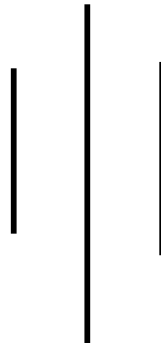


Facilitating the preparation of water use master plan in selected local Municipality

Case of Dakshinkali Municipality

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Jalsrot Vikas Sanstha/GWP Nepal

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Foreword

This research was part of core activity of Jalsrot Vikas Sanstha (JVS)/GWP Nepal. JVS/GWP Nepal highly appreciates the contribution of Mr. Som Nath Uprety.

Disclaimer

The findings, interpretations and conclusions expressed herein are those of the author (s) and do not necessarily reflect the views of the institutions

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Introduction

1.1 Background

A water use master plan (WUMP) is defined as a holistic, participatory, and inclusive planning process that takes an integrated approach to the management of water resources at the community level. The incidence of water scarcity is experienced in many parts of our country though there is enough rainfall and run-off on an annual basis. At moments when water is plentiful, often a large portion of it disappears unused through floods, surface run-off, and evaporation. Nepal, despite being one of the most water-abundant countries in the world with over 6,000 rivers, is experiencing severe water challenges hampering both economic development and poverty alleviation. With major percentage of rainfall (nearly 85%) occurring during the monsoon season, there is an overabundance of water during these months and a shortage outside of this period. The scarcity of water here, could be cited for the poor management of water rather than the lack of water. The issues arising from the water scarcity during dry period has adverse impact on the livelihood of people depending on it. The inadequate amount of drinking water as available induce stress for the household water management especially for women to manage water for drinking, cleaning and sanitary purpose. Water shortage also affects the agro and livestock dependent population negatively. The perennial sources of water are adversely impacted due to the increasing water demand and the competitive use of water creating scenario of conflict between and within the village and community. Similarly, the water induced disaster attributed to the overflow of water during monsoon season creates havoc among the people, their life and property, further accelerating the conflict of water management and its equitable benefit sharing. On this backdrop, a conclusion could be derived that water use planning must be holistic, meaningfully participative, inclusive and focused on the sustainable water management and benefit sharing.

1.2 Importance of Water Use Management Plan

The effective and efficient management of water has emerged as one of our greatest challenges. Traditional approach of water management viewed water as a mere resource to be exploited through the engineering approach of predicting and providing and with an emphasis on infrastructure and individual projects. The social, ecological and cultural importance of water was often ignored and top-down decision making process was practiced. After the concept of IWRM was introduced, emphasis was given for the socio-economic development including physical planning and environment protection with people at the center (public participation) and a focus on sustainability. Water Use Management plan adhering the principle of IWRM explores the water resources availability, it's potential uses at different sector, exploring the balance between demand and supply considering the future scenario, specifies the total water budget for its planning and explores potential uses for it.

WUMP empowers marginalized groups to claim their rights to an equitable share of water within and between communities. It also helps local bodies with annual and periodic planning and project prioritization. Through the several process of WUMP, it helps in capacitating the water users and management stakeholders. WUMP focuses on identifying the different water sources in a given

community, water use in different competitive sector, water demand and supply formulating comprehensive plan and budget for the proper management for the water resource and its benefit sharing. WUMP acts as a blueprint guiding future water related plans and policy in the meanwhile acting as a testament for the sustainable water conservation through inclusive participation. WUMP through its different process adhering the principle of IWRM promotes good water governance and climate resilience. Given the importance of WUMP, Nepal Government has also provided guideline for the formulation of WUMP for the given VDC/ Municipality. Based on this guideline document this study, is carried out to facilitate Dakshinkali Municipality to ensure that the process as provided in the guideline are adhered when the WUMP is to be formulated.

1.3 Objective of the study

The objective of this study is to facilitate the local government to manage their water resources sustainability during the formulation of water use master plan adhering to the guidelines as prescribed by Government of Nepal. The overall objective of this study is to contribute in the sustainable management of water resources through participatory process so, as to meet the water demand in the meanwhile capacitating the water stakeholders.

