



NEPAL RENEWABLE ENERGY PROGRAMME



GOVERNANCE IN THE CONTEXT OF FEDERALISATION: A BRIEF OVERVIEW OF ENERGY SECTOR

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Acronyms

AEPC	Alternative Energy Promotion Centre
BAT	Best Available Technologies
CITA	Common Integrated Target and Activities
ESS	Energy Storage System
FG	Federal Government
FY	Fiscal Year
GESI	Gender Equality and Social Inclusion
GIS	Geographic Information System
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GoN	Government of Nepal
HR	Human Resources
ISPS	Institutional Solar Photovoltaic System
LG	Local Government
MEP	Municipal Energy Plan
MoEWRI	Ministry of Energy, Water Resources and Irrigation
MoF	Ministry of Finance
MoPID	Ministry of Physical Infrastructure Development
MuAN	Municipal Association of Nepal
MW	Mega Watt
NARMIN	National Association of Rural Municipality in Nepal
NNRFC	National Natural Resource and Fiscal Commission
NPC	National Planning Commission
NPR	Nepalese Rupees
O&M	Organization and Management

PECC	Provincial Energy Coordination Committee
PEP	Provincial Energy Plan
PEU	Productive End Use
PG	Provincial Government
PPC	Province Planning Commission
PV	Photovoltaic
QAP	Quality Assurance Plan
RE	Renewable Energy
RM	Rural Municipality
UM	Urban Municipality

SUMMARY

The Constitution of Nepal 2015 elaborated three elements of federalism: i) administrative, ii) political and iii) fiscal. To strengthen the administration, the Civil Servant Adjustment Regulation 2019 proposed an adjustment of over 86,000 civil servants across Federal, Provincial and Local Governments. The political element replaces the unitary system with a federal structure composed of 7 provinces and 753 local governments consisting of urban and rural municipalities. The fiscal element defines the division of governmental functions related to fiscal rights and power at the three levels of government.

The elaboration of these three elements of federalism have also meant significant changes in the roles and responsibilities for renewable energy development in Nepal. In 1996, the Government of Nepal established the Alternative Energy Promotion Centre (AEPC) for developing and promoting alternative energy and up until 2015 was the premier agency representing the government in renewable energy. However, the new Constitution of Nepal, 2015 provided the local governments with the rights, roles and power for alternative energy, small hydro and irrigation. These roles were further specified and elaborated in the Local Government Operation Act 2017 which defined the size of small hydro (up to 1 MW) whereby the local governments can perform the complete tasks from licensing to operation.

At the provincial level, as per the Provincial Business Allocation Rules 2017, the Ministry of Physical Infrastructure Development is responsible for research, policy, planning, implementation, maintenance, coordination, investment promotion, and regulation of energy. At the federal level, AEPC continues to be seen as the focal agency for renewable energy but with a primary role to increase the capacity and work with sub-national entities, private sector and institutions to meet national goals. Under current context, there is a need for AEPC to design a new strategy in terms of vision, objective, structure, modalities and a clear plan towards transition.

To understand all these further, this paper analyses functional divisions in the RE sector between federal, provincial and local governments in the core areas of legislation, policy and planning, regulation, standards and resource mobilisation, including foreign grants and loans. Four major issues were identified related to i) provincial and local governments systems and procedures, ii) intergovernmental coordination mechanism, iii) institutional capacity of provincial and local government and iv) people participation and accountability. Key recommendations identified in this documents are i) implementation of Provincial level Energy Coordination Committee to coordinate between federal and sub-national RE efforts, ii) capacity development at institutional level, iii) readiness for implementation by developing appropriate policies, directives and guidelines, iv) increasing resource mobilisation capability from MoPID's or LG's internal account, v) mobilizing external resources and private sector for scaling up projects, and vi) increase use of data for informed coordination and decision making.

