

ENERGY SECURITY, CLIMATE CHANGE & SUSTAINABLE DEVELOPMENT

The 2008 financial crisis highlighted key faults in the international system, while also presenting an opportunity for the search of a new paradigm with sustainable development at the core. Within the framework of the new 2030 Agenda for Sustainable Development, adopted by the UN General Assembly in September 2015, the author explores the dynamics between robust economic growth and energy sustainability. Switching to low carbon economic models, investing in renewables, and maximizing nuclear energy capacity are just a few ways this can be done. However, successfully achieving these goals requires governments to provide an inclusive business environment for the private sector to flourish.

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The global economy has gone through an unprecedented economic crisis. The worst part may be over, but we are not out of the woods just yet. We are still faced with multiple challenges such as slow growth, unemployment, low trade flows, rising inequalities, low productivity, declining investment, and an overall lack of trust and confidence in governments, markets, and international institutions.

Growth has also been adversely affected by recent geostrategic developments in the Middle East and North Africa (MENA), as well as the ongoing turmoil in Ukraine. They are all relatively new developments which have serious repercussions on the global economy.

Another major challenge of regional and global magnitude is irregular migration and the refugee crisis. The ongoing civil war and war of proxies in Syria, and the ensuing refugee crisis have far-reaching implications for Turkey and the international community. As a result, Turkey is now hosting the world's largest Syrian community, which reached 2.7 million in August 2016.

Obviously, all these challenges have direct bearing on the topic of sustainable development. Issues such as poverty, inequality, unemployment, poor education, climate change, scarcity of natural resources, environmental degradation, food insecurity, and lack of access to energy, water, and sanitation all have negative implications for our societies.

It is worth mentioning that the 2008 financial and economic crisis was a wake-up call. We witnessed just how vulnerable and interdependent our economies are. We saw that the system lacked not only resilience but also the institutional capacity to accurately assess and address the root causes of this crisis. Plus, the crisis aggravated the already existing institutional problems faced by our economies and societies. As painful as this was for the world, this situation also forced us to seek new ways and approaches to create a more inclusive, resilient, and low carbon economy where all segments of our societies are able to live in dignity. The economic crisis prompted various international organizations to search for a new development paradigm which would boost economic growth in a sustainable manner.

A case in point is the Organisation for Economic Cooperation and Development (OECD)'s New Approaches to Economic Challenges (NAEC) initiative. It is an innovative project to better understand and meet the challenges we face. NAEC was initially launched with a view to deal with the root causes of the crisis and to formulate policies to avoid the occurrence of future crises.

Sustainable Development Goals (SDGs)

The adoption of the SDGs in September 2015 at the UN General Assembly was a historic step taken by the international community as a means of achieving worldwide sustainable development. In fact, the 2030 Agenda including SDGs and financing of development provides a comprehensive and robust framework for an economically, socially, and environmentally sustainable world.

The 2030 Agenda further incorporates international migration as a significant multi-dimensional reality that contributes to sustainable development in countries of origin, transit, and destination. The World Humanitarian Summit held in Istanbul on 23-24 May 2016 provided a unique opportunity to comprehensively address this issue.

Let us keep in mind that the Millennium Development Goals (MDGs) helped lift more than one billion people out of extreme poverty. It is expected that the SDGs, which are designed to further the MDGs in an ambitious manner, will improve the life quality for many others.

Alongside poverty eradication, food security, nutrition, health, education, and access to energy for all, these universal, people-centered, and planet-sensitive 17 goals and 169 targets establish a delicate balance between the economic, social, and environmental aspects of sustainable development. The extent to which these goals are embraced not only by developing but also advanced countries will be crucial to how successful their implementation will be.

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Energy Security and Sustainable Development

Energy is one of the engines of growth and the backbone of our economies. Therefore, access to energy for all is one of the most important goals for achieving sustainable development.

Despite the slowdown in global energy demand due to slow growth around the world and effective energy efficiency policies, energy security will remain high on the international agenda and a top priority for international security in the decades to come.

According to the Paris-based International Energy Agency (IEA), as the world population increases, energy demand will continue to grow steadily at a pace of 1.6 percent annually until the year 2030, which is the deadline for meeting the SDGs. In order to satisfy the growing demand, we must make the best use of all available energy sources in a clean, efficient, and sustainable manner. The IEA predicts that between now and 2045, some 24 trillion dollars will be required just to keep the global energy system producing at today's levels. It will indeed be a challenge.

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Even with low oil prices, it will be a challenge to meet such investment costs. The security concern surrounding major oil- and gas-producing countries is another challenge. The international community is facing the challenge of reducing emissions while meeting global energy demand, which will be driven predominantly by India, China, the Middle East, and Southeast Asia in the years to come.

