transparently to support inclusive economic and human development.
- **Transform Governance for Sustainable Development:** The public sector, business, and other stakeholders commit to good governance, including transparency, accountability, access to information, participation, an end to tax and secrecy havens, and efforts to stamp out corruption. The international rules governing international finance, trade, corporate reporting, technology, and intellectual property are made consistent with achieving the SDGs. The financing of poverty reduction and global public goods including efforts to head off climate change are strengthened and based on a graduated set of global rights and responsibilities.

These ten sustainable development challenges must be addressed at global, regional, national, and local scales. They may form a plausible basis for framing the SDGs to trigger practical solutions that governments, businesses, and civil society can pursue with high priority. Some issues like gender equality and human rights cut across all priorities, but since they require social mobilization and political leadership, we recommend highlighting them under a dedicated goal.

Well-crafted SDGs will help guide the public's understanding of complex sustainable development challenges, inspire public and private action, promote integrated thinking, and foster accountability. The SDGs will be complementary to the tools of international law, such as global treaties and conventions, by providing a shared normative framework. Children everywhere should learn the SDGs to help them understand the challenges that they will confront as adults. The SDGs will also mobilize governments and the international system to strengthen measurement and monitoring for sustainable development.

The SDGs can also promote integrated thinking along the four dimensions of sustainable development and put to rest the futile debates that pit one dimension against another. The challenges addressed by the proposed SDGs are inherently integrated, so sustainable development will require that the sustainable development challenges be pursued in combination, rather than individually or one at a time. For example, sustainable management of freshwater resources cuts across the agriculture, urban, rural, and ecosystem goals.

The world has at its disposal the tools to end extreme poverty in all its forms and to address the sustainable development challenges outlined in this document. If the world mobilizes around a shared agenda for sustainable development and ambitious, time-bound Sustainable Development Goals, then rapid, positive change on the required scale is feasible thanks to rising incomes and unprecedented scientific and technological progress.

I. The Four Dimensions of Sustainable Development

The Millennium Declaration and the Millennium Development Goals (MDGs) have successfully focused world attention and action on ending extreme poverty in all its forms¹ and reducing gender inequality. The fifteen-year MDG period will be completed at the end of 2015. The Rio+20 Summit in June 2012 resolved to finish the job of ending extreme poverty and hunger as a matter of urgency. It also endeavored to place poverty reduction within the broader context of sustainable development. The summit's final outcome document, *The Future We Want*, calls for new Sustainable Development Goals (SDGs), including the eradication of poverty and hunger. It also launched an intergovernmental Open Working Group on the Sustainable Development Goals to make recommendations to the UN General Assembly on the design of these goals.

As part of UN Secretary-General Ban Ki-moon's initiatives to promote sustainable development,² the UN Sustainable Development Solutions Network (SDSN) was launched in 2012 to mobilize global scientific and technological knowledge on the challenges of sustainable development, including the design and implementation of the post-2015 global sustainable development agenda. The SDSN has had extensive worldwide consultations with its Leadership Council and a broader network of [thematic groups](#) on the key issues of sustainable development. As a body comprising scientific and operational expertise on the broad range of sustainable development challenges, the Leadership Council has explored what an integrated, concise, science-based, and action-oriented agenda for the world might look like. This document, prepared by the Leadership Council of the SDSN, summarizes the main conclusions of these discussions and the emerging work of the SDSN's thematic groups. It also integrates the large number of comments received on an earlier draft during a two-week public consultation.³

The SDSN fully supports the Rio+20 vision of sustainable development as a holistic concept addressing four dimensions of society:⁴ economic development (including the end of extreme poverty), social inclusion, environmental sustainability, and good governance including peace and security. Societies aim to achieve all four dimensions. Failures in one area, such as environmental sustainability or gender equality, can undermine progress in others, such as the eradication of poverty. Poor governance and insecurity can all too easily undermine progress on economic, social, and environmental objectives.

The [framework document](#) of the SDSN describes the four dimensions of sustainable development in detail. Here we focus on the operational significance of these four dimensions of sustainable development, examining how they can be summarized in a set of clear, succinct, and useful SDGs. The purpose of the SDGs is to help translate global aspirations into practical actions. In this regard, we subscribe to the Rio+20 agreement that the SDGs should be "*action-oriented, concise and easy to communicate, limited in number, aspirational, global in nature and universally applicable to all countries*

¹ We use the term "extreme poverty in all its forms" for the multidimensional concept of poverty embodied in the MDGs, comprising *inter alia* income poverty, hunger, gender inequality, lack of education, poor health and major epidemics, and lack of access to basic infrastructure services.

² The High-Level Panel of Eminent Persons on the Post-2015 Development Agenda, which has recently submitted its report forms part of the Secretary-General's initiatives (www.post2015hlp.org).

³ A synthesis of the comments received during the public consultation is available on the SDSN website. Organizations who have submitted detailed comments on an earlier draft are listed on page 5.

⁴ The Rio+20 outcome document refers to three dimensions of sustainable development (economic, social, and environmental) and good governance, which is sometimes described as the foundation of sustainable development. For simplicity we refer to the four societal objectives as dimensions of sustainable development.

while taking into account different national realities, capacities and levels of development and respecting national policies and priorities.”

II. Updating the Millennium Declaration and the MDGs

The world has changed profoundly since 2000 when the Millennium Declaration and the MDGs were adopted. In particular, five shifts will make the coming fifteen-year period, 2015-2030, different from the MDG period ending in 2015: (i) the feasibility of ending extreme poverty in all its forms, (ii) a drastically higher human impact on the physical Earth, (iii) rapid technological change, (iv) increasing inequality, and (v) a growing diffusion and complexity of governance. Here is a brief description of each shift.

1. The feasibility of ending extreme poverty: Thanks to the powerful forces of technological advances and the rapid growth in emerging economies and many low-income countries, it is now possible – though far from assured – to envision a world by 2030 in which all households are able to meet their basic needs for income, food, health, and basic infrastructure. The MDGs have played an important role, by mobilizing great expertise and strategies in areas such as public health, agricultural productivity, improved infrastructure, and better measurement.

2. Human impacts on the Earth: The scale of human impact on the physical Earth has reached dangerous levels more rapidly and disruptively than was foreseen by most in 2000. These trends threaten the long-term progress against poverty, and the wellbeing of rich and poor countries in all parts of the world. In parallel, our scientific understanding has improved substantially over the last decade, and we can now understand the challenges and dangers with far more clarity than before.

With a world population now at 7.2 billion people and an annual gross domestic product (GDP) of nearly US\$90 trillion, the world economy using today’s technologies is already exceeding several of the Earth’s “planetary boundaries.”⁵ Many natural resources and ecosystems that are essential for human and societal wellbeing are being threatened or destroyed. Climate change is no longer a future threat but a stark current reality: global temperatures are rising, extreme weather events are becoming commonplace, and the oceans are acidifying. Estuaries around the world are experiencing eutrophication as the result of large human-caused fluxes of biologically active nitrogen and phosphorus. Many fisheries are being fished to exhaustion; freshwater withdrawals often exceed sustainable limits; and the Earth is facing an unprecedented mass extinction of species. Unless consumption and production patterns become sustainable, these pressures will increase inexorably with further population and economic growth. They will exacerbate social exclusion and gender inequality.

The world economy is roughly doubling in size every generation (an annual economic growth rate of 4 percent implies a doubling time of just under 18 years), as poorer countries experience rapid growth and poverty reduction. Yet this growth will be impossible to sustain unless growth and living standards can be decoupled from resource use to ensure sustainable consumption and production patterns. The framework for sustainable development must therefore place a central emphasis on decoupling living

⁵ Planetary boundaries define the safe operating space for humanity in the Earth system along nine critical dimensions: greenhouse gas emissions, nitrogen and phosphorus loading, ozone depletion, chemical pollution, freshwater use, ocean acidification, land use change, aerosol loading, and loss of biodiversity.

standards and economic growth from unsustainable resource use and pollution.⁶ An example of decoupling is the shift from fossil fuel to wind and solar energy. Another is the shift from mass fertilizer application to precision dosing. This decoupling will require deep changes to technologies, production systems, and individual behaviors in every country that must be sustained over the long term.

3. Technological change: Rapid technological change, particularly in information and communication technologies, is deepening the integration of the world economy; globalizing supply chains for most products; offering new pathways to decoupling growth from resource use, especially in cities; and opening unprecedented opportunities for low-income countries to join an international production system. New technologies also offer tremendous opportunities to deliver public services, including healthcare, education and basic infrastructure, to more people at a much lower cost and with a much lower use of primary resources.

A central question for the world and the post-2015 framework is therefore how to direct technological change towards sustainable development. Nowhere is this challenge better illustrated than in the need to decarbonize the energy sector to mitigate climate change. While significant advances have been made in promoting energy efficiency and reducing the cost of low-carbon technologies, these advances are often outpaced by technological progress in the extraction and use of “unconventional” oil and gas resources. The so-called “shale gas revolution” in the US and elsewhere, drastic reductions in the cost of generating oil from previously uneconomical oil sands, and the first forays into the exploitation of deep-sea methane hydrates are all major technological achievements. Yet they are complicating the challenge of de-carbonization.

4. Inequality and social exclusion: Inequality and social exclusion are widening within most countries with some important exceptions (such as Brazil and Turkey). The widespread rise in inequality in rich and poor countries alike suggests that it is partly driven by rapid worldwide technological change and the forces of globalization.

Current growth patterns are not providing enough decent work and are leading to widespread unemployment, particularly among those without the skills and training needed for the expanding information-based sectors of the world economy. This includes many young people, disabled people, and individuals without adequate levels of schooling. Moreover, as arable land, freshwater, and foodstuffs become increasingly scarce, poorer and more vulnerable communities are being crowded out and left further behind. The rising inequality is feeding resentment and exacerbating social exclusion, which can lead to injustice and violence.

As argued in this report, national policies can and should play an important role in mitigating the rise of inequalities. A post-2015 framework must therefore promote gender equality, human rights, decent work for all, and social inclusion.

5. Difficulties of global governance: In an age of globalization, governance within and among countries is becoming more diffuse and complex. Whereas in the past, national governments made most decisions relating to a country’s internal economic development, today they must coordinate with a broad spectrum of actors, including businesses, local governments, regional and international bodies, and civil society organizations. The information and communication revolution is leading to unprecedented

⁶ For a definition of decoupling, see Annex 3.

transparency and growing demands for participation in key decisions from all segments of society in every country. An action agenda for sustainable development must therefore mobilize governments at all levels as well as civil society and business.

At the international level, geopolitics is increasingly multi-polar. It is welcome that no single country or even group of countries can impose its will on others. At the same time this diffusion of global governance makes it enormously challenging to tackle problems that require greater global cooperation. Moreover, multinational corporations from both high-income and developing countries have become key players in the global economy. They are now central to global trade, finance, production, and technological change. At the same time, globalization allows them to undertake regulatory and tax arbitrage across jurisdictions, undermining the effectiveness of national policies and underscoring the need for global cooperation on taxation and business regulation. Managing globalization would therefore require more global cooperation across countries, but in practice we often observe less cooperation in a multi-polar world.

III. Business-as-Usual Trajectory Versus a Sustainable Development Path

Today's problems will expand dangerously without an urgent and radical change of course. The world needs an operational sustainable development framework that can mobilize all key actors (national and local governments, civil society, business, science, and academia) in every country to move away from the Business-as-Usual (BAU) trajectory towards a Sustainable Development (SD) path. Such a framework and the SDGs should identify the main objectives and strategies needed to make this shift.

The business-as-usual (BAU) trajectory is marked by a failure of international coordination and cooperation, as well as inadequate policies in developed and developing countries that do not address the challenges of sustainable development. As a result, the BAU trajectory fails to achieve sustainable development in multiple ways. Many countries will prosper and converge rapidly, reaching the same per capita GDP as high-income countries, while others will stagnate and still others fall deeper into poverty. Growing regulatory competition among countries may lead to a "race to the bottom" in terms of taxation, labor, and environmental standards. Even the successful countries will struggle to raise the public revenues they need to invest in human capital, infrastructure, public services, and environmental protection.

Global efforts to assist the poorer and more vulnerable countries will remain inadequate. The recent trend towards declining official development assistance (ODA) will intensify. For the vulnerable regions, including the Sahel, Horn of Africa (plus Yemen), the Great Lakes region of Central Africa, and part of South and Central Asia, economic, social, and political forces will be unable to overcome endemic poverty and fragility. Many countries, both developed and developing, will fail to provide adequate training and economic opportunities to their young and will face rising youth unemployment and social unrest. Women and girls will remain disempowered in many parts of the world.

Countries will continue with token efforts to reduce the resource intensity of production and consumption, but the world will continue on a path of environmental degradation. With the global population rising to 9 billion people or possibly more by 2050⁷ and to 10 billion before 2100, the world will experience unprecedented crises of food production, public health, and natural disasters. Food prices will soar, and some parts of the world may be rendered virtually uninhabitable as a result of climate change and water stress.

A central reason for the poor outcomes of the BAU trajectory is the failure of global cooperation around a framework for sustainable development and inadequate national policy frameworks. A global market economy without adequate governance and cooperation is not equipped to address environmental threats (especially climate change), support vulnerable regions, end extreme poverty, reduce inequalities between skilled and unskilled workers, or guarantee a healthy start for children. In short, the world's current trajectory is a danger for every part of the world.

We highlight the regions likely to suffer moderate (M) and high (H) costs in the BAU trajectory (Table 1) and the regions that will likely contribute the most to environmental stresses that push against planetary boundaries (Table 2). Both tables focus on regional aggregates that sometimes hide substantial variation across countries within a region. They are meant to be illustrative, not quantitatively precise. Note that all regions experience significant, but avoidable costs under the BAU scenario.

