

Sustainable Development: Some Reflections in the Asian Context*

Bindu Lohani**

Although Asia has experienced remarkable economic growth for the past two decades, the growth has been followed by social and economic inequality and environmental degradation. The challenges that Asia faces remain as big obstacles and appropriate measures need to be taken for the region's sustainability. Hence, in order for Asia to pursue sustainable growth, the study emphasizes that the region needs to address the following areas: energy, transportation, urbanization, water security, biodiversity, oceans, and climate change. The linkage between economic development and environmental protection is definite and it is imperative that both grow in a same direction in Asia.

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** The Watergate Office Building, 2600 Virginia Ave., N.W. Suite 201, Washington DC 20037, USA, Centennial Group International, Head of Global Climate Change and Senior Fellow, Tel: +1-202-393-6663, Fax: +1-202-393-6556, E-mail: bnlohani@gmail.com

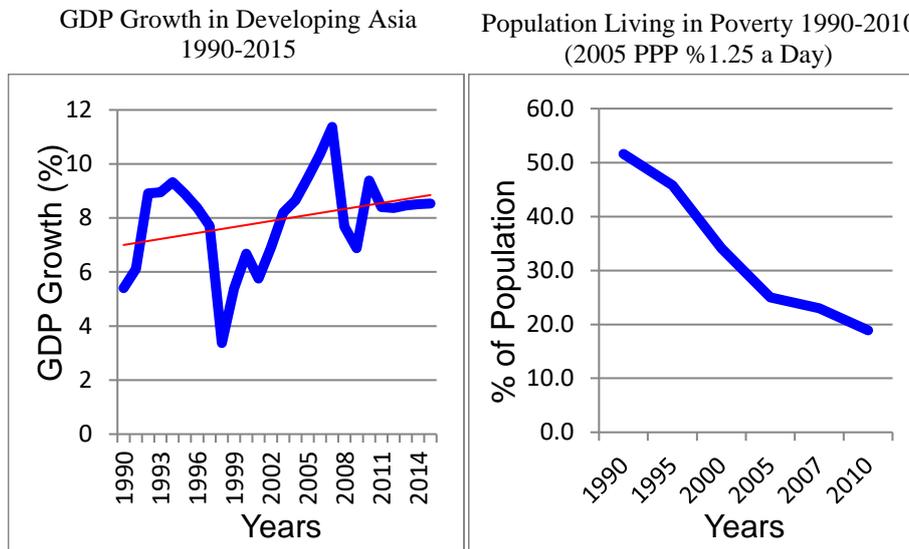
1. INTRODUCTION

The past two decades of development have been remarkable for Asia in realizing economic growth. However, as this economic growth has been accompanied by social and economic inequality and environmental degradation, attaining an inclusive economic growth without compromising the environment has become a challenge to achieve Asian Century. The challenging factors include urbanization, breakthrough in information and communications technology (ICT), emergence of shared economy, competition for finite resources, and climate change. In order to continue the economic growth, Asia needs to address sustainability aspects in the areas of energy, transportation, water security, biodiversity, urbanization, and environmental and climate change.

The economic growth in Asia has been phenomenal in the past two decades. Post the Asian Financial crisis, the economy has been gaining momentum with an average of 7% to 8% after 2012. In 2000, Asia-Pacific contributed to less than 30% of the global gross domestic product (GDP) output, whereas in 2014, the contribution rose to 40% (Guimarães-Filho and Elkan, 2015). This growth resulted in poverty reduction from 50% in 1990 to 20% in 2010 (see Figure 1). But, the development that Asia witnessed came at the cost of rising income disparities and environmental degradation.

The 1.25 USD per-day poverty rate significantly varies from country to country. The Gini coefficient, which is used to measure income disparity, widened in the 11 economies that account for more than four-fifth of the region's population, including India, China, and Indonesia (Kanbur *et al.*, 2014).

