

Water Laws in Nepal

Laws Relating to Drinking Water, Sanitation, Irrigation, Hydropower and Water Pollution



WaterAid Nepal / Anita Pradhan

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Preface

Water is life, for people and for the planet. It is absolutely essential to the well-being of humankind and a basic requirement for the healthy functioning of all the ecosystems. The right to water is indispensable for leading a life in dignity, and is a prerequisite for the realization of other human rights. The human right to water entitles everyone to sufficient, safe, acceptable and affordable water for personal and domestic uses.

On 26 November 2002, this right was recognized by the UN Committee on Economic, Social and Cultural Rights when it announced a General Comment on the Right to Water. The General Comment gives the Committee's interpretations of the implications of the new right to water. In summary, the right to water puts an obligation on governments to progressively extend access to sufficient, affordable, accessible and safe water supplies and to safe sanitation services. This was a milestone event, marking the importance of water services in the development of individuals, communities and nations. While previously water had been implicitly a right, through the rights to health, education, and the rights of the child, this new General Comment explicitly focuses on the right to water, and the responsibilities and obligations that governments have in delivering water services to all.

Water laws play an important role in determining the availability of water, and in the social, economic and institutional aspects of water governance and development since provisions for, and limitations on, the institutional arrangements affect how water is used, developed and managed.

The purpose of this Report is to provide an understanding of the various Acts and Regulations related to drinking water and sanitation, irrigation, hydropower and water pollution in Nepal. By presenting a consolidated summary of the various water Laws and Regulations into one unified Report, this publication attempts to provide an informed perspective on the most important clauses, rules and requirements of key water legislation, and is expected to act as a catalyst to further stimulate thinking and debate to influence water rights of citizens.

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List of Acronyms

BS:	Bikram Sambat (Nepali Calendar)
CEDAW:	Convention on the Elimination of all forms of Discrimination against Women
CRC:	Convention on the Rights of the Child
DDC:	District Development Committee
Dol:	Department of Irrigation
DWRC:	District Water Resource Committee
DWSS:	Department of Water Supply and Sewerage
DWUA:	Drinking Water User Association
EIA:	Environmental Impact Assessment
HMG:	His Majesty's Government
HMGN:	His Majesty's Government of Nepal
ICCPR:	International Covenant on Civil and Political Rights, 1966
ICESCR:	International Covenant on Economic, Social and Cultural Rights, 1966
IEE:	Initial Environmental Examination
IWUA:	Irrigation Water User Association
LICSU:	Low Income Consumer Support Unit
LSGA:	Local Self Governance Act 1999 (2055 BS)
NGO:	Non Governmental Organisation
NKP:	Nepal Kanoon Patrika (Nepal Law Reporter)
NWSC:	Nepal Water Supply Corporation
SWMRMC:	Solid Waste Management and Resource Mobilization Center
UDHR:	Universal Declaration of Human Rights
VDC:	Village Development Committee
WOU:	Water Utility Operator
WUA:	Water User Association

TABLE 1 Summary of Relevant Nepali Laws in Chronological Order

SN	Act or Regulation	Areas Addressed
1.	Essential Commodity Protection Act 1955 (2012 BS)	<ul style="list-style-type: none">~ Deems drinking water an essential commodity and strictly protects drinking water.~ Prohibits any unauthorised use or misuse, stealing, damaging etc. of drinking water.
2.	Muluki Ain 1963 (2020 BS)	<ul style="list-style-type: none">~ Sets out the order of priority of use of water for irrigation.~ Regulates traditional farmer managed irrigation systems.
3.	Solid Waste (Management and Resource Mobilization) Center Act 1987 (2044 BS)	<ul style="list-style-type: none">~ Establishes the Solid Waste Management and Resource Mobilization Center as the responsible authority for the management of solid waste.~ Deals with the pollution of water by solid waste.
4.	Solid Waste (Management and Resource Mobilization) Regulation 1989 (2046 BS)	<ul style="list-style-type: none">~ Deals with the collection, transportation and disposal of solid waste.~ Deals with the provision of public toilets and bath houses.
5.	Nepal Water Supply Corporation Act 1989 (2046 BS)	<ul style="list-style-type: none">~ Establishes the Nepal Water Supply Corporation as the perpetual, autonomous government controlled corporation responsible for the supply of drinking water.~ Prohibits certain acts and provides penalties/punishment for violation.
6.	The Constitution of the Kingdom of Nepal 1990 (2047 BS)	<ul style="list-style-type: none">~ Guarantees the right to life and property.~ Provides for the acquisition of property under certain circumstances and for compensation.

7.	Water Resource Act 1992 (2049 BS)	<ul style="list-style-type: none"> ~ The umbrella Act governing water resource management. ~ Declares the order of priority of water use. ~ Vests ownership of water in the State. ~ Provides for the formation of water user associations and establishes a system of licensing. ~ Prohibits water pollution.
8.	Electricity Act 1992 (2049 BS)	<ul style="list-style-type: none"> ~ Governs the use of water for hydropower production. ~ Establishes a system of licensing. ~ Sets out the powers, functions and duties of a licence holder. ~ Provides certain financial incentives for licence holders. ~ Sets out the powers of the government.
9.	Industrial Enterprises Act 1992 (2049 BS)	<ul style="list-style-type: none"> ~ Requires permission for the extension and diversification of environmentally sensitive industries. ~ Provides financial incentives for industrial enterprises that minimise harmful effects on the environment.
10.	Water Resource Regulation 1993 (2050 BS)	<ul style="list-style-type: none"> ~ The umbrella Regulation governing water resource management. ~ Sets out the procedure to register a Water User Association and to obtain a license. ~ Establishes the District Water Resource Committee. ~ Sets out the rights and obligations of Water User Associations and licence holders. ~ Deals with the acquisition of house and land and compensation.

11.	Electricity Regulation 1993 (2050 BS)	<ul style="list-style-type: none"> ~ Sets out the procedure for obtaining a license. ~ Deals with the acquisition of house and land and compensation. ~ Sets out the powers, functions and duties of licence holders.
12.	Environment Protection Act 1996 (2053 BS)	<ul style="list-style-type: none"> ~ Requires certain persons/bodies to conduct an EIA or IEE. ~ Deals with the prevention and control of pollution.
13.	Environment Protection Regulation 1997 (2054 BS)	<ul style="list-style-type: none"> ~ Lists the water related projects required to conduct an EIA or IEE. ~ Deals with the control of water pollution and pollution control certificate
14.	Drinking Water Regulation 1998 (2055 BS)	<ul style="list-style-type: none"> ~ Regulates the use of drinking water. ~ Provides for the formation of Drinking Water User Associations and sets out the procedure for registration. ~ Deals with licensing of use drinking water. ~ Deals with the control of water pollution and maintenance of quality standards for drinking water. ~ Sets out the conditions of service utilization by consumers. ~ Provides for the acquisition of house and land and compensation.
15.	Local Self Governance Act 1999 (2055 BS)	<ul style="list-style-type: none"> ~ Establishes a decentralised governance structure ~ Sets out the powers, functions and duties of the VDC, Municipality and DDC in relation to water and sanitation. ~ Sets out which natural resources are assets of local bodies and empowers local bodies to levy a natural resource tax.

16.	Local Self Governance Regulation 1999 (2056 BS)	<ul style="list-style-type: none"> ~ Sets out the powers, functions and duties of VDC, Municipality and DDC in relation to water and sanitation. ~ Establishes the procedure for the formulation of water related plan and project implementation.
17.	Irrigation Regulation 2000 (2056 BS)	<ul style="list-style-type: none"> ~ Deals with Irrigation Water User Associations and the transfer of projects to Irrigation Water User Associations. ~ Provides for a joint management system by HMGN and Irrigation Water User Association. ~ Deals with Irrigation and River Control Committee ~ Sets out the conditions of service utilisation. ~ Sets out the obligations of user of irrigation and provides for service charges. ~ Deals with the protection, repair and maintenance of irrigation systems.

Chapter **1** **Introduction**

1.1 Introduction

The term water laws refers to both municipal and international laws, norms, values and principles which protect the right of people to access to water resources for various purposes. Generally speaking, water laws are rules enacted or provided by a legitimate authority that regulate the sectoral use of water. The search for principles governing water resources are motivated by two basic concepts:

1. **Concept of Development Need:** To ensure economic development by providing sufficient water for drinking, health and sanitation, irrigation, electricity and industry.
2. **Concept of Pursuit of Justice:** To ensure the equitable and reasonable allocation, distribution and utilization of water resources.

In this context water law plays a principal role in:

- (i) protecting the right to water as a basic human right;
- (ii) ensuring access to water for drinking, health and sanitation;
- (iii) ensuring access to water for food production;
- (iv) meeting the water needs of industry and commerce;

- (v) resolving and preventing disputes over the allocation, distribution and use of water resources;
- (vi) facilitating the implementation of effective water policy; and
- (vii) ensuring water quality by controlling pollution.

The overall purpose of this publication is to provide a *consolidated summary of the most important contents of the various laws of Nepal that influence the rights of citizens to water.*

Specifically, this publication aims to:

- (i) Bring together in one document the most important clauses, rules and requirements of the various legislation;
- (ii) Provide a clear definition of the entitlements, roles, processes, obligations etc. stated in the laws;
- (iii) Provide a tool for civil society and others to analyse the existing legislation for any gaps and omissions, inconsistencies, out-of-date aspects and ambiguities and thus form the basis for advocating for legal reforms; and
- (iv) Provide these laws in English so that international jurists and others may also have access to their content.

It is hoped that this publication will be useful to a range of users including:

- ~ staff of water agencies –HMGN, Donors, (I)NGOs and the private sector
- ~ staff and members of VDCs, DDCs and Municipalities
- ~ members of community Water User Associations
- ~ politicians, policy makers and policy advocates
- ~ lawyers, law professors and students
- ~ researchers
- ~ citizens

1.2 International Law

Under international law, the right to water is implicitly and explicitly protected as a human right. The Universal Declaration of Human Rights 1948 (UDHR) recognises the inherent dignity and the equal and inalienable rights of all human beings.¹ The UDHR goes on to provide that “everyone has the right to life and security”.² As water is a basic need for human existence (for drinking, to produce food and for sanitation/health) it can be equated to the right to life which cannot be secured in the absence of the right to water.

The International Covenant on Economic, Social and Cultural Rights (ICESCR) 1966 and the International Covenant on Civil and Political Rights (ICCPR) 1966 also implicitly recognises the right to water as an integral component of the right to life, to an adequate standard of living, to health, to housing and to food.³

The right to access to water is explicitly protected under the Convention on the Elimination of all Kinds of Discrimination against Women (CEDAW) 1979 and the Convention on the Rights of the Child (CRC) 1989.

Article 14 (2)(h) of the CEDAW 1979 provides international protection of right “to enjoy adequate living conditions, particularly in relation to housing, sanitation, electricity and water supply”.

Article 24 of the CRC 1989 also explicitly recognises right of the child “to combat disease and malnutrition...through the provision of adequate nutritious foods and clean drinking water, taking into consideration the dangers and risks of environmental pollution”.

International humanitarian law applicable in armed conflict, in particular, the 1977 Protocol to the Geneva Convention Relating to the Protection of Victims of Non International Armed Conflict, prohibits starvation of civilians as a method of war and, accordingly, explicitly protects drinking water supply systems and irrigation systems.⁴

In addition to these rights, the right to a healthy environment has received increased recognition under international environmental law. Such right includes various substantive elements, such as the right to food and water, sanitation etc. The International Conference

on Water and Environment 1992 adopted a statement acknowledging *“the basic right of all human beings to have access to clean water and sanitation at an affordable price”*.

Nepal is signatory to all of the above international instruments and, as a signatory, is bound to uphold the provisions by enacting National legislation to bring them into effect.

Nepal is also a signatory to the Millennium Development Goals as follows:

- ~ Millennium Development Target: To halve by 2015 the proportion of people without access to safe drinking water in 1990 (signed in Stockholm in 2000).
- ~ Millennium Development Target: To halve by 2015 the proportion of people without access to hygienic sanitation in 1990 (signed in Johannesburg in 2002).

1.3 Impending New Legislation

As this publication is prepared, HMG has announced its intention to introduce new legislation that will make fundamental changes

to the legal arrangements for water supply, especially in the Kathmandu Valley. Briefly, these will establish three new agencies:

- 1. Kathmandu Valley Water Authority:**
To own the assets of the water supply system and make policy for the effective use of water resources in the Kathmandu water basin.
- 2. Water Utility Operator:**
To manage the operations, maintenance and expansion of the water supply system in the Kathmandu Valley and to own those assets such as vehicles, computers etc. required to operate the water supply system and to employ staff. This agency will be established as a private company.
- 3. National Water Regulatory Board:**
To approve tariffs and regulate other fundamental aspects of water supply throughout the Kingdom of Nepal.

It is proposed that the new legislation will also establish a Low-Income Consumer Support Unit (LICSU) within the WOU in order to ensure the creation of an institutional mechanism to provide services to members of low income groups at the community level.

Chapter **2** **Drinking Water**

2.1 Policy and Legislation

HMGN has recently prepared the Rural Water Supply and Sanitation National Policy 2004 (2060 BS), the Rural Water Supply and Sanitation Strategy 2004 (2060 BS) and the Rural Water Supply and Sanitation Sectoral Strategic Action Plan 2004 (2060 BS). These policy and strategy documents recognise that all people have a right to access to basic water supply and sanitation services and that these services are necessary for socio economic development and to combat waterborne diseases.

The main legislation in relation to drinking water in Nepal is the Water Resource Act 1992 (2049 BS). This Act is an umbrella Act, governing not only drinking water, but other uses of water and overall water resource management in Nepal. The Act gives priority to the right to use water for drinking purposes over any other domestic or commercial use. There are two regulations under the Act, for drinking water purposes the Water Resource Regulation 1993 (2050 BS) and the Drinking Water Regulation 1998 (2055 BS).

The Water Resource Regulation 1993 (2050 BS) is an umbrella Regulation covering all uses of water and providing procedural mechanisms

for the implementation of the Water Resource Act 1992 (2049 BS). The Regulation covers the formation of Water User Associations and District Water Resource Committees, licensing, provides a dispute settlement mechanism in relation to water use service charges, sets out the process to be followed by the State in relation to land acquisition and compensation and provides some forms in the Schedules to the Regulations for certain administrative procedures.

The Drinking Water Regulation 1998 (2055 BS) specifically deals with drinking water and sanitation as it affects drinking water.⁵ Among other things, this Regulation regulates DWUAs, the quality of drinking water and drinking water suppliers.

The other major pieces of legislation governing drinking water are the Nepal Water Supply Corporation Act 1989 (2046 BS). This Act establishes the NWSC as a public corporation responsible for providing clean drinking water and sewerage services to the urban public. The scope of work of the Corporation has been determined by HMG by notification in the Gazette. This Act establishes the right of people to drinking water and sanitation and

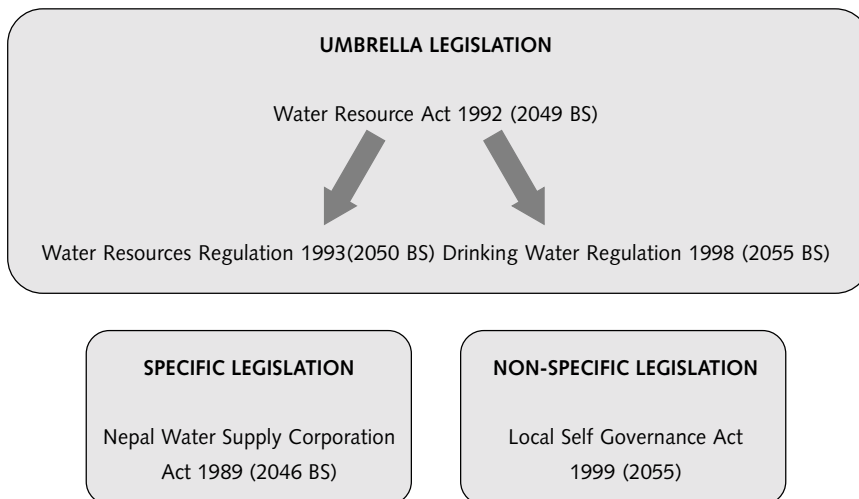
imposes a duty on the State (through the Corporation) to provide drinking water and sanitation.

Drinking water is also touched on by other legislation not necessarily specifically enacted for that purpose. The Local Self Governance Act 1999 (2055 BS), which primarily deals with the decentralisation of government, also gives local bodies some responsibility in relation to the utilization, conservation and management of water resources and the

maintenance of sanitation facilities and waste management.

The Act and its regulations make local bodies (Village Development Committees, District Development Committees and Municipalities) responsible for delivering certain services in relation to drinking water and sanitation. The Act also gives local bodies the power to make policies and implement programs in relation to drinking water and sanitation and to raise revenue via local taxation, fees and other means.

FIGURE 1 ~ Nepali Legislation Governing Drinking Water



2.2 The Right to Drinking Water

The right to drinking water in Nepal is not explicitly guaranteed by any legislation or by the Constitution. However, it is universally recognised that the right to access safe drinking water is a basic human right and an integral part of the right to life. (See Chapter 1.2 above for a full discussion of international law.)

