

“Using Our Superpowers to Save the World:  
Introducing the UN Sustainable Development Goals to Management Students.”

### **ABSTRACT**

Sustainable development is a powerful, significant, and occasionally controversial topic in management education. It usually refers to “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” (2018, International Institute for Sustainable Development)

The broad view of sustainable development is articulated on the United Nations Sustainable Development Knowledge Platform and consists of 17 wide ranging goals including Zero Hunger, Justice world-wide, and Quality Education. This session will be a hands-on exercise demonstrating how this topic can be introduced to management students to generate awareness, solutions, and critical thinking regarding the sustainable development goals.

**Key Words: sustainability, management superpowers, experiential exercise**

## **“Using Our Superpowers to Save the World: Introducing the UN Sustainable Development Goals to Management Students.”**

In the year 2000, the United Nations set in motion the processes for establishing the eight Millennium Development Goals (MDGs) with a target time frame for 2015 ("United Nations Millennium Development Goals", 2016). In 2015, the eight MDGs were followed by the 17 Sustainable Development Goals or SDGs ("Sustainable development goals - United Nations", 2016).

### **The Challenges of Change**

There are considerable challenge in bringing about the necessary behavioral and organizational changes in order to make progress toward the SDGs. Scheyyens, Banks, and Hughes (2016) outline the role of the business sector in contributing specific skills and resources including efficiency, innovation, and responsiveness. Similarly, there have been sector and country specific analysis on how to connect with SDGs and proposed approaches and action steps to make progress toward the goals and targets (Benton, 2016; Malan, 2016; Yamey, et al., 2016).

We believe there is a gap in the management education literature regarding how SDGs can be embedded in management curricula. We have chosen to pair the SDG concepts with images of superpowers to increase interest in the topic and to tap into the cultural touchstones of our traditional undergraduate students. From the “Incredibles” to the Marvel Comic movies, superpowers expand people's sense of what was possible for humans to achieve. We seem to need heroes with superpowers to define the limits of our aspirations. “Our heroes are symbols for us of all the qualities we would like to possess and all the ambitions we would like to satisfy

(LaBarge, 2000). For many, they sustain our hopes of control in the face of seemingly intractable challenges.

In this exercise, the development of desired superpowers is intended to be both fun and a stepping stone to the idea of human efficacy. They help us see ways we can work towards the difficult sustainable development growth goals.

### **Overview of the Exercise**

The learning goals of the exercise are as follows:

1. To have business students be able to describe the 17 SDG's and be able to articulate ways to achieve the goals as well as identify barriers to achievement.
2. To apply information on the 17 SDG's in a problem-solving workshop environment
3. To identify the need for SDG's, describe the various goals, and evaluate the feasibility and desirability of the goals.

### **Instructions for Presenting the Exercise**

Preparing the Class for the exercise:

About one week before the activity we ask students to read several articles and web-based explanations for the 17 UN Sustainable Development Goals. In addition, students are directed to several video presentations on the subject. These assignments create readiness for the activity

The instructions are as follows:

“To be prepared for the class work, please read "About the Sustainable Development Goals," (<https://www.un.org/sustainabledevelopment/sustainable-development-goals/>). Click on each goal for more information and watch the short video quiz at the end of the article. In

addition, to see the same ideas presented in a very different way, watch the following video.

[Improve Life Around the Globe https://www.youtube.com/watch?v=kGcrYkHwE80](https://www.youtube.com/watch?v=kGcrYkHwE80)

After our class today, please take a few minutes and post your thoughts to the designated Discussion Board. You can agree or disagree with the ideas and outcomes and/or suggest different or better ways to get this material across to students. “

### **Presenting the Exercise**

We briefly introduce the topic by referring to the readings and answering any short questions regarding the sustainable development goals. Some of the items to cover at this point are: What are the SDG goals? Why are they important to a global audience? Why isn't this topic included in our textbook? To activate imagination on the superpowers theme, we show a film clip from the “Incredibles 2” movie that shows several characters and their superpowers (see a demonstration of “Jack Jack’s” powers at:

<https://www.youtube.com/watch?v=2ZtZ6mgc3Ws> ).

To begin the activity, divide the class into teams and have someone from each group choose a topic/assignment (topics are written on slips of paper in an envelope). For a class of 30, we use just 6 of the 17 goals matching the number of groups that makes sense for the size of the class. Groups of 5 people seem the right number to encourage participation and decision making.