A sustainable development (SD) path, instead, builds on a global framework for cooperation to address the four dimensions of sustainable development: economic, social, environmental, and governance including peace and security. This framework should be based on four related normative concepts:

1. The right to development: Planetary boundaries are no reason to slam the door on development in today's developing countries; they are a reason for all countries to grow differently and sustainably. As reaffirmed at Rio+20, every country has a right to development and should enjoy the benefits of modern technologies and economic progress.
2. Human rights and social inclusion: Sustainable development requires that all individuals have equal opportunities to share in progress, are treated equally before the law, and have equal access to public services. Therefore, an important objective of sustainable development is to realize long-recognized human rights.
3. Convergence: All regions will continue to raise living standards with poorer countries experiencing higher growth rates. Over time, the gaps between rich and poor countries will narrow substantially. Under the BAU scenario, the poorest and most vulnerable regions will find themselves excluded from economic progress. Under the sustainable development framework, all regions of the world should have the ability to grow and prosper.

⁷ The medium population forecast of the UN Population Division assumes a substantial drop in fertility rates. If this drop does not occur then population might increase beyond 9 billion by 2050.

Table 1: Illustrative costs of a BAU trajectory by region

Region/ Costs under BAU Trajectory	North America	Latin America, Caribbean	Europe	Middle East & North Africa	Sub- Saharan Africa	South & Central Asia	South- East Asia & Pacific	East Asia
Extreme Poverty				M	H	H		
Food Insecurity				M	H	H	M	
Risk of Conflict & Instability		M		H	H	M	M	M
Relative Poverty and Inequality	M	H	M	M	H	M	M	M
High Fertility				H	H	H		
Inadequate Education		M		M	H	H	M	
Gender Inequality		M		H	H	H	M	M
Poor Health		M		M	H	H	M	
Water Stress & Droughts	M	M	M	H	H	H		M
Poor Urban Housing & Services	M	M		M	H	H	H	M
Poor Urban Environment & Resilience	M	H	M	M	H	H	H	H
Extreme Weather	M	M	M	M	H	M	H	H
Sea-Level Rise	H	M	H	H	H	H	H	H
Ocean Acidification	H	H	H	H	H	H	H	H
Biodiversity Loss	M	H	M	M	H	M	H	H

Table 2: Illustrative contribution to environmental degradation under a BAU trajectory by region

Contribution to Environmental Change Under BAU	North America	Latin America, Caribbean	Europe	Middle East & North Africa	Sub-Saharan Africa	South & Central Asia	South-East Asia & Pacific	East Asia
Greenhouse Gas Emissions	H	M	H	M		M	M	H
Water Use (Virtual Water)	H	M	H	H		M	M	M
Water and Air Pollution by Agrochemicals	M		M	M		H	H	H

Notes on Tables 1 and 2: Each row in the table is based on an assessment of current levels and future trends relating to costs and per capita contributions towards environmental stress. Data that have been consulted include: MDG indicators, Global Food Security Index, Global Peace Index, Global Peace Barometer, Gini and other inequality measures, access to electricity, production and consumption-based greenhouse gas emissions from energy use, IPCC data on climate stress and extreme events, IUCN Red List for endangered species, and 2011 National Water Footprint Accounts. To prepare the tables, available data and projections were reviewed by members of the Leadership Council and the Thematic Groups. We underscore the illustrative nature of the results.

4. **Shared responsibilities and opportunities:** All countries should share in promoting sustainable development. Low-income countries and those with special vulnerabilities (e.g. drylands, landlocked countries, and small island states) should receive the international support they need to end extreme poverty and access the technologies needed for sustainable development. As today's low income countries develop, they will graduate from ODA, and eventually become providers of development assistance to the dwindling few who will continue to need it. Respecting planetary boundaries is a task for all countries, but high-income countries that account for high current and historic per capita use of environmental resources will have further to go in reducing the unsustainable per capita use of primary resources and emissions of greenhouse gases.

The priority operational challenges for moving towards a sustainable development trajectory are outlined in the next section. There can be no doubt that these challenges are immense, but fortunately, rapid and positive change on a global scale is feasible thanks to rising incomes, unprecedented scientific and technological progress, the information revolution, a growing political awareness of the need for sustainable development pathways, and the positive lessons from the MDGs regarding the strength of global partnerships. The world has the tools to end extreme poverty in all its forms and to combine economic growth, social inclusion, and environmental sustainability. Where new approaches and technologies are needed, particularly to decouple living standards and economic growth from the destructive overuse of environmental resources, these new approaches can be fostered through concerted action and practical problem solving by governments, businesses, civil society, science, and academia.

The risks of the BAU trajectory are so severe that every country and region of the world will be better off under the SD trajectory. Yet achieving the required change will not be easy. Many countries, and some cities, will try to free ride on the efforts of other nations. The same will be true for many businesses. Political leaders often focus on the short term, while the challenges outlined in this document require long-term responses. For the world to follow a sustainable development trajectory, all countries and businesses must agree to a set of rules and values, and then live up to their responsibilities under a system of transparency, monitoring, and accountability.

IV. Ten Priority Challenges of Sustainable Development

To be effective, a shared framework must mobilize the world around a limited number of priorities and associated goals – probably not more than ten. The Leadership Council of the SDSN has identified ten priority sustainable development challenges described in this section.⁸ They are all interconnected, and each one contributes to the four dimensions of sustainable development, as described in Annex 2. These transformations may form a plausible basis for framing the SDGs (Annexes 2 and 3) to trigger practical solutions that countries can pursue with high priority. Some issues like gender equality and human rights cut across multiple priorities, but since they require social mobilization and political leadership, we recommend highlighting them under a dedicated goal.

The key actors in this transformation include governments, businesses, and civil society. Local and national governments are essential *inter alia* for maintaining peace, upholding the rule of law, ensuring good governance, providing public goods and services, and for enacting policies to address the four dimensions of sustainable development.

Civil society itself spans a wide range of actors, including non-governmental organizations, social enterprises, community leaders, and religious and cultural organizations. They can hold both governments and businesses to account in terms of performance and honesty, organize and mobilize communities, deliver services, and promote “social enterprises” that work on a business model but do not pursue profit as their main motive. Another important part of civil society consists of universities, research centers, and expert communities that promote innovation for sustainable development and train future leaders. Of course the growing number civil society organizations and social entrepreneurs also need to commit to transparency and accountability.

Business deserves special note as a principal engine for economic growth and job creation. The term “business” comprises a great diversity of organizations ranging from small shops to large multinational corporations and financial institutions. Collectively, businesses will develop and deliver many of the new technologies, organizational models, and management systems that are needed for sustainable development. Businesses account directly for about two-thirds of natural resource use. If businesses embrace the SDGs and are supported by clear government policies and rules that align private incentives with sustainable development, then rapid positive change will become possible. If businesses operate under values and incentives that are misaligned with the objectives of sustainable development, then the transformations outlined in this document will be impossible.

⁸ Under each priority we limit ourselves to highlighting some of the key issues that inform the framing of the SDGs. More detailed analysis and descriptions of the means for achieving the proposed goals are described in the upcoming reports by the Thematic Groups of the SDSN (see Annex 4 and www.unsdsn.org).

1. End extreme poverty including hunger

As agreed in *The Future We Want* (paragraph 2), poverty eradication is the greatest global challenge facing the world today and an indispensable requirement for sustainable development. The world has made great progress in reducing extreme poverty since the adoption of the MDGs. It now has a realistic prospect of eradicating extreme poverty in all its forms by 2030.⁹ So ending extreme poverty in all its forms, backed by bold and updated MDG targets, should constitute a clear priority of the SDGs and become the first goal. In this way the world will ensure continuity in the fight against extreme poverty during the transition from MDGs to SDGs.

Of all of the MDGs, the challenge of ending hunger has proven to be the most difficult. Chronic hunger continues to afflict some 870 million people, as reflected in a high prevalence of childhood stunting and other hunger indicators. In addition, serious micronutrient deficiencies affect hundreds of millions more people. It is estimated that some 3 million children under the age of 5 die each year as a result of under-nutrition. In many regions climate change, water stress, and other environmental threats (e.g. land degradation and loss of biodiversity) are making the food supply unstable, increasing the risk of hunger. Rapid population growth in impoverished, food-deficit regions adds to these challenges. Moreover, global and local food markets are prone to wide price fluctuations.

Strategies to address hunger need to include (i) increasing the availability and affordability of nutritious food, particularly for vulnerable populations; (ii) promoting safe water, sanitation and hygiene to reduce diarrheal diseases that cause malnutrition, particularly among young children; (iii) targeted nutrition programs for vulnerable children, pregnant women, and lactating mothers, including the promotion of breast feeding; and (iv) food safety nets for natural disasters and emergencies. We emphasize the urgency and complexity of fighting hunger, and link it to the challenges of gender equality, health and healthy behaviors, sustainable agriculture, water management, sanitation and hygiene, climate change, and ecosystem management described under priorities below.

While most countries have the domestic resources to end extreme poverty, some 70 or so low-income or otherwise vulnerable countries do not. The most vulnerable regions include: the Horn of Africa (plus Yemen), the Sahel, the Great Lakes region of Central Africa, and parts of South and Central Asia. There are also several landlocked and small-island economies in other parts of the world that remain in considerable distress and whose development challenges are greatly exacerbated by their structural conditions.

Many of these vulnerable countries and regions are too poor, too remote, too conflict-ridden, too bereft of natural resources, and/or too burdened by other challenges (e.g. natural hazards and high disease burdens) to meet the goals for sustainable development on their own. Many are severely affected by climate and other environmental changes and need to strengthen resilience. An estimated 1.5 billion people live in countries affected by chronic insecurity or conflict that is partly driven by lack of development, which in turn can become a driver of more insecurity and violence.

These vulnerable countries and regions need special international support to break the vicious cycle of lack of economic development, environmental degradation, rapid population growth, insecurity, and conflict. Ending and preventing conflicts and building peace often requires international support in the

⁹ The World Bank and its Governors have recently endorsed the goal of ending extreme poverty by 2030.

form of mediation, peacekeeping, and timely assistance to address the underlying economic and social crises that drive such conflicts. Of course, such external support can be effective only when national governments also play their part in strengthening the policy and legal frameworks for action and improving governance. Some vulnerable countries have substantial natural resources (minerals, hydrocarbon, and land) that – if carefully used – can be a catalyst for poverty reduction and economic development. Special care must be taken, however, to avoid the infamous “resource curse” in the development of these primary resources (see also priority 9 below).

2. Achieve development within planetary boundaries

All countries have the right to development, meaning the right to enjoy rising living standards and the eventual convergence of living standards with today’s high-income countries. Concerns over the environment must not provide an excuse for today’s high-income countries to frustrate the economic aspirations of developing countries. The key is for all countries, rich and poor, to adopt sustainable technologies and behaviors that decouple economic growth from unsustainable patterns of production and consumption.

Through broad-based and sustainable economic growth, all low-income countries should be able to reach the per capita income threshold of middle-income countries by 2030. Likewise, today’s middle-income countries can become upper-middle-income or high-income countries by 2030, depending on their starting point. As emphasized throughout this document, such economic growth should benefit all citizens.

At the same time, however, the entire world must recognize that growth along the current trajectory using today’s technologies is bound to fail. It would trespass on planetary boundaries and lead to environmental degradation that will stop growth and even threaten major reversals of living standards through pollution, deforestation, water scarcity, famines, floods, displacement, and collapsing agricultural productivity. These threats are not in the distant future. Some countries, including some of the poorest, are already feeling the very heavy costs of environmental change. These costs fall disproportionately on vulnerable and marginalized populations.

Therefore, the right to development is a right to development within planetary boundaries. All countries can and should develop, but all countries must recognize that development, including the convergence of living standards, needs to take place within a sound environmental framework. In this sense, we need a framework of convergence of living standards that respects environmental realities and that in no way slams the door on developing countries, and the poor in particular. All countries will have to adopt sustainable technologies, policies, and business models. They will have to cooperate so that all countries converge not only in living standards but also in their global responsibilities to sustainable development. Developed countries have, of course, a particular responsibility to decouple resource use from incomes and economic growth since they have the highest per capita resource use in the world. They also need to provide support to developing countries in the form of technology transfer and financing for the poorest countries.

It is possible for countries to grow and improve human wellbeing while respecting planetary boundaries, mainly by shifting to low-carbon energy; improving the efficiency of energy, water, and other resource uses; adopting sustainable technologies for agriculture, water, transport, power, industry, buildings, and other sectors; and restraining various kinds of destructive or wasteful behaviors, including pollution and

destruction of biodiversity. The required transformations in agriculture, urban development, water and waste management, the energy system, and management of ecosystems and natural resources are complex and must mobilize all actors of society. They will require increased investments in research and teaching to promote practical problem solving and sharing of knowledge. The operational implications of these transformations are described in more detail under the priorities below.

Today's standard measures of economic progress, GDP per capita and national income accounts, generally do not reflect the environmental and social consequences of a country's development path, nor do they accurately capture wellbeing at an individual or household level. They are therefore poorly suited to serve as stand-alone measures for tracking progress towards sustainable development and must be revised and complemented with more broad-based measures that take into account all dimensions of sustainable development, including subjective wellbeing.¹⁰ Of particular importance will be that countries quantify their contributions towards each planetary boundary to (i) identify opportunities for reducing their environmental impact, (ii) guide long-term sustainable development, and (iii) support regional and global efforts to tackle planetary boundaries, such as agreements under multilateral environmental instruments on climate change, biodiversity, ozone depletion, and desertification.

In many poor countries, the denial of women's sexual and reproductive health rights combined with extreme poverty sustain high fertility rates that have severe consequences for economic development, social inclusion, environmental sustainability, and peace in these countries.¹¹ High fertility rates and the denial of sexual and reproductive health rights increase mothers' risk of dying in child labor, create other health risks for women, and undermine gender equality. They lead to inadequate investments per child, including in nutrition, health, and education, which translate into worse outcomes for children. High fertility rates raise overall population growth rates, reduce the growth rate of income per capita, and greatly impede the eradication of extreme poverty. High population growth can put unmanageable demands on the natural environment, leading, for example, to excessive water use, habitat destruction, and loss of biodiversity. High fertility rates also increase the risk of insecurity by exacerbating poverty, youth unemployment, and migration within and across countries.