Broadly speaking, Asia-Pacific region has made a remarkable progress in terms of realizing the Millennium Development Goals (MDGs), which were established in 2000 with the objective to eradicate extreme poverty by 2015. Overall, the region made a great progress in achieving several targets. However, there have been mixed results in terms of achieving environmental sustainability; carbon dioxide emissions have been rising, but ozone-

Figure 1 GDP Growth and Poverty Reduction in Asia

Sources: World Economic Outlook Database, October 2010 and Statistical Yearbook for Asia and the Pacific (2012).

depleting substances (ODS) have been phased out, globally. There is still a lot to achieve on environmental sustainability.

With Asia's sustained economic growth, an alarming concern has been environmental degradation, particularly the rising carbon dioxide emissions. Studies reveal that if the current trend continues, the carbon emissions would triple by 2050 (Hunt and Lu, 2015).

Hence, environmental sustainability and income inequalities remain major concerns for the region and they need to be immediately addressed in order to ensure a sustainable growth.

2. ASIA'S FUTURE GROWTH AND SUSTAINABILITY CHALLENGES

A report made by the Asian Development Bank (ADB) in 2011, Asia

2050: Realizing the Asian Century, highlights two possibilities. First is the Asian Century Scenario, under which Asia's GDP per capita in PPP terms could rise to 52% of the global GDP. However, this growth is not preordained or certain; there are challenges on the way ahead.

Several challenges need to be overcome in order to bring economic prosperity to Asia. First, inequalities within countries could affect the social cohesion, which in the long-term could invite conflict. Furthermore, inequalities could surface across countries. Some regions could develop significantly whereas some others could lag behind with poverty persisting as the major problem. To mitigate such risks, regional cooperation needs to be fostered.

The middle-income trap is another significant challenge for Asia. Middle-income trap is the condition in which the economic growth of a country stagnates at a middle-income level and hence, fails to attain the status of a high-income country. Countries such as China, Viet Nam, India, and Indonesia must try to avoid this scenario by controlling corruption, promoting inclusive growth, developing efficient and sound financial systems, and specializing their strong areas to gain competitiveness.

Asia is undergoing massive urbanization and this has two possible impacts. Firstly, the high population density could result in the rise of urban poverty, thus leading to poorly managed settlements. Secondly, greenhouse gas emissions would increase. This means that Asia needs to focus on building climate resilient infrastructures and making the existing infrastructures climate-proof.

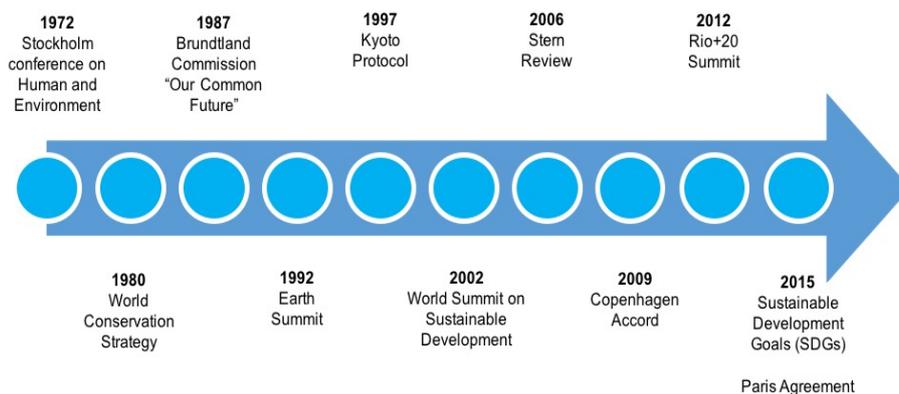
Global competition for finite non-renewable resources poses a big threat to Asia. Demand for the resources will put intense pressure to the supplier. It is estimated that by 2050 Asia will account for 40% of global energy consumption. Again, Asia needs to address environmental degradation and climate change. Water pollution, groundwater depletion, and degradation of biodiversity are some examples of environmental degradation. It is estimated that environmental degradation and climate change can shrink the GDP by 3% to 10%.