1.4 Scope and limitation of WUMP

The guideline as suggested by GoN for the preparation of WUMP by the respective Rural/Municipality gives authority for the possession, formulation and implementation of WUMP to the respective Administrative unit. For the watershed which falls under different administrative boundaries, this WUMP also promotes to carry out the conservation and management plan through consultation among the Rural/Municipality. However, the WUMP focuses on the small watershed so, the large scale irrigation and hydropower projects and big river system are not covered by the WUMP

1.5 Methodology

This study was carried out amidst the Covid-19 crisis hence majority the work schedule included desk study. Different water related legal provisions were studied thoroughly. Similarly, the virtual interview and consultation was carried out among the water stakeholders of the municipality and associated stakeholders. Different annual plans and programs of the municipality was also reviewed. The WUMP from other surrounding municipalities was also assessed to supplement the additional information required.

Water use Master Plan Concept

2.1 Study Area

Dakshinkali Municipality is located in Kathmandu District in Province No. 3 of Nepal that was established on 2014 (2071 B.S in Nepali calender) by merging the former Village development committees Chalnakhel, Satidevi, Sheshnarayan, Dakshinkali, Talku Duduchour and Chhaimal. The municipality is bounded by Indrasarowar Municipality in the west and south, Lalitpur Municipality in the east and Kritipur and Chandragiri Municipality in the north (Figure 1). The municipality consist of 9 wards with the total population of 24,297 people residing in 6,925 households covering an area of 42.38 km² (Municipality Profile, 2019). The municipality lies on an altitude of 1,532 meters above mean sea level (Annual Municipal Development Plan, 2019). Majority of the population (80%) are dependent on public taps and the remaining 20% of population are dependent on spring water (SDF, 2019). This municipality holds plenty of tourism opportunities in this municipality, due to religious and historical holy power, religious sites, filled with various fundamental cultures, natural heritage due to which the water demand is also increasing inducing stress on the water resources available there. Hence, this study is expected to provide guideline for the municipality in formulating its WUMP in the future.