The highest fertility rates in the world are found in sub-Saharan Africa. Even under the medium-fertility scenario of the UN Population Division, which assumes a significant though gradual reduction of fertility rates in the coming decades, the population of sub-Saharan Africa is projected to quadruple between 2010 and 2100, from around 850 million to 3.4 billion. Such a large increase, we fear, would be incompatible with sub-Saharan Africa's aspirations for ending extreme poverty and for sustainable development more generally. We would also anticipate the migration of very poor people from rural to urban areas and across national borders, with attendant social conflicts and political pressures.

¹⁰ Many improved measures of GDP and national accounts are available. We refer in particular to the World Happiness Report, Inclusive Wealth Report, Resource Efficiency Evaluations, the work of the Commission on the Measurement of Economic Performance and Social Progress, and the adjusted net saving and environmental accounting framework developed by the World Bank.

¹¹ For a careful and comprehensive discussion of fertility rates and sexual and reproductive health rights in the context of sustainable development see UN Population Division (2011). The extremely low per capita use of primary resources in these countries means that they currently contribute little to the global pressures on planetary boundaries, but the local environmental implications of high fertility are nevertheless severe, e.g. in deforestation caused by charcoal use, or in habitat loss due to the spread of farmland and pastureland. Even worse, though, are the consequences of high fertility on maternal health and low per-child investments in health, nutrition, and education.

We therefore urge governments in countries with high-fertility populations to promote sexual and reproductive health rights and support measures that accelerate the *voluntary* transition to lower fertility, respecting the rights of women to decide when and how many children they would like to have. Such measures include expanding access to voluntary family planning and reproductive healthcare, investing in child survival, promoting an understanding of the benefits of small families, investing in girls' education, and adopting a holistic approach to the empowerment of women.

Accelerating the reduction of fertility has the potential to usher in a period where the age distribution of the population becomes especially beneficial for economic growth, as the number of potential workers rises in relation to that of children and older persons. Many middle-income countries have benefitted from the “demographic dividend” caused by the decline of fertility.

3. Ensure Effective Learning for All Children and Youth for Life and Livelihood

All girls, boys, and youth have a right to education. Offering them the opportunity to realize their full potential is essential to ensure a healthy and productive society in the next generation. High-quality education can improve job prospects for individuals, raise economic growth, improve health outcomes, and promote safer and more stable communities. High-quality education is also critical for creating equal opportunities for all children, which in turn can lower inequalities and promote gender equality. To reap the full benefits of education, societies need to extend education to all boys and girls, regardless of the income, disability, or social status of their households. They must also adopt a “life-cycle” approach focusing on the education needs of individuals at each stage of their lives.

Evidence accumulated in recent years shows that programs for early childhood development (ECD)¹² play an important role in supporting individual development from birth to ensure a healthy entry to school and preparation for later life. We call on all countries to include universal access to high-quality ECD programs for girls and boys as a central element of their development strategies.

Once children are of school-age, education policies should focus on an adequate level of education and skill development, including an effective transition from school to work. The MDGs emphasize access to primary education, but experience has shown that hard to reach populations (e.g. girls in some settings, nomadic and geographically remote groups, children in conflict-affected regions, the disabled, and the socially and economically disadvantaged) often do not benefit from basic education. To reach universal enrollment, countries therefore need to focus on equity, pursue targeted strategies to reach these children, especially girls, and ensure affordable education for all.

Access and affordability are necessary, but not sufficient. The quality and relevance of education are becoming more important. Being able to read and write are core skills, but effective participation in economic and political life requires a broader, more holistic framework of learning that can only be acquired through a full cycle of high-quality primary and secondary schooling. The learning framework encompasses literacy and numeracy as well as physical wellbeing, social and cognitive skills, problem solving and learning abilities, culture and the arts, critical thinking, and science and technology. Schools should also teach the SDGs to promote the transition to a sustainable development trajectory in every

¹² Early Childhood Development (ECD) programs refer to all programs and policies designed for children in the 0-6 years range including pre-school education, nutrition, child protection, and health interventions. They cover the objectives identified in the *Education for All Goal 1* of comprehensive early childhood care and education for all children.

country. We urge all countries to ensure universal access to at least secondary education and job-skills development with a focus on high-quality learning for all children.

Most countries lack adequately trained and qualified teachers, especially at the secondary level. Countries need to promote the central role of teaching in society, and support teachers to find ways of improving education. We believe countries need to look beyond traditional models of formal schools and explore how new approaches, including through information and communication technologies (ICT), can enhance these models, and expand access to knowledge and skills at all levels of education, particularly for vulnerable groups. For example, online curricula, e-books and journals, school-to-school programs, online teacher training, and other ICT tools can improve access to quality education and expand school curricula to cover the needed life skills.

Skill development is becoming ever more important since labor markets around the world are undergoing unprecedented changes driven in large part by globalization and technological change. Workers with inadequate education find themselves without marketable skills and as a result face unemployment or wages at or near poverty levels. In rural and forest regions, education systems all too often alienate children from traditional family professions, such as farming, fishing, or living off forest products, without providing the skills the children need to prosper in rapidly developing urban economies. Education systems need to do both: equip children with skills for the jobs and livelihoods of the future and also confer skills to upgrade traditional livelihoods in agriculture, fishing, forest management, or other areas.

As demonstrated by a small number of countries, most notably Germany and Switzerland, targeted institutions of vocational training and apprenticeships can train a large number of skilled workers, support the school-to-work transition, and help keep youth unemployment low. Equivalent institutions are missing in most countries. Most students leave school without connections to work and with only weak prospects for decent jobs. This is an area where the business community can help identify sectors with high employment potential, develop and improve curricula, supply trainers, and help absorb students into the workforce. In many developing countries, the informal sector of the economy will continue to be a large provider of work, requiring appropriate labor market institutions to provide job training and matching that can help guide today's students towards decent jobs or livelihoods.

Another focus should be placed on promoting adult literacy, which demonstrably empowers individuals and improves their children's learning outcomes. On current trends, adult literacy (measured by the ability to decipher and write simple text and numbers) is expected to exceed 90 percent by 2030. This is encouraging, but not enough since the basic definition of literacy must be expanded to emphasize functional literacy.¹³ National adult literacy programs therefore should aim to reach the 90 percent mark, using such an expanded definition. In many countries, women's literacy is substantially below national averages, so countries should aim for at least 90 percent functional literacy among both men and women.

Finally, knowledge societies cannot develop without investments in centers of knowledge and learning at the tertiary level. Developing countries need to invest in creating high-quality academic environments

¹³ As defined by the 1978 UNESCO General Conference: "A person is functionally literate who can engage in all those activities in which literacy is required for effective functioning of his group and community and also for enabling him to continue to use reading, writing and calculation for his own and the community's development."

where research and teaching can come together to push the frontiers of human knowledge and work to address the specific development challenges of their societies.

4. Achieve Gender Equality, Social Inclusion, and Human Rights for All

Despite major progress, gender inequality persists in many societies and violence against women and girls remains widespread. The lack of access to secondary education and to sexual and reproductive health services for girls and women is a key driver of gender inequality. In addition, discrimination against ethnic minority groups, indigenous peoples, people with disabilities, and geographically-isolated populations is widespread throughout the world. Gender inequality and other forms of discrimination violate the universal standards of justice enshrined in the Universal Declaration of Human Rights and other agreements. Societies that discriminate against women and social groups obstruct the economic potential of large shares of their populations, which lowers economic growth and limits poverty reduction. Pervasive discrimination and high levels of inequality are also associated with higher risks of conflict and violence.

In response, many countries have successfully instituted legal and administrative reforms to reduce inequality and realize the human rights of all members of society, with a specific view towards reducing disparities by gender and other status. In some cases, practices that are inconsistent with sustainable development and the realization of human rights, such as child marriage, child labor, and sexual violence, need to be tackled head on. Some countries have also actively promoted social support for children in poor households as a way to ensure that poverty is not “vertically transmitted” from poor parents to their children. Ensuring registration at birth has also proven successful in enhancing equal opportunities and legal rights.

Societies and political systems differ in their responses to inequality. Some resist it strongly through aggressive policies and transfers; others seem to tolerate very high levels of inequality. We call on all societies to ensure that all individuals and households are empowered to fully participate in political, economic, and social life. To ensure sustainable development, economic gains must not only be inclusive, but the quality of social interactions that are based on trust, honesty, voluntarism, and solidarity needs to be enhanced through the promotion of social ethics and the observance of human rights for all.

An ambitious objective should be that every country halve “relative poverty,” defined as the percentage of households in a country that earn less than half the median household income in that country.¹⁴ Relative poverty leaves households out of the mainstream of social life, facing discrimination, lack of access to skills and decent work, and a loss of dignity. It also adds to personal stress and can reduce life expectancy and health more generally.

Pathways towards addressing inequalities, overcoming discrimination, and improving social capital are complex and uncertain. Yet there is strong evidence that policies and investments targeted towards social inclusion can play an important role in lowering inequalities and promoting equal opportunities for all. Means to reduce inequalities include greater respect for the rule of law; equal access to education, healthcare, and basic infrastructure services through adequate public financing; effective legal and

¹⁴ Note that halving “relative poverty” is a stretch target for all countries comparable to universal access to basic services or ending extreme poverty since rising median incomes will push up the relative poverty line through to 2030.

administrative reforms including laws on ownership and inheritance of land, and measures to combat corruption; promoting human rights and combating discrimination; affirmative action programs for the poor and marginalized; and social safety nets to better manage the risk of sickness and the consequences of aging.

As described throughout this section, a central focus of the post-2015 agenda must be on providing universal access to high-quality public services and infrastructure. To achieve universal access, we call on countries to collect data on access and utilization that is disaggregated by gender and major social, economic, or other dimensions, so that inequalities in access can be detected and addressed through policy and public awareness.

The most important public good is peace and security, including personal security. Conflict especially is a mortal threat to development, and development cannot thrive without safety from personal and psychological violence, which are all too often directed against women and girls. Even in peaceful countries, interpersonal, criminal, and gang-related armed violence can be a barrier to development. Governments should prevent armed violence, e.g. by disarming ex-combatants and civilians, strengthening the security sector and police, ensuring access to justice, and by working with civil society organizations to end pervasive violence, especially against women and girls. Children must also have special protection from the impact of armed conflict, including the use of child soldiers, and from all forms of physical or mental violence, abuse, neglect, and exploitation. Personal security, ending conflict, and consolidating peace are all essential components of good governance for sustainable development.

5. Achieve Health and Wellbeing at All Ages

The health MDGs have mobilized all stakeholders in health to demonstrate that tremendous progress in health outcomes can be achieved even in a short period of time. The gains in public health, notably in the reductions of child mortality (MDG 4), maternal mortality (MDG 5), and the control of epidemic diseases (MDG 6), reflect increased investments in public health, improved diagnostics and medicines, and improved primary health systems, including the deployment of community health workers. Even if the health MDGs will not be met in all countries by 2015, the gains point the way to further dramatic reductions in the number of deaths and disease prevalence, and the extension of primary health services to include preventative care and the treatment or management of many high-burden non-communicable diseases such as hypertension, metabolic disorders, some cancers, and mental illness.

By 2030, every country should be well positioned to ensure universal health coverage for all citizens at every stage of life, with particular emphasis on the provision of comprehensive and affordable primary health services delivered through a well-resourced health system. Particularly in low-income settings community health worker systems provide an important means to broaden the coverage of essential health interventions. We emphasize the importance of ensuring universal access, including for marginalized groups and people with disability, as well as affordability so that all people receive the quality health services they need without suffering financial hardship. To improve financial protection, countries should seek to replace direct out-of-pocket payments for health care with equitable public financing.

The MDG health targets need to be retained, updated, and expanded. Preventable child deaths and maternal mortality should be ended by 2030. We therefore propose mortality targets that all countries should achieve. Countries that have already exceeded those targets should aim for higher reductions by

setting more ambitious national targets. Likewise, major infectious diseases including HIV/AIDS, TB, and malaria, and relevant high-burden non-communicable diseases should be controlled and comprehensively treated in all countries. Women and men around the world should have access to sexual and reproductive health and family planning services.

To achieve the health goals, health systems also need to be supported by enabling actions in other sectors, including gender equality, education, improved nutrition, water, sanitation, hygiene, clean energy, healthy cities, and lower pollution. Modern technologies including ICT can lower the cost of healthcare provision and increase its efficacy.

Public health and wellbeing also depend on healthy life choices by individuals, including healthy diets, physical exercise, and reduced alcohol and tobacco use. Healthy behaviors are especially important in view of the obesity epidemic, which is sweeping across many countries and reflects the dangers of inadequate physical activities and imbalanced diets. Public policies can help in promoting healthy behaviors, such as by restricting the advertising of unhealthy food products (especially to children); ensuring that cities promote healthy lifestyles; taxing alcohol, tobacco, and other unhealthy products; and restricting the use of trans-fats by the food industry.

Many scholars and an increasing number of governments are now collecting data on subjective wellbeing (SWB) and social capital. Subjective wellbeing refers to an individual's own report of his or her sense of happiness or life satisfaction. These subjective accounts have been shown to be systematic and informative of the individual and social conditions in a country that are conducive to a high quality of life. Social capital refers to the levels of trust, cooperation, friendship, and favorable social connections (contrasted with isolation) in the community or nation. These dimensions of social wellbeing are strongly related to individual subjective wellbeing, and like SWB, can be monitored effectively through surveys. To inform public policy, we suggest that countries systematically monitor subjective wellbeing and social capital.

6. Improve Agriculture Systems and Raise Rural Prosperity

The food system remains one of the greatest challenges for sustainable development that must be addressed if hunger and extreme poverty are to be ended, and if we are not to lose ground in the face of rising population and environmental degradation. The problems are many, varied, and complex. First, the global food system is under considerable stress. Human-induced climate change, water scarcity and pollution, loss of biodiversity, ocean acidification, and other environmental dangers all threaten our ability to feed the world population. Too much agricultural produce is lost or wasted due to inefficient harvesting and processing, lack of storage, and spoilage. Inadequate fishing techniques result in high levels of by-catch and waste as well as unacceptable destruction of marine ecosystems. Diversity has been lost from many farming systems and diets. On the demand side, more food is wasted due to spoilage and poor nutrition is contributing to the growing obesity epidemics in rich and poor countries alike (see priority 5 above). In many poor countries, smallholder farmers go hungry because they do not produce enough food to feed their families and lack alternative sources of income. The urban poor suffer because they cannot afford adequate nutrition and food supply.