Nepal has acknowledged the right to drinking water in government policy. In the Water Resource Strategy 2002 (2058 BS) the State acknowledges the public's right to drinking water and sanitation. It states that:

*"Every Nepali Citizen, now and in future, should have access to safe drinking water and appropriate sanitation as well as enough water to produce food and energy at reasonable cost."*⁶

Similarly, the National Water Supply Sector Policy 1998 (2055 BS) also places the provision of drinking water and sanitation as its principal objective.⁷ The recent Rural Water Supply and Sanitation National Policy 2004 (2060 BS) aims to provide water supply and sanitation services to 100% of the population by the year 2017 (2073 BS).⁸

The concept of a right to drinking water has also been supported by the Supreme Court of Nepal. In the Godavari Marble Case⁹ the Supreme Court of Nepal extended the scope of right to life to include the right to live in a

clean and healthy environment and in the Drinking Water Corporation Case¹⁰ the Supreme Court acknowledged the right to safe drinking water as a part of the right to life.

Also, under Nepali law, drinking water is considered to be a consumer commodity. The Essential Commodity Protection Act, 1955 (2012 BS) deems drinking water to be an essential commodity and as such declares that it should be strictly protected.¹¹

Although there is no explicit right to drinking water provided for in Nepali legislation, such a right can be implied from certain provisions of the Water Resource Act 1992 (2049 BS). For example, drinking water and the domestic use of water, is given priority over all other uses of water.¹² This implies that the public do have a right to drinking water, if not in absolute terms, then at least in priority to say someone wishing to use water for irrigation or hydropower. The Act also exempts users of water for non commercial drinking purposes from obtaining a licence¹³, again implying a right to drinking water, which is not conditional upon having a licence.

2.3 State Ownership of Water Resources

The Water Resource Act 1992 (2049 BS) declares that ownership of water found within the Kingdom of Nepal is vested in the state.¹⁴

This is also supported by the public trust doctrine that the state owns natural resources (including water resources). What this means

is that the State can control the use of water, sell water or levy fees in relation to water, however, it does not mean that the State has an unfettered right to use water.

The use of water is subject to the strict scrutiny of various stakeholders and only 'beneficial use' is permitted.¹⁵ Section 2 (b) of the Water Resource Act 1992 (2049 BS) defines beneficial use as the rational use of water resources within the available means and resource. The beneficial use also connotes reasonable and equitable utilization of optimal potential without adversely affecting the water rights of others. The public are the real beneficial users of water, and the State, while exercising ownership rights over water, must take into account the interests of the people.¹⁶ There are various juristic and statutory limitations and regulations in order to ensure the beneficial use and such legislation prohibits the State from the exercise of its rights over water in an arbitrary manner.

2.4 Priority of Water Uses

The Water Resource Act 1992 (2049 BS) determines which uses of water are given priority and in what order. The use of water for drinking and domestic purposes is given first priority. The priority given to the different uses of water is set out in Section 7 of the Water Resource Act 1992 (2049 BS) as follows:

1. drinking water and domestic use
2. irrigation
3. agricultural use such as animal husbandry, fisheries
4. hydroelectricity

5. cottage industry (eg. water mill or grinder), industrial enterprises and mining
6. navigation
7. recreational use
8. other uses

The Drinking Water Regulation 1998 (2055 BS) also gives the use of water for drinking and domestic purposes priority for service connection by water suppliers. The Regulation sets out other factors for determining the priority of service connection as follows:

- A. geographical location
- B. population
- C. quantity of the water available at the source
- D. capacity of the structure and
- E. other technical factors

The Regulation also sets out which consumers will be given priority in relation to service connection by water suppliers:¹⁷

- (a) Health posts, *Anathalaya* (orphanage), *Bridrasram* (home for the aged) and other social institutions
- (b) Temporary camps established due to the flood, arson, infectious diseases or other natural or god induced disaster.
- (c) Schools, hostels, police posts, governmental, quasi-governmental and non-governmental offices and the residence of officials of such offices
- (d) Private residences
- (e) Construction sites of public importance
- (f) Industrial premises or mills and the residences of employees of such industries or mills

In determining the priority for providing services to consumers, in addition to the factors mentioned above, the Regulation also requires the water supplier to consult the District Drinking Water Office and District Water Resource Committee in the concerned VDC or municipality.

2.5 Management of Water Supply

The Drinking Water Regulation 1993 (2050 BS) regulates the use of drinking water (and water resources in general) in different ways depending on whether the user is a corporate body, a group of people or an individual. The management systems provided by the Act are as follows:

1. **Corporate Bodies:** The use of water by corporate bodies is regulated through a system of licensing.
2. **Groups of People:** The use of water by groups of people who wish to use water collectively is regulated through Water User Associations which must be registered. For example a group of villagers or a community wishing to use a common stream for drinking water can form a DWUA.
3. **Individuals:** The use of water by an individual for personal and non commercial purposes is not regulated (ie. there is no requirement for either a licence or registration). The use of water by an individual for commercial purposes must be licensed.

2.6 Licensing of Water Use

The right to use water is not absolute as the Water Resource Act, 1992 (2049 BS) requires users to obtain a licence for utilization or survey of water resources.¹⁸ The Act exempts some non-commercial users from the requirement to obtain a licence including users of water for drinking or domestic purposes.

Although this section appears under the Chapter for drinking water, it applies to all commercial uses of water resources.

2.6.1 Who Must Obtain a Licence?

The Water Resource Act 1992 (2049 BS) requires the following users of water resources to acquire a licence:¹⁹

1. A person or corporate body who desires to conduct a survey or to utilize water resources.
2. A person or corporate body who was already utilizing water resources prior to the commencement of the Act.

Section 4(2) of Water Resource Act 1992 (2049 BS) exempts users of water for the following purposes from obtaining a licence:

- a) for one's own drinking and domestic use on an individual or collective basis
- b) for the irrigation of one's own land on an individual or collective basis
- c) for the purpose of running a water mill or grinder as a cottage industry
- d) for the use of a boat for personal transportation

- e) for the use, as prescribed by regulations to this Act, of water resources confined to the land by the owner of such land

2.6.2 How to Obtain a Licence?

The procedure for obtaining a licence, and the criteria on which a licence will be granted, are found in the Water Resource Act 1992 (2049 BS), the Water Resource Regulation 1993 (2050 BS) and the Drinking Water Regulation 1998 (2055 BS).

The Water Resource Act 1992 (2049 BS) provides that to obtain a licence the person or corporate body must submit an application with the required particulars to the prescribed officer or authority.²⁰ The application fee is NRs.500 for a survey licence and NRs.1000 for a utilization licence.²¹ The Water Resource Regulation 1993 (2050 BS) also requires applicants to submit 25% of the license fee prescribed in Schedule 8 of the Regulation with the application (this is in addition to the application fee).²²

The Water Resource Regulation 1993 (2050 BS) establishes the District Water Resource Committee (DWRC) as the authority to issue licences for the use of water resources in general (except for hydropower production see Chapter 6.3).²³ This is also confirmed by the Drinking Water Regulation 1998 (2055 BS).²⁴

In each district, the chairperson of the DWRC shall be the Chief District Officer, the Secretary shall be the Local Development Officer and the members shall be representatives from the

District Agriculture Development Office, District Drinking Water Office, District Forest Office, District Irrigation Office, District Development Committee, relevant State Electricity Office and relevant state office relating to the utilization of water resources.²⁵

The particulars to be included in an application to the DWRC for a licence to survey water resources are set out in the Drinking Water Regulation 1998 (2055 BS)²⁶, Schedule 3, as follows:

- 1) name and address of the person/corporate body
- 2) objective of survey of water resources
- 3) name of the water resource to be surveyed
- 4) address of water resource to be surveyed including zone, district, Village Development Committee/Municipality and Ward Number
- 5) duration of survey
- 6) estimated cost of conducting survey
- 7) other particulars

When making an application for a licence to utilize water resources, Schedule 5 of the Regulation requires the following particulars to be submitted, in addition to those particulars required for a survey licence application:²⁷

- 8) quantity of water to be utilized
- 9) estimated cost of utilization of water resource
- 10) total estimated budget of the water utilization project and the source of these funds
- 11) number of consumers to be benefited and area covered

Schedule 3 and 5 also provide that the following documents are to be submitted with the application:

- A. a technical report, environmental report (either Environmental Impact Assessment of Initial Environmental Examination as specified in the Environment Protection Act 1996 (2053 BS), see Chapter 8) and economic viability report in relation to utilization only
- B. a map of the utilization/survey site
- C. statute of corporate body (if application is by a corporate body)
- D. other necessary documents

2.6.3 Processing of Licence Applications

Upon receiving an application for licence, the DWRC shall assess the application. The DWRC may give the applicant 15 days notice to submit additional particulars or documents if necessary in which case the date of submission of application will be deemed to be the date of submission of the additional documents.²⁸

In relation to an application for licence for utilization of water resources, the DWRC is required to publish a public notice informing the public of the details of the proposed utilization.²⁹ Any member of the public may object or comment on the application (stating reasons) within 35 days of the date of the publication if the issue of a licence is likely to have adverse effects. If the DWRC receive such an objection it may impose conditions as part of the licence to be followed by the applicant in order to lessen the adverse impact.

After assessing the application, the DWRC, if it deems proper, may issue a licence to the applicant³⁰. Schedule 4 and 6 of the Drinking Water Regulation 1998 (2055 BS) sets out the details to be included in the licence (such as the commencement date, duration of the licence and expiration date) and the terms and conditions to be complied with by the licensee. If the application meets the criteria, the DWRC is required to issue the licence within the following timeframe³¹:

- ~ in the case of a licence for conducting a survey of water resources, within 30 days of receipt of the application
- ~ in the case of a licence for the utilization of water resources, within 120 days of receipt of the application
- ~ in the case of a licence for the utilization of water resources where the person or corporate body was utilizing water resources prior to the commencement of the Act, within 60 days of receipt of the application

The Drinking Water Regulations 1998 (2055 BS) also provides that only one licence can be issued to survey or use a particular water resource for the same purpose, period of time and in same working area.³² If a person or corporate body already holds a licence to conduct a survey of water resources, that licensee shall be given preference over any other applicant for a licence to utilize water resources in the same area.³³

2.6.4 Rights of Licensee

Once a licence has been issued, a licensee has

certain rights under the Water Resource Act 1992 (2049 BS) and the Drinking Water Regulation 1998 (2055 BS):

1. Right to Use Water Source
2. Right to Transfer or Sell Licence
3. Right to Acquire House and Land

1. Right to Use the Water Source:

Rule 18 of the Drinking Water Regulation 1998 (2055 BS) provides that a licensee has the right to use the water source for the purpose mentioned in the licence to the extent of the water resources of the area specified in the licence. A similar provision is also contained in the Water Resource Regulation 1993 (2050 BS).³⁴

2. Right to Transfer or Sell Licence:

Rule 27 of the Water Resource Regulation 1993 (2050 BS) and *Rule 20* of Drinking Water Regulation 1998 provides that the licensee has the right to sell or transfer ownership of the licence to another person or corporate body. The licensee must first apply to the concerned DWRC which may grant permission for the licence to be sold or transferred provided that the buyer meets certain criteria.

3. Right to Acquire House and Land:

The Drinking Water Regulation 1998 (2055 BS) and the Water Resource Regulation 1993 (2050 BS) also give the licensee the right to acquire or use privately owned house and land (through HMG) if necessary in order to utilize the resource in accordance with the licence. In order to acquire land or house, the licensee must make an application to HMG who will

assess the application, and approve the acquisition as per existing law, if deemed necessary.³⁵

2.6.5 Duties of Licensee

Under the Drinking Water Regulation 1998 (2055 BS), a licensee has certain duties:

1. Pay Levy
2. Start Work on Time
3. Submit Report
4. Renew Licence
5. Amend Licence

1. Duty to Pay Levy:

A licensee must pay an annual levy of NRs.5000 per year (in addition to the licence fee) for the use of the water resource.³⁶

The Water Resource Regulation 1993 (2050 BS) has a conflicting provision which requires drinking water projects to pay a different annual levy and the amount of that levy is set out in Schedule 9 as between NRs.500 and NRs.25 000 depending on the size of the drinking water project.

2. Duty to Start Work on Time:

Rule 16 of the Drinking Water Regulation 1998 (2055 BS) provides that a licensee is required to start the physical works within three months in the case of a licence for survey or utilization. A licensee can apply to the DWRC for an extension of up to three months if the licensee can show reasonable cause for the delay. However, it should be noted that the Water Resource Regulation 1993 (2055 BS) has a conflicting provision that

allows this time period to be relaxed up to one year in the case of a utilization licence.³⁷

3. Duty to Submit Report:

The licensee must report to DWRC every three months on the works undertaken under the licence.³⁸

4. Duty to Renew Licence:

The licensee is required to apply to the DWRC to renew the licence, and pay the renewal application fee of NRs.500, before the expiration of the licence period.³⁹ Late applications may be made DWRC within 35 days of the expiry date, stating the reason for the delay in renewing the licence.

5. Duty to Amend Licence:

If the licensee intends to conduct activities not covered by the existing licence, s/he has a duty to apply to have the licence amended by submitting an application to the DWRC.⁴⁰ The DWRC will assess the application and if it deems the amendment reasonable, may amend the licence.

2.6.6 Cancellation of Licence

Section 21 of the Water Resource Act 1992 (2049 BS) sets out the circumstances and procedure for cancellation of a licence by the DWRC as follows:

1. If the licensee performs any act contrary to the provisions of the Water Resource Act 1992 (2049 BS) or any rules made under this Act, the DWRC may issue an order requiring the licensee to make necessary improvements within a specified period.

2. If the licensee fails to make such improvements within prescribed period, the DWRC may cancel the licence.
3. Before the licence can be cancelled the DWRC shall give the licensee a reasonable opportunity to explain the failure to comply with the Act and/or the order.

2.7 Drinking Water User Associations

The Water Resource Act 1992 (2049 BS) provides for the formation of Water User Associations when a group of individuals wish to make use of a water resource for their collective benefit. Water User Associations must be registered which provides the government with a mechanism to regulate the collective use of drinking water.

2.7.1 Who May Form a Drinking Water User Association?

Rule 3 of the Drinking Water Regulation 1998 (2055 BS) provides that groups of people who wish to benefit collectively from developing and operating their own project may form a DWUA.

A DWUA may also be registered for the operation of a project developed by HMG. If HMG wishes to operate a project through a Water User Association as per *Section 11* of the Water Resource Act 1992 (2049 BS), persons willing to operate the project must form and register a Water User Association as per *Rule 5* of the Water Resource Regulation 1993 (2050 BS).

2.7.2 Statute of Drinking Water User Association

Every DWUA must have a Statute containing the following particulars:⁴¹

- i. objective and working area
- ii. criteria for eligibility for membership
- iii. membership fees and procedure for awarding membership
- iv. disqualification of membership
- v. composition of general assembly
- vi. meeting of general assembly
- vii. power, function and duties of general assembly
- viii. composition of executive committee
- ix. meeting of executive committee
- x. power function and duties of the executive committee
- xi. power, function and duty of Executive Authority
- xii. provision for election of committee members
- xiii. proposal of no confidence motion
- xiv. financial source
- xv. movable and immovable property details
- xvi. funds/funding
- xvii. provision for annual audit
- xviii. amendment of Association Statute
- xix. power to make bylaws
- xx. other necessary provisions

2.7.3 Procedure for Registration of Drinking Water User Association

The Drinking Water Regulation 1998 (2055 BS) sets out the procedure to register a DWUA as follows:⁴²

- ~ Persons desiring to register a Water User

Association must submit an application to the District Water Resource Committee in the format prescribed in Schedule 1 of the Regulation together with a copy of Association Statute and a fee of NRs.100.

- ~ The DWRC, on the receipt of application shall assess the application and, if it deems proper, register the DWUA and issue a certificate of registration in format prescribed in Schedule 2.
- ~ In assessing the application, the DWRC, in consultation with concerned authorities, will look at whether the proposed project is viable and appropriate from an economic and technical point of view.
- ~ If DWRC does not approve the application, it shall notify the applicant within 30 days, stating reasons.

After the registration of one Water User Association, no other Water User Association can be registered which would reduce the quantity of the water used by the original Water User Association in same working area.⁴³ The quantity of water which may be used by the Water User Association is determined by the DWRC and set out in the certificate of registration⁴⁴.

2.7.4 Rights of Drinking Water User Associations

After registration, the Water User Association has the right to use the water source to develop or operate a drinking water project to the extent allowed in the certificate of registration.

Similarly, a Water User Association, operating a drinking water project developed by HMG and transferred before the commencement of the Drinking Water Regulation 1998 (2055 BS) also enjoys the same rights.

The rights of DWUAs are discussed in more depth in Chapter 3.1.

2.7.5 Functions and Duties of Drinking Water User Associations

DWUAs are also suppliers of drinking water to the public. Under the Drinking Water Regulation 1998 (2055 BS), water suppliers have certain functions and duties. These are discussed fully in the following chapter. Other obligations, such as the obligation to hold a meeting of the general assembly, are set out in the Statute of the Water User Association.

The duties of Drinking Water User Associations are discussed in more depth in Chapter 3.1

2.8 Obligations of Consumers of Drinking Water

The Nepal Water Supply Corporation Act 1989 (2046 BS) sets out the obligations and responsibilities of consumers of drinking water. The Act also prohibits certain activities and imposes penalties for breach of these provisions.⁴⁵

Rule 36 of the Drinking Water Regulation 1998 (2055 BS) imposes the following obligations on the public in relation to the consumption of drinking water:

- ~ to pay service fees on time

- ~ to inform the supplier immediately of any unauthorised, intended or attempted, use or misuse of the service, leakage of drinking water or any other such activity
- ~ to provide necessary assistance to the supplier for the protection, maintenance and repair of the water supply structure developed by a WUA

Section 2 (d and e) of the Essential Commodity Protection Act, 1955 (2012 BS) deems drinking water to be an essential commodity and prohibits any strike affecting the water supply and prohibits any persons from causing damage to, or destroying, the water supply structures.