Breakthroughs in ICTs and the emerging concept of shared economy are key drivers to change. Keeping up with this change is essential and equally challenging for Asia to maintain the growth. In order to sustain its growth, Asia needs to address these challenges and should take appropriate measures especially in moving to inclusive and sustainable development.

3. SUSTAINABLE DEVELOPMENT: EVOLUTION AND MILESTONES

The concept of sustainable development has been evolving for more than 40 years. Environmental protection first surfaced as an agenda during the Stockholm Conference on the Human Environment in 1972 where a conflict between humans and the environment was recognized (see Figure 2). It was suggested that economic development could be met without affecting the environment. Subsequently, United Nations Environment Program (UNEP) was formed to address the environmental issues and foster international environment cooperation. In 1980, the World Conservation Strategy was formulated realizing that the need for conservation of natural resources and sustainable development were the only choices left for development.

Figure 2 Sustainable Development: A Timeline



Source: Author's own elaboration.

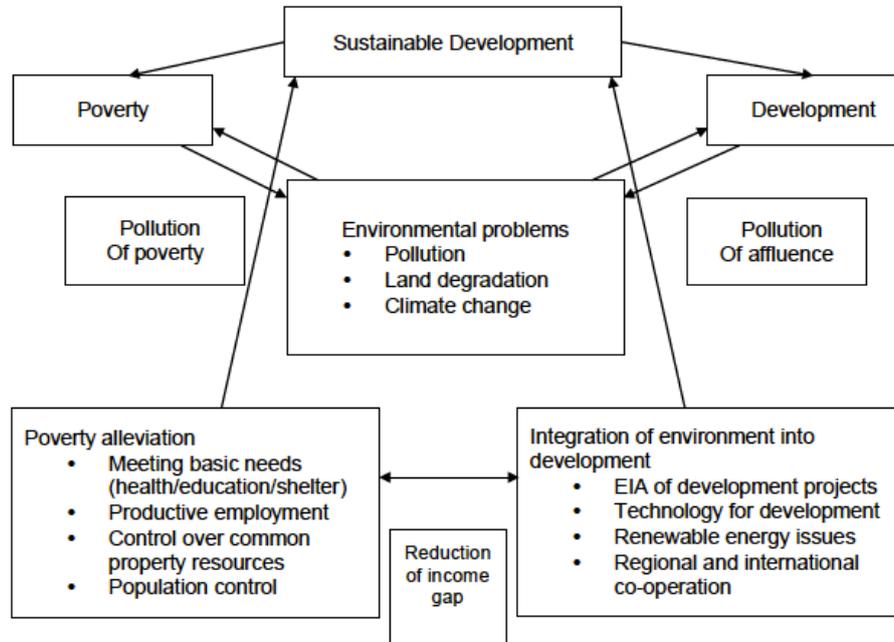
On the national front, environmental legislations were formulated in some Asian economies during the 1970s. The trend continued and additional environmental institutions and legislations were established.

There are many definitions of sustainable development, but the most accepted one is from the World Commission on Environment and Development's (WCED) (often referred to as The Brundtland Commission) report, "Our Common Future", released in 1987. The Brundtland report defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". The report also highlighted two aspects — environmental degradation that is accompanied by economic growth and the need of economic growth to alleviate poverty (Adams, 2006).

In 1992, poverty was placed at the center of sustainable development during the Rio de Janeiro Earth Summit. As poverty causes people to put survival ahead of environmental protection, it indeed could force people into a vicious circle where environmental degradation leads to poverty and poverty causes environmental degradation (see Figure 3). This could remind of the difficult discussion between developing and developed countries in the Stockholm Conference.

The Rio Summit brought environment as a political agenda to the governments and the participating nations committed to implement Agenda 21. More conventions such as the UN Framework Convention on Climate Change (UNFCCC), the Convention on Biological Diversity (CBD), and agreements on Basic Principles for Managing and Conserving World's Forests were adopted. Also, this convention laid foundation for repair of the ozone layer (Montreal Protocol, 1987).