Second, the demands on the global food system are rising rapidly. By 2050 another 2 billion or more people might need to be fed. At the same time, per capita food consumption is rising rapidly because people can afford to buy more food and because they increasingly prefer meat and other protein-rich

food, which requires much more grain to be produced. Moreover, poorly targeted policies for biofuels can further increase the strain on the food system.

Third, the food system is itself a major cause of environmental stress that presses against planetary boundaries (priority 2 above). Farming, animal husbandry, aquaculture, and fishing contribute to large-scale greenhouse gas emissions, loss of habitat and biodiversity, overuse and pollution of freshwater, deforestation and desertification, over-fishing, excess fluxes of nitrogen and phosphorus, and other unsustainable practices. We therefore face a vicious cycle in which unsustainable farming practices worsen many environmental conditions that in turn reduce agricultural productivity and exacerbate environmental damage.

Farming is also the main livelihood of the poor and a mainstay of many countries' economies. When farming is productive, poverty is reduced. When farming is unproductive and is buffeted by environmental stresses, poverty is intensified. Therefore, improvements in the productivity of farms and food processing constitute one of the most important pathways to eradicate extreme poverty, including hunger in rural areas as well as in cities where abundant affordable food increases the purchasing power and health status among the urban poor. In many countries, smallholder farmers are predominantly women who may face discrimination (e.g. in land rights or access to financing) that must be addressed to realize the economic and social potential of agriculture.

The economic potential of agriculture goes of course beyond poverty eradication. The experience of many upper-middle-income countries demonstrates that a well-developed agriculture sector, including food processing, can support prosperous rural areas and high living standards. So it would be a mistake for countries to base their growth strategies solely on urban areas.

It is difficult to predict demand for food since projections depend on dietary choices – such as the role of meat products in the diet – as well as on demographic trends and demand for biofuels. Current UN Food and Agriculture Organization (FAO) estimates suggest that the global net food supply might need to rise by 60 percent by 2050, though with healthy dietary changes the overall increase of necessary grain production could be less. Many developing countries might have to double net food production over this period. In many regions, however, food losses in the value chain and at the end-consumer can be significantly reduced. The promotion of healthy eating habits (see priority 5), particularly reducing dairy and cattle intake where it is currently excessive, will further reduce the need for more grain production and will improve health outcomes if excess meat and dairy products are replaced by legumes, fruits, vegetables, nuts, poultry, and fish.

Yet, substantial increases in food production will surely be needed with an emphasis on non-grain products, and such increases must be achieved without significantly expanding agricultural land or water use, thereby destroying or degrading ecosystems (see also priority 9). Increased food production must also anticipate the threats of unavoidable climate change and enable farmers to adapt to the increasing frequency and severity of natural disasters. These productivity gains will require unprecedented investments in increased crop yields and animal productivity; more resource-efficient production systems and value chains including expanded and improved irrigation; improved resilience to climate change; and drastically reduced post-harvest losses.

Major productivity gains will be essential to improve the economic potential of agriculture and keep food prices within reach for the poor. These improvements will only be possible if all farmers – particularly smallholder farmers and women – have access to land, high-quality inputs, and technical advice. Land

resources should be carefully managed to avoid “land grabs” (see priority 9). Farming must become an attractive business and job opportunity for everyone involved.

Putting these pieces together shows that sustainable increases in agricultural productivity are a central challenge for every region of the world. Making agriculture sustainable and resilient and achieving the needed increases in food production are vital to achieving all other SDGs. Adopting best management practices that stay within planetary boundaries is as equally vital for poor smallholder farmers as for large agricultural business in high-income countries. Such best practices will help protect the environment, reduce hunger, raise rural prosperity, and end extreme poverty.

There is no “one-size-fits-all” strategy for sustainable agriculture. Farming systems and choices farmers make – including with regards to crop varieties, land use, soil nutrient management, biodiversity conservation, water use, harvesting methods, and food processing and marketing – are highly varied and depend on local conditions. Every region and locality requires its own diagnostics and approaches, though it can draw upon lessons from other regions and a toolkit of advanced agricultural principles and technologies. As in other SDGs, technology will play a vital role in enabling agriculture to become more productive and sustainable. Genetic improvement, soil mapping, precision dosing of fertilizers, agricultural advisory systems, weather forecasting, machinery, and reduced post-harvest food losses are all areas where technologies, including ICT, can play an important role.

To ensure rural prosperity and productive agriculture, countries will need to ensure universal access to basic infrastructure in rural areas, including a safe water supply, universal access to sanitation and an end to open defecation, modern energy services (including electricity and clean cooking fuels), modern transport, and connectivity to mobile telecommunications and broadband. In many areas, modern technologies offer opportunities for leapfrogging to cleaner and more efficient energy, transport, and water infrastructure. Improved transport, storage, logistics, and communications can help to reduce food losses and improve rural-urban linkages that are vital for reducing poverty and promoting economic development.

Ongoing climate change will underscore the importance of adaptation to ensure resilient agriculture and infrastructure. Infrastructure built today must be designed to withstand much higher temperatures, more frequent extreme precipitation, and high variability in water supply, which affects power infrastructure in particular. To minimize agricultural productivity losses resulting from climate change, particularly in low-latitude regions, governments and businesses must invest in research and development of new drought and heat resistant crops, improved water management infrastructure, and new farming techniques.

7. Empower Inclusive, Productive, and Resilient Cities¹⁵

Half the world’s seven billion people live in cities, and roughly three-quarters of economic activity is urban. Cities are also home to extreme deprivation and environmental degradation with one billion people living in slums. The dynamism of cities makes urban development and sustainable cities a major sustainable development challenge and opportunity. Between 2010 and 2050, the urban population will

¹⁵ In this document we use the terms “cities” and “urban areas” interchangeably to denote metropolitan areas and all urban centers that have economic or political importance.

grow significantly, perhaps by 2.5 to 3.0 billion people, increasing the urban share to two-thirds of the world's population, with accompanying increases in the shares of global GDP and investments.

Most countries are inadequately prepared for this massive increase in the urban population and the ensuing changes to the structure of their economies. Slums are expanding; infrastructure is inadequate and outmoded; environmental hazards and climate risks are rising significantly with particularly adverse impacts on the lives of the urban poor. Armed violence and insecurity are increasingly concentrated in cities. Moreover, cities are massive users of resources, e.g. water and energy for transportation, industry, heating and cooling of buildings, and appliances. New energy, water, wastewater, and transportation infrastructure for cities will last many decades, as will choices around land use and spatial structure. Urban infrastructure decisions will be vital in determining the future trajectory of greenhouse gas emissions.

In an increasingly urban world, cities are central to global economic development, employment creation, and ending extreme poverty. The success of the SDGs will be determined heavily in the world's cities, resting on improvements in the quality of urban governance, sound investments, cities' ability to innovate, and effective urban-rural linkages.

To reduce urban poverty in all its forms, end slum formation, promote security, and increase productivity, cities – with the support of national policies – will need to ensure universal access to basic urban infrastructure and services, including housing, water, sanitation, waste management, low-carbon energy, transport and mobility, as well as modern information and communication technologies. Urban areas will need to clean up their air, water, and soil to ensure healthy living conditions. Health can further be promoted through urban design that favors walking and cycling. Cities will need to invest in resilience to disasters, more frequent extreme weather events, and other threats of climate change. In particular, building standards must address the need for disaster risk management. Modern technologies, particularly ICT, can help improve city governance, energy and resource use efficiency, delivery of urban services, and can create new employment opportunities. ICT can underpin smart grids for urban power, water, and transport, as well as innovative education and public health systems.

To harness the potential of sustainable urbanization, urban governance will have to be improved in virtually every country. Metropolitan areas and local governments will be at the center of decision-making and therefore need to be empowered, but they must work with many other actors: national governments, businesses (including financial institutions), knowledge institutions, civil society, and the police. Together these actors must mobilize the needed financial, institutional, and human resources across a broad range of urban issues, such as jobs, housing, services, security, and infrastructure. There can be no doubt that the complexity of the urban governance challenge is enormous.

8. Curb Human-Induced Climate Change and Ensure Clean Energy for All

Climate change is an existential threat to human development in all countries. Despite having signed the UN Framework Convention on Climate Change more than 20 years ago, the world remains dangerously off course in mitigating human-induced climate change. Indeed, the situation is far more perilous today than in 1992. Global emissions continue to rise sharply as the global economy expands, dependence on fossil fuels remains very high, and progress in decarbonizing the world's energy systems remains frustratingly slow.

The world has tentatively settled on the goal of avoiding a 2 degree Celsius (°C) rise in average global temperatures above the preindustrial baseline. Emission-reduction trajectories announced to date by UN member states are not adequate to achieve this goal. Even worse, the goal itself might well be insufficient to avoid very dangerous climate changes. Increasing scientific evidence suggests that a 2°C rise in average temperatures could mean severe climate changes in many parts of the world, including significant sea level rise and a sharp increase in extreme events, including storms, droughts, and floods. Moreover, actions that produce a 2°C rise in temperatures in the coming decades might lead to much larger temperature and sea level rises in the longer term as positive feedbacks in the Earth systems amplify the effects of greenhouse gases on the Earth's average temperature and climate patterns. The results would also include catastrophic ocean acidification.

All of these grim realities underscore the crucial need to reduce greenhouse gas emissions globally beginning this decade and achieve low global emissions by mid-century, even as the world economy expands. Unless the climate challenge is addressed it may become impossible to end extreme poverty, particularly in vulnerable countries, and achieve the other sustainable development priorities.

While reductions will be needed in emissions of all greenhouse gases, the most important will be to reduce CO₂ emissions from fossil fuel use. In short, the main challenge will be to “de-carbonize” the world's energy system, meaning to achieve a dramatic reduction of CO₂ emissions in both the aggregate and per unit of energy. The current rate of emissions of around 34 billion tons of CO₂ per year from fossil fuel use should decline by more than half, even as the world economy expands perhaps three-fold in the same period. Therefore, the CO₂ per dollar of world output must decline by more than 80 percent by 2050 with rich countries facing steeper reductions in per capita greenhouse gas emissions.

Most recent studies agree that to achieve such deep reductions in greenhouse gas emissions by 2050, several critical steps will be necessary, which can also help promote “green growth”: (i) major gains in energy efficiency, including denser urban layouts; (ii) intelligent grids and almost CO₂-free electricity generation by 2050 using renewables (essentially wind, solar, hydro), nuclear power,¹⁶ and carbon capture and storage (CCS) technologies; (iii) electrification of vehicle transport and remaining energy needs for heating and cooling of buildings; (iv) advanced biofuels for a small but significant share of transport, but making sure that their production does not compete with food production; (v) reduced deforestation and emission reduction in agriculture (notably methane from livestock and rice cultivation, CO₂ from land-use change, and nitrous oxide); (vi) reduction of certain industrial gases with high warming potential (e.g. HFCs, N₂O, SF₆); and (vii) reduction of other short-lived climate forcers, such as tropospheric ozone, black carbon, or methane emissions from the oil and gas sector, which will also generate immediate health benefits from reduced respiratory infections.

Achieving such a deep transformation of the energy, industrial, and agricultural systems over the next few decades will represent one of the greatest technical, organizational, and financing challenges that humanity has faced. A complex and interconnected set of policies will be needed to drive this transformation, including research and development of new technologies; support for technology transfer to developing countries; adequate market pricing of energy, including an end to fossil-fuel subsidies; and a social price on carbon (such as a carbon tax) that reflects the external damages caused by CO₂ emissions. Also, developed countries will have to follow through on their promise to help finance

¹⁶ Some nations, such as Germany, intend to achieve deep de-carbonization without nuclear power, while others, such as China, intend to expand nuclear power to help phase out coal-fired power plants.

the transformation of energy systems in low-income countries, including a flow of at least \$100 billion per year by the year 2020, much of it through the new Green Climate Fund established under the auspices of the UN Framework Convention on Climate Change (UNFCCC). We urge high-income countries that have not yet done so to contribute substantial climate finance (see priority 10 below).

The de-carbonization of countries' economies must not deflect attention from the urgent need to provide access to clean energy, including electricity and cooking fuels to the rural and urban poor. Clean energy will generate major benefits, particularly for women and children, such as improved health through reduced indoor air pollution, increased productivity, access to modern ICT, and the ability to read or work after dark. We address access to sustainable energy for all with other infrastructure challenges under the rural and urban priorities (6 and 7) above.

Even under the most optimistic scenarios, some severe climate change has by now become unavoidable. In the coming decades the frequency and severity of extreme weather events will further increase, putting pressure on agriculture, water supply, and infrastructure, particularly in coastal cities and cities in drylands. Some coastal areas will likely be flooded, some fragile regions may become uninhabitable, many more coral reefs will bleach, and biodiversity loss will accelerate. As a result, strategies to achieve economic, social, environmental, and governance objectives must be made "climate resilient" by promoting adaptation to climate change and strengthening disaster risk management. The challenges of resilience, climate change adaptation, and disaster risk management are incorporated in several of the other priority areas (particularly priorities 6 and 7).

9. Secure Ecosystem Services and Biodiversity, and Ensure Good Management of Water and Other Natural Resources

Ecosystems, such as rainforests, mangroves, coral reefs, wetlands, drylands, and grasslands underpin human life on Earth, through provisioning services (e.g. food, clean water, energy, medicines), regulating services (e.g. climate, air quality, pollination, coastal storm protection), support services (e.g. soil formation), and cultural services (e.g. educational, religious, tourism)¹⁷. Yet many are heavily degraded and the world is facing an unprecedented mass extinction of species and biodiversity loss.

