Nile Basin Initiative

Nile Equatorial Lakes Subsidiary Action Program (NELSAP)

The Role of NELSAP In Regional Integration

Presenter: Peter Kanyi Maina,
Senior Economist/M&E, NELSAP

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The Nile Equatorial Lakes Subsidiary Action Program (NELSAP)

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NBI/NELSAP Vision, Mission, Mandate

- **NBI Vision:** Promote *"sustainable socioeconomic development through the equitable utilization of, and benefit from, the shared common Nile Basin water resources"*.

- **Mission:** The Mission of NELSAP is to *'contribute to the eradication of poverty, promote economic growth, and to reverse environmental degradation'* in the Nile Equatorial Lakes Region.

- **Mandate:** NELSAP's mandate is to '*facilitate, support and strengthen the identification, preparation and implementation supervision processes for NELSAP projects for the benefit of all riparian countries*

What is NELSAP?

- **NELSAP** was established about 10 years to address WRD issues in the NEL Region in two key areas: Natural Resources Management and Development and Power Development and Trade.

- **NELSAP's** role is to facilitate pre-investment planning (institutions and Projects), resource mobilization and implementation supervision. NELSAP is increasingly being recognized by the countries as a vehicle for value addition to the realization of development aspirations of the member countries.

- Through regional integration, **NELSAP** adds transboundary dimensions to national processes.

❑As a regional body, NELSAP's over the last 10 years, has the capacity to deliver on its mandate: Adequate HR capacities; Good financial & procurement systems in place; Developed guidelines and tools for integrating development communication, social-economic issues, resource mobilization, environmental & social safeguards and climate adaptation into project planning; developed a power master plan (SSEA) which is being updated by a CBWS on power options, and WRD investment master plan-Multisector Sector Investment Opportunities Analysis (MSIOA) has been completed, have facilitated countries access finance through the transboundary window, e.g. LEAF, Rusumo, Maira Dam, Lake Kyoga Investment Program, Institutionalized improved RBS work planning & reporting.

Criteria for Project Selection

1. Priority for the country: from country DPs, PRSPs, Master Plans (Water & Power), have specific Country (ies) defined goals and anticipated measurable results that are clearly stated;
2. Satisfy the NELSAP objective: Poverty reduction, economic growth and reduction of environmental degradation;
3. Demonstrate benefits at a regional level;
4. Ability to be upscaled;
5. Demonstrate sustainable use of water resources;
6. Commitment for significant public consultation and Stakeholder involvement;
7. Economic and Financial viability and sustainability.

Why Regionalism/Integration for NELSAP Member Countries

- NELSAP Member Countries: Kenya, Uganda, Tanzania, Rwanda, Burundi, DRC, Egypt, Sudan, South Sudan, Ethiopia.

- Characteristics:
  - Low p.c. incomes;
  - High poverty levels;
  - Limited access to energy resources, especially electric power;
  - Limited markets;
  - Limited & erratic financial inflows;
  - High debt/GDP ratios;
  - Highly degraded environments.

- It's against this background that these countries saw Classical Integration as a panacea to overcome these challenges jointly and formed the NBI in 1999 and the SAPs in 2001.

The Case for Environmental and Developmental Regionalism

- Prior to the formation of NBI/NELSAP/ENSAP, there was TECO-NILE & KBO -Integration and cooperation, in the classical sense, meant:
  - Larger markets;
  - Protectionism;
  - Greater bargaining power at international fora;
  - Improved access to FDIs & other financial inflows;
  - Export-led economic growth-Autarky Equilibrium, absolute & Comparative Advantage, poverty reduction.

- Establishment of NBI/NELSAP/ENSAP meant a different form of integration on a regional public good-from a ***"state-centric approach"*** to a **"whole of basin programmatic approach"** to planning, meaning:
  - Creation of a permanent effective institution;
  - Provision of value addition to national development processes-fora for discussions, peace, harmonization & development of regional policies, best practices;
  - Removal of barriers that impede exchange, e.g. in trade, investments;
  - Joint identification, preparation & implementation of investment projects;
  - Transboundary window for resource mobilization;
  - Joint regional capacity building.

How do NELSAP WRD and Power Projects Contribute to Regional Integration?