The year 1997 was marked by the emergence of the Kyoto Protocol under the UNFCCC. This agreement (first commitment from 2008 to 2012) legally bound the governments of developed countries to reduce greenhouse gas emissions. The agreement encouraged low carbon emitting nations to reduce their emissions and sell their limits to higher carbon emitting nations; this opened the door for emissions trading under the Clean Development

Figure 3 Poverty, Environment, and Development Nexus

Source: Jalal (1993).

Mechanism (CDM). The second commitment period of the Kyoto protocol is 2013-2020, but some key countries did not participate. The 2002 World Summit on Sustainable Development held on Johannesburg identified the three “interdependent and mutually reinforcing pillars” of sustainable development namely — social development, economic development, and environmental protection.

In 2006, “Stern Review: The Economics of Climate Change” discussed in detail the effect of global warming on the world economy and hence, was a milestone. In 2009 at the 15th Conference of the Parties (COP 15) to the UNFCCC, the Copenhagen Accord of 2009 called for the formation of the Green Climate Fund (GCF) to invest in low carbon emitting technologies. In 2012, the Rio+20 Summit endorsed “The Future We Want”, renewing the political commitment for sustainable development.

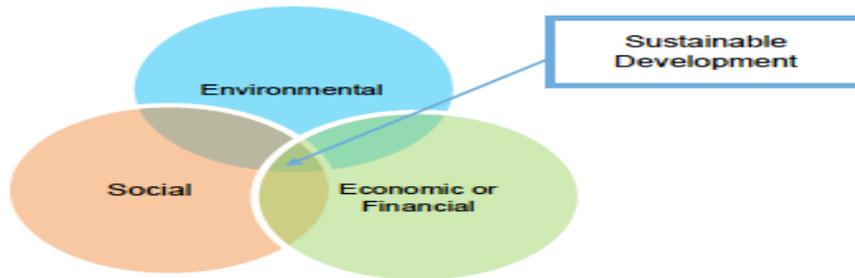
The Sustainable Development Goals (SDGs) endorsed by the UN General Assembly on September 2015 stands as an agreement to implement the SDGs which were mentioned in the Rio+20 Summit. The SDGs are built on MDGs and have become expanded and universal with 17 goals and 169 targets. The agreement envisions a sustainable, poverty free, prosperous, and peaceful world that can be achieved through partnerships. In implementing the SDGs, countries should consider globalization trends and build stakeholder values on a country's environmental, economic, and social impacts, which could be effective in achieving sustainable competitive advantage. The SDGs are aspirational and ambitious; hence, it is up to each country to decide how aspirational and global targets should be incorporated into national planning process, policies, and strategies.

Recognizing that climate change is the biggest threat to human society in the 21st century, the Paris Agreement was reached on December 2015. The Paris Agreement focuses on achieving Goal 13 of the SDGs and implementing the Addis Ababa Action Agenda. The agreement also focuses on fostering global partnerships to work on reducing greenhouse gas emissions by 2020 and holding the increase in global temperature below 2°C.

Sustainable Development Concept in Multilateral Institutions: One of the major contributions in translating the concept of sustainable development into development programs was made by multilateral institutions such as the ADB, the World Bank, and others. They demonstrated and operationalized how to integrate economic and social issues into economic development. The result was that development projects require not only be economically or financially viable, but also socially and environmentally acceptable (see Figure 4).

Sustainable development must take account of all three aspects — environmental, social, and economic, together in a development agenda. Hence, Multilateral Financial Institutions (MFIs) have developed a system to integrate these aspects in a project at all the stages. Environmental Impact Assessment (EIA) developed by the MFIs later became an environmental and social safeguard policy in promoting sustainable development. MFIs also