As one important example, an estimated 60 percent of marine ecosystems are used unsustainably or degraded as a result of overfishing, pollution, eutrophication, warming, sea level rise, and acidification driven by human-induced increases in CO₂ concentration in the atmosphere. To sustainably manage oceans and coastal regions, it will be crucial to strengthen and harmonize national and regional maritime policies, strengthen cooperation in ocean observation and marine spatial planning, and improve our scientific understanding of how these systems react to different impacts and policies. Countries have long promised integrated networks of marine protected areas, which now need to be implemented.

Management of biodiversity and ecosystems must be transformed to ensure robust and healthy ecosystems everywhere. Successful strategies for biodiversity management and ecosystem preservation are complex to design and require coordinated policies over a long time frame. They will need to be based on sound science, but also draw on the tools of social mobilization and behavior change that civil society and modern social media can facilitate. A common element in most management strategies must be to ensure that governments, businesses, and individuals recognize the full ecological value and pay

¹⁷ See the [Millennium Ecosystem Assessment](#) for more details.

the full social cost of the use of ecosystem services and their pollution.¹⁸ Likewise, national accounts and business reporting should value biodiversity and ecosystems to support true value management of natural assets.

A related management challenge concerns ecosystems that are of regional or global significance as well as trans-boundary issues, for example: polar regions, tropical rainforests, ocean and coastal systems, permafrost regions, temperate forests, and savannahs. These regulating systems are of concern for humanity as a whole, irrespective of where one lives. They therefore require targeted and coordinated international management strategies to which all concerned countries and businesses must contribute.

A central element of national, regional, and global management strategies for ecosystems and biodiversity is the need for better data. The world is flying blind with regard to the true state of many ecosystems, so management strategies must be underpinned by targeted efforts to inventory and monitor biodiversity, principal ecosystem functions, and services at biome and national scales.

We support the Aichi Biodiversity Targets that were developed under the Convention for Biological Diversity.¹⁹ The five strategic goals and twenty targets map out operational milestones to be achieved by 2020 covering key drivers of biodiversity loss, ecosystem degradation, and proximate drivers. Since the SDGs need to cover the full spectrum of sustainable development in a succinct number of goals – we would argue no more than ten goals and thirty targets – key elements of the Aichi targets need to be covered in the SDGs and be extended to 2030.

The diversity and specificity of ecosystems around the world makes it difficult to select two or three quantified SDG outcome targets that are applicable in every country, since every choice of one type of ecosystem or dimension of biodiversity would leave out many others that are equally important. For this reason, we propose that countries achieve locally-defined outcome targets for inventorying, managing, and preserving key ecosystems by adopting policies and legislation that address drivers of degradation and biodiversity loss, and requiring individuals, businesses, and governments to pay the social cost of pollution and use of environmental services. Such national outcome targets could, for example, include halting the conversion of natural terrestrial ecosystems, particularly forests, wetlands, and savannahs, for other land uses (see also priority 6 above).

Managing trans-boundary and international ecosystems requires cooperation across countries with management strategies, monitoring arrangements, and financing strategies that may be very different from national-level strategies for ecosystem management. We therefore propose a second target focusing on the need for regional and global arrangements to inventory, monitor, and protect biomes and environmental commons of regional and global significance and to curb trans-boundary environmental harms. We call on robust trans-boundary management and coordination mechanisms to be in place by 2020.

The proposed SDG Targets 9a and 9b in conjunction with the other SDGs cover much of the Aichi Biodiversity targets. We underscore that these targets, and the SDGs as a whole, are not designed to replace the Aichi targets or their successors. Instead, the SDGs will complement the much more detailed

¹⁸ One option might be to use the global footprint metric to quantify different types of resource use and pollution using a single common metric.

¹⁹ For a list of the Aichi Biodiversity Targets see: www.cbd.int/sp/targets.

Aichi targets, just like almost every other area of sustainable development has its own suite of detailed targets.

Many countries face growing water stress and virtually all must improve the integrated and sustainable management of their water resources. This will require long-term strategies involving governments, communities, and businesses to balance sustainable supply and use, reduce water loss, improve water retention, and lower pollution. Impounding or redirecting freshwater flows to the detriment of key ecosystems needs to be avoided. In many countries, subsidies for the extraction of ground and surface water will need to be reconsidered, and adequate pricing systems for water might need to be put in place. Water use cuts across all priorities highlighted in this section, particularly 6 (agriculture), 7 (cities and industry), and 9 (ecosystems). We therefore propose to integrate water use into each of the corresponding goals and highlight the need for integrated management of freshwater resources under this priority 9 (see also Annex 3).

A consequence of the growing demand for primary commodities and stresses on the world's food supplies is the recent sharp rise in the market values of land, minerals, hydrocarbons, freshwater, and other primary resources. In turn, the rising market values of primary resources are leading to a new scramble by many nations to secure their own access to primary commodities. As a result, the scale of global investments in exploration and development of hydrocarbon reserves, minerals deposits, and farmland is rising sharply, including in some of the world's poorest countries. These increased economic activities can be a catalyst for growth and economic development in poor regions. Yet history also teaches that increased investments in primary commodities can also produce a "resource curse," marked by rising corruption, massive environmental degradation, land grabs, the dispossession of traditional landowners, and a siphoning off of resource revenues by a small elite.

We therefore underscore the importance of sustainable practices in the extractive industries, including mining, hydrocarbons, and large-scale land development. Governments and the associated extractive or farming/forestry industries involved need to commit to the effective and transparent management of minerals, hydrocarbon resources, and agricultural land or forest holdings in order to support inclusive economic development and the achievement of all SDGs. This may include consultations with affected communities, strengthening governments' regulatory and negotiation capacities to obtain fairer deals, seizing opportunities for resource-based industrialization, long-term strategies for investing natural resource rents to support inclusive development, maximizing opportunities for skill transfer, independent certification of land-use practices and chain of custody, and establishing transparent platforms for public participation, accountability, and decision making.

10. Transform Governance for Sustainable Development

Sustainable development requires good governance in every country – rich or poor – at local, national, and global levels, and by all sectors of society including governments, businesses, and civil society organizations. Good governance is an important means to achieving the three other dimensions of sustainable development – economic, social, and environmental – but it is also an end in itself. Since sustainable development is the result of the sum of the actions of all people it is important that stakeholders can participate in decision making at all levels and that policies are integrated across the ten priorities identified in this document. All stakeholders must commit to supporting the SDGs with transparency, accountability, participation, responsiveness to public needs, and without corruption.

Where necessary, rules for international trade, finance, taxation, business accounting, and intellectual property need to be reformed to become consistent with achieving the SDGs.

Governments must commit to good governance by respecting human rights and fundamental freedoms; upholding the rule of law; ensuring effective participation, especially by women; and by promoting transparent, accountable, and effective institutions. They must mobilize the necessary resources to reduce inequalities and equitably provide the public goods needed for sustainable development. This includes sound economic policies that promote employment and ensure financial stability. Public policy decisions must be made on the basis of reliable evidence and sound scientific analysis; guided by understanding and learning from the various social policy models that are available globally; and driven by values that foster responsibility, solidarity, and tolerance. To this end governments may launch discussions on long-term development pathways involving all key stakeholders.

As emphasized throughout this document, large and small businesses must be an integral part of any strategy to address the sustainable development challenges. Many companies are embracing reporting on sustainability performance and leading development of more sustainable products and services. Good corporate governance calls for all companies, especially the major multinational companies, to adopt the SDGs and to hold themselves accountable for those goals vis-à-vis their investors, customers, suppliers, employees, and society at large.

Where needed, companies need to work responsibly and constructively with governments to address market failures, support reasonable taxation, and ensure that private incentives become more fully aligned with public objectives. They must be accountable for adverse environmental and social consequences of their actions, along the lines of the “polluter pays” and “payment for ecosystem services” principles. In particular, this will require better ways of measuring the value and true performance of companies by internalizing externalities in companies’ reporting and ensuring transparent independent evaluation for all major corporations.²⁰ Where sustainable development requires structural transformations in business models, for example to decarbonize the energy system, governments must lead, working with business to enable the needed transformations. Transitional support may be required to deal with “stranded assets,” such as polluting power plants and high-carbon fossil fuel reserves, in a responsible manner.

Civil society, including universities and research institutions, can play an important role in adapting SDG targets to national and sub-national contexts, developing long-term strategies for meeting each target, designing indicators, and monitoring progress. They can help ensure transparency, disseminate findings, and hold governments at all levels as well as business accountable for their commitments to achieve the SDGs. To be able to fulfill this role, governments and business need to ensure access to information.

As part of a governance transformation for sustainable development, the world also needs a fair and viable financing strategy for ending poverty and providing global public goods. The bulk of investment in sustainable development can be financed through private finance and national public resource mobilization. It seems reasonable that developing countries should aim for domestic resource mobilization of at least 20 percent of gross national income (GNI). Business and public-private

²⁰ Examples are the environmental profit and loss statements developed by Puma, Integrated Reporting (IIRC), the Economics of Ecosystems and Biodiversity (TEEB) for Business, Global Reporting Initiative (GRI) and Sustainability Accounting Standards Board (SASB) pricing of externalities.

partnerships (PPP) must play an important role in financing sustainable development, particularly for infrastructure and urban development. The role of private finance will grow as a country becomes richer. Yet low-income countries and global public goods will require substantial ODA, adequate climate finance, and other public financing from rich countries and emerging economies. Donors must enhance aid effectiveness, strengthen accountability, and promote coherence among partners.

Given that under the sustainable development trajectory per capita incomes will converge across countries, clear criteria are required for resource mobilization and graduation from official development assistance. Every high-income country should aim to provide 0.7 percent of its GNI as ODA until such time as that ODA is no longer needed. If the world pursues the sustainable development trajectory, ODA can likely begin to decline as a share of GNI after 2025 as more of today's low-income countries enter the ranks of middle-income countries. During the 2030s, it might be possible to phase out traditional ODA entirely. Of course global public goods will still require substantial financing beyond 2030, but this burden can be shared across a larger number of wealthy countries.

We recognize that the fiscal crises in many developed countries make the ODA target difficult to achieve, particularly when domestic concerns take precedence. But the 0.7 percent of GNI strikes us as a modest investment in the benefits of a sustainable development trajectory relative to business as usual. To support more effective domestic resource mobilization in all countries, rich countries should take the lead in curtailing abusive transfer pricing and work to close havens that encourage tax evasion and capital flight. Moreover, these havens should stop providing a home for opaque ownership structures that foster corrupt behaviors in developing countries. Innovative financing mechanisms, including levies on air travel, international maritime transport, and financial transactions, should also be adopted or expanded as a means to complement the financing of ODA.

Global problems require global institutions that are representative of the world they seek to govern. The voting rights and shares in many international institutions reflect the world as it was after the Second World War and not as it is today. This imbalance ought to be addressed so that global institutions can speak and act with greater legitimacy. At the same time, today's emerging economies will need to take greater responsibility in the financing of these institutions and of global public goods more generally.

Today's multilateral and bilateral development cooperation agencies are mainly geared towards providing technical and financial support for fighting poverty in all its forms. The focus on finishing the job started by the MDGs needs to be retained, but the organizations will need to broaden their services and skills to address the full spectrum of sustainable development challenges and to become agents of global change. In order to win the legitimacy for these expanded roles, multilateral organizations will need to change their governance structures by empowering developing countries within the governing boards.

Many international negotiations proceed on the basis that "nothing is agreed until everything is agreed," which becomes a recipe for gridlock. Such gridlock can be exacerbated by rules under the World Trade Organization (WTO) and multilateral institutions (e.g. bilateral investment treaties) that make it hard for individual countries to enact stronger environmental standards without either violating rules or increasing competition from non-compliers. For example, a growing number of researchers and policy-makers advocate border carbon taxes as a necessary means to allow individual countries to enact tighter curbs on their own greenhouse gas emissions without threatening their industrial base. Trade and other international rules should therefore be revised to meet the test of whether they are consistent with the

objectives of sustainable development. Where this is not the case, reasonable safeguards need to be put in place to allow individual countries to move forward with stronger environmental standards.

The difficulties of reaching and implementing multilateral agreements on complex issues such as trade, finance, and climate change are real. Yet we have no doubt that managing these global public goods requires binding international agreements. Countries should be encouraged to take the initiative on their own to achieve the SDGs, but this must not deflect attention from the need to strengthen and improve the multilateral governance framework.

V. Framing Sustainable Development Goals

The ten sustainable development challenges must be addressed at global, regional, national, and local scales. Well-crafted SDGs, perhaps along the lines of our suggestions in Annex 1 (and further explained in Annexes 2 and 3), will help guide the public's understanding of complex sustainable development challenges, inspire public and private action, promote integrated thinking, and foster accountability. The SDGs will be complementary to the tools of international law, such as global treaties and conventions, by providing a shared normative framework that fosters collaboration across countries. Children everywhere should learn the SDGs to help them understand the challenges that they will confront as young adults. The SDGs will also mobilize governments and the international system to strengthen measurement and monitoring for sustainable development.

The SDGs can also promote integrated thinking along the four dimensions of sustainable development (Annex 2) and put to rest the futile debates that pit one dimension of sustainable development against another. The challenges addressed by the proposed SDGs are inherently integrated, so sustainable development will require that the goals be pursued in combination, rather than individually or one at a time. For example, sustainable management of freshwater resources cuts across the agriculture, urban, rural, and ecosystem goals.

The SDGs need to be operational and help countries, businesses, and civil society address the sustainable development priorities, which in turn requires a pragmatic approach to designing the goals and targets. Some can be outcome-based (e.g. end extreme poverty), while other operationally useful targets might focus on inputs. For example, a stand-alone target on financial resource mobilization generates focus and promotes accountability. Likewise, some goals are place-based to deal with the need for integration across a broad range of dimensions (e.g. the urban goal) and others are issue-based (e.g. the health and education goals). Some goals highlight cross-cutting issues (e.g. gender equality, human rights, water management) that affect every goal but require high-level commitment, which can be fostered by a dedicated goal (see also Annex 3 Question 12).