Along with the topic, everyone in the group gets a 1 page summary of their group’s topic (see Appendix A for models). A useful source for these summaries can be found at:

<https://www.un.org/sustainabledevelopment/development-agenda/>

In the pilot activities, we used: Goal 2: Zero Hunger; Goal 5: Gender Equality; Goal 12: Ensure Sustainable Consumption and Production Patterns; Goal 15: Life on Land; and Goal 16: Peace and Justice. Any of the 17 goals could be used at the discretion of the instructor. We conclude

the activity with a discussion of why this topic belongs in an Organizational Behavior class and how this is ultimately a management challenge for leaders.

### **Timing and Target Audience**

This exercise was designed for a 75 minute class but can easily be scaled for 55 minutes by doing the introductory work on a prior day or spending an additional class period on the debrief. In addition, the exercise is designed for traditional-age, undergraduate business students but younger MBA students might also be engaged by the superpowers aspect of the activity. It can be used in any size group but the small groups (3-5 people) are best to encourage discussion. Finally, no special equipment is required. A projection system is useful to show the superpower video and to keep slides with the 17 sustainable development goals in front of the class

### **The instructions to the groups are as follows:**

1. Take a few minutes and consider the sustainable development goal you have just received. What is important about this? What are the key aspects of this goal for our natural and human systems? (5 minutes)
2. Next, think about ways to achieve the goals for your topic (e.g. Zero Hunger; Clean Water and Sanitation for All; or Affordable and Clean Energy).
3. What would help the goal to be implemented? What one superpower would you would choose to make this happen? Why would this be helpful? (20 min.).
4. The groups then report out their answers to the large group. It is a good idea to capture the list of desired superpowers on the white board. Some examples from a recent class are: “Fish Woman – with the ability to swim through the oceans swallowing plastic debris”; “Justice Girl with powers to intervene on behalf of people confronted with corrupt authority figures”; “Eat Like a Snake so that food consumption is reduced to once

a month,” “The Inhalenator’ who can simply breathe in polluted air”). Each team is encouraged to draw a SDG superpower logo to identify their topic. (Item 4 takes about 10 minutes)

5. After the reports from the class groups, we review the list of superpowers and mention that every superhero needs a villain. In literature and folk tales the villain serves as an obstacle the hero must struggle to overcome. In our modern corporate and political landscape, villains are often charismatic leaders who use their influence to perpetuate counterproductive, illegal, or corrupt behaviors. (DeSelles, 2004). We then ask the groups to identify their SDG topic’s “mortal enemy.” Some suggestions were: Greed; Stupidity; Complacency; Father Time; Mother Earth; and Income Inequality). If people identify multinational corporations as the villains; this is not necessarily wrong but the team should be encouraged to widen their focus and see corporations as a consequence of political decisions not as a specific cause. Each class that has done this activity generates a different and interesting list of supposed enemies of the sustainable development. Developing a sense of opposition to meeting the Sustainable Development Goals seems to activate students’ creativity in finding ways to overcome resistance to change.
6. Finally, students are asked to meet again with their group (10 minutes) to answer the following questions: What were your goals? Will your super powers be effective in meeting your SDG? What are the barriers to achieving your goal? What should we be most aware of in working to meet these goals?

### **Debriefing Notes for the Instructor**

Following the exercise, discussion questions are useful for surfacing learning and anchoring the ideas behind the challenge of sustainable development.

1. Did everyone select the same superpower or did the small topics have different needs?

2. Think about the year 2030. What if the SDG's are achieved, what will life in the future look like?
3. Think about the year 2030. What if the SDG's are not achieved, what will life in the future look like?
4. As a thought exercise, think about what Amazon CEO Jeff Bezos or the innovators at Apple would do to solve your group's problem.

