Landlocked Developing Countries: Challenges and Priority Areas for Action

*The **Global Forum on Sustainable Energy (GFSE)** is a neutral multi-stakeholder platform which is facilitating international dialogue on energy for sustainable development by taking into accounts the special interests and challenges of developing countries. GFSE aims at the establishment of a sustainable world energy system from a social, economic and environmental perspective.*

GFSE contributes to both international discourse and information dissemination on sustainable energy. The multi-stakeholder platform plays a crucial role in facilitating sustainable energy projects by bringing together donors, investors and project developers. Their interaction creates new opportunities and enhances existing initiatives in the field of sustainable energy.

Introduction

The thirty-two[1] heterogeneous landlocked developing countries (LLDCs), located in South America, Europe, Africa and Asia, face a number of special challenges that are associated with their lack of direct territorial access to the sea, which often coincides with remoteness from world markets, difficult topography and tropical or desert ecology. Landlockedness has been shown to be a major contributor to extreme poverty, high dependence and low economic growth. In many cases, additional factors like deficient infrastructure, inefficient logistics systems, weak institutions and high vulnerability to the effects of climate change (increased land degradation and desertification) aggravate the situation.

16 of the 32 LLDCs are classified as least developed countries (LDCs), and LLDCs' economies are characterized by weak growth rates, limited productive capacities and a non-diversified export structure - typically a heavy reliance on a very limited number of low-value bulky commodities for their export earnings, which makes them highly vulnerable to external shocks. The remoteness from major world markets is not only a principal reason why LLDCs have not been very successful in mitigating the side-effects of their location, but also a distinguishing feature from European landlocked countries.

Transport and related transport costs are a major issue for LLDCs, which are caused by long distances, difficult terrain, deficient infrastructure conditions and inefficiency of transit transport. These difficulties are amplified by the dependence on the political stability, infrastructure and institutional quality of transit countries, which are often developing countries as well. High trade transaction costs, which are linked to transport issues, also impose constraints on overall socio-economic development of the affected countries.

Internationals Goals and Programmes

Landlockedness has been shown to be a major contributor to extreme poverty, high dependence and low economic growth.

The **Almaty Programme of Action of 2003** aimed to establish a new global framework for developing efficient transit transport systems. It recognizes the direct link between transport, international trade and economic growth, and aims at ensuring fuller and more effective integration of LLDCs into the global economy around five priority areas: (1) fundamental transit policy issues, (2) infrastructure development and maintenance, (3) international trade and trade facilitation, (4) international support measures, and (5) implementation and review.

At the UN Convention to Combat Desertification (UNCCD) COP11 Side Event on Building the Resilience of LLDCs to the Impacts of Climate Change, Desertification, Land Degradation and Drought, priority areas for action were highlighted. These include applying holistic approaches to address all areas related to climate change and land productivity[2], providing support to LLDCs to diversify their economic base and promoting regional integration, including regional programmes, technology centres and regional networks of excellence. Furthermore, strengthening of international support and access to financial facilities and supporting participation in intergovernmental and multilateral processes count among these priority areas.

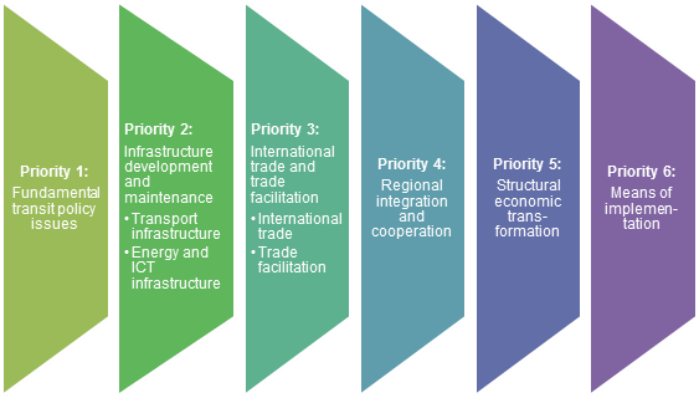
[1] Afghanistan, Armenia, Azerbaijan, Bhutan, Bolivia, Botswana, Burkina Faso, Burundi, Central African Republic, Chad, Ethiopia, Kazakhstan, Kyrgyzstan, the Lao People's Democratic Republic, Lesotho, the Former Yugoslav Republic of Macedonia, Malawi, Mali, Republic of Moldova, Mongolia, Nepal, Niger, Paraguay, Rwanda, South Sudan, Swaziland, Tajikistan, Turkmenistan, Uganda, Uzbekistan, Zambia and Zimbabwe