1. CONTEXT

In 2015, the Constitution of Nepal was promulgated which elaborated three elements of federalism i) administrative, ii) political, and iii) fiscal. To strengthen the administration, a number of initiatives such as Organisation and Management (O&M) survey and the Civil Servant Adjustment Regulation 2019 were forwarded aiming to adjust over 86,000 civil servants in three different tiers of government under the new federal set up. The political element reinforces the replacement of the unitary system by the federal structure with the country restructured into 7 provinces, 77 districts, and 753 local government (LG) consisting of Rural Municipalities (RM) and Urban Municipalities (UM). The fiscal element defines the division of governmental functions related to fiscal rights power at the different levels of government. In this practice, the power including fiscal resources has been divided among the three levels of governments.

The Constitution also envisions a non-hierarchic three levels of government – i) federal, ii) provincial and iii) local, based on the principles of “*Coordination, Cooperation and Coexistence.*” The schedules: Schedule-5, Schedule- 6, Schedule-7, Schedule-8, and Schedule-9 under the Constitution provide exclusive and concurrent rights to the three levels of government.

1.1 OBJECTIVE

The main objective of this paper is to analyze the constitutional, legal and institutional structure of the federal government (FG), provincial government (PG) and local government (LG) related to renewable energy (RE) from the perspective of governance. The specific objectives are:

- To outline the functions and mandates of the FG, PG and LGs related to RE
- To analyse the institutional structure of FG, PG and LGs structure on RE implementation.
- To identify gaps amongst different legal and institutional governance system
- To develop the institutional reform options of PG and LG related to RE
- To develop short-, medium- and long-term intervention area in the RE sector

1.2 METHODS

Both primary and secondary information were used as a data source. The secondary data sources were:

- The Constitution 2015, Local Government Operation Act 2017 (LGOA), the Unbundling Report, Intergovernmental Fiscal Transfer Act, 2017
- Rural Energy Policy-2063, Subsidy and Delivery Mechanism of Institutional Solar System 2070, Subsidy Delivery Mechanism on Additional Financial Support to MHPs-2070, Renewable Energy Subsidy Delivery Mechanism-2070, Urban Solar Energy System Subsidy, Loan Mobilisation Directives 2072, Biomass Energy Strategy 2073, Renewable Energy Subsidy Policy 2073, Renewable Energy Subsidy Delivery Mechanism 2073, and Subsidy Delivery Mechanism for Special Programs 2073

- Policy papers, Federalism and its implication for RE in Nepal paper, Transition paper of AEPC, White Paper and other position papers

The primary sources of information included interaction with key organisations working in governance reforms such as National Natural Resource and Fiscal Commission (NNRFC), Local Governance and Community Development Programme/ Ministry of Federal Affairs and General Administration, The Asia Foundation, GIZ, National Association of Rural Municipality in Nepal (NARMIN), Municipal Association of Nepal (MuAN) amongst others. For structured interviews at the province and local government level a set of questionnaires were developed on the following broad areas:

- Roles and responsibilities related to RE
- Organisational structure for promoting RE
- Coordination and linkages with federal government (FG) and LGs
- Public financial management

2. INTERGOVERNMENTAL COORDINATION AND RELATIONSHIP SYSTEM AND STRUCTURE

2.1 LAW MAKING

The Constitution of Nepal 2015 provides the authority to the Province to make the laws in the matters enumerated in Schedule-6 (see annex-2) and the concurrent powers of the Federation and Province enumerated in Schedule-7 (see annex-3). In addition, clause 226 provides the authority to LG Assembly to make necessary laws on the matters set forth in the lists contained in Schedule-8 (see annex-4) and Schedule-9 (see annex-5). Any law made by the Provincial Assembly, LG Assembly pursuant to clause (3) or (5) shall be not be inconsistent with the Federal law, and any law made by the Province Assembly or LG Assembly which is inconsistent with the Federal law shall be invalid to the extent of such inconsistency.

2.2 INTERGOVERNMENTAL COORDINATION MECHANISM AND SYSTEM

Intergovernmental relation is an essential process of federalism, which build connections and interactions in power relationships and service functions among the governmental levels and units. For this, the constitution has provisioned several institutional mechanisms for intergovernmental relations. The Constitution of Nepal 2015, Article 235 states that the federal parliament will make the necessary laws for coordination between the FG, PG and LG. Another clause of the same Article states that the provincial assembly will sustain coordination between the PG and LG and can settle any political disputes in coordination with the concerned.