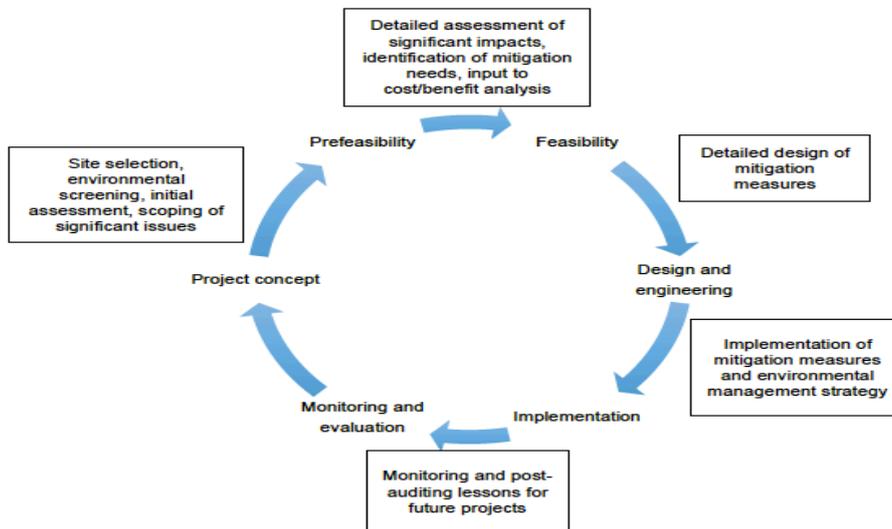
Figure 4 Three Dimensions of Sustainable Development



Source: Author’s own elaboration.

developed a system to integrate environmental issues into the whole project cycle — site selection, project screening, initial assessment of significant issues and detailed assessment, project preparations, mitigation measures and environmental action plan, implementation and monitoring, and evaluation (see Figure 5).

Figure 5 EIA Inputs to Project Lifecycle



Source: Asian Development Bank (1993).

4. ADDRESSING KEY DEVELOPMENT AND ENVIRONMENTAL TRENDS IN ASIA

It is important for Asian countries to look at the environmental trends and drivers related to areas such as energy, transportation, urban development, water demand, biodiversity, and climate change. There are 8 key environmental trends in Asia and the Pacific region.

4.1. Energy and Greenhouse Gas Emissions

Asia is a major source of greenhouse gas emissions. The dominant use of fossil fuel has increased the carbon dioxide emissions from 8.7% in 1973 to 37% in 2010. Fossil fuel represented 81% of the fuel mix in 2010 and demand for fossil fuel is still persistent. Therefore, an urgent mitigation action to reduce the carbon dioxide emissions is needed to prevent the dangerous consequences of climate change.

4.2. Transportation

A research conducted by the ADB and International Energy Agency (IEA) on Asian transportation trends projects that the use of cars and motorbikes is likely to dominate the use of mass transport systems, cycling, and walking by 2020. Revolution in mobility in this region is happening, but the trends show that this will not help solve the problem. A reversal of the trend is required; hence, a need to transform the transportation sector is urgent. New approach to financing and investing in transportation sector is a must.

4.3. Urbanization

High-speed urbanization in Asia has created a huge demand. Urbanization is expected to grow by 3% per annum in Asia; three hundred Asian cities account for 60% of the global GDP and half of the world's megacities are in

Asia. It is estimated that about 1.1 billion people will move to cities in next 20 years. This will likely increase the demand of resources, deplete natural resources, increase consumption, and invite extreme weather conditions. Not to be forgotten, nearly a third of urban population in Asia live in slums under poor living conditions and are highly vulnerable to climate change. Further, cities are facing considerable environmental stress due to poor air quality and water pollution. Urban mobility is poor due to traffic congestion, which has an economic cost of 2% to 4% of the GDP. The demand of public infrastructure due to rapid urbanization poses a financial strain on the public spending. Therefore, there is a heightened need to create green and smart cities and make them livable. Goal 11 of the SDGs emphasizes on developing cities with better living conditions.

4.4. Water Security and Sustainable Water Management

Water security is a key issue in the region. An analysis by the 2030 Water Resources Group (WRG) presents that water scarcity is likely to reach 40% of the unconstrained demand by 2030. The total annual sustainable supply of freshwater remains static at 4,200 cubic kilometers, constituting 16% of groundwater and 84% of surface water. In order to address water security, there is a need to balance competing demands and pressures on water sector by considering domestic and urban water supply, economic use of water, and environmental and climate change requirements.