- Thru Inter country MOUs-joint identification, preparation, implementation supervision, facilitating transboundary RM (e.g. RBMs, LEAF, Interconnections, Rusumo) & regional capacity building to support regional WRD & power infrastructure implementation and operation;
- Development & harmonization of power infrastructure to make regional power trade possible among the equatorial lakes countries including removal of barriers to trade-(means: source of income to countries, improved stability of the systems, reliability and security of power supply, load diversity savings, rural electrification, etc.);
- The establishment and participation in institutional arrangements for implementation and operation of power infrastructure and market development (PPAs, rules, and institutions);
- The establishment institutional arrangements for WRD projects (e.g. RBMs, LEAF);
- Joint project planning by the countries-trust, enhances regional peace & mutual benefit sharing-Interaction and networking of people from different countries & professions;
- NELSAP value addition-transboundary dimensions to national developmental processes, thereby enhancing countries' willingness to partner with each other;
- Joint planning with other RECs, e.g. LVBC, COMESA, CEPGEL, AU, NEPAD, FAO, Regional commodity groups (e.g. EAGC, etc.)-thru MOUs;

Has Regionalism Produced Benefits? Examples-Natural Resources Sub-Program Projects

- Natural Resources Magmt Program
  - Inter Country Projects Ongoing
    - Mara RBM Project
    - SMM RBM Project
    - LEAF Pilot Project
    - Kagera RBM Project
    - RATP Project
    - LVEMP II
  - NEL-WRD Project (Identification)
    - Regional Analysis
      - Multi sector Investment Opportunity Analysis
    - Projects Preparation
      - Lakes Edward, Albert, George MPP Project
      - Aswa Basin MPP Project
      - Kyoga MPP Project
      - MPP Projects in Western Kenya (Yala and Gucha)
      - Tanzania Irrigation Project
      - Bugesera TWM Project
      - Climate Adaptation Mainstreaming

Rationale: Promote Sustainable Natural resources management and development of the NEL shared water resources for improved livelihoods.

Lakes Edward and Albert Fisheries and Water Resources Management Project (Uganda & DRC)

- **Phase I**

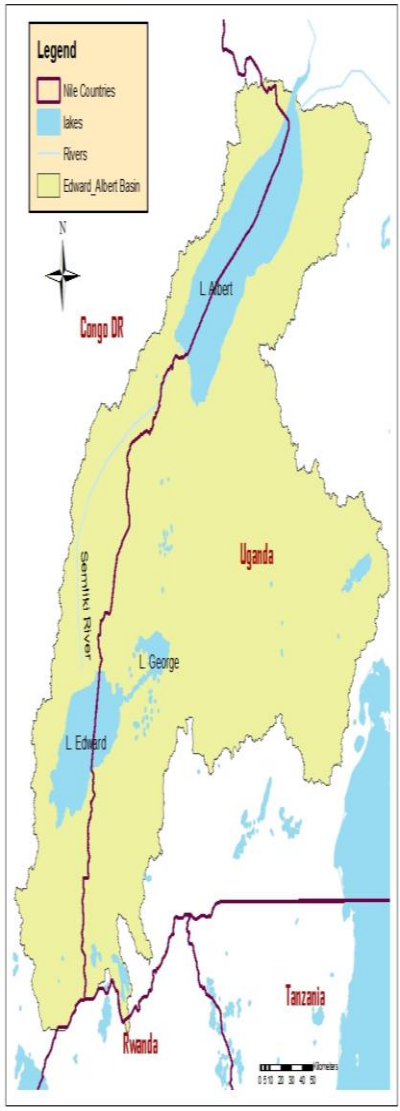
  Integrated Lake Management and Investment Plan prepared (estimated at US$ 170 m)

- **Phase II-Progress towards implementation**
  - AfDB has committed UA 25 m.
  - Environmental and Social Management Plan prepared between February-April 2011
  - PCN for Phase II prepared: Components for AfDB Support 1) Fisheries management and development 2) IWRM & 3) Project coordination including establishment of a TWM organisation

- **Implementation Arrangements-2014-2018**
  - National level activities will be implemented by existing national institutions and mechanisms
  - NELSAP CU responsible for coordinating project implementation.

Expected Benefits: (e.g.)