2.3 DISPUTE SETTLEMENT MECHANISM

In the Constitution of Nepal 2015, to settle political disputes among provinces, there is a provision for an Inter-State Council, which is chaired by the Prime Minister. Similarly, to settle the conflict among the local levels and between the local level and province, the responsibility lies with the provincial council. To strengthen the further coordination and collaboration between PGs and LGs, in the Local Government Operation Act 2074 there is a provision for a Committee which will be chaired by the Chief Minister(s) with members including all the ministers, chief secretary and secretaries, chief and deputy chief of District Coordination Committees, chairs and vice chairs of the RMs and mayors and deputy mayors of the UMs of the province.

2.4 FISCAL ARRANGEMENT MECHANISM

The **Intergovernmental Fiscal Arrangement, 2074 Act** outlines the necessary provisions regarding revenue rights, revenue sharing, grants, loans, budget arrangements, public expenditures, and fiscal discipline of the FG, PG and LGs of Nepal.

Article 5 (1) of this Act contains the clause ‘...tax and non- tax revenues to be collected by any two levels from among Government of Nepal, the state, or local level shall be collected’. And Article 3 (6) of the Act provides for the Government of Nepal to levy on and collect royalty of natural resources in accordance with federal law. Chapter 3 of this Act also has provisions for revenue sharing mechanism from the major sources as listed in Table 1 below.

Table 1: Major revenue sources and sharing mechanism

Level of Government	VAT & excise duties	Royalty from natural resources	Foreign grants or borrowing	Internal loans
Federal	70%	50%	Able to attain	Able to attain
Provincial	15%	25%	Pre-approval of FG	Consent of FG
Local	15%	25%	Pre-approval of FG	Consent of FG

Source: *Inter-Governmental Fiscal Arrangement Act, 2017*

For maintaining necessary consultation and coordination among the Government of Nepal, the State and Local level on intergovernmental fiscal arrangements, Article 33 of this Act has provision for an Intergovernmental Fiscal Council with the Minister of Finance as its coordinator with fourteen members including one woman from each province, representatives from among Mayors and Deputy Mayors of LGs recommended by each province.

3. RENEWABLE ENERGY

Generally, RE resources are defined as those resources that replenish themselves naturally without being depleted and include bio-energy, hydropower, geothermal energy, solar energy, wind energy and ocean (tide and wave) energy (Owusu et al. 2016).

Table 2: Renewable energy forms and their uses

Energy sources	Energy conversion and usage options
Hydropower	Power generation, end uses
Modern biomass	Heat and power generation, pyrolysis, gasification, digestion
Geothermal	Urban heating, power generation, hydrothermal, hot dry rock
Solar	Solar home systems, solar dryers, solar cookers
Direct solar	Photovoltaic, thermal power generation, water heaters
Wind	Power generation, wind generators, windmills, water pump
Wave and tide	Numerous designs, barrage, tidal stream

Source: Owusu, P.A., Samuel, A.S., Dubey, S. (2016)

3.1 LEGAL PROVISION

The Constitution of Nepal promulgated in 2015 gave local government specific responsibility in developing and implementing renewable energy projects. In 2017, the Local Government Operation Act specified the ceiling of the renewable energy project at 1 MW giving local government the authority to give permits, develop project, finance and operate these RE projects. In the same year, the Provincial Government Business Allocation Rules 2017 gave provincial governments the rights to coordinate projects within their political jurisdiction but with no specific details on energy. In 2019, the Nepal Planning Commission approved the directive allocating specific responsibility in energy for all three levels of government. These provisions are also taken along in the draft Electricity Act tabled in the parliament (in 2020). Specific legal provisions in these documents are given below:

Constitution of Nepal -Part-4, Directive Principles, Policies and Obligations of the State, Article 51. Policies of the State (g) Policies relating to protection, promotion and use of natural resources: (3) to ensure reliable supply of energy in an affordable and easy manner, and make proper use of energy, for the fulfillment of the basic needs of citizens, by generating and developing RE.