We have ordered the proposed goals in such a way as to stay close to the structure of the Millennium Development Goals. They are not ordered by priority. All are very important and work in harmony with the others.

As agreed at the Rio+20 Summit, the SDGs should be universal. They should apply to rich and poor countries alike and target governments at all levels as well as business and civil society. This does not mean that every goal must be a "stretch goal" for every country. Rich countries, for instance, are likely to have met most goals related to ending extreme poverty. Yet every country will face significant challenges

on at least some of the goals. Poor countries that cannot meet the goals out of their own domestic resources should receive international financial support to do so.

Giving the poor a voice will be a critical part of operationalizing sustainable development. Any process for implementing the sustainable development challenges will need to ensure the participation and voice of the poor in decision-making.

Data, monitoring, and accountability will be key. The MDGs have highlighted the importance of well-defined indicators and the need for better statistical data systems to track progress towards the international goals, and to support management efforts aimed at achieving the goals. Therefore, the new set of goals for sustainable development must also be bolstered by significant improvements in local, national, and global data collection and processing, using new tools (GIS, remote sensing, social networking, etc.) as well as existing ones. As a result of the information revolution, the SDGs can and should be supported by online, real-time, place-based, and highly disaggregated data.

A central objective of these proposed goals is to ensure social inclusion, by calling for the equal and universal provision of social services, infrastructure, and other critical public goods for all segments of the population. We therefore urge that where appropriate and feasible, metrics should be disaggregated according to gender, geography, socioeconomic status, disability, ethnicity, and other dimensions in order to track and address marginalization and inequalities across sub-populations.

International organizations, such as the agencies, funds, and programs of the United Nations should support governments in designing and harmonizing data collection systems. Where official development assistance is required to finance improved data systems, these investments should be supported so that progress in achieving the SDGs can be monitored in real time.

Finally, the SDGs must be dynamic and incorporate changes over the next 15 years that are impossible to anticipate fully today. In some areas, such as climate change, the global consensus on the type and ambition of action to be undertaken by governments may evolve, chiefly through negotiations under the UNFCCC. The SDGs must be flexible, to better reflect the evolving global consensus, but without lowering their ambition. Likewise, technical progress and business innovation may make it much easier to achieve some goals; here the world should increase the level of ambition. In other areas, improved scientific knowledge will change our understanding of safe thresholds that must not be surpassed, which in turn must be reflected in the framing of goals, targets, and indicators.

Annex 1: Proposed Sustainable Development Goals (SDGs) and Targets

Goals and Targets are for 2030 unless otherwise noted. Targets marked with () need to be specified at country or sub-national level. Each target will require one or more indicators to be developed at a later stage.*

PREAMBLE¹

The Sustainable Development Goals (SDGs) build on the success of the Millennium Development Goals (MDGs) and aim to finish the job of ending extreme poverty in all its forms. The SDGs reaffirm the need to achieve sustainable development by promoting economic development, social inclusion, environmental sustainability, and good governance including peace and security. These goals reaffirm human rights and underscore the right to development as central objectives. They are universal and apply to all countries, national and local governments, businesses, and civil society. Sustainable development will require that the goals be pursued in combination, rather than individually or one at a time.

GOAL 1: END EXTREME POVERTY INCLUDING HUNGER²

End extreme poverty in all its forms (MDGs 1-7), including hunger, child stunting, malnutrition, and food insecurity. Support highly vulnerable countries.

- Target 1a. End absolute income poverty (\$1.25 or less per day) and hunger, including achieving food security and appropriate nutrition, and ending child stunting (MDG 1).
- Target 1b. [Other suitably revised targets of MDGs 2-7 included here or below.]
- Target 1c. Provide enhanced support for highly vulnerable states and Least Developed Countries, to address the structural challenges facing those countries, including violence and conflict.*

GOAL 2: ACHIEVE DEVELOPMENT WITHIN PLANETARY BOUNDARIES

All countries have a right to development that respects planetary boundaries, ensures sustainable production and consumption patterns, and helps to stabilize the global population by mid-century.

- Target 2a. Each country reaches at least the next income level as defined by the World Bank.³
- Target 2b. Countries report on their contribution to planetary boundaries⁴ and incorporate them, together with other environmental and social indicators, into expanded GDP measures and national accounts.*
- Target 2c. Rapid voluntary reduction of fertility through the realization of sexual and reproductive health rights in countries with total fertility rates above [3] children per woman and a

¹ Preamble based on the Rio+20 outcome document.

² The term hunger embraces various things, including child stunting, food insecurity, and malnutrition. Appropriate indicators will need to be chosen to reflect the full spectrum of what constitutes hunger.

³ E.g. Low-Income Countries become at least Lower-Middle-Income Countries.

⁴ Planetary boundaries define the safe operating space for humanity in the Earth system. They include greenhouse gas emissions, nitrogen and phosphorus loading, ozone depletion, chemical pollution, freshwater use, ocean acidification, land use change, aerosol loading, and loss of biodiversity.

continuation of voluntary fertility reductions in countries where total fertility rates are above replacement level.*

GOAL 3: ENSURE EFFECTIVE LEARNING FOR ALL CHILDREN AND YOUTH FOR LIFE AND LIVELIHOOD

All girls and boys complete affordable and high-quality early childhood development programs, and primary and secondary education to prepare them for the challenges of modern life and decent livelihoods. All youth and adults have access to continuous lifelong learning to acquire functional literacy, numeracy, and skills to earn a living through decent employment or self-employment.

- Target 3a. All girls and boys have equal access to quality early childhood development (ECD) programs.
- Target 3b. All girls and boys receive quality primary and secondary education that focuses on learning outcomes and on reducing the dropout rate to zero.
- Target 3c. Youth unemployment rate is below [10] percent.

GOAL 4: ACHIEVE GENDER EQUALITY, SOCIAL INCLUSION, AND HUMAN RIGHTS FOR ALL

Ensure gender equality, human rights, the rule of law, and universal access to public services. Reduce relative poverty and other inequalities that cause social exclusion. Prevent and eliminate violence and exploitation, especially for women and children.

- Target 4a. Monitor and end discrimination and inequalities in public service delivery, the rule of law, access to justice, and participation in political and economic life on the basis of gender, ethnicity, religion, disability, national origin, and social or other status.
- Target 4b. Reduce by half the proportion of households with incomes less than half of the national median income (relative poverty).
- Target 4c. Prevent and eliminate violence against individuals, especially women and children.*

GOAL 5: ACHIEVE HEALTH AND WELLBEING AT ALL AGES

Achieve universal health coverage at every stage of life, with particular emphasis on primary health services, including reproductive health, to ensure that all people receive quality health services without suffering financial hardship. All countries promote policies to help individuals make healthy and sustainable decisions regarding diet, physical activity, and other individual or social dimensions of health.

- Target 5a. Ensure universal access to primary healthcare that includes sexual and reproductive healthcare, family planning, routine immunizations, and the prevention and treatment of communicable and non-communicable diseases.⁵
- Target 5b. End preventable deaths by reducing child mortality to [20] or fewer deaths per 1000 births, maternal mortality to [40] or fewer deaths per 100,000 live births, and mortality

⁵ We recommend that countries retain suitably updated MDG indicators for HIV/AIDS, TB and malaria.

under 70 years of age from non-communicable diseases by at least 30 percent compared with the level in 2015.⁶

- Target 5c. Promote healthy diets and physical activity, discourage unhealthy behaviors, such as smoking and excessive alcohol intake, and track subjective wellbeing and social capital.*

GOAL 6: IMPROVE AGRICULTURE SYSTEMS AND RAISE RURAL PROSPERITY

Improve farming practices, rural infrastructure, and access to resources for food production to increase the productivity of agriculture, livestock, and fisheries, raise smallholder incomes, reduce environmental impacts, promote rural prosperity, and ensure resilience to climate change.

- Target 6a. Ensure sustainable food production systems with high yields and high efficiency of water, soil nutrients, and energy, supporting nutritious diets with low food losses and waste.*
- Target 6b. Halt forest and wetland conversion to agriculture, protect soil resources, and ensure that farming systems are resilient to climate change and disasters.*
- Target 6c. Ensure universal access in rural areas to basic resources and infrastructure services (land, water, sanitation, modern energy, transport, mobile and broadband communication, agricultural inputs, and advisory services).

GOAL 7: EMPOWER INCLUSIVE, PRODUCTIVE, AND RESILIENT CITIES

Make all cities socially inclusive, economically productive, environmentally sustainable, secure, and resilient to climate change and other risks. Develop participatory, accountable, and effective city governance to support rapid and equitable urban transformation.

- Target 7a. End extreme urban poverty, expand employment and productivity, and raise living standards, especially in slums.*
- Target 7b. Ensure universal access to a secure and affordable built environment and basic urban services including housing; water, sanitation and waste management; low-carbon energy and transport; and mobile and broadband communication.
- Target 7c. Ensure safe air and water quality for all, and integrate reductions in greenhouse gas emissions, efficient land and resource use, and climate and disaster resilience into investments and standards.*

GOAL 8: CURB HUMAN-INDUCED CLIMATE CHANGE AND ENSURE SUSTAINABLE ENERGY

Curb greenhouse gas emissions from energy, industry, agriculture, the built environment, and land-use change to ensure a peak of global CO₂ emissions by 2020 and to head off the rapidly growing dangers of climate change.⁷ Promote sustainable energy for all.

⁶ Countries that have achieved the mortality targets should set more ambitious aggregate targets that are commensurate with their development and ensure that the minimum quantitative targets are achieved for every sub-population.

⁷ The Fourth Assessment Report of the IPCC (2007) has defined this level as global average temperatures that are 2°C above the pre-industrial level. Recent scientific evidence suggests the need to reduce the long-term temperature increase to 1.5°C or less. The global emission reduction target should be regularly updated in view of the growing body of scientific evidence.

- Target 8a. Decarbonize the energy system, ensure clean energy for all, and improve energy efficiency, with targets for 2020, 2030, and 2050.*
- Target 8b. Reduce non-energy-related emissions of greenhouse gases through improved practices in agriculture, forestry, waste management, and industry.*
- Target 8c. Adopt incentives, including pricing greenhouse gas emissions, to curb climate change and promote technology transfer to developing countries.*

GOAL 9: SECURE ECOSYSTEM SERVICES AND BIODIVERSITY, AND ENSURE GOOD MANAGEMENT OF WATER AND OTHER NATURAL RESOURCES

Biodiversity, marine and terrestrial ecosystems of local, regional, and global significance are inventoried, managed, and monitored to ensure the continuation of resilient and adaptive life support systems and to support sustainable development.⁸ Water and other natural resources are managed sustainably and transparently to support inclusive economic and human development.

- Target 9a. Ensure resilient and productive ecosystems by adopting policies and legislation that address drivers of ecosystem degradation, and requiring individuals, businesses and governments to pay the social cost of pollution and use of environmental services.*
- Target 9b. Participate in and support regional and global arrangements to inventory, monitor, and protect biomes and environmental commons of regional and global significance and curb trans-boundary environmental harms, with robust systems in place no later than 2020.
- Target 9c. All governments and businesses commit to the sustainable, integrated, and transparent management of water, agricultural land, forests, fisheries, mining, and hydrocarbon resources to support inclusive economic development and the achievement of all SDGs.*

GOAL 10: TRANSFORM GOVERNANCE FOR SUSTAINABLE DEVELOPMENT

The public sector, business, and other stakeholders commit to good governance, including transparency, accountability, access to information, participation, an end to tax and secrecy havens, and efforts to stamp out corruption. The international rules governing international finance, trade, corporate reporting, technology, and intellectual property are made consistent with achieving the SDGs. The financing of poverty reduction and global public goods including efforts to head off climate change are strengthened and based on a graduated set of global rights and responsibilities.

- Target 10a. Governments (national and local) and business commit to the SDGs, transparent monitoring, and annual reports - including independent evaluation of integrated reporting for all major companies starting no later than 2020.*
- Target 10b. Adequate domestic and international public finance for ending extreme poverty, providing global public goods, capacity building, and transferring technologies, including 0.7 percent of GNI in ODA for all high-income countries, and an additional \$100 billion per year in official climate financing by 2020.
- Target 10c. Rules for international trade, finance, taxation, business accounting, and intellectual property are reformed to be consistent with and support achieving the SDGs.

⁸ In line with the Aichi Biodiversity targets to be achieved by 2020.

Annex 2: Illustrative contributions of the proposed SDGs to the four dimensions of sustainable development

The table is for illustration purposes only and not intended to outline every contribution that the proposed SDGs make to each of the four dimensions.