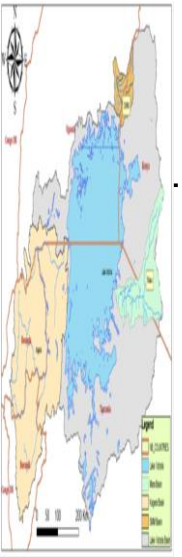
- Development of a Lakes Fishery Policy Framework including a Regional Fisheries & Integrated Management & Development Agency
- Increase the contribution of fisheries to GDP from a 2008 baseline of 1.5% in DRC to 3.5% and from 2.5% to 4.5% in Uganda, respectfully;
- A 50% reduction in illegal fishing,
- A 50% reduction in pollutants (water effluents Metals & Nutrient) from a 2008 baseline of 2000m3/sec;
- 30 regional water monitoring stations to be established for improved WR planning



River Basin Management Projects of Mara (Kenya & TZ), Kagera (RW, BUR, UG, TZ) and Sio-Malaba-Malakisi (Kenya & Uganda)

- **Institutional Studies**
  - Study to conclude institutional aspects of the three RBM projects completed, bilateral agreements prepared and are under consideration for ratification by the participating countries.

- **Outputs**
  - **Kagera:** (Feasibility study for IWSM completed; Feasibility study completed for 4 multipurpose WRD projects at Buyongwe, Taba-Gakomeye, Karazi and Bigasha; Independent ESIA and Preliminary RAP studies completed for the 4 multi-purpose WRD; 59 hydrometric stations installed).



  - **SMM:** (Feasibility study for IWSM completed; feasibility study and preliminary designs & RAP for Maira small dam finalized with investment requirement of US$43m and with capacity of 5MCM; Maira Multipurpose Dam Safety Plan prepared; feasibility study for Bulusambu multipurpose dam undertaken, ESIA, RAP & dam safety plan prepared for the same, 58 Hydro-meteorological stations installed to support sub basin water resources planning).
  - **Mara:**(Feasibility study for Mara Integrated Watershed Management project concluded, ESIA and RAP for Borenga and Norera dam sites completed, 58 Hydro-meteorological stations installed to enhance sub basin wide water resources planning).

- **Some expected benefits:**
  Kagera: Benefits from prepared 4 multipurpose WRD projects:
  - 784,500 people to access potable water;
  - 10,120 farmers to benefit from 2,024 ha of irrigation;
  - 314,000 livestock to be watered;
  - 1,070 households to access electricity; 166 fish ponds to be constructed.
  - **SMM:** Maira Multipurpose Dam would benefit:
  - 10,000 people through irrigation of 2000ha;
  - Bulusambu would benefit about 8,000 people through irrigation of 1950ha,
  - Bungoma Pollution Control Project would benefit 200,000 people,
  - Lwakhakha Pollution Control Project would benefit 20,000 people, etc.

NEL WRD Project Preparation Studies (US$ 4.99m, NBTF)

- Multipurpose WRD projects identified & Development Strategy & Plan for the **Yala River Basin, Kenya** prepared**:**

  – **Some Expected Benefits: Mushangubu WRD project:** 1.96 MCM of storage, 42MW, 4,000ha of irrigation, 43,000m3/d for water & sanitation, 360,000 people, etc.

- Multipurpose WRD projects identified & Development Strategy & Plan for the **Gucha-Migori River Basin, Kenya** prepared**:**

  Gogo Falls Project: 155 MCM storage, 20MW, 30,000ha of irrigation, Up to 86,400m3/d for WS, 1.152 mln people , A bankable MP project for further investment formulated .

- Multipurpose WRD projects identified & Development Strategy & Plan for the **Kyoga basin, Uganda** prepared**:**

  Integrated management Multipurpose reservoir in Lopei: 4,000 ha, 448kW of power, Water supply for 35,000 people

- Multipurpose WRD projects identified & Development Strategy & Plan for the **Aswa basin between South Sudan and Uganda** prepared, and one bankable project formulated.

