Sustainable development has been on the global agenda since 1972 with the first UN Conference on the Human Environment in Stockholm. Twenty years later, in 1992, the world met at the Rio Earth Summit and adopted the UN Framework Convention on Climate Change and the Convention on Biological Diversity, and also laid the groundwork for the UN Convention to Combat Desertification.

When the world met for a third time, in 2012 at the Rio+20 Summit, leaders realized that all of the evidence showed that the diagnosis made back in 1972 was fundamentally correct and that the major environmental treaties had not succeeded.

At the Rio+20 Summit, leaders agreed that the most urgent task was to pursue the advancement of MDGs and intensify the fight against extreme poverty. They also agreed that the world needed a similar approach for sustainable development and called for a set of goals, the Sustainable Development Goals (SDGs), to help pursue focused and coherent action on sustainable development.

The Sustainable Development Solutions Network (SDSN) is a global network of sustainable development problem solving. In the follow-up of the Rio+20 Summit, it was tasked with suggesting a concise set of goals that could be a framework of action. Here are the final 17 SDGs adopted by world leaders at the UN General Assembly in September 2015:

Goal 1  End poverty in all its forms everywhere

Goal 2  End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Goal 3  Ensure healthy lives and promote well-being for all at all ages

Goal 4  Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Goal 5  Achieve gender equality and empower all women and girls

Goal 6  Ensure availability and sustainable management of water and sanitation for all

Goal 7  Ensure access to affordable, reliable, sustainable and modern energy for all

Goal 8  Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Goal 9  Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Goal 10  Reduce inequality within and among countries

Goal 11  Make cities and human settlements inclusive, safe, resilient and sustainable

Goal 12  Ensure sustainable consumption and production patterns

Goal 13  Take urgent action to combat climate change and its impacts*
Goal 14 Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Goal 15 Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Goal 16 Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

Goal 17 Strengthen the means of implementation and revitalize the global partnership for sustainable development

- Setting goals is crucially important and UN goals can make a difference. First, goals are critical for social mobilization: stating goals helps individuals, organizations, and governments all over the world to agree on the direction to pursue, therefore coordinating actions. Second, goals effectively allow peer pressure to come in when leaders are publicly and privately questioned on their progress and the steps they are taking to achieve MDGs. Third, goals mobilize epistemic communities, networks of expertise around specific challenges. Finally, goals mobilize stakeholder networks: community leaders, politicians, government ministries, the scientific communities, leading nongovernmental organizations, religious groups, etc..

- The biggest accomplishments of the MDGs have been in the area of public health. In areas such as sanitation, education or agriculture and hunger, progress is still lagging. MDGs have been effective in the area of public health because: 1) the goals in that areas were specific, quantifiable targets, and so the progress and outcomes could be measured and assessed; 2) the epistemic communities helped to map the pathways to achieve the targets making the MDGs more manageable and less remote; 3) specific funding mechanisms such as the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) were created.

- Stating a goal is merely the first step of implementing a plan of action. There must be good policy design, new financing and new institutions to help implement that goal. When the outcomes occur, they must be measured, and strategies must be rethought and adapted in a continuing loop of policy feedback.

- The sustainable development agenda is bigger and harder than the MDGs. The set of challenges is even more complex because natural time horizon for results is longer term and because the goals must be universal, requiring the buy-in and action of all parts of the world, rich and poor.

- There are two specific tools that will be important for translating SDGs into reality. The first one is "backcasting": instead of forecasting the future, one sets a target for a certain date in the future and analyze how to get from the present to the target. The second is "technology road-mapping". Often used in sophisticated high-technology industries, road-mapping asks deep questions about the pathway from today to the future goal in order to identify the policy or technological barriers to overcome.

- Investing in people through education and healthcare, technologies, infrastructure, and natural capital is at the very heart of achieving the SDGs. As a result, progress will require effective financing. In some sense, everyone will pay: through markets when consumers buy goods, and through political institutions when citizens pay taxes. Both public and private approaches are needed.
• There are some cases, like mobile telephony, where the private sector approach has worked brilliantly. However the private sector does not solve many critical problems. First, when the challenge is fighting extreme poverty, public financing is essential to ensure the poor have access to education and health care, because markets are designed to target good customers only, and therefore ignore the poor. Second, public financing is also essential in areas where it is hard to recoup the returns on an investment such as basic research and development. Finally, public finance is also necessary to provide a social safety net against unemployment and other kinds of hardship not effectively insured in private markets.

• Another aspect of public finance is official development assistance (ODA). Despite harsh critics, the evidence is quite strong that aid can work and that it is vital in certain circumstances. The effectiveness of ODA and public finance in general requires a serious process of planning, backcasting, road-mapping, monitoring, evaluation, and strategy updates. With this system in place, the incremental costs of meeting SDGs are probably in a global cost range of about 1–2 percentage points of world output per year including public financing, ODA, and public-private partnerships.

• The three traditional dimensions of sustainable development (economic development, social inclusion, and environmental sustainability) require the underpinning of a fourth dimension: good governance. Good governance is about the rules of behavior in both the public sector and the private sector. The principles of good governance are accountability, transparency and participation. Governments and businesses need to be accountable for their actions. However accountability is possible only if citizens know those actions and behaviors. Hence transparency is necessary and institutions should resist secrecy, including the institutionalization of secrecy in the form of tax havens. Finally, the ability to participate through public discourse, public deliberations and hearings on regulations are extremely important. Businesses similarly need to engage in a multistakeholder approach.