	Economic Development and Eradication of Poverty	Social Inclusion	Environmental Sustainability	Governance, including Peace and Security
GOAL 1: End Extreme Poverty including Hunger	Empower all citizens to be productive and ends extreme poverty including hunger	Reduce inequality by raising incomes and nutritional status of the extreme poor	Reduce pressure on the environment that is partly driven by poverty (e.g. slash and burn agriculture)	Focus on improving governance and reduction in risk of conflict, particularly in vulnerable countries
GOAL 2: Achieve Development within Planetary Boundaries	A global norm of convergence or “right to development” will support economic growth in all countries	Economic growth offers opportunities for investing in the poor to strengthen social inclusion	This will promote environmental sustainability by combining the “right to development” for all with the need to respect planetary boundaries	Acknowledging the right to development for all countries will strengthen the global partnership for sustainable development and reduce the risk of conflict and insecurity
GOAL 3: Ensure Effective Learning for All Children and Youth for Life and Livelihood	Effective learning is critical for creating job opportunities and livelihoods for people at all ages, which in turn drives economic development	Effective learning is critical for creating job opportunities and livelihoods for people at all ages, which in turn promotes social inclusion	Improved education and awareness, including education in sustainable development, will generate innovation and leadership for environmental sustainability	Educated and informed citizens will contribute to and uphold good governance and lower the risk of conflict and insecurity
GOAL 4: Achieve Gender Equality, Social Inclusion, and Human Rights	Mobilize and empower all members of society for economic development, thereby enhancing productivity and incomes	Promotes social inclusion	Social exclusion and discrimination can drive environmental degradation	Rule of law, respect for human rights, improved security and participation are central components of good governance
GOAL 5: Achieve Health and Wellbeing at all Ages	Health and personal wellbeing are prerequisites and central inputs into economic development and poverty eradication	Health and personal wellbeing are central for achieving gender equality and improving social inclusion	Improving health will inter alia have to address environmental causes (e.g. air and water pollution); healthy behavior promotes environmental sustainability	Effective and responsive service delivery is a core component of good governance and can lower the risk of conflict and insecurity

	Economic Development and Eradication of Poverty	Social Inclusion	Environmental Sustainability	Governance, including Peace and Security
GOAL 6: Improve Agriculture Systems and Raise Rural Prosperity	Increasing agricultural output will help reduce extreme poverty, fight hunger, and promote economic growth	Improving the lives of smallholder farmers will strengthen social inclusion including gender equality; sustainable low-cost food supply will increase the purchasing power of the rural and urban poor	Sustainable agriculture will reduce pressure on ecosystems (e.g. water abstraction) and planetary boundaries (e.g. lower greenhouse gas emissions, improved nitrogen and phosphorus cycles)	Universal access in rural areas to basic infrastructure services is a core component of good governance; rural development lowers the risk of conflict and insecurity
GOAL 7: Empower Inclusive, Productive, and Resilient Cities	Productive cities will drive economic growth, accelerate technological change, produce jobs, and reduce extreme poverty	Inclusive cities will improve social inclusion in urban areas (e.g. by improving the lives of slum dwellers, creating decent jobs, and promoting gender equality)	Sustainable cities will ensure clean air and water, use land and resources efficiently, reduce greenhouse gas emissions, and increase disaster and climate resilience	Effective, participatory, and accountable urban governments will help ensure rapid and equitable urban transformations and reduce violence
GOAL 8: Curb Human-Induced Climate Change and Ensure Clean Energy for All	Curbing climate change can impose short-term economic costs, which are far exceeded by the long-term economic benefits from a stable climate and short-term opportunities for “green growth”	If left unchecked, climate change will disproportionately harm the livelihoods and lives of the poor	Addressing climate change is one of the pivotal environmental (and economic) challenges the world faces	An effective global response to climate change is central to maintaining the trust and cooperation needed to strengthen the global partnership and will reduce the risk of conflict and instability
GOAL 9: Secure Ecosystem Services and Biodiversity, and Ensure Good Management of Water and Other Natural Resources	Healthy ecosystems and biodiversity will meet the needs of the poor and sustain an important foundation for economic prosperity	If left unchecked, the loss of biodiversity and collapse of ecosystems will gravely harm the livelihoods of the poor	Ensuring sustainable ecosystems and biodiversity are at the core of environmental sustainability	Halting the degradation of ecosystems will reduce the risk of conflict and insecurity; focus on good governance of extractive and land resources by the public and private actors
GOAL 10: Transform Governance for Sustainable Development	Good public and private governance, adequate development finance and a global partnership are essential transformations for economic growth and the eradication of extreme poverty	Strengthening social inclusion and tackling discrimination requires good public and private governance	A transformation of governance, including a global partnership around global public goods (such as a stable climate), and good public/private governance are central to ensure environmental sustainability	Good governance of the private and public sector, global partnership

Annex 3: Questions and Answers (Q&A) on the proposed SDGs

Question 1: Who prepared these proposed goals and for what purpose?

The proposed goals and targets were prepared by the Leadership Council of the Sustainable Development Solutions Network (SDSN) to help inform the debate around Sustainable Development Goals (SDGs), including the work of the High-Level Panel of Eminent Persons on the Post-2015 Development Agenda, which has recently submitted its report to the Secretary-General, and the Open Working Group on the Sustainable Development Goals established at Rio+20. The Leadership Council took into consideration proposals emerging from the thematic and national consultations organized by the UN Task Team, other processes, and numerous reports issued by civil society and research organizations (Annex 4). The Leadership Council also benefited enormously from hundreds of comments received during public consultations on the document.

Question 2: What are the four dimensions of sustainable development?

The Rio+20 outcome document refers to three dimensions of sustainable development (economic, social, and environmental) and emphasizes the importance of good governance as well as peace and security which are sometimes referred to as a foundation of sustainable development. For simplicity we refer to the four societal objectives as dimensions of sustainable development: economic development (including ending extreme poverty), social inclusion, environmental sustainability, and good governance including peace and security.

Question 3: Why does the world need sustainable development goals?

The Millennium Development Goals (MDGs) demonstrate the power of global goals, backed by quantitative targets, in building momentum for national and local action. Addressing the challenges of sustainable development requires a shared focus on ending extreme poverty in all its forms and a structural transformation in the way that national and local economies operate. The necessary focus and collaboration across actors and countries can best be achieved through shared global objectives for sustainable development. That is why the Rio+20 Summit called for SDGs. Of course setting global goals – even if they are based on shared values – will have little impact unless followed up by concerted action. However, averting the business-as-usual (BAU) trajectory will be nearly impossible without an ambitious and universal set of SDGs.

Well-crafted SDGs will guide the public understanding of complex long-term challenges, inspire public and private action, and promote accountability. They will build on existing global initiatives and bring together ongoing efforts in sustainable development. The SDGs will be complementary to the tools of international laws, such as global treaties and conventions, by providing a normative framework for the global partnership needed to address the interconnected challenges the world faces. Children around the world will learn a simplified version of the goals as a clear introduction to sustainable development. For businesspeople, government officials, civil society, and others, the goals will promote integrated thinking and help to stave off the futile debates that often pit one dimension of sustainable development against another. They will mobilize governments and the international system to strengthen measurement and monitoring for sustainable development.

Question 4: How does the scope of the SDGs compare with the scope of the global policy agenda?

The SDGs are one part of the global policy framework for the period after 2015. Just as the MDGs were part of the Millennium Declaration, which goes well beyond the MDGs to include issues of war and peace, the SDGs will be one part of the global policy agenda after 2015. The broader agenda will include issues of war

and peace, ridding the world of nuclear weapons as per the Non-Proliferation Treaty, and addressing major macroeconomic challenges such as reforming the global financial systems to prevent a repeat of the devastating 2008 financial crisis.

Question 5: Why are the proposed goals called “Sustainable Development Goals”?

The Rio+20 Conference adopted the principle of sustainable development goals to be crafted and adopted by UN member states before the end of 2015. The proposed goals outlined by the SDSN are one of many inputs into this debate.

Question 6: Who would such goals apply to? What would be the role of civil society and business?

The SDGs should be universal, applying to all nations, rich and poor alike. We also suggest that they should have a 15-year time frame, like the MDGs, thereby covering the period 2015 to 2030. The SDGs should address all four dimensions of sustainable development (economic, social, environmental, and governance) and set objectives for governments at all levels, as well as for business and civil society. Not every goal will be a “stretch goal” for every country. Rich countries, for instance, will have met goals related to ending extreme poverty. Yet all countries lag behind on some dimensions of sustainable development.

Business deserves special note as a principal engine for economic growth and job creation. The term “business” comprises a great diversity of organizations ranging from small shops to large multinational corporations and financial institutions. Collectively, businesses will develop and deliver many of the new technologies, organizational models, and management systems that are needed for sustainable development. Businesses also directly account for some two-thirds of natural resource use. If businesses embrace the SDGs and are supported by clear government policies and rules that align private incentives with sustainable development, then rapid positive change will become possible.¹ If businesses operate under values and incentives that are misaligned with the objectives of sustainable development, then the transformations outlined in this document will be impossible.

Similarly, sustainable development cannot occur without civil society doing its part. The SDGs are a guide and standard for civil society as well, including universities and other expert communities, non-governmental organizations (NGOs), philanthropies and foundations, environmental groups, social enterprises, and others. Each of these civil society actors will have their own distinctive role to play in support of the SDGs.

Question 7: How do the proposed SDGs relate to the Millennium Development Goals (MDGs)?

The MDGs are the world’s shared goals for ending extreme poverty in all its forms and will expire at the end of 2015. They have supported tremendous progress, including the reduction by half of the poverty rate of developing countries taken as a group. However, the job of ending extreme poverty in all its forms is far from complete country by country, particularly among disadvantaged groups and regions within countries. For this reason we propose that the SDGs start with a clear commitment to finishing the work of the MDGs by resolving under SDG 1 to end extreme poverty and hunger by 2030. We are pleased that the World Bank has recently committed to the goal of ending extreme poverty by 2030. Member states may decide to include suitably updated MDG targets under SDG 1 as measures of extreme poverty in all its forms. Alternatively, the targets on ending extreme poverty may be distributed across the corresponding SDGs.

¹ One example of a values-based business initiative that also includes a development dimension is the [United Nations Global Compact](#).

Question 8: Are the proposed SDGs prioritized? How have they been ordered?

We have ordered the proposed goals in such a way as to stay close to the structure of the Millennium Development Goals. They are not ordered by priority. All are very important and work in harmony with the others.

Question 9: How do the goals relate to sustainable development and its dimensions? How do they deal with integration?

As described in this document and illustrated in Annex 2, the world's challenges are interconnected and must therefore address all four dimensions of sustainable development (economic development and ending poverty, social inclusion, environmental sustainability, and good governance including peace and security). To reflect the need for integration, the proposed ten SDGs and their thirty targets have been designed to address multiple dimensions of sustainable development.

Question 10: What are the reasoning and criteria behind crafting the goals and targets?

Several criteria have been identified for crafting the goals. They should be:

- i. Universal: The goals should be applicable to all countries. In particular they should address the needs of low-income, middle-income, and high-income countries.
- ii. Comprehensive: Together, the ten goals should spell out the principal challenges of sustainable development and provide a normative framework for the global partnership needed to address the profound and interconnected challenges the world faces. For example, the SDSN feels that climate change is such an important challenge that these words need to appear in the title of one of the goals.
- iii. Operational: To the extent possible, each goal should address and mobilize clearly defined knowledge communities comprising government departments, business, civil society, international organizations, and academia/research. Some goals therefore focus on specific operational or place-based challenges, such as urban management, climate change, or sustainable agriculture. Others focus on cross-cutting issues like gender equality or water management that must be addressed in every goal, but should also be highlighted through a dedicated goal.
- iv. Jargon-free and easy to understand: Children should be able to learn the goals at school as a clear introduction to sustainable development. To this end the wording of the goals needs to be free of jargon. Where important technical concepts (e.g. ecosystems) are needed these should be included and become part of the introduction to sustainable development.
- v. SMART Targets: In general, targets should be "SMART": specific, measurable (though some targets should remain fairly general and may require the setting of national/local targets or new metrics – see Question 11: and Question 14: below), attainable (though some will be "stretch" goals that can be attained only with considerable effort), relevant (to the four dimensions of sustainable development), and time bound to 2030 or earlier.
- vi. Applicable to all stakeholders: The goals should apply to governments at all levels, business, civil society, international organizations, and other stakeholders.
- vii. Integrated: The goals should promote integrated thinking and put to rest the futile debates that pit one dimension of sustainable development against another (see also Question 9)
- viii. Limited in number: The SDSN believes that ten is the maximum practical number. Beyond ten, the goals would lose the benefit of public understanding and motivation. We did not find a way to reduce the SDGs to fewer than ten.

Question 11: How can the targets be measured? Where are the indicators?

The targets proposed in Annex 1 should be specified at the global and national level to ensure that they can be measured in a timely and accurate way using one or more indicators. The indicators should be well designed to enable data collection and monitoring. The statistical agencies should promote the use of advanced data tools, including remote sensing, real-time monitoring with smartphones, crowdsourcing, GIS mapping, and other techniques.

Question 12: Why do some goals focus on outcomes whereas others focus on outputs or means?

Where possible, the SDGs should focus on outcomes, such as ending extreme poverty. Yet, the distinction between outcomes, outputs, and inputs needs to be handled pragmatically, and the design of goals and targets should be – we believe – guided by approaches that are best suited to mobilize action and ensure accountability. For example, ensuring universal access to healthcare or high-quality early childhood development (ECD) are important commitments for every government. Goals and targets that focus on these outputs will ensure operational focus and accountability. In some instances it also makes sense to target inputs. For example, official development assistance (ODA) is critical for ensuring many SDGs and needs to be mobilized in every high-income country. Mobilizing resources for sustainable development is difficult, so subsuming ODA as an implicit input into every SDG would make it harder for government leaders, citizens, and civil society organizations to argue for increased ODA. It would also weaken accountability for rich countries. Similar considerations apply, for example, to the proposed target on integrated reporting by governments and businesses on their contributions to the SDGs.

Question 13: What does reducing to “zero” or “universal access” mean?

Many targets call for “universal access” (e.g. to infrastructure) or “zero” deprivation (e.g. extreme poverty, hunger). For each such target, the technical communities and member states will need to define the precise quantitative standard for their commitment to “universal access” or “zero” deprivation. We hope that in most cases these standards will indeed be 100 percent or 0 percent, respectively, but there may be areas where it is technically impossible to achieve 100 percent access or 0 percent deprivation. In such cases countries should aim to get as close as possible to 100 percent or 0 percent, respectively.

Question 14: Why are some targets not quantified and marked with an asterisk? Why do some targets have numbers in square brackets?

It is important that every target can be measured at the national or local level, but not every target can be defined globally in a meaningful way, for three distinct reasons:

- i. The starting points may differ too much across countries for a single meaningful quantitative standard at the global level;
- ii. Some targets need to be adapted and quantified locally or may be relevant only in subsets of countries (e.g. those that refer to specific ecosystems);
- iii. For some targets no global consensus exists today, and these still need to be negotiated, as is the case with greenhouse gas emission reduction targets. In the meantime, countries should establish their own plans and targets.

In some cases proposed numerical targets are presented in square brackets since these numbers are preliminary and may need to be reviewed by the corresponding technical communities.

Question 15: How do the goals define poverty?