**Instructor Summarizing Comments:**

1. Students should be reminded that we need to view all the goals holistically (e.g. we may not have income equality if the water and food issue is not solved). So we cannot really focus on just one goal.
2. Interconnectedness is the key (e.g. Team 6's goal will not work if Team 2's goal does not get met).
3. How does this affect us now and why is this coming up in an OB course?
  - o Issues are Leadership and Interconnectedness of goals...that is what leaders do.
  - o Seeing one goal and working towards it is MGT but seeing all the goals and connecting the efforts to them is Leadership
  - o Commitment to the goals is a factor of motivation
  - o Managers have a corporate social responsibility to use their power for the public good.
4. Do you think these goals can be achieved? Recent [surveys](#) suggest that people have a bleak outlook: while 81% of people believe business can be a force for positive environmental and societal change, only 36% agree they can trust business leaders to do what's right, and only 8% strongly agree.
5. Some management areas to consider are:
  - o Motivation: How do we get people to work on the 17 SDG's? Should we? Is there an ethical reason for leaving this subject alone?
  - o Problem-Solving: How do we figure out how to solve this problem of sustainability?
  - o What is the responsibility of business, public, and academic leadership?

6. Can we think critically about these goals? Are all these goals good for everyone in the world? All countries? All cultures?
  - Is there anything wrong with these 17 goals? The class should brain storm problems or criticisms. For more thoughts on this question see “Experts Divided over value of UN sustainable development goals at:  
<https://www.ft.com/content/1ac2384c-57bf-11e5-9846-de406ccb37f2>
7. Bottom line message...what did we learn? Do we know more about the 17 SDG’s than we did before the activity? Are we applying critical thinking to the goals and the problems of reaching those goals? A useful anchoring exercise is to ask the class members to take a few minutes following the class and post some thoughts to the designated Discussion Board. They can agree or disagree with the ideas and outcomes and/or suggest different or better ways to get this material across to students.

### **Student Reactions**

We only have anecdotal evidence at this point but reactions from 4 different classes at two universities suggest a positive response in terms of class enthusiasm for the exercise and thoughtful follow-up comments on the discussion board. There were no negative comments about the activity.

### **Some additional ways to enhance the exercise**

1. If time allows, the instructor can distribute drawing materials and easel paper to each group and ask them to draw their superhero. The results are often amusing, sometimes amazingly well done, and offer a response using a different learning style.
2. The instructor can ask the student groups if anything important was left out of the UN’s 17 sustainable development goals. If so, develop an additional goal with a rationale and brief supporting evidence.



3. Student groups can extend the learning by being given the opportunity to take a few days to find examples of each goal in their community. When class next resumes they can present their findings with a video or photo display.

### **For the Experiential Learning Association Exercise**

This exercise can be demonstrated at the Experiential Learning Association Meeting in 30 minutes. ELA attendees will quickly form small groups and pick a topic from an envelope. They will participate in a group discussion (10 minutes) with the goal of considering the topic and choosing a superpower that will advance achievement of their sustainable development goal. Debriefing will be done by the facilitators and group reflection on the exercise (10 minutes) will be followed by a discussion on how the exercise might be integrated into both undergraduate and graduate courses in leadership or management. Suggestions for improving or modifying the exercise will be encouraged

SDG's for class discussion

#### **The 17 sustainable development goals (SDGs) to transform our world:**

GOAL 2: Zero Hunger

GOAL 3: Good Health and Well-being

GOAL 4: Quality Education

GOAL 5: Gender Equality

GOAL 6: Clean Water and Sanitation

GOAL 7: Affordable and Clean Energy

GOAL 8: Decent Work and Economic Growth

GOAL 9: Industry, Innovation and Infrastructure

GOAL 10: Reduced Inequality

GOAL 11: Sustainable Cities and Communities

GOAL 12: Responsible Consumption and Production

GOAL 13: Climate Action

GOAL 14: Life Below Water

GOAL 15: Life on Land

GOAL 16: Peace and Justice Strong Institutions

GOAL 17: Partnerships to achieve the Goal

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## Appendix A

### Discussion Prompt/Summaries of Each Sustainable Development Goal

#### 6 Sample Summaries: can be reproduced on for a one sheet (2 sided) handout

- **Goal 2: Zero Hunger**

Rethink how we grow, share and consume our food. If done right, agriculture, forestry and fisheries can provide nutritious food for all and generate decent incomes, while supporting people-centered rural development and protecting the environment.

Right now, our soils, freshwater, oceans, forests and biodiversity are being rapidly degraded. Climate change is putting even more pressure on the resources we depend on, increasing risks associated with disasters, such as droughts and floods. Many rural women and men can no longer make ends meet on their land, forcing them to migrate to cities in search of opportunities. Poor food security is also causing millions of children to be stunted, or too short for the ages, due to severe malnutrition.