Section 6 of the Nepal Water Supply Corporation Act 1989 (2046 BS) also creates an obligation to pay a tariff and service charges for the supply of water. It has authorised the NWSC to determine the amount of the tariff and date for payment. The consumer has an obligation to pay the water tariffs within the prescribed time. If a consumer does not pay the tariff within the prescribed time the NWSC may terminate the drinking water and sewerage connection.

Rule 37 of the Drinking Water Regulation 1998 (2055 BS) prohibits the following:

- ~ any act in violation of *Rule 36* of the Act
- ~ any unauthorized use or misuse of the service or leakage of drinking water or other such activity
- ~ providing a separate sub-line to another from one's own line

- ~ damaging meter, or the breaking of the seal of a drinking water meter

A supplier may cut the service to a user if the user commits any of the prohibited acts in *Rule 37*.

Section 18 of the Nepal Water Supply Corporation Act 1989 (2046 BS) also prohibits the following activities:

- ~ causing damage to, or the destruction of a drinking water source, reservoir or other structure relating to drinking water and sewerage
- ~ pollution of drinking water
- ~ connecting a water tap to the drinking water supply pipe without permission from the Corporation
- ~ the use of water after removing the drinking water meter without informing the Corporation
- ~ the use of any machine connected to the drinking water pipe to draw more water

- ~ causing damage to, or breaking, the drinking water meter
- ~ connecting to the sewerage system or throwing or keeping solid material in the sewerage system without the approval of the Corporation
- ~ stealing, destroying, spoiling or causing damage to the drinking water supply system or sewerage system managed by the Corporation
- ~ breaking, damaging or destroying a sanitation outlet or *mangal*⁴⁶
- ~ creating an obstacle or opposing activities of the Corporation relating to sanitation and drinking water
- ~ undertaking any construction work so as to damage the pipeline laid for the distribution of water and sewerage

Section 19 of the Nepal Water Supply Corporation Act 1989 (2046 BS) provides various penalties for violation of *Section 18*.

Chapter **3** **Water Supply System**

There are various authorities/bodies in Nepal which play a role in supply drinking water to the people:

1. **Drinking Water Suppliers:** The Drinking Water Regulation 1998 (2055BS) provides for the establishment of private water suppliers as well as community user groups and sets out their responsibilities while supplying water to consumers.
2. **Nepal Water Supply Corporation:** The Nepal Water Supply Corporation Act 1989 (2046 BS) establishes the NWSC as the authority responsible for the supply of drinking water and sanitation.
3. **Local Bodies:** The Local Self Governance Act 1999 (2055 BS) gives local bodies certain rights and duties to maintain water supply and sanitation in their respective territories.
4. **Department of Water Supply and Sewerage:** The Department of Water Supply and Sewerage is established by HMG under the Ministry of Physical Planning and Works and conducts various activities on behalf of the central government.

3.1 Drinking Water Suppliers

Drinking water suppliers are DWUA and corporate bodies essentially fulfilling a state responsibility (to supply drinking water) as a

service and also for commercial gain. They are regulated by the Drinking Water Regulation 1998 (2055 BS) which defines a water supplier as a Water User Association and/or licensee holding a licence for the operation of a water supply system.⁴⁷ In other words, a drinking water supplier is a DWUA and these terms are interchangeable.

The piped drinking water supply system in Nepal, within most cities, is operated by the NWSC. In smaller towns and rural areas piped drinking water supply is operated by community DWUAs. The Kathmandu Valley Water Reform Project has proposed certain legal reforms to establish a Water Authority (WA), a National Water Supply Regulatory Board and a Water Utility Operator (WUO) the later being a limited liability company for the supply of drinking water in the Kathmandu Valley.

There are also some private water vendors (for example in the village of Ichangu Narayan) who sell drinking water to tankers who then sell the water to private people or commercial enterprises in the Kathmandu Valley.

The Drinking Water Regulation 1998 (2055 BS) gives water suppliers/Water User Associations certain powers and imposes

certain duties in the supply of water to consumers as follows:

1. Duty to Supply Water
2. Duty to Maintain Quality Standards
3. Duty not to Pollute
4. Duty to Repair and Maintain
5. Duty to Compensate
6. Power to Impose Conditions of Service
7. Power to Reduce or Cease Service
8. Power to Impose a Service Charge

3.1.1 Duty to Supply Water

Water suppliers are under a legal obligation to supply water to the public. While there is no specific provision imposing this obligation, a water supplier is defined as a person or user association formed to supply water. This is the purpose for which they are licensed and the powers given to them are to enable them to fulfil this role.

There are certain guidelines set out in the Drinking Water Regulation 1998 (2055 BS) in relation to the basis for service supply and the priority to be given to applicants for water supply (see Chapter 2.4) and also in relation to the procedure for service connection.⁴⁸

Rule 31 of the Drinking Water Regulation 1998 (2055 BS) provides that if a person or institution wishes to utilize the services of a water supplier, they must make an application to the water supplier in the format prescribed by the supplier. The supplier will assess the application and determine whether or not it can provide the service requested by the applicant. If the service can be provided the water supplier will issue a notice to the

applicant stating the estimated cost and amount to be deposited and time limitation for such deposit. Upon receipt of the deposit, the water supplier must include the name of the applicant in the list of its users and provide the service requested.

If the water supplier determines that the service cannot be provided to the applicant, the water supplier is required to inform the applicant. The applicant can appeal this decision to the District Drinking Water Office who may issue an order which is final and binding on both parties.

3.1.2 Duty to Maintain Quality Standards

The water supplier has a duty to maintain the quality of drinking water provided to the consumer⁴⁹ in accordance with the standard set by *Section 18* of the Water Resource Act 1992 (2049 BS). However in practice this statutory obligation is repeatedly violated and the quality of drinking water supplied by NWSC is contaminated with pollutants in excess of the tolerance limits set by the World Health Organisation and HMGN.

3.1.3 Duty not to Pollute

Rule 26 of the Drinking Water Regulation 1998 (2055 BS) provides that the drinking water supplier must not undertake any work or build any structure which would cause pollution at the source or have an adverse impact on the environment. *Section 22* of the Water Resource Act 1992 (2049 BS) prescribes a general penalty for causing pollution of NRs.5, 000 and further provides that any

violator of this section must pay compensation for damage caused.

3.1.4 Duty to Repair and Maintain

Rule 28 of the Drinking Water Regulation 1998 (2055 BS) provides that the water supplier has a duty to make simple and major repairs to the project as follows:

- ~ **Simple Repairs:** The water supplier is required to conduct simple repairs of the project using its own resources and means. If the water supplier is unable to do simple repairs then financial assistance can be requested from the concerned VDC or Municipality and technical assistance can be requested from the District Drinking Water Office.
- ~ **Major Repairs:** The water supplier is required to conduct major repairs of the project using unskilled labour and local construction materials such as sand, stone, concrete etc. If skilled labour, other construction materials or technical assistance is required for the repairs the water supplier can request skilled labour and construction materials from the concerned VDC, municipality or DDC and technical assistant from the District Drinking Water Office. If the VDC, Municipality or DDC cannot provide sufficient assistance to conduct the major repairs the supplier can request assistance from the relevant District Drinking Water Office and must provide detail particulars. Upon receipt of request for assistance from the water supplier with detailed particulars, and after inspection of the

project, the District Drinking Water Office must provide financial and technical assistance in order to repair the project.

3.1.5 Duty to Compensate

The water supplier is required to pay compensation to any aggrieved person who has sustained loss as a result of being prohibited from using his/her own house or land for a period or as a result of the acquisition of his/her house and/or land by a water supplier (see Chapter 7).⁵⁰

3.1.6 Power to Impose Conditions of Service

Rule 32 of the Drinking Water Regulation 1998 (2055 BS) empowers water suppliers to impose any necessary conditions, while providing service to a consumer, provided that such conditions are not inconsistent with the Regulation, the Water Resource Act 1992 (2049 BS) or any conditions imposed by HMG at the time of the transfer of the project to the Water User Association.

The water supplier is required to consult with the District Drinking Water Office and concerned VDC or municipality when determining the conditions of service to be imposed on a consumer.

3.1.7 Power to Reduce or Cease Service

Rule 33 of Drinking Water Regulation 1998 (2055 BS) empowers water suppliers to reduce service partially or fully if the demand for water exceeds the capacity of the structure.

Reduction of service to a consumer must be in accordance with the priority given to different users under *Rule 30* of the Drinking Water Regulation 1998 (2055 BS) (See Chapter 2.4 for details). The water supplier must consult with the District Drinking Water Office and concerned VDC or municipality when reducing service to a consumer.

Similarly, a water supplier is empowered to cease service to a consumer under the following circumstances⁵¹ :

- (i) If the consumer fails to pay the service charge, service can be ceased for the period during which the service charge is unpaid.
- (ii) If the consumer violates the conditions of service as agreed with the supplier, service can be ceased until those conditions are met.
- (iii) If the structure is damaged or is likely to cause damage, service can be ceased for the period of repair.
- (iv) If the water becomes unsafe to health due to pollution or other reasons, service can be ceased while the water is unusable.

The water supplier is required to publish a public notice stating the reason for reduction or cessation of service at least before 15 days prior to reduction/cessation.⁵² The water supplier must give notice of this to the consumer and concerned individuals and authorities except in the circumstances set out in *Rules 33, 34(c) and (d)*.

3.1.8 Power to Impose a Service Charge

Rule 39 of Drinking Water Regulation 1998 (2055 BS) also empowers the water supplier to levy a fee as fixed by the Service Charge Fixation Committee. Regular payment of the service charge is the duty of the consumer. *Rule 39* empowers the water supplier to recover the service charge from the consumer in cash, kind or by way of services such as labour. The water supplier can also determine the date and the method of the service charge collection.

3.2 Nepal Water Supply Corporation

The NWSC is established under the statutory provisions of the Nepal Water Supply Corporation Act, 1989 (2046 BS) as the authority responsible for providing clean drinking water, sanitation and sewerage. The Act is the primary legislation dealing with drinking water and sewerage. It establishes the right of the public to drinking water and sanitation by determining the responsibilities and duties of the NWSC in relation to water supply and sewerage management.

The NWSC is a statutory body and is a government controlled public corporation. HMG can give directives from time to time and it is the duty of the Corporation to abide by such directives. HMG has the power to issue an order to stop activities against this Act. HMG has the power to dissolve the NWSC at any time and, upon dissolution, the liabilities of the corporation shall be transferred to HMG.⁵³

The NWSC has certain functions and duties and powers under the Nepal Water Supply Corporation Act 1989 (2046 BS):

1. Functions and Duties
2. Power to Impose Fees and Charges
3. Power to Cease Service
4. Power to Enter House and Land
5. Power to Lay Pipelines

3.2.1 Functions and Duties

Section 5 of the Nepal Water Supply Corporation Act 1989 (2046 BS) lists the following as the *functions* and *duties* of the Nepal Water Supply Corporation:

1. to formulate and implement a plan for drinking water and sewerage
2. to conduct study, research and surveys in relation to sources of drinking water, distribution of drinking water and sewerage
3. to determine and map roads linking the source of drinking water to the distribution point
4. to complete works as per agreements between HMG and international or foreign organisations
5. to carry out necessary construction work related to drinking water and sewerage
6. to operate drinking water and sewerage related projects as prescribed by HMG
7. to provide drinking water and sewerage facilities by charging fees/levies for services
8. to impose necessary conditions for the utilization of drinking water and the use of sewerage facilities
9. to protect drinking water from being misused

10. to control pollution of drinking water
11. to repair and maintain pipelines for drinking water and sewerage
12. to make necessary repairs to restore service as soon as possible after being informed that the flow of water from a tap has ceased
13. to increase fees/tariffs to recover operation costs
14. to undertake any other necessary activities to achieve the objective of the Corporation

3.2.2 Power to Impose Fees and Charges

Section 6 of the Nepal Water Supply Corporation Act 1989 (2046 BS) provides that the NWSC can determine and collect tariffs for supplying drinking water and a service charge for providing connection to water and sewerage services.

The Corporation may set time limits for payment of any tariff or service charge and may charge a 25-50% penalty for late payment of such tariff/charges.

3.2.3 Power to Cease Service

Section 6(4) of the Nepal Water Supply Corporation Act 1989 (2046 BS) provides that the Corporation may cease water supply and sewerage facilities to the consumer, if consumer fails to pay the fees, service charge and or any other charge payable to Corporation within the time limit prescribed by Corporation. However, the Corporation may resume services to a consumer if the consumer pays the amount due and any penalty.⁵⁴

3.2.4 Power to Enter House and Land

Section 7 of the Nepal Water Supply Corporation Act 1989 (2046 BS) provides that a person authorized by the Corporation may, if necessary, enter the house or land of another for the purpose of discharging the duty of the Corporation, subject to giving prior notice to the owner. The requirement of notice is waived if there is reason to suspect the misuse or stealing of drinking water. In this case the chairperson of the Corporation, or person authorized by him/her, may enter the property during daylight hours for the purpose of investigating.

3.2.5 Power to Lay Pipelines

Section 17 of the Nepal Water Supply Corporation Act 1989 (2046 BS) provides that the Corporation, in the course of implementing a project related to drinking water and sewerage, may if necessary, lay pipelines in accordance with the plan through public or private house or land, for the purpose of connecting services from one place to another.

The Corporation is required to lay the pipelines in such a way as to minimise any loss or damage to public or private property. Further, the Corporation shall either pay compensation to the owner of the house or land for any loss caused by the laying of the pipeline for drinking water and sanitation at current market value or restore the land or house to its former condition.⁵⁵

3.3 Local Bodies

The promulgation of the Local Self Governance Act 1999 (2055 BS) and the Local Self Governance Regulation 1999 (2056 BS) built on, and improved, the existing legislative framework for effective decentralisation of government. The Local Self Governance Act devolves wider powers to local bodies at the village, municipality and district level to plan and manage services including services relating to drinking water, irrigation, sanitation and conservation of water resources. The local bodies that have a role in relation to drinking water, sanitation and water conservation are the:

1. Village Development Committee (VDC)
2. Municipality
3. District Development Committee (DDC)

3.3.1 Village Development Committee

The Local Self Governance Act 1999 (2055 BS) and its Regulations establishes the VDC as the local bodies body at the village level and sets out the *functions, powers* and *duties* of the Ward Committee, Village Council and VDC in relation to drinking water, sanitation and water conservation.

1. **Functions and Duties** *Section 28* provides that the VDC shall be responsible for the following within the village development area:
 - ~ Supplying drinking water
 - ~ Preparing project and programmes relating to irrigation and river control
 - ~ Providing wells, ground water, ponds and taps

- ~ Preserving sources of water
- ~ Protecting the environment

Section 25 provides that the Ward Committee shall be responsible for the following:

- ~ Keeping ponds, lakes, wells, ground water, taps etc neat and clean
- ~ Arranging disposal of waste, dirt and rotten materials
- ~ Assisting the VDC to keep an inventory of ponds, lakes, wells, ground water and taps etc within the ward
- ~ Looking after canals drills, water spout (or *Paini* in Nepali) within the ward

Section 26 provides that the Village Council shall be responsible for the following:

- ~ Passing budgets, plans and programmes submitted by the VDC
- ~ Adopting resolutions relating to the levying and collection of taxes, charges, fees, levies etc proposed by the VDC
- ~ Evaluating development and construction work carried out within the VDC area and giving necessary directions to the VDC

Section 28(2) provides that the VDC is responsible for encouraging consumer groups and other non-governmental organisations involved in development and construction work to operate in the village development area and provides that the VDC should use these groups/organisations to undertake works on behalf of the VDC.

2. Powers: The Local Self Governance Act 1999 (2055 BS) also gives the VDC the

following powers in relation to water resources:

- i. Judicial Power
- ii. Power to Impose Taxes, Charges or Fees
- iii. Rights over Public Areas
- iv. Power to Fine

(i) Judicial Power

Section 33 of the Local Self Governance Act 1999 (2055 BS) has not yet come into force, but will give the VDC certain judicial power to decide cases relating to:

- i. the allocation of water
- ii. the use of water and riverbanks (ghats)
- iii. canals, dams and ditches

(ii) Power to Impose Taxes, Charges or Fees

The VDC has the power to impose the following taxes/charges:⁵⁶

- i. taxes on the commercial exploitation of natural resources and heritage within the village development area
- ii. service charges for use of facilities such as drinking water, water taps and other similar facilities

(iii) Rights over Public Areas

The Act declares that public property, which is not subject to the proprietary right of any individual and not within the ownership of HMG or DDC, such as public drainage, sewerage, ponds, public rest houses, inns, water spouts, taps, wells, riverbanks (ghats) etc shall be the assets of the VDC and it shall have title over these properties and shall have to supervise repair, maintain and manage such properties.⁵⁷ Accordingly, the VDC has the power

to generate income from selling the product of public ponds or the assets of the VDC.⁵⁸

(iv) Power to Fine

The Act empowers the VDC to impose a fine of up to NRs.100 for dumping solid waste in or near a water body (other than in a designated place) plus expenses incurred in removing the waste.⁵⁹

3.3.2 Municipality

The Local Self Governance Act 1999 (2055 BS) establishes the Municipality as the local bodies body in urban areas. The availability of drinking water and electricity is one of the criteria of declaration and classification of a Municipality.⁶⁰

The Local Self Governance Act 1999 (2055 BS) and its Regulations sets out the *functions* and *duties* of the Ward Committee,⁶¹ Municipal Council,⁶² and the Municipality⁶³ in relation to drinking water, irrigation, sanitation and water conservation. It also gives the Municipality certain *rights* and *powers* such as judicial powers,⁶⁴ power to impose taxes/service charges⁶⁵ and rights over public areas.⁶⁶ These *functions*, *powers* and *duties* are substantially the same as those of the VDC and will not be repeated here.