[2] Including poverty, food security, biodiversity, deforestation, forced migration, amongst others

[3] No submission could be found by Uzbekistan

The overarching goal of the **2014 Vienna Programme of Action for LLDCs for the Decade 2014-2024** is to address the special development needs and challenges of LLDCs in a more coherent manner and thus contribute to an enhanced rate of sustainable and inclusive growth.

The six priorities for action include the following:



Improving energy infrastructure and ensuring access to affordable, reliable and renewable energy and related technologies are imperative in enhancing productive capacity to achieve sustained economic growth and sustainable development. Regional approaches, including the creation of networks of regional renewable (RE) and energy efficient (EE) centres, will be needed to complement and enhance the effectiveness of national efforts and international initiatives. South-South and triangular cooperations as well as partnerships with relevant international and regional organizations and between public and private sectors will become increasingly important. Close cooperation with transit countries, stronger regional integration and harmonised and coherent regional policies will significantly contribute to improved connectivity and greater interregional trade to expand regional markets. And finally, structural economic transformation should be based on measures to encourage innovative solutions, entrepreneurship and the use of modern, cost-effective and locally adapted technologies, to create a conducive environment to attract more diversified foreign direct investment, the sharing of experiences and lessons learned and the strengthening of the private sector.

As noted in the report of the UNCCD COP11 Side Event, LLDCs are typically particularly vulnerable to the adverse effects of climate change and lack adaptive capacity, institutional and technical capacity, financial resources and appropriate data and monitoring systems. 72% of global drylands are in developing countries, and 60% of these are in LLDCs. 70% of the 400 million people living in LLDCs live in rural areas and heavily rely on land resources, livestock production, fisheries, forests for food production, exports, employment and energy. Climate change, desertification, land degradation and drought are therefore expected to negatively affect the agriculture, water, environment, transport and energy sectors.

Energy and LLDCs

Energy services play an integral role in supporting economic growth and improving social equity, while creating new employment opportunities for the local population. Under the 2030 Agenda for Sustainable Development, seventeen goals (Sustainable Development Goals - SDGs) were developed to target a range of sustainable development issues, including ending poverty, improving health, and combating climate change. Within the 2030 Agenda, the importance of affordable and clean energy for all (SDG 7) was re-emphasized, especially since the energy sector is linked to so many other development areas, like food, clean water, and gender equality.

There exists enormous potential for increased renewable energy use and energy efficiency measures within the landlocked developing countries. Through energy saving initiatives, LLDCs have the potential to cut their energy demand by approximately 25% and save billions of dollars per year. On average, the proportion of renewable energy in the total final energy consumption is 53% for the LLDCs, while in seven of these countries renewable energy accounts for less than 10% of the final energy consumption. However, inadequate access to financial resources and inappropriate financial incentives (or disincentives) continue to be the largest barriers for the energy sector in the LLDCs. Landlocked developing countries need to rapidly expand access to reliable, modern energy services in order to alleviate poverty and promote growth and development.

Closer Look at the LLDCs' INDCs

Prior to the COP21 in Paris, signatory states of the UNFCCC were invited to submit **Intended Nationally Determined Contributions (INDCs)**. These INDCs, which are part of the Paris Agreement, shall contain their voluntary climate objectives and measures to jointly achieve the agreed global target of limiting global temperature increase to well below 2°C. Starting in 2020, signatories of the Paris Agreement shall submit updated and more ambitious plans every five years, and from 2023 onwards, shall publicly report on their progress in reaching their contributions in five-year cycles. As of May 2016, 31 LLDCs have submitted their Intended Nationally Determined Contributions (INDCs) to the Secretariat of the UN Framework Convention on Climate Change (UNFCCC)[3]. The INDCs of the LLDCs covered a broad range of mitigation and adaptation sectors, which can be seen in the table below:

Mitigation Sectors	Adaptation Sectors
Energy	Energy
Waste	Human settlements/cities
Transport	Transport
Industrial processes and product use	Infrastructure
Agriculture	Water
LULUCF	Agriculture
	Forestry
	Human health