  - **Palaro County Project (Gulu, Uganda):** 200 MCM storage, 68MW, 8,800ha of irrigation,
  - **Nyimur Project (Lamwo district in Uganda and Magwi Town in South Sudan):** 350kW, 5,105ha of irrigation, 14,300ha of Land use management
  - **Parajok Project (Magwi town in South Sudan):** 520 MCM storage, 10MW, 21,800ha of irrigation, up to 36,000m3/d for WS

NEL WRD Project Preparation Studies

- **In the Lake Victoria basin in Tanzania:**
  - Prefeasibility studies for 20,051 Ha of irrigation area completed for 3 sites:
    a. Ngono (11,681Ha) with an investment cost of US$251.5M
    b. Bugwema (2,030Ha) with investment cost of US$14.8M, and
    c. Mara (6,340Ha) with an investment cost of US$92.5M
  - Preliminary designs successfully completed;
  - Preliminary ESIA successfully completed for the 3 schemes;
  - Preliminary costing and economic analysis completed.
- Through **the Multi-Sector Investment Opportunity Analysis (MSIOA)**, the NEL Multi-Sector Investment Strategy, Action Plan, Analytical framework and Economic Model were developed, and a Strategic Social and Environmental Assessment completed.
- Metadata base of existing and planned WRD and related interventions developed.

– **Some expected benefits**

- **In Ngono:**20 villages in the districts of Bukoba Rural and Missenyi) with about 20,000 people;
- **In Bugwema:** 755 households from the 6 Sub-villages of Bugwema village in Musoma district (Mwiyiero, Solar, Ziwani, Kasenyi, Kagera, Rwamasisi);
- **In Mara Valley:** 10 villages in Serengeti district (Borenga, Nyiboko, Buchanchari, Nyansurumunti, Gentamome, Busawe, Iseresere, Nyamakobiti, Majimoto, Hekwe/Magatini) with about 10,000 people;
- **MSIOA: A Water Master Plan for the NEL Region** enhanced with economic analysis.

Bugesera Transboundary Water Management Project (€770,000), financed by African Water Facility

- **Components:**
  - Prepare Transboundary Integrated Lakes Management Plans and Investment project, including capacity development

- **Outputs:**
  - 3 Technical/Diagnostic studies completed;
  - Three IMDP and Investment plans, Strategic Environmental Assessment and Project Concept Note prepared;
  - Two meteorological stations equipped and operational in each of the two countries of Rwanda & Burundi
  - Two hydrological stations equipped and operational in Burundi only

- **Expected Benefits:**
- **IMDP:** About 1 million people to benefit from the prepared Integrated Multipurpose Development Plan;
- **Integrated Agricultural development:**
- 4,200 ha of land in the marsh and the hills to be irrigated and more than 42,000 farmers to benefit from technical and agricultural inputs
- **Environment and catchment management-realized in PH 1**

-12 catchment management plans prepared;
-12 catchment management organizations involving local communities set up;
- 2,500,000 agro forestry and fruit trees including 300,000 indigenous and bamboo trees planted on the lakes and river catchments areas (0-100m);
- 765 ha of river banks and lake shores restored (265 ha Cyohaha, 200 ha Rweru & 300 ha Akan);
- 6 community based wetland management plans developed and implemented;
- 12 water monitoring stations established including bathymetric analysis of the two lakes;
- 40 pilot fish cages established in Lake Cyohoha for 4 fishermen cooperatives;
- 4 community based fish hatcheries established, 9 fishermen cooperatives set up, Fishery information system and database established, 90% of fisher organisation to benefit from micro-projects & 4,500 households to be involved in alternatives income generating activities.

Power Trade and Development Sub-program Projects

Power Trade and Development Sub-Program

- Inter-countries projects preparation/implementation
  - Rusumo Falls
  - Interconnection Project (5 countries)
  - Kenya-Tanzania Interconnection
- NEL Power Project-Identification
  - Iringa-Mbeya
  - Uganda-DRC
  - Tanzania-Zambia

<u>Objective:</u>
To create a regional power market amongst the NELSAP Countries through development of the regional Power infrastructure and ensure establishment of rules and mechanisms for power exchange.

Rusumo Falls Hydroelectric Project (Rwanda, Burundi, Tanzania)

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– **Objective:** To develop generation capacity (80MW) to increase installed capacity of Burundi, Rwanda and Tanzania, and create regional interconnected system between Burundi – Rwanda – DRC eastern grid with the Tanzanian grid.

– **Outputs:**

• Technical Feasibility study completed (ESIA and RAP and Technical design);

- Technical feasibility studies for T-lines by Fichtner (technical design, ESIA and RAP) done;
- RoR ESIA and RAP studies updated by Artelia;
- The project is under preconstruction activities (recruitment of the owners engineer, preparation of the compensation, establishment of institutional arrangements).
- Finalization of the RoR ESIA and RAP Reports for the Power Plant and Transmission lines
- Financing closure expected to be reached by end 2013. WB, AfDB, EIB, KFW, Sida, The Netherlands interested to participate in the project financing that is estimated at USD 440 million.
- Construction to start in 2015 and commissioning expected by 2018 .