However there are some differences between the VDC and Municipality:

- ~ The Municipality's powers are focused more on sanitation and recreational parks whereas the VDC's power is focused more on supplying water and preserving natural resources.

- ~ In relation to taxes, charges and fees, there is no provision for the Municipality to levy a natural resource utilization tax. However, the Municipality, like the VDC, can levy a service charge on drinking water, water taps, solid waste management, recreational facilities such as swimming pools, public baths, laundry and public ghats (riverbanks) etc.⁶⁷
- ~ The Municipality may also impose a larger fine of up to NRs.15, 000 for dumping of solid waste in or near a water body (other than in a designated place) plus expenses incurred in removing the waste.

3.3.3 District Development Committee

The Local Self Governance Act 1999 (2055 BS) and its Regulations establishes the DDC as the local bodies body at the district level and sets out the *functions*, *powers* and *duties* of the DDC in relation to drinking water, irrigation, sanitation and water conservation.

1. Functions and Duties: *Section 189* provides that the DDC shall be responsible for the following in the district area:

- ~ Formulating and implementing drinking water projects for the benefit of people in more than one VDC of the district
- ~ Protecting the environment
- ~ Formulating, implementing, operating and maintaining irrigation projects which provide irrigation in more than one VDC of the district
- ~ Formulating and implementing plans to prevent soil erosion and river cutting within the DDC.

Section 201(d) and 202(1) (a) further provide that water projects which protect and promote the environment shall be given priority by the DDC while formulating plans.

The functions of the District Council are the same as those for the Village Council set out above in Chapter 3.3.1.

2. Powers: The Local Self Governance Act 1999 (2055 BS) also gives the DDC the following powers:

- (i) Power to Transfer Projects to User Groups
- (ii) Power to Impose Taxes, Charges or Fees
- (iii) Property Rights
- (iv) Power to Fine

(i) Power to Transfer Projects to User Groups

When implementing drinking water projects, the DDC has the power to form user groups from amongst the persons who receives direct benefit from the project.⁶⁸ The DDC may transfer the operation of such projects to the concerned body or users group who shall then be responsible for their operation, maintenance and repair.⁶⁹

(ii) Power to Impose Taxes, Charges or Fees

The DDC has the power to impose taxes, charges or fees in relation to the use of water as follows:⁷⁰

- i. taxes to raise revenue for ditches and irrigation ponds etc. at the rate prescribed by the District Council
- ii. service charges for the use of a ditch, embankment, canal etc constructed by the DDC for public use at the rate prescribed by the District Council

- iii. fees for issuing and renewing licences for use of waterways, use of flying fox (*tuin*) to cross rivers, boating and fishing at the rate approved by District Council

(iii) Property Rights

The DDC has the right to sell sand from rivers and canals as well as concrete (*roda*), stones, soil and wood found on river banks. The DDC must provide 35-50% of the proceeds of sale of such materials to the concerned VDC or Municipality⁷¹.

(iv) Power to Fine

Section 233 of the Local Self Governance Act 1999 (2055 BS) provides that if anyone commits any act in contravention of this Act, its Regulations or any bylaws made under this Act, the DDC may punish the offender with a fine of up to NRs.1000 and if s/he repeats same offence the fine is increased by NRs.1000 each time the offence is committed.

3.4 Department of Water Supply and Sewerage

The Department of Water Supply and Sewerage (DWSS) is established by HMG under the Ministry of Physical Planning and Works. The vision of the DWSS is "*To provide every settlement in the country with safe drinking water and adequate sanitation.*"

The DWSS is committed to providing a safe water supply and adequate sanitation to improve quality of life with the efficient mobilisation of resources. The Department of Water Supply and Sewerage (DWSS), has a network of 5 regional monitoring and

supervision offices, 43 divisions, and 27 sub-divisions located throughout the country.

The DWSS is not governed by any separate and specific legislation. The DWSS is the government agency responsible for the planning and implementation of drinking water supply, sanitation and sewerage facilities. The DWSS website⁷² sets out the Department's main functions/activities as follows:

1. Planning of new water supply projects including conducting feasibility studies, detailed surveys, designing projects and preparing cost estimates.
2. Community participation through the formation of Users' Committees, interaction with User Groups and community mobilisation.
3. Implementation/construction/maintenance of water supply projects with the involvement of user groups.
4. Construction of drainage and sewerage system in number of towns.
5. The operation and maintenance of water supply projects throughout the country including the implementation of gravity-fed, piped systems in the hill regions and shallow or deep tube wells in the Terai region.
6. The installation of water treatment systems, spring protection works and implementation of rainwater harvesting programmes in a number of districts.
7. Construction of sewage treatment plants in some villages/towns.
8. Promotion of sanitation activities with creation of on-site sanitation facilities, promotion of latrines and awareness raising activities to disseminate knowledge, change attitudes, build skills and change practices.
9. Implementation of human resource development activities.
10. Research and development in relation to water and sanitation.

Chapter **4** **Sanitation**

4.1 Policy and Legislation

To date, there is no separate policy or specific legislation regarding sanitation. Sanitation in Nepal is addressed together with drinking water as an essential component of safe and clean drinking water.

HMG's policy on sanitation is contained in the Rural Water Supply and Sanitation National Policy 2004, the Rural Water Supply and Sanitation Strategy 2004 and the Rural Water Supply and Sanitation Sectoral Strategic Action Plan 2004.

These policies recognise sanitation as a basic need and aim to provide all Nepali people with sanitation services by the year 2017 (2074 BS).⁷³ The Rural Water Supply and Sanitation National Policy 2004 (2060 BS) states its objective as *to provide safe, accessible and adequate water supply services with sanitation facilities, reduce waterborne disease and save time and labour fetching water.*⁷⁴

The main legislation in relation to sanitation is the Local Self Governance Act 1999 (2055 BS) which give local bodies *functions, powers* and *duties* in relation to sanitation and in particular

solid waste management and The Solid Waste (Management and Resource Mobilization) Act 1987 (2044 BS) which establishes the Solid Waste Management and Resource Mobilization Center as the authority responsible for the collection, transportation and disposal of municipal solid waste in a safe and environmental friendly manner.

4.2 The Right to Sanitation

The right to sanitation, under international law is usually linked to drinking water or health. The right to safe drinking water and the right to health are recognised under international law as basic human rights and sanitation is recognised as integral to these rights. (See Chapter 1.2 regarding the international law on sanitation.)

Policy and legislation in Nepal have also recognised the right to sanitation but only to the extent that it is associated with drinking water. Policy documents have acknowledged that all people have a right to access to basic water supply and sanitation services in order to support the socio economic development and combat with waterborne diseases (See Chapter 1.2).⁷⁵

4.3 Sanitation Services

The local bodies including the VDC and municipality and the SWMRMC are basically responsible for the safe disposal of solid waste and for providing sanitation facilities to the public.⁷⁶

The central government, operating through the NWSC and Department of Water Supply and Sewerage is responsible for providing sewerage and sanitation services to the public⁷⁷.

There are various state bodies that play a role in sanitation in Nepal:

1. **Local Bodies:** The Local Self Governance Act 1999 (2055 BS) gives local bodies certain rights and duties in relation to sanitation in their respective territories.
2. **Solid Waste Management and Resource Mobilization Centre:** The Solid Waste (Management and Resource Mobilization) Act 1987 (2044 BS) establish the SWMRMC as the authority responsible for the collection, transportation and disposal of municipal solid waste in a safe and environmental friendly manner.
3. **Nepal Water Supply Corporation:** The Nepal Water Supply Corporation Act 1989 (2046 BS) establishes the NWSC as the authority responsible for the supply of drinking water and sanitation facilities.
4. **Ministry of Physical Planning and Works:** The Sanitation Division and the Department of Water Supply and Sewerage are established by HMG under

the Ministry of Physical Planning and Works and conduct various activities on behalf of the central government in relation to sanitation.

4.3.1 Local Bodies

The Local Self Governance Act 1999 (2055 BS) and the Local Self Governance Regulation 1999 (2056 BS) give local bodies *functions, powers and duties* in relation to sanitation and, in particular, solid waste management. As mentioned above, sanitation services are mostly dealt with in connection to drinking water and accordingly this section should be read in conjunction with Chapter 3.3 above which discusses the role of local bodies in providing drinking water and sanitation services. The local bodies that have a role in relation to sanitation are the:

1. Village Development Committee
2. Municipality
3. District Development Committee

1. Village Development Committee: Functions and Duties of the Ward Committee

Section 25 provides that the Ward Committee shall be responsible for the following:

- ~ Keeping drainage, ponds and lakes neat and clean with the Ward
- ~ Arranging for the disposal of waste, dirt and rotten materials

Functions and Duties of the VDC

Section 28 provides that the VDC shall be responsible for the following:

- ~ Building public toilets
- ~ Preparing criteria for houses, buildings

and other infrastructures to be constructed

- ~ Making arrangements for sewerage and sanitation in settled areas

Powers of the VDC

The Local Self Governance Act 1999 (2055 BS) also gives the VDC the following powers:

- (i) Power to Impose Service Charge
- (ii) Right to Remove Structures and to Fine

(i) Power to Impose a Service Charge

Section 56 gives the VDC the power to impose a service charge on sanitation, drainage and sewerage services.

(ii) Power to Remove Structures and to Fine

Section 70 gives the VDC the following powers:

- i. If anyone constructs or places drainage, toilet or septic tank etc, or does anything that creates an obstacle or barrier with an intention of causing trouble to others, the VDC may order the offender to stop such act, or remove or demolish such construction. If the offender refuses to comply with the order, the VDC may depute someone to stop, demolish or remove the same. Any expense incurred while demolishing or removing shall be recovered from the offender who shall also incur a fine of up to NRs.1000.
- ii. If anyone dumps solid waste at a place other than that designated for waste disposal within the village development area, such a person may be punished with a fine up to NRs.100 plus any expenses incurred in removing such waste.

2. Municipality: The Local Self Governance Act 1999 (2055 BS) and the Local Self Governance Regulation 1999 (2056 BS) give full responsibility of managing and handling the solid waste to the Municipality.

Functions and Duties of the Municipal Ward Committee

Section 93 provides that the Municipal Ward Committee shall be responsible for:

- ~ Keeping drainage, ponds and lakes neat and clean with the Ward
- ~ Arranging for the disposal of waste, dirt and rotten materials

Functions and Duties of the Municipality

Section 96 (b) provides that the Municipality shall be responsible for:

- ~ carrying out drainage plans in the municipality and operating, maintaining and repairing drainage
- ~ arranging public toilets within municipality
- ~ carrying out sanitation programmes
- ~ carrying out and managing waste collection and disposal

Powers of the Municipality

The Local Self Governance Act 1999 (2055 BS) also gives the Municipality the following powers:

- (i) Power to Impose Service Charge
- (ii) Power to Fine

(i) Power to Impose a Service Charge

The municipality may impose a service charge for:⁷⁸

- i. providing solid waste management,

sanitation, sewerage and drainage and facilities

- ii. use of public toilets, bath houses, swimming pools, laundry ghat (or riverbank) or other such facilities

(ii) Power to Remove Structures and to Fine

The Municipality has the same power to remove a structure obstructing sanitation and to impose a fine as the VDC except that the Municipality may impose a fine of up to NRs.15,000.⁷⁹

3. District Development Committee: The Local Self Governance Act 1999 (2055 BS) and the Local Self Governance Regulation 1999 (2056 BS) do not contain any specific provisions regarding the responsibilities of the DDC in relation to sanitation. However, the DDC does have functions, duties and powers relating to drinking water and protection of the environment and, therefore, it can be inferred that the DDC is also responsible for sanitation as far as it affects drinking water and the environment.

4.3.2 Solid Waste Management and Resource Mobilization Centre

The Solid Waste (Management and Resource Mobilization) Act 1987 (2044 BS) was enacted to improve the health conditions of the general public by reducing environmental pollution caused by solid waste. The Act has established the SWMRMC as the agency responsible for the collection, transportation and disposal of municipal solid waste in a safe and environmental friendly manner.

Section 3 sets out the *functions and duties* of the Centre in relation to solid waste management which can be summarised as follows:⁸⁰

- ~ formulation of policies in relation to solid waste management
- ~ planning and implementation of solid waste management programs
- ~ construction, repair and maintenance of solid waste facilities in cooperation with the municipality
- ~ transportation, collection and disposal of solid waste in a safe and environmentally friendly manner
- ~ provision of public toilets, abattoirs, bath rooms etc
- ~ training in relation to solid waste management and environmental issues
- ~ appointment of inspection officers
- ~ employment of people in solid waste disposal and control

In addition to above mentioned functions and duties, the Solid Waste (Management and Resource Mobilization) Regulation, 1989 (2046 BS) provides for the collection, transportation and safe disposal of solid waste. In terms of sanitation services, the Regulation also creates an obligation on the Center to provide and operate public toilet and bath houses in the public places.⁸¹

4.3.3 Nepal Water Supply Corporation

The NWSC is a public corporation established by the Nepal Water Supply Corporation Act 1989 (2046 BS) and is responsible for

providing sewerage facilities to the public. (The functions, duties and powers of the Corporation are discussed in detail in Chapter 3.2)

4.3.4 Ministry of Physical Planning and Works

1. Sanitation Division: The Ministry of Physical Planning and Works has established a Sanitation Division as the arm of the central government responsible for sanitation. The HMG website⁸² sets out the functions of the Division as follows:

1. To formulate short-term and long-term programs at the national level, implement them and have coordination at the central level among the programs, in order to meet people's requirements related with sanitation through out the Kingdom of Nepal.
2. To collect information and data on the population benefited by urban and rural rainwater and domestic sewerage (excluding road surface sewerage) projects, the outputs achieved by such projects (qualitative and quantitative) and other managerial aspects, to analyse such information and data and provide the results to the implementing agencies.
3. To analyse, or cause to be analysed, favourable and adverse impacts on the environment from implementation of sewerage and sanitation projects, and give directions to the implementing agencies to identify, and to do research

and study on, proper technology to mitigate adverse impacts and employ such technology.

4. To provide assistance at the central level to execute sanitation projects operated by the non-governmental and private sector.
5. To render technical assistance to bilateral and multilateral organisations in formulation, monitoring and evaluating sanitation programs.

2. Department of Water Supply and Sewerage: Similarly the Department of Water Supply and Sewerage (DWSS) is also established by HMG under the Ministry of Physical Planning and Works. The main activities of the Department in relation to drinking water and sanitation are discussed in Chapter 3.4 above.

Among other things, the Department has been involved in the construction of drainage and sewerage systems in number of towns, the construction of sewerage treatment plants, the promotion of sanitation and sanitation research.⁸³

4.4 Obligations of Users of Sanitation Services

The obligation of users of sanitation services can be found in The Local Self Governance Act 1999 (2055 BS), the Nepal Water Supply Corporation Act 1989 (2046 BS) and the Solid Waste (Management and Resource Mobilization) Act 1987 (2044 BS).

Many of the obligations of users of sanitation are covered in Chapter 2.8: Obligations of Consumers of Drinking Water. The major obligations of the public can be summarised as follows:

1. to pay any service charge as determined by VDC or Municipality⁸⁴ or any service charge or training fee imposed by the SWMRMC⁸⁵
2. to construct, maintain, repair or manage sanitation services provided by sanitation user groups⁸⁶
3. to follow the criteria prescribed by the VDC or Municipality for construction of a building, house or other structure⁸⁷
4. not to violate any of the prohibited activities regarding sanitation system (See Chapter 2.8: Obligations of Consumers of Drinking Water) or any of the activities prohibited by *Section 5* of the Local Self Governance Act 1999 (2055 BS).

Chapter **5** **Irrigation**

5.1 The Policy and Legislation

His Majesty's Government of Nepal's policy on irrigation is contained in the Irrigation Policy 2003 (2060 BS) which states its objective as effective use of water resource for irrigation, institutional development of IWUA for the sustainable management of the irrigation system and promotion of knowledge, skill and functional efficiency of technical manpower, users and NGOs which are related to the development of the irrigation sector. The policy stresses on the participatory management approach by way of direct involvement and investment of users for maintenance, repair and operation of irrigation system. The policy contains provision relating to study, identification, selection, implementation procedure of the project; IWUA, resource mobilization and public participation; irrigation system management etc and much more focus is given to involvement of IWUA in every stage of project development. HMG has amended some of the important provisions of the Irrigation Regulation 2000 (2056 BS) in tune with the policy guidelines.

The main pieces of legislation governing irrigation in Nepal are the Muluki Ain 1963 (2020 BS) (National Code) and the Irrigation

Regulation 2000 (2056 BS) promulgated under the Water Resource Act 1992 (2049 BS). The first amendment is made in this Regulation and it came into force in February 23, 2004 as it is published in official gazette.