a) Schedule-5, List of federal power

SN 27. National and international environment management, national parks, wildlife reserves and wetlands, national forest policies, **carbon services**

b) Schedule-6, List of state power

SN 7. State level **electricity**, irrigation and water supply services, navigation

c) Schedule-8, List of local level power

SN 19. Water supply, *small hydropower projects, alternative energy.*

Local Government Operation Act, 2074, Chapter 3, Clause 11 Authority of Rural / Municipality. The Act under the heading *Drinking water, small hydro project, and alternative energy* mentions the following functions / tasks:

SN 3. Formulation, implementation, monitoring and regulation of policies, laws, standards and plans related to hydro-power projects up to 1MW at local level.

SN 4. Formulation, implementation and regulation of policies, laws, standards and plans related to alternative energy at local level.

SN 5. Management, operation and regulation of local electricity distribution system and services at local level.

SN 6. Alternative energy related technology development and transfer, capacity development and promotion at local level.

SN 7. Other functions related to drinking water, micro hydro projects and alternative energy.

Province Business Allocation Rules 2017: Ministry of Physical Infrastructure Development (MoPID)

SN 4. Responsible for research, policy, planning, implementation, maintenance, coordination, investment promotion and regulation of energy.

National Planning Commission Guideline 2076

The NPC guideline 2076 detail out the role and responsibilities of FG, PG and LGs as below.

Table 3: Functional Division on Energy, Water resource and Irrigation

Federal	Provincial	Local
<ul style="list-style-type: none"> • Construction and management of >20 MW hydro plants • Solar energy system >20 MW • Construction and management of transmission line 33 kV and above • Develop and operationalise national electricity distribution system • Develop acts, policy and strategies related to water 	<ul style="list-style-type: none"> • Construction and management >3 MW to 20 MW hydro plants • Construction and management of solar energy >3 MW to 20 MW. • Construction and management of small transmission line above 11 kV to 33 kV. 	<ul style="list-style-type: none"> • Construction and management up to 3 MW hydro plants • Construction and management up to 3 MW of solar • Rural and community electrification • Domestic and community-based bio-gas system

resources, energy, irrigation and water induced hazard	<ul style="list-style-type: none"> Rural and community electrification 	
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3.2 FUNCTIONAL DIVISION

Based on the legal provision of the Constitution of Nepal 2015, Local Government Operation Act 2074 and Provincial Business Allocation Rules 2017, the functional division on the RE sector of FG, PG and LGs are listed below.

Table 4: Functional division between of Federal, Provincial and Local Government

SN.	Thematic Areas	Roles and responsibilities related to RE			
		Federal	AEPC	Provincial	Local
1	Legislative, Policy and Plan				
1.1	Acts, Rules and Policies	Act, policy and regulation relating to electricity service standard, quality and charge or fee	Under federal government (MoEWRI): support to draft necessary Acts, Rules and Policies related to RE PGs & LGs: support to draft their acts, rules and policies.	Provincial acts, policy, law, standard, planning, implementation and regulation relating to electricity, irrigation, drinking water, sanitation and hygiene/purity	Policy, law, standards, planning, implementation and regulation relating to local water supply, small hydro power projects up to 1MW, and alternative energy at the local level
1.2	Plan and Program/s	Develop national level energy plan (Master / strategic / periodic / annual), national level projects	Provide technical support to MoEWRI/PG/LG in developing energy plan	Develop province level energy plan (Master / strategic / periodic / annual) Implement projects up to 20 MW (as per NPC guideline)	Formulate local level RE Plan (Master / strategic / periodic / annual) Implement projects up to 1MW
1.3	Coordination	Coordination between FG, PG and LGs- policy and standards relating to revenue and natural resource utilisation or profit distribution at	Coordination between FG, PG and LGs - for information collection and analysis. Monitor the progress of RE	Coordinate through Provincial Coordination Council with LGs for energy efficiency. Identify inter-government	Coordination with PG (MoPID) and FG (MoEWRI- AEPC) for formulating policies, laws and guidelines, technical back-up, obtaining support from (foreign)