A profound change of the global food and agriculture system is needed if we are to nourish the 815 million people who are hungry today and the additional 2 billion people expected to be undernourished by 2050. Investments in agriculture are crucial to increasing the capacity for agricultural productivity and sustainable food production systems are necessary to help alleviate the perils of hunger.

#### Facts and Figures

##### Hunger

- Globally, one in nine people in the world today (815 million) are undernourished
- Asia is the continent with the hungriest people – two thirds of the total. The percentage in southern Asia has fallen in recent years but in western Asia it has increased slightly.
- Southern Asia faces the greatest hunger burden, with about 281 million undernourished people. In sub-Saharan Africa, projections for the 2014-2016 period indicate a rate of undernourishment of almost 23 per cent.
- Poor nutrition causes nearly half (45 per cent) of deaths in children under five – 3.1 million children each year.

##### Food security

- Agriculture is the single largest employer in the world, providing livelihoods for 40 per cent of today's global population. It is the largest source of income and jobs for poor rural households.

- Since the 1900s, some 75 per cent of crop diversity has been lost from farmers' fields. Better use of agricultural biodiversity can contribute to more nutritious diets, enhanced livelihoods for farming communities and more resilient and sustainable farming systems.
- If women farmers had the same access to resources as men, the number of hungry in the world could be reduced by up to 150 million.
- 4 billion people have no access to electricity worldwide – most of whom live in rural areas of the developing world. Energy poverty in many regions is a fundamental barrier to reducing hunger and ensuring that the world can produce enough food to meet future demand.

## Goal 2: Targets

**2.1** By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round.

**2.2** By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons.

**2.3** By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, and fishermen.

**2.4** By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.

**2.5** By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed.

**2.A** Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries.

**2.B** Correct and prevent trade restrictions and distortions in world agricultural markets, including through the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round.

**2.C** Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility.

- **Goal 5: Achieve gender equality and empower all women and girls**

Women and girls continue to suffer discrimination and violence in every part of the world.

Gender equality is not only a fundamental human right, but a necessary foundation for a peaceful, prosperous and sustainable world. Unfortunately, at the current time, 1 in 5 women and girls between the ages of 15-49 have reported experiencing physical or sexual violence by an intimate partner within a 12-month period and 49 countries currently have no laws protecting women from domestic violence. Providing women and girls with equal access to education, health care, decent work, and representation in political and economic decision-making processes will fuel sustainable economies and benefit societies and humanity at large. Implementing new legal frameworks regarding female equality in the workplace and the eradication of harmful practices targeted at women is crucial to ending the gender-based discrimination prevalent in many countries around the world.

#### Facts and Figures

- In 18 countries, husbands can legally prevent their wives from working; in 39 countries, daughters and sons do not have equal inheritance rights; and 49 countries lack laws protecting women from domestic violence.
- One in five women and girls, including 19 per cent of women and girls aged 15 to 49, have experienced physical and/or sexual violence by an intimate partner with the last 12 months. Yet, 49 countries have no laws that specifically protect women from such violence.
- While women have made important inroads into political office across the world, their representation in national parliaments at 23.7 per cent is still far from parity.
- Globally, women are just 13 per cent of agricultural land holders.
- The proportion of women in paid employment outside the agriculture sector has increased from 35 per cent in 1990 to 41 per cent in 2015.
- In 46 countries, women now hold more than 30 per cent of seats in national parliament in at least one chamber.

## **Goal 5: Targets**

- End all forms of discrimination against all women and girls everywhere
- Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation
- Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate
- Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision making in political, economic and public life
- Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences
- Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws

## **• Goal 11: Make cities inclusive, safe, resilient and sustainable**

Cities are hubs for ideas, commerce, culture, science, productivity, social development and much more. At their best, cities have enabled people to advance socially and economically. With the number of people living within cities projected to rise to 5 billion people by 2030, it's important that efficient urban planning and management practices are in place to deal with the challenges brought by urbanization.

Many challenges exist to maintaining cities in a way that continues to create jobs and prosperity without straining land and resources. Common urban challenges include congestion, lack of funds to provide basic services, a shortage of adequate housing, declining infrastructure and rising air pollution within cities.