The Muluki Ain 1963 (2020 BS) is one of the most important pieces of legislation in Nepal and deals with all civil and criminal matters. For our purposes, the most relevant section is Part 3, and, in particular, the chapter on land cultivation (*Jagga Abad Garneko*) which deals with traditional, farmer-managed irrigation systems.⁸⁸

The Irrigation Regulation 2000 (2056 BS) deals with irrigation systems developed and operated by HMG as well users groups and provides for the handing over and operation of irrigation systems developed and operated by HMG to Irrigation Water User Associations.

5.2 The Right to Use Water for Irrigation

The only right that exists over water in its natural state is the right to use water, not to own water. The right of an individual to use water for irrigation is an extension of property rights.⁸⁹ The right to use water for irrigation

is also one linked to the right to life (i.e. food). The Water Resources Act 1992 (2049 BS) provides that right to use water for irrigation is given priority over any other use of water other than the use of water for drinking and domestic purposes.⁹⁰

The Muluki Ain 1963 (2020 BS) sets out the order of priority given to landowners wanting to use water for irrigation (see Chapter 5.3.1 for details).

The Irrigation Regulation 2000 (2056 BS) also establishes a right to form a Water User Association to use water for irrigation. However, the right to use water for irrigation is not absolute and is subject to certain duties and prohibitions which must be complied with by the user (see Chapter 5.6 for details).

5.3 Traditional Farmer Managed Irrigation Systems

The Muluki Ain 1963 (2020 BS), chapter on land cultivation (*Jagga Abad Garneko*) lays down certain rules in relation to traditional, farmer-managed irrigation systems. Irrigation systems developed, managed and operated by the farmers using local resources for collective benefit are called farmer management irrigation system. The Irrigation Policy 2003 (20060 BS) recognizes the traditional irrigation system as one kind of user managed irrigation system. However, Irrigation Regulation does not contain separate and specific provision for the management of traditionally farmer managed irrigation systems unless they are registered as IWUA.

5.3.1 The Priority in which Landowners are entitled to Irrigate

The *Jagga Abad Garneko* prioritizes the right of different landowners to use irrigation water as follows:⁹¹

- ~ Water shall not be available to others, until the requirements of the person who constructed the irrigation canal, at his own expense, or with his own physical labour, are met.
- ~ In places where water has been shared in the past, no one shall be allowed to withhold anyone else's usual share of water so as to make the other person's field barren.
- ~ After the field at the source of the water is irrigated, the next landowner/farmer shall use the water.
- ~ If the owner of the field at the source is confronted with any difficulty such that s/he cannot irrigate, the owner of the next field shall use the water for cultivation.
- ~ A new irrigation channel may be constructed upstream only if the amount of the water available to the fields irrigated by old channel is not reduced.

5.3.2 Construction of Dams and Irrigation Channels

The *Jagga Abad Garneko* provides the following in relation to the construction of dams and irrigation channels:⁹²

- ~ Dams and irrigation channels may be constructed on any land, cultivated or barren, to bring water for the cultivation of the land, provided that no obstruction

shall be caused to the use of water by other land owners.

- ~ The owner of land taken up by a dam or irrigation channel, except for barren land on which land revenue is not levied, shall be compensated for the value of the cultivated land or be given other land in exchange.
- ~ When a landowner (*Raititarpha bata*) incurs expenses for irrigation to bring barren land into cultivation he will not be charged land revenue tax on the land taken up by the dam or irrigation channels if the land revenue on the newly cultivated barren land is double that of the land used for the dam or irrigation channels.

5.3.3 Repair of Irrigation Channels

The *Jagga Abad Garneko* provides the following in relation to the repair of irrigation channels:⁹³

- ~ If an irrigation channel is destroyed, or a field is damaged, by a flood or landslide, the *Mohi* (landowners) themselves shall repair the channel/field as far as possible by jointly providing labour.
- ~ If the resources of the *Mohi* (landowners) prove inadequate, then the *Jimidar* or *Talukdar* (owners of large tracts of land cultivated by others) shall submit a report containing all the particulars to the concerned HMG office requesting funds for the repairs. As *Jimidari* system is abolished in Nepal, in practice, VDCs do this function now a days.

5.4 Irrigation Water User Associations

The Irrigation Regulation 2000 (2056 BS) envisioned four kinds of irrigation management systems: (i) an irrigation project operated by HMG, (ii) an irrigation project operated by an IWUA, (iii) an irrigation project jointly operated by HMG and an IWUA, and (iv) an irrigation project operated by a licensee. In all management systems the Regulation focuses on community participation in irrigation system management. Below we will discuss irrigation projects operated by HMG and IWUAs. Irrigation projects managed by a licensee are largely governed by the Water Resource Act 1992 (2049 BS) and its Regulation (see Chapter 2.6 above).

5.4.1 Who May Form an Irrigation Water User Association?

Rule 3 of the Irrigation Regulation 2000 (2056 BS) provides that:

*The users of following Irrigation System shall require to constitute a Water User Association and apply to concerned Irrigation Office for the registration.*⁹⁴

- ~ developed and operated by HMG
- ~ repaired, maintained and improved by HMG
- ~ developed and operated by users' groups

A number of farmers or other users may join together to manage an irrigation system by forming an IWUA. The Irrigation Regulation 2000 (2056 BS), promulgated under the Water

Resource Act 1992 (2049 BS) provides for the transfer of irrigation systems to Irrigation Water User Associations. If the irrigation system is too large for the IWUA to operate, the Regulation also provides for the joint management of the irrigation system by the IWUA and HMG.

5.4.2 Statute of Irrigation Water User Associations

The Irrigation Regulation 2000 (2056 BS) also requires IWUAs to have a statute to govern the association. Schedule 1 of the Regulation requires two copies of statute of the IWUA to be submitted along with the application for the registration. However, it does not provide details of the particulars to be contained in the statute as does for DWUAs (see Chapter 2.7.2 above)

5.4.3 Procedure for Registration of an Irrigation Water User Association

The procedure to register an IWUA seems similar to the registration of a Water User Association for drinking water (See Chapter 2.7.3)

Rule 3 of the Irrigation Regulation 2000 (2056 BS) sets out the procedure to register an IWUA:

- ~ Users of an irrigation system must submit an application to the concerned Irrigation Office in the format as prescribed in Schedule 1 of the Regulation together

with the charge as prescribed in the same schedule.

- ~ The concerned Irrigation Office, on the receipt of application shall assess the application and, if it deems proper, register the IWUA within seven days of submission of the application and issue a registration certificate in the format prescribed in Schedule 2.
- ~ Registration will be denied if, any discrepancy is found, or a Water User Association is found to be already registered for the same irrigation area, or it would not be in compliance with the law to register it. If registration is denied, the applicant must be notified within seven days, with reasons.

5.4.4 Executive Committee and General Members of Irrigation Water User Associations

Rule 3 of the Irrigation Regulation 2000 (2056 BS) provides that IWUAs shall have:

- ~ an executive committee not exceeding eleven members and including at least 33% women, and 2 members from *Dalit*, underprivileged and backward *Janajatis*
- ~ at least sixty seven percent of general members being users of the irrigation area representing canal, secondary canal, sub-secondary canal, tertiary canal and watercourse users.

Rule 4 provides that the election procedure and the tenure of office of the executive

committee shall be as prescribed in the statute of the IWUA. However, Rule 4 (2) provides dissolution of the executive committee in the following circumstances:

- ~ *If two thirds of the general members of the IWUA decided that the executive committee has failed to properly operate the irrigation system,*
- ~ *if it is found that the executive committee of a User Association has acted against this Regulation, or approved Constitution, the concerned Irrigation Office must ask executive committee to submit reasons within 15 days. In case of not responding or reasons are not satisfactory, the concerned office shall submit a recommendation to Department of Irrigation for dissolution of such committee and on the prior approval of the Department of Irrigation dissolve such executive committee.*
- ~ *If IWUA is not renewed within time prescribed by rule 8A, executive committee is automatically dissolved.*
- ~ *In case of such dissolution, election of executive committee shall be held pursuant to the Constitution of the User Association, within three months through District Irrigation Water Users Organization, under direct supervision of the concerned Irrigation Office.*

5.4.5 User Coordination Association

Rule 7 of the Irrigation Regulation 2000 (2056 BS) provides for the formation of a User Coordination Association to be constituted to

represent and protect the interests of all users of the irrigation system and inform to District Irrigation User Organization and concern Irrigation Office. The User Coordination Association is made up of one representative from each of the main canal, secondary canal and sub-secondary canal and tertiary canal systems and its role is to coordinate the operation, maintenance and supply of water through the irrigation system. Rule 8 of the Regulation requires the User Coordination Association to be registered with the Irrigation Office in accordance with Rule 3 of the Regulation.

5.4.6 Power, Functions and Duties of Irrigation Water User Associations

Rule 5 of the Irrigation Regulation 2000 (2056 BS) sets out the *functions* and *duties* of an IWUA in the supply of irrigation as follows:

- ~ To repair and maintain; operate and manage the Irrigation System provided that replacement or change of physical structure, equipment or machines affecting the irrigation system needs prior approval from the concerned Irrigation Office.
- ~ To make available water to user farmers at the appropriate time and in the proper amount according to the type of crop and the condition of the land.
- ~ To keep records of land for which services could not be provided and recommend that such users be exempt from paying service charges.
- ~ To distribute water to new user farmers

without causing any harm to existing users.

- ~ To mobilize public participation for the maintenance of the irrigation system.
- ~ To construct additional structures to increase irrigable area considering the supply of water.
- ~ To collect service charge from the user and deposit to prescribed place
- ~ Inform concerned irrigation office if any person destroy, damages or create hindrances

IWUA may request technical advice, in relation to the exercise of above mentioned power, function and duties, from the concerned Irrigation Office and if such request is made, the concerned Irrigation Office shall provide the necessary technical advice⁹⁵.

Rules 6 and 9 of the Irrigation Regulation 2000 (2056 BS) further provide that the IWUA is required to do the following in relation to finances and maintenance:

- ~ establish a separate fund for the maintenance of the irrigation system and its structures and deposit at least ninety percent of the service charge and other income to the fund
- ~ maintain up-to-date records including records of service charges owed, expenditure incurred for maintenance as well as the balance of the fund
- ~ within three months of expiry of fiscal year, submit its report to the concerned Irrigation Office along with the financial statements of the IWUA and all details of

the services made available to users in that fiscal year

The recent amendment of the Regulation requires renewing IWUA within the 90 days of the end of financial year. If IWUA submit application stating reasons for delay, the period will be extended for another 90 days by charging Rs.100 as late fine and shall be renewed.

5.4.7 Provision of Irrigation Services to a User

If a person wishes to use the services of an irrigation system operated by HMG or by an IWUA they are required to make an application for service to the concerned Project Office.⁹⁶

In relation to the provision of irrigation services, the Project Office, and the Irrigation Office, has the following *duties* and *powers*:

1. Duty to Provide Irrigation Services on Application
2. Power to Reduce Service
3. Power to Cease Service
4. Duty to Notify User of Reduction/ Cessation of Service
5. Power to Impose Conditions of Use

1. Duty to Provide Irrigation Services on Application: Upon receipt of an application for service by a user, the Project Office shall deliver irrigation services after satisfying itself that the service can be provided. If the service cannot be provided for technical or other reasons, the applicant shall be notified accordingly.⁹⁷

Rule 21 of the Irrigation Regulation 2000 (2056 BS) prescribes the basis on which irrigation services will be provided as follows:

- A. geographical location
- B. area of land
- C. quantity of water available at the source
- D. type of crop to be cultivated
- E. nature of soil on the land
- F. capacity of the structure and other technical matters

If an applicant is not satisfied with the decision of the Project Office not to provide service s/ he can appeal to the concerned Irrigation Office within thirty-five days of such decision. The concerned Irrigation Office shall conduct the necessary inquiries and issue an order which shall be final.⁹⁸

2. Power to Reduce Service: *Rule 22* of the Irrigation Regulation 2000 (2056 BS) provides that the Project Office may reduce irrigation services to a user when:⁹⁹

- ~ the demand for water exceeds the availability of water at the source; or
- ~ the demand for water exceeds the capacity of structure.

Any reduction of irrigation services must be made in coordination with IWUA subject to the criteria specified in *Rule 21* and in consultation with the concerned Irrigation Office and concerned local bodies body.

3. Power to Cease Service: The Project Office may stop providing irrigation services in the following circumstances:¹⁰⁰

- ~ If the user has failed to pay the service charge, Project Office may cease services until such service charges are paid.
- ~ If the user has violated any condition prescribed in the agreement of service between the Project Office and the user, the Project Office may cease services until the breach is remedied.
- ~ If the irrigation structure has been damaged, or there is a danger of damage occurring, the Project Office may cease service until the necessary repairs and maintenance are completed.

4. Duty to Notify User of Reduction/ Cessation of Service: If the Project Office intends to reduce or cease irrigation services to a user they must notify the concerned IWUA and local bodies body to that effect.¹⁰¹

5. Power to Impose Conditions of Use: *Rule 20* of the Irrigation Regulation 2000 (2056 BS) states that in the case of an irrigation system developed and operated by His Majesty's Government, the concerned Irrigation Office may specify conditions of use to be complied with by the user provided that the conditions are not contrary to the Water Resource Act 1992 (2049 BS), the Irrigation Regulation 2000 (2056BS) or, in the case of a licence holder, any conditions specified in the licence.

5.4.8 Transfer of Irrigation System to Irrigation Water User Association

Rule 10 of Irrigation Regulation 2000 (2056 BS) provides that a project developed by His

Majesty's Government or a canal, secondary canal, sub-secondary canal, tertiary canal or watercourse of such project may be transferred to an Irrigation Water User Association.

HMG must impose terms and conditions in relation to the following when transferring an irrigation project to an IWUA:¹⁰²

- ~ Restricting the Association from pledging or transferring ownership of the structure to others by way of sale, donation, exchange, agreement or otherwise.
- ~ Prohibiting the Association from causing damage, spoiling or changing the structure, provided that changes may be made for the purpose of maintenance and those goods including the tools and equipment which can not be re-used and could be damaged or spoiled if they are kept idle may be sold or transferred on prior approval of the concerned Irrigation Office that transferred the Project.
- ~ Prohibiting the Association from carrying out any activities that reduces the quantity and quality of the water available for irrigation.
- ~ Prohibiting the Association from reducing the quantity of water available to users except in circumstances provided in this Regulation
- ~ Restricting the Association from authorizing any other person or organisation to operate the project

5.4.9 Joint Management by HMG and Irrigation Water User Association

Rule 13 of the Irrigation Regulation 2000

(2056 BS) provides for the joint management of large irrigation projects by HMG and an IWUA as follows:

- ~ Large irrigation projects which can not be fully managed by an IWUA may be operated jointly by agreement between HMG and the IWUA.
- ~ The obligations, responsibilities and activities to be carried out in accordance with the Act and this Regulation by the Water User Association, including collection of service charge, the share of revenue collected to be retained by the Water User Association and arrangements for maintenance shall be specified in the Agreement between HMG and the Water User Association.

The recent amendment in the Regulation has opened the way to provide responsibility of maintenance, repair and operation of jointly managed or government managed irrigation system in contract to any individual, IWUA or NGO on the basis of the competitiveness. Similarly it also provides that if local body requests to take the responsibilities of regular management of jointly managed system, the responsibility of government can be transferred to local body after assessing the technical ability and resource availability.

5.4.10 Project Committee

In relation to irrigation projects as determined as large by HMG, *Rule 31* of the Irrigation Regulation 2000 (2056 BS) provides for the formation of a Project Committee to carry out activities necessary for the completion of the project.

The chairperson of the Project Committee shall be the Secretary of the Ministry of Water Resources, the member secretary shall be the Chief of the concerned project and the members shall be the Director General of the Department of Irrigation, the Director General of the Department of Agriculture and representatives from the Ministry of Finance, the National Planning Commission and the Ministry of General Administration.¹⁰³

Rule 33 of the Irrigation Regulation 2000 (2056 BS) sets out the functions and duties of the Project Committee as follows:

- ~ To complete the project within the stipulated timeframe.
- ~ To arrange for the technical works such as design, drawings etc of the
- ~ To approve the number of staff necessary for the project.
- ~ To undertake any other work necessary to complete the project.

5.4.11 Monitoring of Irrigation Systems and Reporting

HMG shall form a monitoring committee taking into account the service provided by system, availability of water, crop production, increase in production, institutional and financial condition of the IWUA and changes in the area. The monitoring and evaluation committee shall comprise including a representative of the concerned Irrigation Water User Organisation. The Committee shall monitor the status of the irrigation system, user participation and the condition of the

structure among other things. The monitoring committee shall submit a report to HMG accordingly.¹⁰⁴

5.5 Obligations of Users of Irrigation Services

Rule 25 of the Irrigation Regulations 2000 (2056 BS) imposes the following obligations on users of irrigation services:

- ~ To inform the Project Office immediately of any known, intended or attempted unauthorized use or misuse of the service, any leakage of water or any other such activity.
- ~ To provide the Project Office with any necessary assistance with construction, repair, maintenance and protection of the irrigation structure.

Rule 29 and 30 of the Irrigation Regulation 2000 (2056 BS) imposes a duty on users of irrigation services to pay the service charge to users association or person or institutions authorised to collect service charge. Responsibility of collection of service charge lies in the IWUA in joint managed irrigation system. The service charge may be paid in a lump sum or in instalments. The mode of payment, the time limit for payment and any late fee shall be determined by the Service Charge Fixation Committee comprised of Chief of the concerned Irrigation Office, a representative of the District Irrigation Office, chairman of the concerned Water User Association and representative of District IWUA Organization as member¹⁰⁵.