– **Expected Benefits:**

- **Livelihood Restoration and Local Area Development Plan (LADP):** Will enhance livelihood of PAPs and ex-PAPs in Rwanda, Burundi and Tanzania (About 7,000 households);
- **Job creation:** 1000 persons are estimated to be employed by the project.
- **Power Generation:** A total of 80 megawatts will be shared between the 3 countries.
- **Improved access:** Given the current power access rates of 10%, 16% and 18% in Burundi, Rwanda and Tanzania respectively, the power generated from Rusumo will increase the access rates by 5.4% (520,000 people), 4 %(467,000 people) and 0.34% (159,000 people) respectively.

The NEL Interconnection Project

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- **Objective:** Creating Interconnection Projects of NEL Countries through construction of 400 & 220 KV transmission lines to interconnect the electricity grids of the NEL countries: **Burundi, Kenya, DRC, Rwanda, Tanzania and Uganda.** The interconnections will improve access to electricity in NBI countries through increased cross-border sharing of energy and power, increase power security and reliability. Some of these interconnections are under implementation while others are under preparation.
- All studies were completed in 2008
- Resources effectively mobilized to the tune of USD 402 mln
- The interconnection of five NEL Countries is under implementation

Expected Benefits:

• **Uganda-Kenya Line:**
- Increased power supply allowing the transfer of about 150-300MW of electric power along the 255 km power line;
- Reduced power tariffs leading to various social-economic benefits.

• **Uganda-Rwanda Interconnection** (length 172 km):
- Increased power supply allowing the transfer of about 150-250MW of electric power along the 172 km power line;
- Reduced power tariffs leading to various social-economic benefits.

• **Burundi-Rwanda Interconnection** (length 143 km):
- 15 villages of about 25,000 people and 2 tea factories (Nshili & Mata) to benefit from rural electrification;
- Other beneficiaries: small businesses, schools, health centers, etc.

• **Burundi-DRC-Rwanda Interconnection** (length 545 km):
- 15 villages in the districts of Musanze, Nyabihu & Rubavu with about 40,000 people and 2 tea factories of Nyabihu & Pfunda to benefit from rural electrification;
- Other beneficiaries: small businesses, schools, health centers, etc.

Other Interconnections and Transmission lines

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- **Linking the NEL region to Southern Africa Power Pool.** NELSAP successfully prepared the Kenya – Tanzania and Iringa – Mbeya power transmission lines and will soon commence the preparation of the **Tanzania - Zambia** Interconnection for future exchange of power of the two regions.

- **Extension of the regional grid to Northern East part of the DR Congo** through the Uganda (Nkenda) – DR Congo (Beni/Bunia /Butembo) Transmission study . This part of DRC is currently supplied by diesel generators Preparation of the project is at advanced stage.

- The next NELSAP focus is to **integrate South Sudan in the Nile Equatorial Lakes grid.**

Expected Benefits:

- **Kenya-Tanzania Line:**
  - 18,000 inhabitants in villages along the transmission line to benefit from rural electrification.

- **Iringa-Mbeya Interconnector :**
  - 72,000 inhabitants in villages along the transmission line to benefit from rural electrification.

- **Uganda (Nkenda) – Democratic Republic of Congo (Beni – Butembo – Bunia) Power Transmission Line**
  - 838,000 inhabitants in the 3 towns of Beni (100,000), Bunia (366,000) and Butembo (218,000) to benefit from power supply.

How Have we Done & What are our Resource Needs?