Rapid urbanization challenges, such as the safe removal and management of solid waste within cities, can be overcome in ways that allow them to continue to thrive and grow, while improving resource use and reducing pollution and poverty. One such example is an increase in municipal



waste collection. There needs to be a future in which cities provide opportunities for all, with access to basic services, energy, housing, transportation and more.

## **Facts and Figures**

- Half of humanity – 3.5 billion people – lives in cities today and 5 billion people are projected to live in cities by 2030.
- 95 per cent of urban expansion in the next decades will take place in developing world
- 883 million people live in slums today and most them are found in Eastern and South-Eastern Asia.
- The world's cities occupy just 3 per cent of the Earth's land, but account for 60-80 per cent of energy consumption and 75 per cent of carbon emissions.
- Rapid urbanization is exerting pressure on fresh water supplies, sewage, the living environment, and public health
- As of 2016, 90% of urban dwellers have been breathing unsafe air, resulting in 4.2 million deaths due to ambient air pollution. More than half of the global urban population were exposed to air pollution levels at least 2.5 times higher than the safety standard.

## **Goal 11 Targets**

- By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums
- By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons
- Strengthen efforts to protect and safeguard the world's cultural and natural heritage
- By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management
- By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities
- By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels
- Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials

- **Goal 12: Ensure sustainable consumption and production patterns**

#### Facts and Figures

- Should the global population reach 9.6 billion by 2050, the equivalent of almost three planets could be required to provide the natural resources needed to sustain current lifestyles.
- With rises in the use of non-metallic minerals within infrastructure and construction, there has been significant improvement in the material standard of living. The per capita “material footprint” of developing countries increased from 5 metric tons in 2000 to 9 metric tons in 2017.
- 93% of the world’s 250 largest companies are now reporting on sustainability.

#### Water

1. Less than 3 per cent of the world’s water is fresh (drinkable), of which 2.5 per cent is frozen in the Antarctica, Arctic and glaciers. Humanity must therefore rely on 0.5 per cent for all of man’s ecosystem’s and fresh water needs.
2. Man is polluting water faster than nature can recycle and purify water in rivers and lakes.
3. More than 1 billion people still do not have access to fresh water.
4. Excessive use of water contributes to the global water stress.
5. Water is free from nature but the infrastructure needed to deliver it is expensive.

#### Energy

- If people worldwide switched to energy efficient lightbulbs, the world would save US\$120 billion annually.
- Despite technological advances that have promoted energy efficiency gains, energy use in OECD countries will continue to grow another 35 per cent by 2020. Commercial and residential energy use is the second most rapidly growing area of global energy use after transport.
- Households consume 29 per cent of global energy and consequently contribute to 21 per cent of resultant CO2 emissions.
- The share of renewable energy in final energy consumption has reached 17.5% in 2015.

#### Food

- While substantial environmental impacts from food occur in the production phase (agriculture, food processing), households influence these impacts through their dietary choices and habits. This consequently affects the environment through food-related energy consumption and waste generation.

- Each year, an estimated 1/3 of all food produced – equivalent to 1.3 billion tons worth around \$1 trillion – ends up rotting in the bins of consumers and retailers, or spoiling due to poor transportation and harvesting practices
- 2 billion people globally are overweight or obese.
- Land degradation, declining soil fertility, unsustainable water use, over-fishing and marine environment degradation are all lessening the ability of the natural resource base to supply food.
- The food sector accounts for around 30 per cent of the world's total energy consumption and accounts for around 22 per cent of total Greenhouse Gas emissions.

#### Goal 12 Targets

1. By 2030, achieve the sustainable management and efficient use of natural resources
2. By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses
3. By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment
4. Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle
5. By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature
6. Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production
7. Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products
8. Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities

- **Goal 15: Life on Land**

Forests cover 30.7 per cent of the Earth's surface and, in addition to providing food security and shelter, they are key to combating climate change, protecting biodiversity and the homes of the indigenous population. By protecting forests, we will also be able to strengthen natural resource management and increase land productivity.

At the current time, thirteen million hectares of forests are being lost every year while the persistent degradation of drylands has led to the desertification of 3.6 billion hectares. Even though up to 15% of land is currently under protection, biodiversity is still at risk. Deforestation and desertification – caused by human activities and climate change – pose major challenges to sustainable development and have affected the lives and livelihoods of millions of people in the fight against poverty.

Efforts are being made to manage forests and combat desertification. There are two international agreements being implemented currently that promote the use of resources in an equitable way. Financial investments in support of biodiversity are also being provided.