The new amendment of the Irrigation Regulation sets a system of sharing of service charge among HMG, IWUA and Central Repair and Maintenance Fund operated by DoI. Schedule 3 determines the share of IWUA ranging from 20 – 95 % of collected service charge in accordance with the involvement of IWUA in the management of irrigation system. The amendment in Rule 42 requires that users have to contribute certain percent of the investment as specified in Schedule 4 which range between 3-15 percent of the investment. Users must provide land required for the construction of canal or subsidiary canal which can be included in the amount to be contributed by users.

Rule 39 of the Irrigation Regulation 2000 (2056 BS) prohibits all people including irrigation service users from the following activities in order to protect irrigation structures and prevent unauthorized use:

- ~ trespassing on irrigation structures
- ~ destruction, closing or make any alternations to the irrigation structure
- ~ increasing or decreasing the quantity of

water flowing through the irrigation structure

- ~ polluting the water used for irrigation
- ~ causing damage to or moving the irrigation signs and signals
- ~ moving, transferring or causing damage to any equipment controlling the flow of water
- ~ moving, grazing or leave unattended cattle within a prohibited irrigation area
- ~ driving any vehicle within a prohibited irrigation area without permission from the concerned authority
- ~ taking stone, sand or concrete from the land occupied by an irrigation structure
- ~ breaking, or attempting to break, the embankment of a canal, to alter the flow of water to an irrigation structure
- ~ controlling the flow of water to an irrigation structure by obstructing the current of a river or stream so as to make it less beneficial
- ~ encroaching on a river, stream, waterfall, lake or pond so as to adversely effect an irrigation system
- ~ pumping water without permission.

Chapter **6** **Hydropower**

6.1 The Policy and Legislation

HMG has endorsed separate Hydropower Development Policy 2001 with the objective of promotion of hydropower development, extension of standard electricity service throughout the country and export abroad. This policy also provides for the sharing of benefit in the local level and promotes involvement of community/cooperative organization, local bodies and private sector in the production, distribution and transmission of electricity. Among others, it also provides functional policy related to the environmental flow, investment, rural electrification and benefit sharing (Royalty sharing), transfer of project, electricity purchase, license, institutional reform etc.

The main legislation governing hydropower in Nepal is the Electricity Act 1992 (2049 BS) and its regulation, the Electricity Regulation 1993 (2050 BS). The Water Resource Act 1992 (2049 BS) and the Water Resource Regulation 1993 (2050 BS) also contain provisions regarding the use of water for hydropower generation. The Electricity Act 1992 (2049 BS) and its Regulations, deal with the management of electricity in Nepal, including the survey, generation and distribution of electricity. It

regulates the electricity sector by a system of licensing. The Act applies to the entire electricity sector, not just electricity generated by hydropower. The Act vests ownership of any assets or structures related to electricity in HMG and imposes an obligation on a licensee to pay royalties.

6.2 Right to Use Water for Hydropower

Neither the Electricity Act 1992 (2049 BS), nor the Electricity Regulation 1993 (2050 BS), explicitly provide for a right to use water for hydropower. However the Constitution of the Kingdom of Nepal, under Article 12, guarantees the freedom to practice any business or profession, which would therefore include hydropower.¹⁰⁶ This right is upheld by Hydropower Policy 2001 (2058 BS) and the Electricity Act 1992 (2049 BS) subject to obtaining a licence.¹⁰⁷

The Water Resource Act 1992 (2049 BS) provides that the use of water for hydropower shall have priority over the use of water for cottage industries, navigation and recreation but not over the use of water for drinking and domestic use, irrigation or agriculture.¹⁰⁸

6.3 Licensing of Hydropower

6.3.1 Who Must Obtain a Licence

Section 3 of the Electricity Act 1992 (2049 BS) requires a person or corporate body to obtain a licence for the survey, generation, transmission or distribution of electricity:

No person shall be entitled to conduct a survey, generate, transmit or distribute electricity without obtaining a licence under this Act.

An exemption is given if the electricity to be generated is less than 1000 kilowatts however in case of the project with capacity of 100-1000 kilowatt certain information must still be provided to the prescribed officer.¹⁰⁹

6.3.2 How to Obtain a Licence

To obtain a licence for the survey, generation, transmission or distribution of electricity an application form must be submitted to the Secretary of Ministry of Water Resource through Department of Electricity Development along with a financial, technical and environmental study report and other prescribed particulars.¹¹⁰

Rule 24 of the Electricity Regulation 1993 (2050 BS) provides that an application for a licence for the survey of electricity must be submitted together with 15% of the licence fee. For a licence for the generation, transmission and distribution of electricity the application fee is prescribed in Schedule 11. However, 33.33 percent amount must be paid for obtaining license for one of them.

A person or corporate body, generating, transmitting or distributing electricity prior to the commencement of the Electricity Act 1992, shall be required to submit an application for licence within one year from the commencement of the Act.¹¹¹

1. Hydropower Production of 100-1000

Kilowatts (Mini Micro): Although a Nepali producer of hydropower electricity of up to 1000 kilowatts is exempt from obtaining a licence, Rule 3 of the Electricity Regulation 1993 (2050 BS) requires the following particulars to be provided to Department of Electricity Development:

- 1) detailed description of the project
- 2) map of the project (showing main structure)
- 3) source of water and quantity of water to be utilized
- 4) area where electricity is to be distributed and estimated number of consumers to be benefited
- 5) whether the water resource to be utilized has already been utilized by another or not, if so, particulars of the same
- 6) other necessary particulars

2. Hydropower Production Over 1000

Kilowatts (Mega): Rule 4 provides that to apply for obtaining licence to survey only, the following particulars are required:

- 1) map of the project site (including a preliminary sketch of the proposed power house, dam, reservoir canal, tunnel, substation, transmission line and which clearly shows any village/town, historical places, road way etc inside the project site)

- 2) area of water resource to be surveyed and quantity of water to be utilized
- 3) estimated cost and time for completion of the project (both for survey and construction)
- 4) total capacity of the project and estimated annual production
- 5) if electricity is to be produced other than by using water resources, the kinds of the fuel and method of acquiring such fuel should be mentioned
- 6) other necessary particulars

To apply for a licence for the production of electricity the following particulars must be provided to the Department of Electricity Development.¹¹²

- 1) details of the project (including a map of the project site, the source of the electricity to be produced, estimated cost and time to complete the project, name of any partners in the project and types of their involvement, full name and address of the person or corporate body and its directors with whom ownership of the project shall be vested)
- 2) if mineral fuels are to be used, the kinds of fuel, method of its supply and storage and any agreement or letter of intention/ interest and other relevant documents
- 3) feasibility analysis (including technical description together with a detail map of the project, economic analysis, description of the consumer and client, estimated quantity of the electricity to be sold and, if any transmission or distribution system belonging to other person or corporate

- body is to be used in supplying the electricity, a description of the same)
- 4) mode of finance (estimated cost of the project, economic condition of the investor, commitment of the financial institutions that will be involved directly in the project and the liabilities, share capital and debt of the investor)
- 5) acquisition or possession of house and land (description of landowner/s whose property will be acquired and the total area of public or private land to be acquired for the project temporally or permanently)
- 6) analysis of environmental effect¹¹³ (measures to be taken to lessen the adverse effects of the project on the environment, measures to be taken for the conservation of aquatic animals and the water environment, the social and economic effect of project for the concerned area, utilization of local labour, source and materials, benefits to the local people after completion of the project, training to be provided for local people in relation to construction, maintenance and operation, facilities required for the construction site, safety arrangements, the possible effect on concerned landowners of the operation of the project and details of the people to be evacuated and plans for their relocation)
- 7) details of the sale and purchase of the electric power of the project (agreement or letter of intention if any and related documents)
- 8) description of electricity transmission line of the project

- 9) details of the supply, transportation and storage of fuel (agreement or letter of intention, if any, and other documents relating to the same)
- 10) other necessary matters

6.3.3 Processing of Licence Applications

After receiving the application, the Secretary of Ministry of Water Resource or Department of Electricity Development assesses the application and grants the licence within the prescribed time frame.¹¹⁴

If the applicant has not submitted all of the necessary documents, reports or other particulars, the Department of Electricity Development is required to give notice to the applicant, within 15 days in the case of application for survey, and within 45 day in case of an application for generation, transmission or distribution of electricity specifying a reasonable time limit for the submission of such documents, particulars or reports. The date of submission of these documents is deemed to be the date of submission of application.¹¹⁵

In the case of an application for licence for generation, transmission or distribution of electricity, *Rule 16* of the Electricity Regulation 1993 (2050 BS) requires Department of Electricity Development to publish a public notice stating the details of particulars for the information of general public. Any person may lodge an objection or comment within 35 days from the date of the publication on the

grounds that utilization of the water resource for construction and operation of the project is likely to have an adverse effect. The Department of Electricity Development may take such objections or comments into account and impose conditions as part of the licence to be followed by the applicant in order to lessen the adverse impact.

After assessing the application, the Secretary of Ministry of Water Resource, if it deems proper, shall issue licence to the applicant in accordance with the application, or with necessary amendments, in the prescribed format.¹¹⁶

If the application is approved a licence must be issued within the following timeframe:¹¹⁷

- ~ in the case of a licence for survey, within 30 days of receipt of the application
- ~ in the case of licence for generation, transmission or distribution of electricity, within 120 days of receipt of the application

Section 5 of the Electricity Act 1992 (2049 BS) specifies the term (duration) of the licence as follows:

- ~ in the case of a licence for survey of electricity, maximum term shall be 5 years
- ~ in the case of a licence for generation, transmission or distribution of electricity, maximum term shall be 50 years

Provided that, in the case of licence issued for a term of less than 5 year, the licensee must renew the licence one year prior to the expiry of the licence.

6.3.4 Financial Incentives for Licensees

Section 12 and 13 of the Electricity Act 1992 (2049 BS) sets out certain financial incentives to encourage investment in hydroelectricity including incentives regarding:

1. Income Tax and other concession
2. Customs Duty and Sales Tax
3. Foreign Currency

1. Income Tax and other concession: Section 12 of the Electricity Act 1992 provides the following income tax incentives in relation to hydroelectricity production:

- ~ A person or a corporate body who is generating, transmitting or distributing hydroelectricity up to 1000 kilowatts shall be exempt from income tax.
- ~ A licensee who holds a licence for hydroelectricity generation, transmission or distribution shall be levied income tax at a rate 10 percent less than the corporate income tax rate.
- ~ A licensee who holds a licence for hydro electricity generation, transmission or distribution shall be exempted from income tax for fifteen years from the date of commencement of electricity generation, transmission or distribution for commercial purposes.
- ~ A licensee who operates and manages a hydroelectricity generation plant, transmission or distribution line owned by HMG, or who purchases the same from HMG, shall be exempted from the income tax for five years from the date of such undertaking.

- ~ A licensee who reinvest in a hydroelectricity generation plant, transmission or distribution line either to diversify, or to extend capacity by 25% or more, or to modernize the technology, or to develop a subsidiary industry, shall be entitled to deduct 50% of the cost of new fixed assets from the net income¹¹⁸ earned from such hydroelectricity generation, transmission or distribution line. Such deduction can be made in either a lump sum or in the instalment for 3 years.

2. Custom Duty and Sales Tax: Section 12 of the Electricity Act 1992 (2049 BS) provides that custom duties and sales tax shall be levied at the prevailing rate if the imported construction equipment, machine, tools and equipment required for repair and maintenance or spare parts for hydro electricity generation, transmission or distribution are available local industries.

However, if the materials imported are not produced in Nepal, only one percent custom duties shall be levied and no charge will be levied for either the import licence or sales tax.

3. Foreign Currency: Section 13 of the Electricity Act 1992 (2049 BS) provides that, where foreign currency has been invested in the generation, transmission or distribution of hydroelectricity, as a loan or share capital, HMG shall make available foreign currency, at the prevailing market rate for remittance of the investment, or repayment of the principal and interest of loan.

In addition to these, a licensee shall also enjoy such facilities as provided by prevailing law provided that the same facility under different laws cannot be applied in the same situation to double the benefit received.

6.3.5 Rights of Licensee

Once a licence has been issued, a licensee has certain rights and is entitled to certain financial benefits under the Electricity Act 1992 (2049 BS) and the Electricity Regulation 1993 (2050 BS).

Rule 20 of Electricity Regulation 1993 (2050 BS) provides that a licensee, who has obtained a licence for the generation, transmission and distribution of electricity, shall have right to use water resources, for works specified in the licence, to the extent of the water resources of the area specified in the licence.

6.3.6 Duties of Licensee

Under the Electricity Act 1992 (2049 BS) and the Electricity Regulations 1993 (2050 BS) a licensee has certain duties to:

1. Pay Royalties
2. Pay Licence Fee
3. Start Work
4. Submit Report
5. Protect Environment
6. Notify Public of Service Interruption
7. Duty to Renew Licence
8. Obtain New Licence

1. Duty to Pay Royalties: *Section 11* of the Electricity Act 1992 (2049 BS) requires a licensee to pay royalties to HMG as follows:

- ~ for up to fifteen years from the date of generation of electricity for commercial purposes, at a rate of NRs.100 for each installed kilowatt per annum plus 2% of the average tariff per unit (per kilowatt hour)
- ~ after 15 years, at a rate of NRs.1000 for each installed kilowatt per annum plus 10% of the average tariff per unit

2. Duty to Pay Licence Fee: *Rule 24* of the Electricity Regulation 1993 (2050 BS) imposes a duty to pay a licence fee as prescribed in Schedule 11. At the time of application 15% of the licence fee must be paid in the case a licence to survey and 33.33% must be paid in the case of a licence for one among generation, transmission or distribution of electricity.

3. Duty to Start Work: *Rule 21* of the Electricity Regulation 1993 (2050 BS) requires a licensee to start physical works within three months of obtaining licence in case of survey, and within one year in case of the generation, transmission or distribution of electricity and to inform the Department of Electricity Development of the same.

If the licensee is unable to start the works within time limit, the licensee may make application for extension stating reasons for the delay and the time limit may be extended if such reasons are deemed proper and sufficient.

4. Duty to Submit Report: Once work has start, the licensee, is required to submit a

progress report to the Department of Electricity Development in every six month until completion of the work.¹¹⁹

5. Duty to Protect Environment: The licensee has a duty to protect the environment while carrying out electricity generation, transmission or distribution, so that there will be no substantial adverse effects on the environment by way of soil erosion, flood, landslide or air pollution etc.¹²⁰ In relation to water pollution by hydropower see Chapter 8.1.5 below.

6. Duty to Notify Public of Service Interruption: The licensee has a duty to notify the public of any interruption to service for the purpose of repair and maintenance by publishing a notification at least 24 hour in advance of the interruption.¹²¹

7. Duty to Renew Licence: The licensee must renew its licence for the next period, one year before expiry of the term of the licence and pay a fee equal to 10% of the amount prescribed in Schedule 11 of the Electricity Regulation 1993 (2050 BS).¹²²

8. Duty to Obtain New Licence: A person or corporate body, generating, transmitting or distributing of electricity prior to the commencement of the Electricity Act 1992 (2049 BS), shall be required to submit an application within one year from the commencement of the Act.¹²³

6.3.7 Cancellation of Licence

Section 8 of the Electricity Act 1992 (2050 BS) provides that if the licensee performs any act contrary to the licence, Act or Regulations, or breaches the conditions of the licence, the Secretary or Department of Electricity Development may issue an order requiring the licensee to take steps to stop such act or make an improvement to comply with the licence, Act or Regulations within a certain time.

If the licensee fails to comply with the order within time, the Secretary of Ministry of Water Resource may cancel the licence. Prior to cancellation of the licence, the Secretary of the Ministry of Water Resource must give reasonable opportunity to the licensee to explain.¹²⁴

6.4 Role of the State

The public trust doctrine places HMG as trustee of all natural resources on behalf of the Nepali people.¹²⁵ As such the state is empowered to develop and manage natural resources, including hydropower, to serve the public interest. The Electricity Act 1992 (2049 BS) sets out the following functions, duties and powers of the state in relation to hydropower:

1. Licence Issue
2. Enter into an Agreement
3. Purchase Electricity
4. Ownership
5. Fix Quality Standards
6. Acquire Land and House
7. Generate and Develop Electricity
8. Develop Hydropower

1. Licence Issue:

HMG through the Department of Electricity Development has the power and a duty to issue a licence for the development of hydropower.¹²⁶

2. Enter into an Agreement:

HMG may enter into an agreement with a licensee in relation to the bulk purchase of electricity, the guarantee of investment capital or other financial and technical matters.¹²⁷

3. Purchase Electricity:

If a licensee wishes to sell electricity in bulk, HMG may purchase such electricity for connection in the national grid. The rate at which the electricity is purchased shall be determined on the basis of either a fixed percentage of avoided cost, or cost plus to generation cost, or a fixed percent of the average tariff of the Nepal Electricity Authority. When fixing the rate, calculations must show that the investment made by the licensee can be recovered within 25 years.¹²⁸

4. Ownership:

HMG shall own any land, buildings, equipment and structures related to an electricity generation plant or a transmission and distribution line after expiration of the term of the licence if they are established in more than 50% of total investment by a foreign national or corporate body.¹²⁹

5. Fix Quality Standards:

HMG may, by notification published in the Nepal Gazette, fix the quality standard for

electricity generated, transmitted and distributed pursuant to the Electricity Act 1992.¹³⁰

6. Acquire House or Land:

HMG has the power to acquire or use house and land for the purpose of generation, transmission or distribution of electricity.¹³¹ More details on acquisition of property can be found in Chapter 7.