To achieve multiple goals, governments must take the necessary steps to switch to low carbon economic models. Although the demand for coal is decreasing, its share in the global energy mix is still 29 percent. This illustrates the magnitude of our task. The challenge ahead of us is how to introduce a low carbon economic model without further slowing economic growth. To this end, first and foremost the share of renewable energy capacity, including wind, solar, and hydropower, should be increased by using the latest technologies, and the cost of doing so is declining.

The Role of Renewables Versus Fossil Fuels

In the latest World Energy Outlook, the IEA predicts that renewables will account for the largest share of growth in global energy supply. Nevertheless, it will take time and trillions of dollars of investment for renewables to become the dominant share in the primary energy mix. According to the IEA, wind and solar represents only one percent of the world's energy use, other renewables such as hydro and biomass are at 12 percent. The falling cost of solar and wind power will increase the share of renewables in the global energy mix. However, fossil fuels such as oil, gas, and coal will continue to make up 49 percent of the global energy mix in 2030.

Given that CO₂ emissions resulting from the use of natural gas are half that of coal when burned for power generation, one of the ways to meet energy demand without harming economic growth is to replace heavy polluters such as old technology coal-fired power stations with gas-fired power plants. That being said, we should keep

in mind that natural gas is still an expensive energy resource and cannot compete with coal in terms of price. However, if the US expands its export capacity towards Europe and the Far East, this situation might change in the near future.

The Role of Nuclear Energy

As the energy sector is the major source of greenhouse gas emissions, the solution for sustainable growth and development is building a better energy mix and reducing the share of fossil fuels. Nuclear energy, which offers significant advantages, can play an extremely important role in this regard. As a matter of fact, nuclear power is already a vital part of the energy infrastructure in many of the world's most developed economies. To be more specific, 58 nuclear power plants are in operation in France, providing 72 percent of its electricity generation. This figure is 40 percent in Sweden and 20 percent in the US. Although Germany decided to phase out its nuclear capacity, sufficient growth worldwide is still expected.

It follows that nuclear power is and will remain an important part of energy policy as it inherently works on long timelines. The IEA and the OECD-Nuclear Energy Agency (NEA) are confident that nuclear power has a bright future. Although the Fukushima Daiichi accident is still fresh in the minds of some countries, many other countries continue to value nuclear power as part of their energy mix. One of the reasons is the fact that unlike renewables, nuclear power plants can deliver the steady supply of baseload electricity needed to power their economies.

Nevertheless, for nuclear energy to be viable and environmentally sustainable, developing a culture of safety before commissioning new nuclear power plants should be a top priority for all players.

Climate Change – COP-21 and the Paris Agreement

During COP-21 – the 21st Session of the Conference of the Parties to the UN Framework Convention on Climate Change (UNFCCC) – representatives of 196 countries met in Paris to conclude a comprehensive agreement which applies to all countries. The aim of the agreement is to deal with the adverse effects of climate change and to keep the rise in global temperature below two degrees Celsius compared to preindustrial (1860) levels. COP-21 proved to be a very successful event as it concluded with the signing of the Paris Agreement.

The Paris Agreement represents a turning point for humanity and our planet. It is a historic achievement for the international community as all countries managed to act together to lower greenhouse gas emissions.

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It is encouraging that so far 188 countries have declared their Intended Nationally Determined Contributions (INDCs) to reduce emissions. These pledges account for 95 percent of total emissions. INDCs are designed to enable all countries, developed and developing, to contribute to global efforts to combat climate change. However, we must admit that not all INDCs are ambitious, and some of the commitments that have been made may not be measurable or verifiable.

According to analyses, the commitments made to date would lead to an increase of 2.7 degrees in global temperature by the end of the century. In other words, they fall short of the two-degree target. Hence the need for new and ambitious commitments and additional measures such as eliminating fossil fuel subsidies and investing more in renewables and energy efficiency technologies.

The Role of the Private Sector

The private sector has an important role to play as it is one of the essential actors in the delivery of long-term sustainable development. However, in order for the private sector to effectively play its role, governments must provide the necessary business environment and guarantee a level-playing field through legal, economic, and social measures. It is clear that major infrastructure and energy projects – which are vital for economic growth and the well-being of our societies – can only be realized if such measures are taken and effectively implemented. Trust and confidence in government is another vital component in this regard.

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Concluding Remarks

The global challenge we face today is achieving stronger and more inclusive growth and sustainable development which will benefit all, including the poor and vulnerable groups such as women and children. The international community is also faced with another problem, which is to provide safe, affordable, and uninterrupted energy for all while fighting climate change. Achieving all these goals will not be easy. To be successful, the international community must work together and engage in more meaningful cooperation. Heads of states and governments should express their political will to this end. International organizations must do their part and contribute to the global agenda for the well-being of our people and the planet.

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