We use the term “extreme poverty in all its forms” for the multidimensional concept of poverty encapsulated in the MDGs, comprising *inter alia* income poverty, hunger, gender inequality, lack of

education, poor health, and lack of access to basic infrastructure services. Extreme income poverty or “absolute income poverty” is defined by the World Bank as a per capita income of less than \$1.25 per day. We measure social inclusion in part by the use of “relative poverty,” defined by the OECD as the proportion of households with incomes less than half of the national median income.

Question 16: Why is hunger included under poverty instead of agriculture?

Several arguments have prompted the Leadership Council to include hunger and nutrition under extreme poverty:

- i. Hunger and malnutrition are challenges that affect rural as well as urban areas, so grouping hunger under a place-based “rural” goal might weaken the focus on urban hunger;
- ii. Hunger is not only a function of food availability, which a goal focused on sustainable food production might suggest;
- iii. Stunting and malnutrition are key dimensions of extreme poverty that give substance to the notion of “extreme poverty in all its forms”; and
- iv. A poverty/hunger goal ensures full continuity with MDG 1.

Note that in sub-Saharan Africa, the links between hunger and low agricultural productivity are especially acute, so that, in this region, the reduction of hunger and the achievement of sustainable agriculture are deeply intertwined.

Question 17: How do the proposed SDGs deal with inequalities?

The proposed SDGs deal with inequalities in several ways:

- i. SDG 4 has explicit targets on ending discrimination and reducing relative poverty, which describes the proportion of households with incomes below 50 percent of the national median. Relative poverty is a widely used measure of inequality.
- ii. Many of the goals emphasize universal access to various public services and infrastructure that give every person, especially women, a fair chance at prosperity (note in particular SDGs 3 to 9). Achieving universal access will require that special strategies address deep-rooted inequalities across regions, gender, ethnicities, income levels, and other dimensions.
- iii. We recommend that the SDG indicators be disaggregated as much as possible by geography, income, socio-economic group, and other identifiers to track inequalities in SDG outcomes. As described in Section V, for every SDG we call on countries to monitor and to end inequalities in outcomes across sub-populations.

Question 18: What is the reasoning behind the focus on highly vulnerable states and regions?

Certain parts of the world, including the Sahel, the Horn of Africa (plus Yemen), the Great Lakes region of Central Africa, and parts of Central Asia, face extraordinary challenges as the result of the combination of extreme poverty, weak infrastructure, chronic violence, rapid population growth, and inherently difficult geographical conditions (such as being landlocked, small island states, extremely arid, highly vulnerable to droughts and floods, and/or having a high burden of communicable diseases such as malaria). Countries facing these tremendous and interconnected challenges need special international support, including timely and adequate external assistance. They also need a regional focus, since many of the problems (weak transportation, cross-border nomadism, displaced populations, droughts, epidemics, and conflicts) occur at the regional scale and must be addressed in part at that scale.

Question 19: What is the reasoning behind SDG 2 (Development within Planetary Boundaries)?

Modern Earth-systems science (including geology, climate science, hydrology, and ecology) makes clear that human activity is now dangerously impinging on vital Earth functions, including climate, the water cycle, the nitrogen cycle, biodiversity, ocean acidification, particulate pollution, and more. Scientists are identifying certain thresholds or “planetary boundaries” beyond which human activity can have dire effects on human wellbeing and on ecosystem functions everywhere. Unless human development respects these planetary boundaries, people in all countries are likely to face severe environmental degradation that could severely set back human development. Yet it is possible for countries to grow while respecting these boundaries, mainly by improving efficiency, shifting to sustainable technologies, restraining various kinds of wasteful behaviors, and by decelerating population growth more rapidly. The proposed SDG 2 therefore underscores the right to development for all countries within planetary boundaries. It is closely related to the better-known concept of sustainable consumption and production. This goal includes a target on economic growth as a key dimension of the right to development. A second target focuses on the need to measure and track the environmental impact of growth in every country by reforming national accounting systems. A third target focuses on the rapid attainment of population stabilization. The transformations needed for the world and for every country to respect planetary boundaries are addressed in the goals below (particularly SDGs 6 to 10).

Question 20: Why is there no proposed goal called “Sustainable Consumption and Production”?

Most simply because it is the essence of proposed SDG 2. As emphasized throughout this document and in the “Framework of Programs on Sustainable Consumption and Production Patterns” adopted at Rio+20, the use of environmental resources and pollution must be brought down to levels that can be sustained over the long run. This in turn will require a major decoupling of pollution and environmental resource use from rising living standards and economic growth, consistent with achieving a net reduction in both aggregate pollution and resource use. In many areas consumption and production patterns will need to change significantly. Yet, the key question is not the level of “consumption” or “production” per se, but their primary resource, pollution, and ecosystem implications. Consumption and production in an economic sense (i.e., improvement of material conditions) can grow provided they are decoupled from pollution and unsustainable natural resource use. This is the normative essence of SDG 2 (Question 19: above).

Question 21: What does the notion of “decoupling” mean?

Decoupling means a drop in primary resource use and pollution as economic growth proceeds. It is achieved through a combination of new technologies (e.g. photovoltaic electricity and wind power substituting for fossil fuels), investments in energy efficiency (e.g. reduced losses on the power grid, improved insulation for homes), the dematerialization of production (e.g. the shift from vinyl albums to online music and from books to e-books), and proper economic incentives for individuals, businesses, and governments.

Resource efficiency (more output per unit of resource input) is a necessary but not sufficient condition. Greater efficiency in oil and gas extraction (e.g. hydrofracking) can expand rather than reduce CO₂ emissions. Greater efficiency in internal combustion engines can lead to larger cars rather than fuel savings. Thus, technological changes need to be combined with appropriate policy incentives.

There are many pessimists regarding decoupling who feel that the only way to limit resource use is to limit overall economic growth. We disagree. Decoupling has not yet been tried as a serious global strategy, and we believe that advances in areas such as information and communications technologies, energy technologies, materials science, advanced manufacturing processes, and agriculture will permit continued

economic growth combined with a massive reduction in the use and waste of key primary commodities, a sharp drop in greenhouse gas emissions and other forms of pollution.

Question 22: How do the goals deal with jobs, particularly for the young?

Reducing youth unemployment is a core priority for most countries. The proposed SDG 3 focuses on high-quality primary and secondary education and on effective institutions (such as apprenticeships) that can help youth prepare for decent work. The third target focuses directly on the youth unemployment rate. Likewise, the agriculture goal (SDG 6) includes the need for rural job creation and development, whereas the urban goal (SDG 7) addresses urban employment under its first target.

Question 23: What is meant by measuring "subjective wellbeing and social capital" (Target 5c)?

Many scholars and an increasing number of governments are now collecting data on subjective wellbeing (SWB) and social capital. SWB refers to an individual's own report of his or her sense of happiness or life satisfaction. These subjective accounts have been shown to be systematic and informative of the individual and social conditions in a country that are conducive to a high quality of life. Social capital refers to the levels of trust, cooperation, friendship, and favorable social connections (contrasted with isolation) in the community or nation. These dimensions of social wellbeing are strongly related to individual subjective wellbeing, and like SWB, can be monitored effectively through survey data.

Question 24: Why is there no stand-alone goal on infrastructure?

Access to infrastructure is essential for ending extreme poverty in all its forms and promoting sustainable development. The proposed SDGs divide the challenges of providing access to infrastructure between urban (SDG 7) and rural (SDG 6) areas. This division is motivated by the fact that infrastructure technologies, delivery models, and responsible actors vary significantly between urban and rural areas.

Question 25: How do the proposed goals deal with water supply and water resources management?

Providing access to safe water and sanitation, ensuring sound management of freshwater resources, and preventing water pollution are inter-related priority challenges of sustainable development that must be met for other goals and targets to be achieved. All three must become central components of the SDGs:

- Water access: Delivery models, technologies, and responsible actors for access to water and sanitation differ between urban and rural areas, so we propose to assign these challenges to the urban and rural goals, respectively. This has the added advantage of combining water supply and sanitation, which are often closely linked.
- Water resources management: Integrated water resources management and the allocation of water across different uses is a cross-cutting requirement for all goals. Freshwater needs for agriculture (accounting for some 70 percent of freshwater withdrawals), industry, households, and the healthy functioning of ecosystems (sometimes referred to as "green water") stand out as major challenges. Moreover, water-related disasters, such as floods and droughts, account for a large share of damage from natural disasters. Water resources management and associated disaster risk management cannot be pursued in isolation from the management of agriculture, cities, and ecosystems, so water is part of several goals. The proposed SDG 9 emphasizes the need for integrated water resources management. A suitable indicator for Target 9c might include the ratio of freshwater withdrawals to renewable freshwater supply which should be lower than one.
- Water pollution: Water pollution is a separate management challenge. Although not limited to urban areas, water pollution is a significant urban challenge and is therefore included under SDG 7.

The question of how to deal with water challenges in the proposed SDGs has been intensely discussed in the Leadership Council. Some have argued for a stand-alone water goal partly to draw attention to the importance of water management. Overall, though, we believe that our proposals provide a sound basis for managing the various water challenges within the framework of ten SDGs, particularly if suitable indicators track the sustainable use of water resources, access to water supply, and water quality.

Question 26: Most goals apply to cities. Why do we need a separate urban² goal?

Urban sustainable development is a central challenge and a major opportunity for most countries, as urban and slum populations are rising rapidly. The urban share of the world's population is expected to rise from 52 percent in 2010 to around 67 percent in 2050, and the urban share of GDP and employment will rise commensurately. If managed well, urbanization can create employment and prosperity, and become a central driver for ending extreme poverty and for strengthening social inclusion. If managed poorly, cities will deepen social exclusion and fail to generate enough jobs.

Urban sustainable development is complex, involving not only many sectors but also many political entities, including local neighborhoods, city governments, metropolitan areas, and national governments, which must empower cities and link them to rural areas. As a result, strategies for cities pose highly complex yet crucial challenges. An urban SDG is therefore important to mobilize and bring together the efforts of multiple actors and stakeholders (e.g. local authorities, national governments, businesses, knowledge institutions, and civil society) across a range of urban issues (e.g. urban jobs, housing, infrastructure, governance, disaster risk reduction, and climate change adaptation and mitigation) and mobilize the financial, institutional, and human resources to make this possible.

Question 27: Why are the targets under Goal 9 not quantified?

The world has adopted the Aichi Biodiversity targets as quantitative outcome targets for biodiversity and ecosystems. These 20 targets include outcome objectives to be achieved by 2020. The SDG targets cannot replicate the full set of Aichi targets, and it strikes us as impossible to pick one ecosystem or one quantitative target over the others. Countries therefore need to set their own quantitative targets under the SDGs, which should ideally be consistent with the Aichi targets. We propose to distinguish between ecosystem management at the national and subnational level (first target) and regional or global efforts (second target). The latter are inherently more complex and require different institutional arrangements. Both are critical for sustainable development.

The proposed SDG targets call for policies to ensure resilient and productive ecosystems. A central objective of such policies must be to address the drivers of ecosystem degradation and biodiversity loss, which includes applying the “polluter pays” and “payment for ecosystem services” principles. Suitable indicators, including halting the loss of biodiversity, can and should be constructed at national/local and regional/global levels to measure the achievement of this target across a broad range of ecosystems.

Question 28: The UNFCCC deals with climate change. Why do we propose a goal on climate change?

The UNFCCC will set legally binding targets among nations. The SDGs will not be legally binding and will not replace or hinder the work of the UNFCCC. Rather, the SDGs, like the MDGs today, will provide a global, easily understood, normative framework to mobilize all stakeholders in the fight for sustainable development, which must include efforts to curb human-induced climate change. The SDGs should

² In this document we use the terms “cities” and “urban areas” interchangeably to denote metropolitan areas and all urban centers that have economic or political importance.

therefore help the public to understand the critical issues, the solutions, and the urgency of changing course. Similar considerations apply to biodiversity, human rights, and other areas where legally binding international conventions have been adopted, but which also need to be addressed by the SDGs. The SDGs need to get to the crux of the matter on climate change: that is, heading off the rapidly growing dangers. Because the science of climate change continues to evolve, it is important to define the related SDG so that it can evolve with the progress of scientific understanding and reflect new and hopefully stronger commitments made under the UNFCCC. Today's consensus on avoiding a 2°C increase in temperature, for example, may not be ambitious enough according to a growing body of scientific evidence. This is especially troubling since the world is far off course from even achieving the 2°C target.

Question 29: Why is there no stand-alone goal on peace and security?

We underscore the importance of peace and security as a central component of the four dimensions of sustainable development. Goal 1 includes a focus on vulnerable regions, including post-conflict regions, and a target to address conflict and violence. Goal 4 includes a target on reducing violence against individuals, especially women and children, which needs to be operationalized at the country level. This target addresses issues of gender-based violence and child protection, as well as personal security, which represent a critical challenge in conflict and post-conflict settings. Indeed many of the proposed goals address the structural causes of conflict such as inequality and exclusion, extreme poverty in all its forms, and poor governance.

The broader political issues of peace and security, which are typically addressed by the Security Council of the United Nations, go beyond the scope of the proposed SDGs. The post-2015 global policy framework, which will include more than the SDGs themselves, should also draw attention to the long-standing but still unfulfilled objective of ridding the world of nuclear weapons.

Annex 4: Further reading

A vast number of scientific articles and reports have been issued on the sustainable development challenges outlined in this document. Below we highlight some of the documents that have informed this document.

INTERNATIONAL AGREEMENTS

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United Nations. (2012). *The Future We Want, Our Common Vision*. Outcome document of the Rio+20 Conference. (A/CONF.216/L.1). Available at https://rio20.un.org/sites/rio20.un.org/files/a-conf.216l-1_english.pdf

SOME USEFUL WEBSITES

The World We Want: www.worldwewant2015.org

Open Working Group on SDGs: <http://sustainabledevelopment.un.org/index.php?menu=1549>

Oversees Development Institute (ODI) post-2015 site: www.post2015.org

Sustainable Development Solutions Network (SDSN): www.unsdsn.org

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