



MINISTRY OF ENERGY

Presentation

By Michael M. Mulasikwanda

Assistant Director - Electrification & Power Development

CHALLENGES AND BENEFITS OF THE LUAPULA CATCHMENT IN
RELATION TO ENERGY GENERATION AND CROSS-SECTORAL
COORDINATION

Presentation Outline

1. Introduction
2. Country Status
3. Benefits of Transboundary Water Management and Cooperation
4. Challenges of Transboundary Water Management and Cooperation
5. Focus on the Luapula Hydropower Scheme
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Introduction

- ❖ Energy is a critical input in the socio-economic development of the country.
- ❖ Every productive sector in the economy relies on the provision of energy.
- ❖ Zambia's total population is expected to grow from 17.9 million to 26.9 million by 2035 leading to an increase in the demand for energy services.
- ❖ The energy sector therefore needs to put in place measures and interventions to meet the future demand.

Country Power Status

- ❖ Zambia has a diversity of potential sources of energy, such as hydro, solar, geothermal and wind.
- ❖ The installed generation capacity in Zambia is 3,307.4 MW as of 2021.
- ❖ The installed capacity comprises of 79.65 percent of hydro, 10.96 percent of coal, 3.65 percent of heavy fuel oil and 2.96 percent solar PV.
- ❖ With the coming in of the Kafue Gorge Lower Power Station, the installed capacity is expected to grow to about 3,757.4 MW when all the units of the plant are online and operational.
- ❖ Zambia has an estimated 6,000 megawatts of untapped hydropower potential.

Benefits of Transboundary Water Management and Cooperation in the Energy Sector

- ❖ Coordinated, Efficient and effective management of trans-boundary water resources

- ❖ Social, political and economic stability as a result of cooperation between riparian states.
- ❖ Shared infrastructure and shared resource fosters unity e.g. The Kariba Dam Complex with one dam wall but two power stations (KNBPS & KSBPS)
- ❖ Batoka Gorge Hydro Electric Scheme (BGHES) project – One water reservoir planned with each country producing 1200MW
- ❖ These projects are being sponsored by one bilateral Organisation, the Zambezi River Authority.
- ❖ ZRA is jointly owned on a 50-50 basis (including staffing levels)
- ❖ The ZRA Act of 1987 ensures equity and equality in the management of the ZRA and the shared Zambezi River

Challenges of Transboundary Water Management & Cooperation

1. Funding of Trans-boundary Institutions

Effective management of transboundary water resources requires sustainable funding mechanisms.

2. Un-harmonized Legal Frameworks of Riparian/Members States

Lack of equivalence in scope and dimensions in National Water Laws among Riparian States hinders implementation of some functions of transboundary organizations.

3. Differences Between Member States

Differences in economy and economic priorities, peace and stability, political heritages, priorities, size of a watercourse that lies within a country and its significance, culture and education, religion and relation with external allies may have a stake in making trans-boundary water governance difficult and complex.

Challenges of Transboundary Water Management & Cooperation – Cont'd

4. Differences in Country Commitment in Meeting Obligations

Commitments of Member States in fulfilling individual obligations differ from country to country and are influenced by interests, benefits and magnitude of a calculated loss if a country does not collaborate.

E.g. CAPCO dispute, creditworthiness etc

5. Competition Over Water Allocations

One of the rationales of transboundary water cooperation is to ensure each Member State gets its water share equitably and sustainably. Equitable water allocation, however; is not easy and straight forward.

6. Prolonged Discussions that Delay Decisions

Experience has shown that discussions and negotiations between Member States take many years to arrive at assented agreements.

Focus on the LUAPULA HYDROELECTRIC POWER SCHEME

Zambia and Congo DRC signed an InterGovernmental Memorandum of Understanding (IGMOU)) for the development of about 1200MW common hydropower sites on the Luapula River (Mombotuta and Mambilima) and associated infrastructure.

IGMOU also includes the development of the Solwezi – Kolwezi 330KV Transmission Line.

Zesco Ltd and SNEL also signed an InterUtility Memorandum of Understanding (IUMOU)

Initially signed on 9th July 2015 in Kinshasa

Amended through an ADDENDUM 8th July 2018

Expired on 7th July 2021

Focus on the Luapula HydroElectric Power Scheme cont....

Apon reviewing the progress made, and the many milestones left to be done, such as Feasibility Studies, ESIA's and Preliminary Designs for the power scheme, the Parties signed a revised IGMOU and IUMOU on 13 June 2022 in Lusaka

Working Groups Establishment Under the IGMOU

1. Joint Ministers Committee (JMC)

Comprises Minister of Energy – Zambia and Minister of Water Resources and Electricity - DRC

2. Project Steering Committee (PSC)

Comprises Permanent Secretaries responsible for the Energy and Finance portfolios

3. Project Management Unit (PMU)

Comprises 12 appointed experts (6 from each country)

(For Zambia, the experts drawn from Energy, Water, Justice, Finance, Zesco, OPPPI)

Commitments in the IGMOU

The Parties commit to:

1. Cooperate intensively for the realisation of the projects;
2. renew their commitment in the bilateral cooperation so as to jointly facilitate the development, the realisation and the mobilisation of funds for the materialisation of the projects and for the enhancement of the interconnection system;
3. continue the existence of the working groups that have been responsible for the attainment of the purpose of this Memorandum;
4. jointly source funds for advisory and consultancy services;
5. jointly source funds for Solwezi - Kolwezi interconnector Project implementation following the completion of feasibility studies;
6. procure advisory and consultancy services to prepare the Projects to bankability as required for the development of the hydropower projects;
7. develop and implement an appropriate framework for the integral management of water resources on the Luapula River Basin;
8. sign any specific agreement related to the development of each project site;
9. establish specific management and supporting structures for the implementation of the Projects;
10. develop a framework for equal sharing of energy between the Parties;
11. operationalise the projects.

Conclusion

The benefits of transboundary cooperation cuts across various sectors and/or economic areas and livelihoods, and given the inherent local interpretation of such benefits, it is prudent that the water resource is efficiently and effectively managed not only for electricity generation but for all other purposes for Zambia and all Riparian States.

THE END

Thank You