4.5. Biodiversity

Asia-Pacific region is home to 60% of the world's plants and animals, 50% of the coral reefs, and 17% of the wetlands. These natural assets provide benefit to humans through provisioning (fuel, fiber, and water) and regulating services (water purification and erosion control). This richness is at stake. The Living Planet Index (LPI) shows that the population of 6,000 key indicators species in Asia and the Pacific has been declining at a rate of twice

the global average. Forest cover is particularly a problem in some countries. Efforts need to be put into protection of plants and animals in the regions as their destruction would harm the ecosystem. Use of economic tools such as valuation of ecosystems services will be needed to integrate biodiversity into decision-making.

4.6. Oceans and Coasts

Land-based pollution, unsustainable fishing practices, coastal development, and climate change are impacting the oceans. The Ocean Health Index (OHI) and the Food Provision Index show mixed results in Asia-Pacific. Greater attention needs to be given to ocean protection. Goal 14 of the SDGs emphasizes both on conserving oceans and seas and using them in a sustainable way.

4.7. Climate Vulnerability

Climate change stands as the biggest threat to Asia-Pacific region. It is estimated that the economic cost of climate change could range from 5% to 20% of the GDP. India and Southeast Asia could lose from 9% to 13% of GDP and 8.8% of GDP by the South Asian countries excluding India and Afghanistan by 2100. The region is most susceptible to flood, storm, and sea level rise. The vulnerability of climate change will rise with urbanization and hence, 410 million urban Asians could be at risk of coastal flooding. Further, 350 million people could be at risk of inland flooding in more than half of the population in selected large cities. Given the extent of vulnerabilities by climate change, Asian economies must address climate change issues by adopting appropriate mitigation and adaptation measures. Thus, low carbon technology should be promoted and disaster risk management needs to be strengthened.

5. SUSTAINABLE DEVELOPMENT: THE CHALLENGES IN ASIA

To address key development and the environmental trends in Asia, it is crucial to tackle them in a holistic approach for the sustainable development in Asia. The economic growth should be harmonized with environment and specific needs and conditions of sub-regions in Asia.

5.1. Achieving Green Growth

There is no such exact definition of green growth. Green growth is simply an alternative path that strives to transform infrastructure development and achieve gains in resource-use-efficiency and resilience against climate change and other shocks and stresses.

5.2. Decoupling Growth

The choices that Asia-Pacific makes over the next few decades are vital in determining the future of the planet. Economic growth and environmental degradation are interlinked; economic growth can be decoupled from resource use and environmental degradation. This would result in decreased consumption of energy, water, and land per GDP, which would lead to efficiency gains. However, in the Asian context, population growth and per capita consumption could surpass the rate of decoupling, resulting in loss of efficiency gains.

In Asia, the selected priorities for addressing sustainability are promoting shift to sustainable infrastructure such as energy, water, transport, and urban, conserving and investing in terrestrial and marine ecosystems which is investing in natural capital. Sustainable consumption and production patterns should be designed for both rich and poor countries in Asia, since the actions should be taken by final end-users. Responding to climate change imperative in both mitigation and adaptation is also critical in Asia, since this region is

the most vulnerable to climate change with most population. Strengthening governance and management capabilities of both public and private institutions cannot be ignored.

These objectives should be promoted through various programs. For example, sustainable infrastructure should be promoted by using renewable energy and gaining energy efficiency, sustainable transport, safe water and sanitation, and improved urban infrastructure and green cities. Similarly, action should be promoted to protect the natural capital in areas such as The Himalayas, the Greater Mekong Subregion, the Heart of Borneo, and the Coral triangle.