The commitments of the submitting LLDC, the level of detail in the description of targets and of mitigation and adaptation measures varied considerably between the evaluated countries. Around 75% of LLDC commitments are either conditional upon external support or include a combination of conditional and unconditional targets. Conditionality was defined differently among the evaluated INDCs, but in the majority of cases referred to technical assistance and financial support. The remaining quarter of submitted INDCs contained unconditional domestic targets, which have to be seen independently from the mentioned need for capacity building, technology transfer or financial support. Overall, the definition of commitments in the INDCs of landlocked developing countries and the fact that half of these countries are currently least developed countries indicate that concrete measures and projects, that are linked to the development priorities of these countries and receive strong international support, will be needed for the implementation of these plans.

Roughly 65% of the 31 INDCs contained commitments which referred to a quantified percentage emissions reduction compared to a business as usual (BAU) scenario or a base year. The base year was defined differently throughout the INDCs, which also differed with regard to the timeframe considered (2030, 2050, a period or no indication). 26% of INDCs either contained commitments based solely on policies and measures, non-GHG targets or not quantified GHG targets, and 10% of INDCs contained an absolute figure referring to a fixed-level target or GHG intensity target.

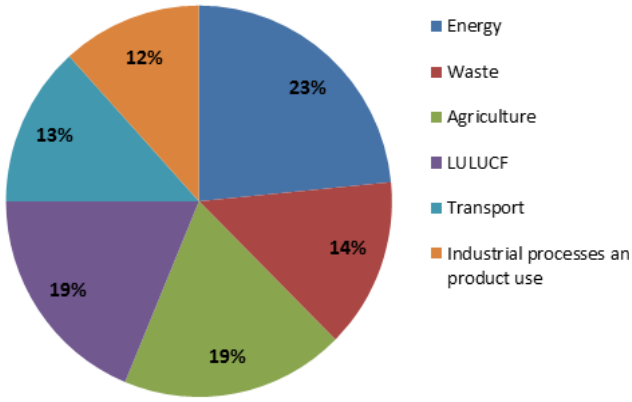
Climate Change Mitigation

Of the 31 LLDCs that submitted their INDCs, priority action for climate change mitigation addressed the energy sector in almost all cases (30 INDCs or 97%). In their Technology Needs Assessment Reports, the LLDCs listed numerous prioritized technologies for their energy sectors, namely solar photovoltaic, biomass/biogas, efficient lighting, waste-to-energy, wind turbines followed by hydropower. Agriculture and land use, land use change and forestry (LULUCF) were mentioned by 77% of LLDCs (24 countries) each. The waste sector was mentioned as priority sector by 58% of submitted INDCs (18), the transport sector by 53% or 17 countries, and industrial processes and product use by 48% or 15 LLDCs.

There exists enormous potential for increased renewable energy use and energy efficiency measures within the landlocked developing countries.

These focal sectors give an indication about the economic structure of landlocked developing countries and reflect their needs and challenges, putting a particular emphasis on the critical importance of an affordable, sustainable and reliable energy system for the future development of these countries. The measures foreseen in the respective sectors and the overall evaluation results also indicate a strong nexus between the agriculture, water and energy sectors. The implementation of INDCs will thus require a closer coordination across sectors and ministries involved, and could be aided by the creation of facilitating structures like inter-ministerial committees, working groups etc.

Priority Areas for CC Mitigation (Share of Coverage in Submitted INDCs)