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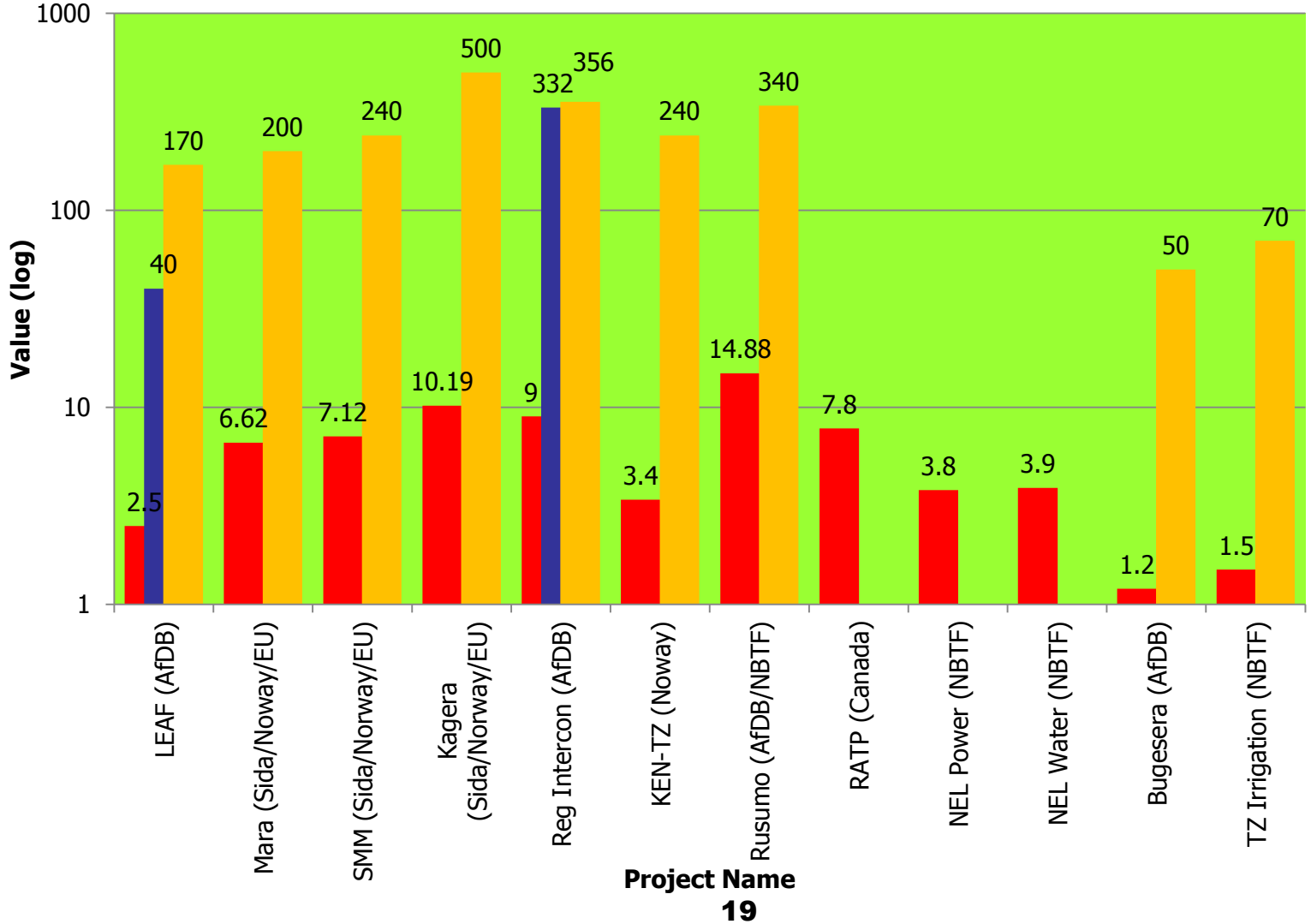
Current NELSAP Portfolio & Resource Needs



Pre-Investments
-USD 70mln
Resource Needs
-USD 1.5 bln by 2012 and USD 3.9 bln by 2020

Some Lessons Learnt

- Political goodwill and consensus building are key in creating institutional arrangements for transboundary river basin management. Formal forms of collaboration alone are not enough and consensus building is critical;

- A basin-wide shared vision must be based on a sound scientific understanding of the basin and the biophysical, socio-economic and environmental constraints operating within it; it must actively, and in a transparent manner, seek to address the critical areas identified for country buy-in;

- Stakeholder participation is essential for successful transboundary WRM and contributes to enhanced ownership and sustainability of programs in the basin. Civil societies and local groups play a vital role for the success of projects and strategies should be developed to effectively involve them in the project conception and implementation right from inception.

Summary

- **Summary:** The NELSAP program is strategic, catalytic, enabling and transformational and a practical example of benefits that can accrue from cooperation/regionalism on international waters.

- **Our DPs:** World Bank (NBTF), Bilateral Support by the Governments of Sweden & Norway, AfDB, JICA, Netherlands, EIB, KfW, Member Countries.

Thank You