• A fourth aspect of good governance is the polluter pays principle: whenever a company or individuals are imposing costs on others not reflected in market prices, they should bear that cost. This is called "internalizing the externality".

• Sustainable development is the greatest, most complicated challenge humanity has ever faced. These are science-based issues with tremendous uncertainties and a multigenerational dimension. It goes to the core areas of our economic life and there are powerful vested interests that hinder clarity and progress on implementation.

• However we have identified specific opportunities within our grasp, things we know how to do where the costs are within reach. Despite the cynicism and the political obstacles, breakthroughs are possible. Ideas have been transformative throughout history and have sparked some of the greatest transformational movements such as the end of slavery or the struggle against European colonial rule. It has also been a half-century since two great episodes in U.S. history where values changed history: the U.S. civil rights movement and President John F. Kennedy’s quest to make peace with the Soviet Union.

• We will need to look beyond the skeptics and cynics. They have every reason to point out the difficulties. But we will need to look forward to what needs to be done and to find the pathways to achieve it.
**Concepts and Definitions**

Can you define or explain the significance of these concepts?

| UN Conference on the Human Environment | Goal-based development |
| UN Conference on Environment and Development | Epistemic Communities |
| Rio+20 Summit | Backcasting |
| Millennium Development Goals (MDGs) | Technology road-mapping |
| Sustainable Development Solution Network (SDSN) | Good governance |
| Sustainable Development Goals (SDGs) | Polluter pays principle |
| | Corporate responsibility |

**Check your facts**

1) When did the UN Generally Assembly adopt the MDGs?
2) Who is the author of the following quote: "By defining our goal more clearly, by making it seem more manageable and less remote, we can help all people to see it, to draw hope from it and to move irresistibly towards it"?
3) True/False: the MDGs achieved most progress in the area of education.
4) Approximately how many percentage points of the world output per year would the incremental costs of meeting SDGs represent?
5) Who is the author of the following quote: "The arc of the moral universe is long, but it bends towards justice"?
6) Who is the author of the following quote: "Archimedes, in explaining the principles of the lever was said to have declared to his friends: 'Give me a place where I can stand and I shall move the world'. My fellow inhabitants of this planet: Let us take our stand here in this Assembly of nations. And let us see if we, in our time, can move the world to a just and lasting peace."

Answers: 
1) 2000; 2) President Kennedy in 1963; 3) False, they achieved most progress in the area of public health; 4) 1 or 2 percentage points; 5) Martin Luther King Jr.; 6) John F. Kennedy at the UN in 1963 after the Partial Nuclear Test Ban Treaty was signed.

**Review questions**

What were the three historical global summits on sustainable development? When and where did they take place?

When and how were the SDGs created?

List the 17 SDGs proposed by SDSN.

Why is goal setting useful to tackle sustainable development challenges?

Why have the MDGs achieved the most progress in the public health area?

What is the role of epistemic communities in goal-based development?
Why are stakeholder networks important to achieve SDGs?
What is the International Technology Roadmap for Semiconductors and what is its relevance to SDGs?
What is the role of the private sector in achieving SDGs?
What is the role of public finance in achieving SDGs?
What are the pillars of good governance?
How can governments and business be accountable for their actions?
What is meant by "internalizing the externality"?
Why is transparency an important principle of governance?
How is the doctrine “primum non-nocere” relevant to governance?
Which authors were pessimistic in regards to overcoming challenges of sustainable development?
What are historical examples when ideas and values have sparked great transformations?

**DISCUSS AND DEBATE**

1) Using examples from the MDGs or SDGs, discuss the effectiveness of goal setting.

2) Discuss why the SDGs will be more challenging than the MDGs.

3) Discuss the role of both private and public financing in achieving sustainable development.

4) Discuss how the 4th dimension of sustainable development, good governance, interacts with the other three traditional dimensions (economic development, social inclusion and environmental sustainability).

5) Discuss to what extent historical antecedents can guide us to achieve sustainable development.

6) Discuss and debate why sustainable development is the greatest, most complicated challenge humanity has ever faced.

7) A friend of yours claims the following: "Sustainable development is an oxymoron. Sustainability implies stability. Development implies change. The world has finite resources, and economies are growing. How could development and sustainability then not be contradictory?" Using precise arguments and examples, explain to your friend why you disagree.
This book explains how to head off global warming and environmental destruction, stabilize the world's population, end extreme poverty and break the political barriers that hinder global cooperation on these issues.

This report discusses practical vision for development beyond 2015. Starting from the MDGs, it proposes some priority transformations for a post-2015 agenda.
The Secretary General’s High Level Panel of Eminent Persons on the Post, A New Global Partnership: Eradicate Poverty and Transform Economies Through Sustainable Development, -2015 Development Agenda

UN document calling for "Sustainable Development Goals".

UN report laying out the ten priority challenges of sustainable development.

This report contains 56 recommendations to put sustainable development into practice and to mainstream it into economic policy as quickly as possible.

This paper describes some of the best practices and available solutions to catalyze improved governance of natural resources, in particular extractive and land resources, and promote resource-driven growth and development.

This essay makes the case for foreign aid.

• **Speeches from John F. Kennedy**