6. SUSTAINABLE DEVELOPMENT GOALS (SDGs) AND THEIR IMPLICATION IN ASIA

The SDGs envision poverty eradication. These 17 goals and 169 targets were passed by UN General Assembly on September 2015 where all the nations have politically agreed to “heal the planet”. The 17 SDGs are defined as “ambitious and transformational” as they apply globally. The SDGs are built on the MDGs and attempt to cover all the global issues; the SDGs aim to fill the gaps that MDGs could not meet. The five major areas of focus of the SDGs are to eradicate poverty, protect the planet, build a prosperous world, ensure peace, and foster partnerships to achieve these goals.

The SDGs were formed on the basis of several intergovernmental negotiations and the proposal of Open Working Group on SDGs. The UN General Assembly globally recognizes two major concerns, the first one being the reduction of inequalities within and across countries (Goal 10). Several regions in Africa, Least Developed Countries (LDCs), landlocked developing countries, and small island developing countries have achieved the MDGs, but the economic growth is uneven. The second issue is climate change that is likely to affect economic growth. The SDGs not only address these concerns, but also take the migrants issues into consideration and

commit to protect them and work for their welfare.

Ending poverty, promoting peace, ensuring inclusive and equitable quality education, achieving gender equality and women empowerment, protecting environment, addressing climate change issues, and promoting partnerships are extended to 17 goals and 169 targets. Again, these goals are aspirational, ambitious, and transformational. Some targets are not quantified as baseline data for setting the targets were unavailable. This could be a challenge in monitoring and evaluating the achievements.

The SDGs underline that each country has the primary responsibility for ensuring economic and social development. Each country needs to set the national goals based on the global ambitions while not ignoring national circumstances. Support for implementing the goals is essential.

Financing the SDGs is a key challenge because trillions of funds are required to meet the SDGs. The United Nations Conference on Trade and Development (UNCTAD) estimates that for funding infrastructure development alone, each developing country would require at least 1.5 billion USD annually. This is a huge requirement to be met, which requires significant support and coordination from governments, companies, foundations, and other stakeholders. Private sector participation can be encouraged as it has a vast pool of financial resources and better technical skills to utilize those resources. However, transparency, accountability, and suitability of private finance to a country need to be ensured.

The government has the primary responsibility in financing the SDGs and government revenue is a vital source. One study revealed that government revenue contributes 70% to 80% of spending to the SDGs.

International public finance will especially play an important role for poor and vulnerable countries that do not have sufficient internal sources of funds. The question is whether debt for development is suitable for developing countries as debt comes with cost. In this regard, a political agreement has been reached to reduce debt burden for developing countries through debt restructuring, debt financing, debt relief, and debt management. Further, concessional international public finance could be provided to countries that

are in need.

Another possible source of funding for economic development is Official Development Assistance (ODA). Developed countries have made a commitment to contribute 0.7% of their gross national income (GNI) for ODA. The contribution for LDCs is limited to between 0.15% and 0.2% of their GNI. Other financial innovations need to be promoted for addressing the SDGs. The GCF has been set up by 194 countries to mitigate climate change vulnerabilities. The GCF is a financial mechanism that aims to invest in low emission and climate resilient development. The fund envisions keeping the average increase in temperature below 2°C. It targets to collect annual contribution of 100 billion USD per year by 2020.

Multilateral Development Banks (MDBs) are good sources of financing for the SDGs. They provide specific tools depending on the SDGs. Adding, pooling, enabling is one such tool used by the MDBs which are not traditional financial instruments but generate economic and financial value. This tool covers new cash flows such as taxes or fees. Examples include Africa50 Fund, Asset Management Company, Climate Investment Fund, and many more. Other tools adopted by the MDBs include debt-based/right-timing instruments, financial risk management mechanism, and results-based financing.

There is no doubt over the linkages between economic development and environmental degradation. The “let’s grow first and clean up later” attitude will no longer work in Asia. Asia now needs a growth that takes economic growth and environmental protection together. Several attempts have been made by the world leaders to address these thriving issues through various declarations. The implementation of these agreements by all the signatories is essential to protect our planet and make the planet livable.

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