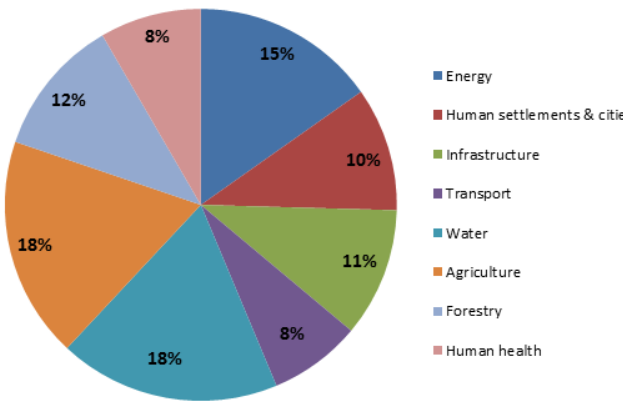


Adaptation to Climate Change

With regard to adaptation to climate change, INDCs of landlocked developing countries gave highest priority to adaptation measures in the water and agriculture sectors: 77% of submitted INDCs or 24 in absolute numbers, explicitly mentioned both sectors as important areas for national action. 65% or 20 INDCs referred to intended adaptation measures in the energy sector, the forestry sector was mentioned by 48% or 15 INDCs, followed by infrastructure (45% or 14 INDCs) as well as enhancing adaptive capacity of human settlements or cities (43% or 13 INDCs). Human health and the transport sector were explicitly mentioned by 35% and 32% of INDCs. Since the definition and scope of priority areas varied to a certain extent between the submitted INDCs, sectoral overlaps and inaccuracies in the assignment of priority areas for adaptation to climate change are possible. Overall, the adaptation areas of highest relevance to landlocked developing countries reflect the above-mentioned challenges and specific circumstances of LLDCs well.

The evaluation of focal sectors for adaptation to climate change once again revealed the importance for holistic, cross-sectoral approaches and stronger cooperation to achieve the desired environmental and development results.

Priority Areas for CC Adaptation (Share of Coverage in Submitted INDCs)



Technology & Financing Needs

International support for financing is a key demand of LLDCs: 87% of submitted INDCs stated the need to attract financing for the implementation of the plans.

The need for technology transfer or technological support was mentioned in about two thirds of the evaluated INDCs, although specific technology needs were only stated in about half of them.

Lack of capacity or the need for training and capacity building were mentioned as important barriers to technology implementation, but also as a more general hurdle to the implementation of the policies and measures contained in the 31 INDCs. The need for stronger cooperation in research and development (R&D) and in innovative approaches was also highlighted in numerous cases. Due to the mentioned dependence of LLDCs on transit countries, a closer regional cooperation and knowledge exchange, stronger regional integration and the creation of coherent regional policies have the potential to improve connectivity, enhance interregional trade and achieve both environmental and sustainable development goals.

Lack of capacity or the need for training and capacity building are important barriers to technology implementation in LLDCs.

Conclusion

Although the LLDCs have made some developmental progress since the Almaty Programme of Action in 2003, much remains to be done to accelerate poverty reduction and achieve sustainable, inclusive economic growth. The share of LLDCs in world trade is slowly increasing; however, as LLDCs heavily rely on natural resource-based commodities, they are extremely vulnerable to commodity price fluctuations.

Other challenges that LLDCs face are limited productive capacities, limited market access and high transport and trade transaction costs. The quality of landlockedness results in a dependence on transit infrastructure, on political relations with neighbours, and on peace and stability in the region. LLDCs will need support from other countries in order to face the challenges that they face to reach sustainable development for all.

Needs and Challenges for the Future

- International support for financing and technology transfer is a key demand in submitted INDCs of landlocked developing countries.

- Concrete projects, to a large degree supported by international finance, technical assistance and technology, will be required for the full implementation of the INDCs.

- Capacity building and stronger cooperation in research and development will be needed in the focal areas for climate change mitigation and adaptation.

- The vast majority of LLDCs foresee mitigation policies and measures in the energy, agriculture and LULUCF sectors, which shows the critical importance of these areas for a sustainable development pathway.

- Enhancing adaptive capacity and resilience to the adverse effects of climate change is particularly important in the water, agriculture and energy sectors of LLDCs.

- Cross-sectoral, holistic approaches linked to the development priorities of LLDCs will be needed to take account of existing interdependencies (e.g. the water-energy-food security nexus) and tap the potential for environmental and development co-benefits.

- A strengthening and diversification of economic activities in LLDCs, based on the efficient use of sustainable energy sources, are needed to reduce dependencies and transaction costs.

- Stronger regional cooperation and capacities can mitigate barriers to e.g. renewable energy and energy efficiency investment, markets and industries which were highlighted in a great number of INDCs. Knowledge networks and regional centres of excellence can substantially enhance the existing knowledge base and support the development of innovative solutions and technologies.

- Innovative and cross-sectoral partnerships, as well as multi-level and holistic solutions will be needed to simultaneously address the climate, energy and development challenges.

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