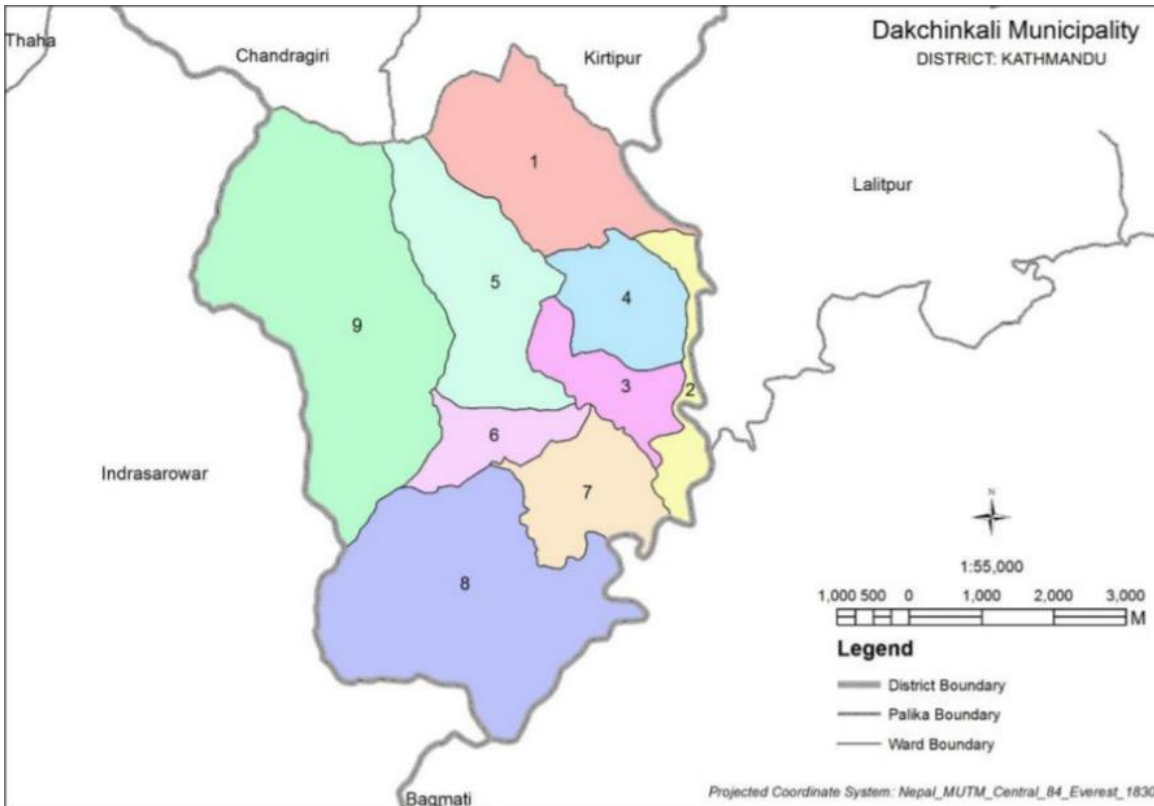


Figure 1: Map of Dakshinkali Municipality (Source: Ministry of Federal Affairs and General Administration).

2.2 Water Use Master Plan Concept

Water Use Master Plan with its integrated and participatory approach helps in allocation of water to the potential sectors through water budgeting in the given geographical area. Since, it is a participatory process, it promotes transparent and good governance and also capacitates the water stakeholders (especially the marginalized communities) for the equitable sharing of water and its benefit. Water Use Masterplan not only focuses on drinking water and irrigation rather it encompasses the broader concept of water demand and supply, sanitation and hygiene, sectoral water development, its conservation and management. On overall, WUMP helps to facilitate the equitable, efficient and sustainable water use and management through principle of

- Integrated Water Resource Management
- Inclusive and bottom-up participatory approach
- Capacity Development
- Water Productivity and Multipurpose use
- Climate Change Adaptation
- Awareness raising on cleanliness and hygiene, efficient water use, recharge, recycle and reuse, source conservation etc

2.3 Stages and Steps of WUMP

The water use master plan preparation process as guided by the GoN, shall follow different stages and steps as stated below

1. Preparation Phase

- Decision by Rural/Municipality to prepare WUMP
- Memorandum of Understanding
- Consultant selection and hiring

2. Capacity Development Phase

- Initial awareness campaign at community level
- Ward level awareness and mechanism to engage local people
- Capacity development of water stakeholders there

3. Survey Phase

- Social and economic assessment and need identification
- Technical assessment

4. Planning phase

- Planning workshop at ward level
- Preparation of first draft of the WUMP
- Consultation at the municipal level regarding planning document
- Preparation of final draft
- Approval from municipal level
- Information dissemination at the district level

5. Implementation Phase

- Implement and information dissemination of WUMP
- Monitoring and Evaluation

2.4 Methodology for the WUMP

- Collection of secondary literatures and maps for desk study
- Information collection on available resources
- Community consultation and discussion through PRA
- Capacity development of the related water stakeholders
- Social and economic assessment
- Assessment of available water infrastructure
- Survey of water resources in consideration with climate change perspective
- Information analysis on water availability, its allocation, budget for the construction, rehabilitation and maintenance of infrastructure
- Consultation workshop for feedback on information generated
- Drafting of WUMP and information dissemination at district level

Challenges and Ways Forward

3.1 Challenges for the Implementation of WUMP

The challenges as outlined while the drafting and implementation of water use master plan has been summarized in the following points

- The WUMP though is a participatory process, it still possesses challenge to meaningfully engage and participate the marginalized communities throughout the process
- The need for communication and coordination among the different water stakeholders is crucial however, the possible loophole in maintaining the communication channel could hinder the whole participatory process.
- Water need prioritization and budget allocation at the different sector might trigger conflict among the competitive water user groups
- The conservation and management of watershed that falls under different administrative boundary for which effective communication mechanism should be established for equitable benefit sharing
- Consideration of climate change, urbanization, socio-economic dynamic while water allocation and planning has to be considered to address the future water issues

3.2 Ways Forward

The ways forward to address the above mentioned challenges as suggested are

- Effective Communication dissemination and coordination among different water stakeholders has to be maintained
- Developing mechanism for monitoring and evaluation of the WUMP implementation process has to be carried out for the sustainable development of water resources
- The 3R concept of Recharge, Retention and Reuse of water has to be effectively integrated into the WUMP
- Capacity development of the stakeholders involved in the WUMP Process has to be ensured

References

Dakshinkali Municipality, 2019/2020

Annual Municipal Development Plan, 2019.

Dakshinkali Municipality Profile, 2019

SDF lite Report. Dakshinkali Municipality Nepal,2019