7. Generate and Develop Electricity:

Section 34 of the Electricity Act 1992 (2049 BS) states that nothing mentioned in the Act shall be deemed to prevent HMG from generating or to developing electricity on its own.

8. Develop Hydropower:

The public trust doctrine implies a duty on the state to develop hydropower for the benefit of the people. *Section 36* of the Electricity Act provides that, in order to develop hydroelectricity, encourage private sector entrepreneurs to develop hydroelectricity, and to follow up works relating to hydroelectricity development, a hydroelectricity unit shall be constituted in the Minister of Water Resources.

6.5 Royalty sharing with local bodies

HMG has begun disbursing 10 per cent of the royalties it earns from electricity sales to the affected DDC as per the Local self Government Act and Regulation.¹³² The Hydropower Policy 2001 (2058 BS) contains provision to disburse one percent royalties obtained from the electricity sales to the affected VDC to use for

rural electrification. An Ordinance was passed and issued in January 2004 amended some provision of Local Self Governance Regulation relating to revenue sharing. According the new amendment, the DDC where power house is made shall be entitled to obtain 12% of

royalty of the electricity sale from the government. Thirty percent of royalty shall be allocated to concerned Development Region in which electricity is produced. By making this provision, HMG has recognized the notion of local right.

Chapter **7** **Acquisition and Compensation**

7.1 The Right to Property

Article 17 of the Constitution of the Kingdom of Nepal 1990 (2047 BS) guarantees the right to property as a fundamental right. However this right is not absolute and the State may acquire property, in the public interest, subject to the provision of compensation.

Article 17 provides that:

- (1) *All citizens shall, subject to the existing law, have the right to acquire, own, sell or otherwise dispose of property.*
- (2) *The State shall not acquire, requisition or create any encumbrance on the property of any person except in public interest.*
- (3) *The basis of compensation and procedure for awarding compensation for any property requisitioned, acquired or encumbered by the State in the public interest, shall be as prescribed by law.*

7.2 The Right to Acquire Property

Article 17 of the Constitution gives the State the right to acquire property in the public interest and subject to compensation.¹³³ This right is provided for more specifically and for certain purposes only by legislation. Sec 3 of Land Acquisition Act 1977 (2034 BS) also empower government to acquire land for the public purpose. The Act also provides that

government may avail land to any organization on the request. In this case, the Act requires that the compensation and other expenditure must be paid by such organization.¹³⁴

7.2.1 Acquisition for the Utilization of Water Resources

Section 16 of the Water Resource Act 1992 (2049 BS) gives HMG the right to acquire or utilize the house and land of others on the application of the licensee, for the following purposes:

1. for the construction of a dam or barrage,
2. for the construction of a canal, ditch or tunnel
3. for the construction of a water tank, on the surface or underground, or for laying pipes
4. for the construction of a pond or installation of a water distribution centre
5. for performing any other necessary work related to water resource development

Section 16(3) further provides that HMG may prohibit the use of premises or land located in an area where such construction work is taking place, or a certain distance from such construction work, or for any other propose. HMG or the licensee must pay compensation,

as fixed by the compensation fixation committee, to the concerned person for any damage or loss caused by such prohibition.

Rule 33 of the Water Resource Regulation 1992 (2050 BS) specifies the circumstances in which such prohibition can be invoked under *Section 16(3)* of the Act as follows:

- ~ HMG may prohibit the use of houses and land situated within the area of the project taking into account the type of project, the project structure and the capacity of the project, etc.
- ~ HMG shall publish a public notice regarding the prohibition at the main places of the concerned project area, project office, DDC, District Administration Office or Land Revenue Office.

7.2.2 Acquisition for Drinking Water and Sanitation

Section 16 of Nepal Water Supply Corporation Act 1989 (2046 BS) gives HMG the right to acquire land and provide land to the NWSC for the following purposes:

1. construction of a reservoir
2. construction of structures relating to drinking water and sewerage
3. other works to achieve the objective of the Corporation

Similarly, the Drinking Water Regulation 1998 (2055 BS) also contains provisions regarding the acquisition of land and the prohibition of use of land which are similar to those in the Water Resource Regulation 1993 (2050 BS) discussed above.

7.2.3 Acquisition for Hydropower

Section 33 of the Electricity Act 1992 (2049 BS) gives HMG or a licensee the right to acquire or prohibit use of land or house for the purpose of generation, transmission or distribution of electricity.

Rule 66 of Electricity Regulation 1993 (2050 BS) gives HMG the right to prohibit the use of land at or around a project construction site, in relation to generation, transmission or distribution of electricity, by publishing a public notice in Nepal Gazette.

If a licensee wishes to acquire land or house s/he must submit an application to HMG. After assessing the application HMG may make the house or land available to the licensee or the HMG may prohibit the use of house or land located a prescribed distance from a place where construction work is being carried out.

HMG or the licensee must pay compensation to an aggrieved person for any damage or loss caused by such prohibition or acquisition.

The detail provisions and procedures for the acquisition of land are incorporated in Land Acquisition Act 1977 (2034 BS). The Act has incorporated provision relating to the authority to decide and preliminary requirement for land acquisition, initiation of preliminary process, compensation, notice of land acquisition, complain of land owner, compensation determination, transfer of land ownership, cancellation of record from land revenue office etc. This legislation is comprehensive

legislation applicable for land acquisition applies to water resource development sector too.

7.3 The Right to Compensation

The Constitution of the Kingdom of Nepal 1990 (2047 BS) guarantees right to be compensated for property acquisition. *Article 17(3)* provides that:

The basis of compensation and procedure for awarding compensation for any property requisitioned, acquired or encumbered by the State in the public interest, shall be as prescribed by law.

Compensation is also provided for in the Water Resource Act 1992 (2049 BS), the Water Resource Regulation 1993 (2050 BS) and the Drinking Water Regulation 1998 (2055 BS), and also by the Electricity Act 1992 (2049 BS) and Electricity Regulation 1993 (2050).

Section 10(3) of the Water Resource Act 1992 (2049 BS) provides that HMG shall pay compensation as prescribed for land, buildings, and equipment or structures relating to utilization of water resources acquired by HMG. The amount of compensation shall be determined on the basis of market price (after deducting wear, tear and depreciation).

Similarly, *Rule 34* of the Water Resource Regulation 1993 (2050 BS) provides that:

1. The amount of compensation to be given

to an aggrieved person due to prohibition or acquisition shall be determined by the Compensation Fixation Committee.

2. Compensation shall be given to the concerned person immediately, except if additional prohibition on the use of the house and land is to be made.

Rule 16 of the Drinking Water Regulation 1998 (2055 BS) also provides that the supplier shall have to pay compensation to an aggrieved person who has sustained loss due to prohibition imposed by HMG on using land or house for the purpose of the protection of construction work relating to project development and utilization by licensee.

Similarly, *Section 33* of the Electricity Act 1992 (2049 BS) and *Rule 87* of the Electricity Regulation 1993 92050 BS) provides that:

1. HMG or licensee shall pay compensation to the concerned person for land, building and equipment acquired, requisitioned or used by an electricity generation project.¹³⁵
2. HMG or the licensee shall pay compensation, as prescribed to the concerned person for damage or loss due to the prohibition from using house and land situated within the area of a project or a fixed distance from the site of a project for any specified purpose.
3. The right to be compensated shall only arise in relation to construction works relating to electricity projects which are constructed after the commencement of this Regulation.

4. Compensation shall not be paid if:
 - i. the land in question is underneath the service line installed for the purpose of supplying electricity to the land owner
 - ii. the houses are attached to each other in a densely populated urban or rural area and the main line passes through the wall of one house to another house to connect electricity

7.4 Compensation Fixation Committee

The amount of compensation to be given to an aggrieved person for the requisition, acquisition or use of property is determined by different Compensation Fixation Committees provided for by the Water Resource Regulation 1993 (2050 BS), the Drinking Water Regulation 1998 (2055 BS) and the Electricity Regulations 1993 (2050 BS).

Rule 35 of the Water Resource Regulation provides for two Compensation Fixation Committees for acquisitions for different reason:¹³⁶

1. **Compensation Fixation Committee for Acquisition etc by HMG.** As per sec 10 (3) of the Water Resource Act 1992 (2049 BS), HMG can acquire or own land/house, equipment or structures relating to the use of water resource for wide public purpose. For the fixation of compensation in such cases, the Chairman of the Committee shall be a person nominate by HMG and the members shall include a representative of

the concerned office of the project related to the utilization of the water resources and an expert related to water sources as nominated by HMG.

2. **Compensation Fixation Committee for Acquisition etc by a Licensee or HMG.** To determine the amount of compensation for prohibition on use and acquisition of land or house by HMG or Licensee, the committee comprises Chairman and members same as above and in addition members shall include the owner of the immovable property sustaining loss or his representative, a representative from the District Land Revenue Office where the property is situated and a representative from the concerned VDC or Municipality where property is situated.

The Compensation Fixation Committee shall fix the amount of compensation by evaluating the actual loss or damage.

Rule 44 of the Drinking Water Regulation 1998 (2055 BS) also provides for the formation of a Compensation Fixation Committee and sets out the procedure for assessment of the amount of compensation as follows:

- ~ The Compensation Fixation Committee shall consist of the Chairman being the Chief District Officer and member representatives of the District Drinking Water Office and District Irrigation Office.
- ~ The Compensation Fixation Committee shall fix the amount of compensation by

evaluating the actual loss or damage caused to the land or house owner.

- ~ The compensation amount fixed by Compensation Fixation Committee shall be acceptable to both parties.
- ~ The licensee shall have to provide the amount of the compensation fixed by the Committee within 30 days from the date of fixation.

Rule 88 of the Electricity Regulation 1993 (2050 BS) also establishes a Compensation Fixation Committee to fix compensation in cases of acquisition of land, house and equipment of a hydropower generation plant of less than 1000 kilowatts by HMG. Nationalisation of land, house and equipment of a hydropower generation plant of more

than 1000 kilowatts is prohibited by Act.¹³⁷ The Committee comprises a chairman designated by HMG, and members including a concerned person or representative of the licensee and an electricity expert as designated by HMG.

If HMG or a licensee acquires or prohibits to use house or land for the generation of electricity, *Rule 88* provides that the following members are added to the committee: the property owner who has sustained loss or his representative, a representative from the concerned land revenue office and a representative from the VDC or Municipality. The Compensation Fixation Committee shall fix the amount by evaluating the actual loss or damage.

Chapter **8** **Water Pollution**

8.1 Water Pollution Control Law

Water related legislation in Nepal in relation to drinking water, sanitation, irrigation and hydropower all make provision for the prevention and control of water pollution. Many of the provisions relating to water pollution have been discussed in the preceding Chapters however the main provisions are summarised below.

8.1.1 Pollution of Water Resources

The Water Resource Act 1992 (2049 BS)¹³⁸ contain provisions for the prevention and control of pollution of water resources. *Section 19* provides that:

No one shall pollute water resources by placing litter, industrial waste, poisons, chemicals or other toxicants to the effect that it exceeds the pollution tolerance limit.

The “pollution tolerance limit” for water resources shall be prescribed by HMG, by way of a public notice published in the Nepal Gazette.

The prescribed officer (prescribed in the Nepal Gazette) may examine, or cause to examine,

a water resource in order to determine whether or not the water resource has been polluted and if pollution tolerance limit has exceeded.¹³⁹

Section 20 of the Water Resource Act 1992 (2049 BS) further provides that, in utilizing water resources, the user must ensure that there is *no substantial adverse effect on the environment* such as soil erosion, flood, landslide or other effect.

Section 22 of the Water Resource Act 1992 (2049 BS) provides that any person or corporation who pollutes water resources will incur a fine of up to NRs.5000 and must pay compensation to any person sustaining a loss as a result of the pollution.

The Water Resource Regulation 1993 requires an Environment Impact Assessment (EIA) to be submitted with the application for a licence for the utilization and survey of water resources.¹⁴⁰

The Local Self Governance Act 1999 (2055 BS) establishes environment protection and water resource conservation (including the preservation of water sources) as an important duty of Local bodies (see Chapter 3.3 for

details).¹⁴¹ In particular it allows local bodies to impose a fine of up to NRs.15 000 for the dumping of solid waste in a water body (other than in a designated place) plus expenses incurred in removing the waste.¹⁴²

8.1.2 Pollution of Drinking Water

The Nepal Water Supply Corporation Act 1989 (2046 BS) and the Drinking Water Regulation 1998 (2055 BS) contain provisions for the prevention and control of pollution of drinking water. *Section 18* of the Nepal Water Supply Corporation Act 1989 (2046 BS) prohibits the pollution of drinking water. *Section 19* of the Act provides a penalty of up to NRs.10 000 for violation of *Section 18*.

Section 5 of the Nepal Water Supply Corporation Act 1989 (2046 BS) also creates a duty in the Nepal Water Supply Corporation to control the pollution of drinking water.

Rule 26 and *27* of Drinking Water Regulation 1998 (2055 BS) also prohibits a drinking water supplier from doing any work or constructing any structure which will pollute the source of the water resource or have a *substantial adverse impact on the environment*. Similarly,

Rule 25 of the Regulation imposes a duty on a water supplier to maintain a determined quality of water supplied.

8.1.3 Pollution of Water by Solid Waste

The Solid Waste (Management and Resource Mobilization) Act 1987 (2044 BS) contains provisions which control the adverse impact on

the environment caused by solid waste pollution. The Act establishes the SWMRMC as the body responsible for the collection, transportation and disposal of municipal solid waste in safe and environmental friendly manner (See Chapter 4.3 for details). In addition, the Local Self Governance Act 1999 (2055 BS) and Regulation 1999 (2056 BS) gives the local municipality full responsibility for the management and handling of the solid waste in the municipality.¹⁴³

The Solid Waste Management and Resource Mobilization Act 1987 provide that the SWMRMC may:¹⁴⁴

In case of the air, soil or water pollution resulting from solid wastes affects, or is likely to adversely affect, human beings, birds, animals, plants and other living creatures in any area or public place or any inhabited area, the Centre may make necessary arrangements for the eradication of such pollution.

The Solid Waste (Management and Resource Mobilization) Act 1987 (2044 BS) also prohibit the following activities:¹⁴⁵

1. Throwing, leaving or dumping gas or liquid of any kind in other than pots, containers or places prescribed for the solid waste.
2. Allowing the spill over from the septic tanks to escape carelessly.
3. Throwing, leaving or releasing carelessly waste from an industrial establishment in any street or public place.

In addition, the SWMRC may issue orders prohibiting the disposal of solid waste including keeping, throwing, burning, burying or otherwise storing, disposing of, or destroying harmful solid waste in any public or any private place considering the welfare and convenience of the public.¹⁴⁶

8.1.4 Pollution by Irrigation

Rule 39(1) (d) of the Irrigation Regulation 2000 (2056 BS) relates to the protection of an irrigation structure and prohibits all people including irrigation service users from the pollution of water resources in the irrigation structure.

8.1.5 Pollution by Hydropower

The Electricity Act 1992 (2049 BS) prohibits any *substantial adverse effect* on the environment by way of soil erosion, flood, landslide or air pollution etc while generating, transmitting or distributing electricity.¹⁴⁷

Similarly, the Electricity Regulation 1992 requires an Environmental Impact Assessment (EIA) to be lodge with the application for a licence for use of water resource for hydropower.

8.2 Industrial Pollution

Pollution generally, including industrial pollution is managed by the Environment Protection Act 1996 (2053 BS), the Environment Protection Regulation 1997 (2054 BS) and the Industrial Enterprises Act 1992 (2049 BS). The Environmental Protection Act and Regulation are the umbrella legislation for all kinds of pollution.

8.2.1 Prohibition on Industrial Pollution

Rule 15 of the Environment Protection Regulation 1997 (2054 BS) prohibits industrial pollution as follows:¹⁴⁸

No person shall emit, or cause the emission of noise, heat, radio-active material and waste from any mechanical means, industrial establishment or any other place in contravention of the prescribed standards set by the Ministry by notice published in the Nepal Gazette.

8.2.2 Pollution Control Certificate

To control industrial pollution, the Environment Protection Regulation 1997(2054 BS) requires certain industries to obtain a Pollution Control Certificate.¹⁴⁹

There are two types of Pollution Control Certificates:

1. Provisional
2. Permanent

1. Provisional: Rule 16(1) of the Environment Protection Regulation 1997 (2054 BS) provides that:

~ All industries listed in Schedule 7 which are currently in operation are required to apply to the Ministry of Environment and Population within 90 days of the date of commencement of this rule, or in the case of such industries which are not currently in operation, within 60 days from the date of production, for a Provisional Pollution Control Certificate.

- ~ The Ministry of Environment and Population will assess the application and during its investigations, will consult with the Village Development Committee or Municipality where the industry is to be operated.
- ~ If it is found that the operation of the industry shall cause no *substantial adverse impact on the environment*, or if there is a possibility of reducing or controlling such adverse impact, the Ministry of Environment and Population shall issue a Provisional Pollution Control Certificate, valid for one year, within 90 days of receipt of the application.

However, if the industry has already consulted with the Village Development Committee or Municipality in the course of the preparation of the Environmental Impact Assessment or Initial Environment Examination, the concerned body shall not be required to consult with the Village Development Committee or Municipality again.¹⁵⁰

The Provisional Pollution Control Certificate shall be renewed every year.