## **Facts and Figures**

### **Desertification**

- 6 billion people depend directly on agriculture, but 52 per cent of the land used for agriculture is moderately or severely affected by soil degradation.
- Arable land loss is estimated at 30 to 35 times the historical rate
- Due to drought and desertification, 12 million hectares are lost each year (23 hectares per minute). Within one year, 20 million tons of grain could have been grown.
- 74 per cent of the poor are directly affected by land degradation globally.

### **Biodiversity**

- Illicit poaching and trafficking of wildlife continues to thwart conservation efforts, with nearly 7,000 species of animals and plants reported in illegal trade involving 120 countries.
- Of the 8,300 animal breeds known, 8 per cent are extinct and 22 per cent are at risk of extinction.
- Of the over 80,000 tree species, less than 1 per cent have been studied for potential use.
- Fish provide 20 per cent of animal protein to about 3 billion people. Only ten species provide about 30 per cent of marine capture fisheries and ten species provide about 50 per cent of aquaculture production.
- Over 80 per cent of the human diet is provided by plants. Only three cereal crops – rice, maize and wheat – provide 60 per cent of energy intake.
- As many as 80 per cent of people living in rural areas in developing countries rely on traditional plant-based medicines for basic healthcare.
- Micro-organisms and invertebrates are key to ecosystem services, but their contributions are still poorly known and rarely acknowledged.

## Goal 15 Targets

5.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements

15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally

15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world

15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development

15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species

15.6 Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed

15.7 Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products

15.8 By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species

15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts

15. A Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems

15. B Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation

15. C Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities

- **Goal 16: promote just, peaceful, and inclusive societies**

The threats of international homicide, violence against children, human trafficking and sexual violence are important to address to promote peaceful and inclusive societies for sustainable development. They pave the way for the provision of access to justice for all and for building effective, accountable institutions at all levels.

While homicide and trafficking cases have seen significant progress over the past decade, there are still thousands of people at greater risk of intentional murder within Latin America, Sub-Saharan Africa and around Asia. Children's rights violations through aggression and sexual violence continue to plague many countries around the world, especially as under-reporting and lack of data aggravate the problem.

To tackle these challenges and build a more peaceful, inclusive societies, there needs to be more efficient and transparent regulations put in place and comprehensive, realistic government budgets. One of the first steps towards protecting individual rights is the creation of more independent national human rights institutions around the world.

#### **Facts and Figures**

- Among the institutions most affected by corruption are the judiciary and police.
- Corruption, bribery, theft and tax evasion cost some US \$1.26 trillion for developing countries per year; this amount of money could be used to lift those who are living on less than \$1.25 a day above \$1.25 for at least six years
- Approximately 28.5 million children who are out of school live in conflict-affected areas.
- The rule of law and development have a significant interrelation and are mutually reinforcing, making it essential for sustainable development at the national and international level.
- The proportion of prisoners held in detention without sentencing has remained almost constant in the last decade, at 31% of all prisoners.

#### **Goal 16 Targets**

- Significantly reduce all forms of violence and related death rates everywhere
- End abuse, exploitation, trafficking and all forms of violence against and torture of children
- Promote the rule of law at the national and international levels and ensure equal access to justice for all

- By 2030, significantly reduce illicit financial and arms flows, strengthen the recovery and return of stolen assets and combat all forms of organized crime
- Substantially reduce corruption and bribery in all their forms
- Develop effective, accountable and transparent institutions at all levels
- Ensure responsive, inclusive, participatory and representative decision-making at all levels
- Broaden and strengthen the participation of developing countries in the institutions of global governance
- By 2030, provide legal identity for all, including birth registration
- Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements
- Strengthen relevant national institutions, including through international cooperation, for building capacity at all levels, in particular in developing countries, to prevent violence and combat terrorism and crime
- Promote and enforce non-discriminatory laws and policies for sustainable development

**Sample selection tags to be drawn from an envelope: Print the sheet and cut each into a 1” strip**

- **GOAL 2: Zero Hunger**
- **GOAL 5: Gender Equality**
- **GOAL 11: Sustainable Cities and Communities**
- **GOAL 12: Responsible Consumption and Production**

- GOAL 15: Life on Land
- GOAL 16: Peace and Justice Strong Institutions