



Government of Nepal
Ministry of Energy, Water Resources and Irrigation
Department of Hydrology and Meteorology

Country Report Nepal

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- Workshop on "Climate Change and Water Resources of Kathmandu Valley" has been organized on the date of April 5, 2018 in Kathmandu, Nepal.
 1. Impact of Climate Change on Water Resources of Nepal by Dr. Santosh Nepal
 2. Climate Change Policy and Recent Initiatives by Dr. Ram Prasad Lamsal
 3. Water Supply in Kathmandu Valley by Mahesh Prasad Bhattarai
- Workshop conducted on " Water Resource Management in Federal Nepal: Potential Conflict to Potential Cooperation" on February, 2017 in Kathmandu, Nepal.
 1. Potential Conflict under Federal System of Government in Water Resource Management and its Solution : International Experience by Dr. Bishnu Prasad Upreti
 2. Potential Conflict in Water Resource Management in Nepal under Federal System and its Solution by Dr. Dwarika Nath Dhungel.
- National Symposium on Hydrology and Meteorology-2015 was conducted on December 24, 2015

Development Strategy of Water Resources in Federal System of Nepal

1. White Paper has been issued on the date of May 8, 2018 by the Ministry of Energy, Water Resources and irrigation for the sustainable development of energy, water resources and irrigation, their conservation and promotion to meet the national goal of *Prosperous Nepal and happiness of Nepalese* people.

Current Status

A: Water Resources

Law and Regulation

- Water Resource Act- 1992
- Water Resource Strategy- 2002
- National Water Plan Nepal- 2005

Water Availability and Consumption

- Available Water Quantity : 225 billion cubic meter annual average
- Rechargeable groundwater : 5.8-11.5 billion cubic meter
- Irrigation : 28.8 billion cubic meter
- Industries : 0.5 billion cubic meter
- Service sector and Others : 0.1 billion cubic meter

Current Status

B: Energy

i) Hydroelectricity

- Energy demand of Nepal is 1300 Mw.
- Total capacity is 1073 Mw
 - 562 Mw from Nepal Electricity Authority
 - 511 Mw from Private Sector.
 - 450 Mw energy from India

ii) Alternative and Renewable Energy

- solar
- bio-gas
- wind
- geothermal energy sources

Current Status

C: Irrigation and Water Induced Disaster Management

- Total agricultural land : 26410 sq. km (*18% land of Nepal*)
- Irrigation Land : 17660 sq. km
- Irrigation Infrastructure : 14333 sq. km
- Groundwater irrigation : 4433 sq. km
- Surface water irrigation : 8131 sq. km
- Community irrigation : 1679 sq. km

One third of irrigable land has the whole year availability of the irrigation facility

National level irrigation projects

- Bheri-Babai Diversion
- Sunkoshi-Marin Diversion
- Mahakali Irrigation

Swallow and deep tube well projects are also in existence to irrigate 4156 sq. km of land until 2016

Current Status

D: Hydrology and Climate

- i. Hydrological and Climate Data for Development, Plan and Research
- ii. Network for Climate Induced Disaster Reduction, Mitigation and Prevention

Services

- i. Weather Forecast
- ii. Flood Monitoring and Early Warning System
- iii. Aviation Meteorology
- iv. GLOF Risk Reduction and Community Based Early Warning System
- v. Agromet Services
- vi. Climate Bulletins

The decadal plan called "Energy and Water Resource, 2018-2027 envisaged

- **Integrated national water resource policy** is going to be developed through basin approach to address the transboundary issues of water allocation and consumption, conservation and management.
- **Multipurpose water projects plans** shall be governed within 3 years considering the *social, economic and environmental factors*.
- **The groundwater conservation, development and regulation** shall be incorporated in water resource act.
- **Institutional framework** shall be formulated for addressing central, provincial and local level water conflict management.
- **Strategic and implementation plan** shall be envisaged for inter basin transfer and relocation of water resources.
- **Transboundary issues of water resources** between India and Nepal shall be revisited through mutual agreement and coordination for utmost benefit to Nepal.

The decadal plan called "Energy and Water Resource, 2018-2027 envisaged *contd...*

- **Modality of water allocation** of water shall be envisaged to lower region and countries.
- **Technologies** shall be explored for sustainable irrigation throughout the year for agriculture land.
- **Lift irrigation** with solar energy technology will be adapted in the difficult *mountainous terrain*.
- **Capacity building measures** shall be implemented for *water induced disaster prevention* in central, provincial and local government level.
- **Hydrological and Meteorological network** will be expanded and updated through *automation and modernization of monitoring stations*.
- **Research works** shall be promoted for incorporating *impact of climate change* on ground water depletion, flood, agriculture, sediment yield etc.
- The system of **3 to 5 days prediction of weather**, prediction of extreme weather events and **effective early warning system** shall be formulated.

Thank You