2. Permanent: *Rule 16(3)* of the Environment Protection Regulation 1997 provides that a Permanent Pollution Control Certificate is required in cases where the standards of sound, heat, nuclear radiation and waste disposal for any industry have been determined by notice published in the Nepal Gazette. Industries, to which the standard applies, having been examined by the designated laboratory, within 6 months from

the date of determination of such standards, must obtain a Permanent Pollution Control Certificate which is valid for three years.

Conditions of Certificate

Rule 16(4) provides that while issuing the Provisional or Permanent Pollution Control Certificate, the Ministry of Environment and Population may, as required, prescribe all or any of the following conditions to be complied by such industries:

- ~ to install within the stated time the equipment required to reduce or control pollution
- ~ to use appropriately the installed pollution control equipment
- ~ to operate the industries at the stated time only
- ~ to take specific measures to control any activities of any industry which generate pollution carried out on the premises
- ~ to take specific measures to control the activities of any industry which generate pollution outside the premises of the industry
- ~ to make available the equipment necessary for monitoring activities at the times fixed
- ~ other necessary condition as per the nature of the industries

The permanent pollution control certificate shall be renewed every three years.

8.2.3 Permission to Establish an Industry

The Industrial Enterprise Act 1992 (2049 BS) requires that certain industries listed in

Annex 2, which may cause a significant adverse impact on the security, public health and environment, are required to obtain permission for their establishment, extension and diversification. Following is the list of such industries:¹⁵¹

Cigarette, modern leather tanning, beer and alcohol, sugar production, pulp and paper, cement, textile, washing and dyeing, bitumen, chemicals, fertilizer, pesticides, lubricating oil, producing foam, carpet washing, soap, electroplating, photo processing, tyre, tubes, LP gas, petroleum related mineral based large industries, stone crossings, forest based medium and large industries, paints and bricks industries.

Section 15 of the Industrial Enterprise Act 1992 (2049 BS) provides that a reduction of up to 50 % of taxable income will be granted to an industrial enterprise that invests in a processor or equipment, which has the objective of controlling pollution or which may minimize the effect on the environment.¹⁵²

8.4 Environmental Pollution

8.4.1 Prohibition on Environmental Pollution

Environmental pollution is mainly governed by the Environment Protection Act 1996 (2054 BS) and the Environment Protection Regulation

1997 (2054 BS). Section 7(1) of the Act prohibits environmental pollution as follows:¹⁵³

Nobody shall create pollution in a manner that has a significant adverse impact on the environment, or is likely to be hazardous to life and health of people, or dispose of, or cause to be disposed, sound, heat, radioactive rays and waste from any mechanical device, industrial enterprises, or other place contrary to the prescribed standards.

Section 7 further provides that:

- ~ If it appears that anyone has carried out any act contrary to sub-section (1) and resulting in significant adverse impact to the environment, the concerned agency may prescribed necessary terms in regard thereto or may prohibit the carrying out of such an act.
- ~ If it appears that the use of any substance, fuel, tool or device has caused, or is likely to cause, significant adverse impact on the environment, the Ministry of Population and Environment may, by a notification in the Nepal Gazette, forbid the use of such substance, fuel, tool or device.

The Local Self Governance Act 1999 (2055 BS) also establishes environment protection as a duty of local bodies, in particular it is the duty of the VDC and Municipality to develop and implement various programs on environmental

protection¹⁵⁴ and the role of the DDC to protect and promote the environment¹⁵⁵.

8.4.2 Initial Environment Examination and Environmental Impact Assessment

Section 3 of the Environmental Protection Act 1993 (2053 BS) provides that a proponent (a person or body who wish to carryout EIA or IEE) must conduct an Initial Environmental Examination (IEE) and an Environmental Impact Assessment (EIA) of a proposed development project. The IEE and EIA are required for many purposes including obtaining a licence to use

most water resources. They provide an important mechanism for the prevention and control of pollution.

The Environment Protection Regulation 1997 (2054 BS) lists the types of development projects that requires an Initial Environmental Examination and an Environmental Impact Assessment in Schedules 1 and 2 respectively.¹⁵⁶ The table below shows a summary of water related development projects and whether an IEE or EIA must be conducted.

Table 2 Water Related Projects Requiring IEE and/or EIA as Per Schedule 1 and 2 E Environment Protection Regulation 1997

Use of Water Resources Sector	IEE Required	EIA Required
Electricity Generation	1-5 megawatts	over 5 megawatts
New Irrigation System		
~ Terai	25-2000 hectares	over 2000 hectares
~ mountain and hill area	10-200 hectares	over 200 hectares
~ hill valley	15-500 hectares	over 500 hectares
Restoration of Irrigation System		
~ Terai	over 500 hectares	
~ mountain and hill area	over 100 hectare	
~ hill valley	over 200 hectare	
Flood Control by Constructing Dam in the Terai	Required	
River Control	More than 1 kilometre	
Water Resource Development which Displaces People Permanent Residents)	Up to 100 people displaced	More than 100 people displaced
Construction of Multiple Purpose Reservoir		Required

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Channelling Water from one Watershed to Another		Required
Drinking Water Sector		
Drinking Water Supply	Population 2000-20000	Population above 20000
Rain Water Collection and Use of Spewing Wetland	Up to 200 hector	More than 200 hectors
Supply of Water in Dry Season from Surface Water Source	Up to 1 cubic feet	More than 1 cubic feet
Ground Water Recharge	50% of total aquifer	More than 50% of total aquifer
Water Supply Project which Displace People	Up to 100 people displaced	More than 100 people displaced
Construction of Tunnel for Channelling Drinking Water	Up to 1 km	More than 1 km
Settlement of People Upstream of Water Source	Settlement of up to 500 people	Settlement of more than 500 people
Pumping and Processing Water to use for Electricity	Connection of electricity more than 20 Kilovolts and use more than 1 Megawatt	
Connection of New Source to Supply Water	Population 10,000-100,000	Population more than 100, 000
Water Treatment	10-25 litre per second	More than 25 litre per second
Over Mining of Ground Water		Required
Solid Waste Management	Population 2000-10,000	Population above10,000
Land Filling of Municipal Garbage	100-1000 ton annually	More than 1000 ton annually
Works Relating to Resource Recovery and Transfer Station	Extended in up to 3 hector	Extended in more than 3 hectors
Selection, Segregation, Disposal, Reuse through Chemical, Mechanical and Biological Process	Extended in up to 2 hectors	Extended in more than 2 hectors
Sanitation	Required	
Harmful Waste		Required

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- ¹ Art 1, Universal Declaration of Human Rights 1948
- ² Art 3, *id*
- ³ Art 11, International Covenant on Economic, Social and Cultural Right, 1966
- ⁴ Art 14, Protocol to the Geneva Convention Relating to the Protection of Victims of Non International Armed Conflict 1977.
- ⁵ Sec 45, Water Resource Act 1992 (2049 BS)
- ⁶ Final Approved Version of Water Resource Strategy Nepal, Ministry of Water Resource, p 1.
- ⁷ National Water Supply Sector Policy 1998 (2055 BS), Point 2.5
- ⁸ See 3.1.B Rural Water Supply and Sanitation National Policy 2004 (2060 BS)
- ⁹ Surya Dhungel v. Godavari Marble Industries and others, 37 NKP, Golden Jubilee Special Issue, (1995) (2052 BS) p.139.
- ¹⁰ Prakash Mani Sharma v. Nepal Water Supply Corporation, Writ No. 2237, 1990 (2047 BS) SC decided in July 2001 (Ashadh 26 2058 BS).
- ¹¹ Sec 3, Essential Commodity Protection Act 1955 (2012 BS)
- ¹² Sec 7, *id*
- ¹³ Sec 4, *id*
- ¹⁴ Sec 3, *id*
- ¹⁵ Preamble, *id*
- ¹⁶ Public Trust Doctrine and Sec 4(3), Water Resource Act 1992 (2049 BS)
- ¹⁷ Rule 30, *id*
- ¹⁸ Sec 4, Water Resource Act 1992 (2049 BS)
- ¹⁹ Sec 8, *id*
- ²⁰ Sec 8 Water Resource Act 1992 (2049 BS)
- ²¹ Rule 10 and 12, Drinking Water Regulation 1998 (2055BS)
- ²² Rule 12 (2) Water Resource Regulation 1993 (2050)
- ²³ Rule 8, *id*
- ²⁴ Rule 10 and 2(g) and 49, Drinking Water Regulation 1998 (2055 BS)
- ²⁵ Rule 8, Water Resource Regulation 1993 (2050 BS)
- ²⁶ Rule 10 and 12 Drinking Water Regulation 1998 (2055 BS)
- ²⁷ Schedule 5, *id*
- ²⁸ Rule 12, Drinking Water Regulation 1998 (2055 BS)
- ²⁹ Rule 13, *id*
- ³⁰ Rule 11 and 14, *id*
- ³¹ Section 8 (2), Water Resource Act 1992 (2049 BS)
- ³² Rule 15, Drinking Water Regulation, 1998 (2050 BS)
- ³³ Rule 21, Water Resource Regulation, 1993 (2050 BS)
- ³⁴ Rule 22, *id*

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- ³⁵ Rule 32, *id*
- ³⁶ Rule 22, Drinking Water Regulation 1998 (2055 BS)
- ³⁷ Rule 23, Water Resource Regulation, 1993 (2050 BS)
- ³⁸ Rule 17, Drinking Water Regulation 1998 (2055 BS)
- ³⁹ Rule 19, *id*
- ⁴⁰ Rule 21, *id*
- ⁴¹ Rule 4 Drinking Water Regulation 1998 (2055 BS)
- ⁴² Rule 5 and 6, Drinking Water Regulation 1998 (2055 BS)
- ⁴³ Rule 7, *id*
- ⁴⁴ Rule 8, *id*
- ⁴⁵ Rule 37 Drinking Water Regulation 1998 (2055 BS) and Section 18, Nepal Water Supply Corporation Act, 1998 (2046 BS)
- ⁴⁶ *Mangal* is the Nepali word for the point where the household sewerage pipe connects with the main sewerage system channel.
- ⁴⁷ Rule 2 (h), Drinking Water Regulation 1998 (2055 BS)
- ⁴⁸ Rule 31, *id*
- ⁴⁹ Rule 25, *id*
- ⁵⁰ Rule 46, *id*
- ⁵¹ Rule 34, *id*
- ⁵² Rule 35, *id*
- ⁵³ Sec 24, Nepal Water Supply Corporation Act 1989 (2046 BS)
- ⁵⁴ Sec 6.5, *id*
- ⁵⁵ Sec 17.3, *id*
- ⁵⁶ Sec 55 (j), Local Self Governance Act 1999 (2055)
- ⁵⁷ Sec 68, *id*
- ⁵⁸ Sec 58, *id*
- ⁵⁹ Sec 70, *id*
- ⁶⁰ Sec 88, *id*
- ⁶¹ Sec 93, *id*
- ⁶² Sec 94, *id*
- ⁶³ Sec 96, *id*
- ⁶⁴ Sec 101, *id*
- ⁶⁵ Sec 145, *id*
- ⁶⁶ Sec, 134, *id*
- ⁶⁷ Sec 145, *id*
- ⁶⁸ Sec 208, *id*
- ⁶⁹ Sec 214, *id*
- ⁷⁰ Sec 215 & 216, *id*
- ⁷¹ Sec 218, *id*
- ⁷² <http://.yomari.com/dwss/function/html/>
- ⁷³ Point 3.1.B, Rural Water Supply and Sanitation National Policy 2004
- ⁷⁴ Point 2, *id*
- ⁷⁵ Final Approved Version of Water Resource Strategy, 2002 (2059 BS) Nepal, Ministry of Water Resources, Point 1; National Water Supply Sector Policy 1998 (2055 BS), Point 2.5; Rural Water Supply and Sanitation National Policy 2004 (2060 BS), Point 3.5.

- ⁷⁶ Local Self Governance Act 1999 (2055 BS) and Local Self Governance Regulation 1999 (2056 BS) and Solid Waste Management and Resource Mobilization Act 1987 (2044 BS)
- ⁷⁷ Nepal Water Supply Corporation Act 1989 (2046 BS)
- ⁷⁸ Sec 145, Local Self Governance Act 1999 (2055 BS)
- ⁷⁹ Sec 165, *id*
- ⁸⁰ Sec 3, Solid Waste (Management and Resource Mobilization) Act, 1987 (2044 BS)
- ⁸¹ Rule 2.7, Solid Waste (Management and Resource Mobilization) Regulation, 1989 (2046 BS)
- ⁸² <http://www.moppw.gov.np/activity/html/>
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- ⁸⁴ Sec 145, Local Self Governance Act 1999 (2055 BS)
- ⁸⁵ Sec 3.2, Solid Waste Management and Resource Mobilization Act 1987 (2044 BS)
- ⁸⁶ Sec 28(2) and 96(3) Local Self Governance Act 1999 (2055 BS)
- ⁸⁷ Sec 28, *id*
- ⁸⁸ Muluki Ain 1963 (2020 BS), Chapter on Land Cultivation (*Jagga Abad Garneko*)
- ⁸⁹ Alic Jacob & S.N.Singh, Law Relating to Irrigation, N M Tripathi Pvt. Ltd, Bombay, 1972, p. 7
- ⁹⁰ Sec 7, Water Resource Act 1992 (2049 BS)
- ⁹¹ No.1, *Jagga Abad Garneko*, Muluki Ain 1963 (2020 BS)
- ⁹² No.3, *Jagga Abad Garneko*, *id*
- ⁹³ No. 3, *Jagga Abad Garneko*, *id*
- ⁹⁴ Rule 3(1), Irrigation Regulation 2000 (2056 BS)
- ⁹⁵ Rule 5(2), *id*
- ⁹⁶ Rule 18, *id*
- ⁹⁷ Rule 18 (2), *id*
- ⁹⁸ Rule 19, *id*
- ⁹⁹ Rule 22 *id*
- ¹⁰⁰ Rule 23, *id*
- ¹⁰¹ Rule 24, *id*
- ¹⁰² Rule 11, *id*
- ¹⁰³ Rule 31, *id*
- ¹⁰⁴ Rule 43 and 44 *id*
- ¹⁰⁵ Rule 26, *id*
- ¹⁰⁶ Article 12(2)(e), Constitution of the Kingdom of Nepal
- ¹⁰⁷ Sec 3, Electricity Act 1993 (2050 BS) and point 6.2 Hydropower Policy 2001 (2058 BS)
- ¹⁰⁸ Sec 7, Water Resource Act 1992 (2049 BS)
- ¹⁰⁹ Sec 3, Electricity Act 1992 (2049 BS)
- ¹¹⁰ Rule 4, Electricity Regulation 1993 (2050 BS) (The Regulation provides that application for obtaining license must be submitted to the Electricity Development Centre. The Centre is renamed as Department of Electricity Development by the decision of HMG in 2056/10/24 (February, 2000). However government has not made any formal amendment in the Regulation.)
- ¹¹¹ Sec 4 (3), *ibid*
- ¹¹² Rule 12, *id*
- ¹¹³ By way of reports either Environmental Impact Assessment of Initial Environmental Examination as specified in the Environment Protection Act 1996 (2053 BS), see Chapter 8.
- ¹¹⁴ Sec 4, Electricity Act 1992 (2049 BS) and Rule 15, Electricity Regulation 1993 (2050 BS)
- ¹¹⁵ Rule 15, Electricity Regulation 1993 (2050 BS)

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- ¹¹⁶ Rule 8 and 17, *id*
- ¹¹⁷ Sec 4, Electricity Act 1992 and Rule 15, Electricity Regulation 1993 (2050 BS)
- ¹¹⁸ Net income refers to net income for income tax purposes.
- ¹¹⁹ Rule 21, *id*
- ¹²⁰ Sec 24, Electricity Act 1992 (2049) and Rule 25, Electricity Regulation 1993 (2050 BS)
- ¹²¹ Sec 27, Electricity Act 1992 (2049 BS)
- ¹²² Rule 25, Electricity Regulation 1993 (2050 BS)
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- ¹²⁵ The public trust doctrine is drawn from ancient Justian law and the common law doctrine of *res commun* (ie. things common to all are property of none). Chatrapati Singh, Water Right and Principle of Water Resource Management, N.M. Tripathi Pvt. Ltd. Bombay, 1991, p 76.
- ¹²⁶ Sec 4, Electricity Act 1992 (2049 BS)
- ¹²⁷ Sec 9, *id*
- ¹²⁸ Sec 21, *id*
- ¹²⁹ Sec 10, *id*
- ¹³⁰ Sec 23, *id*
- ¹³¹ Sec 33, *id*
- ¹³² Sec 220, Local self Government Act 1999 (2055 BS), Rule 211 along with Schedule 26, Local Self Government Regulation 1999 (2056 BS)
- ¹³³ Article 17(2), the Constitution of the Kingdom of Nepal 1990 (2047 BS)
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- ¹³⁵ Sec 33, Electricity Act 1992
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- ¹⁴³ Supported by the decision of the Ministry of Local Development in April 1998 (or Nepali Calendar-12 Chaitra 2054 B.S)
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- ¹⁴⁵ Sec 5, *id*
- ¹⁴⁶ Sec 4.3, *id*
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- ¹⁵³ Sec 7(1), Environment Protection Act 1996 (1996 (2053 BS)
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- ¹⁵⁶ Rule 3, Environment Protection Regulation 1997 (2054 BS)



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