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SN.	Thematic Areas	Roles and responsibilities related to RE			
		Federal	AEPC	Provincial	Local
		federal, province and local level		partnership (LG-PG and LG-PG-AEPC) Play a bridging role between FG and LG	development partners (donors)etc. Inter-government partnership (LG-LG and LG-PG and LG-PG-AEPC)
2	Regulation				
2.1	License, Registration and Permit	Issue license and permit	Support in preparing regulations	Issue license and permit up to 20 MW (NPC Guideline) Prepare regulations	Issue license and permit up to 1 MW Regulation of local level alternative energy systems
2.2	Electricity Tariff and Service Fee	Policy and regulation relating to electricity service standard, quality and charge or fee	Supports to FG to prepare tariff guideline of RE	Quality regulation of electricity distribution and service	Local electricity distribution system and management, operation and regulation of services
3.	Standards and Measurements				
3.1	Specification of Standards and Safety of technologies and services	Develop national standards and specifications, including safety standards for grid, off-grid and RE	Support FG to develop national standards and specifications of RE	Implementation and monitoring	Implementation and monitoring
3.2	Testing and Measurements	Develop testing and measurement of grid, off-grid and RE	Support FG to develop testing and measurement of RE	Implementation and monitoring	Implementation and monitoring
3.3	Accreditation	Award and renew accreditation for RE	Encourage RE technologies and RE based services to be accredited formally	Implementation	Accreditation certificates for local installations
4.	Resource Mobilisation Including Foreign Grants and Loans				
4.1	Royalty from Electricity, Water and Other	Formulation, implementation and regulation of policies and laws relating to revenue	Support to PG/LGs for royalty management	Collection of royalty as specified by PG Act	Collection of royalty as specified by LG Act

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SN.	Thematic Areas	Roles and responsibilities related to RE			
		Federal	AEPC	Provincial	Local
	Natural Resources				
4.2	Tax, Duties and Fees	Standards, determination of fee and quality, regulation and monitoring of electricity service	Prepare guidelines for RE service charge and fees	Collection of service charge and fee	Policy, law, standard, plan formulation and implementation and regulation relating to local service fee, charge, penalty
4.3	Internal Grants and Subsidy	Policies, laws and standards formulation, implementation, coordination and regulation relating to intergovernmental fiscal transfer	Disburse subsidy	Allocate fiscal equalization grant and conditional grant to LGs	Utilize grants, can allocate grant from their internal resources
4.4	Foreign Grants and Loan Mobilisation	Management and regulation of internal and foreign loans and grants	Mobilisation of foreign grants and assistance for RE with consent of MoEWRI	Mobilisation of foreign grants and assistance at province level with consent of federal government	Mobilisation of foreign grants and assistance at local level with consent of federal government
5.	Research and Development				
5.1	Statistics	Data collection, management, study, research, analysis, prediction and projection/s	Data collection, management national level RE statistics	Data collection, management provincial level RE statistics	Collection and management of local level RE statistic
5.2	Research on RE Technology Development	Support research & development on RE technology	Mobilise resources for research on RE technology development in the country	Facilitate research & development on RE technology at province level	Facilitate research & development on RE technology at local level
5.3	Research on Financing and Implementation Modality	Support research on financing and implementation modality	Mobilise resources on financing and implementation modality	Facilitate research on financing and implementation modality at province level	Facilitate research on financing and implementation modality at local level

Source: Constitution of Nepal 2015, Schedule 5,6,7,8,9; Local Government Operation Act 2074; The Unbundling Report 2073 and Provincial Business allocation Rules, 2017

3.3 INSTITUTIONAL MECHANISM - FEDERAL, PROVINCIAL AND LOCAL GOVERNMENT

After the federalisation of Nepal, the first election took place in 2016 and operationalised 753 local governments across Nepal. Similarly, the 2017 provincial level election operationalised the provincial governments. Specific institutional arrangements are discussed below:

i) Ministry of Energy, Water Resources and Irrigation

The FG has restructured the federal ministries through mergers of functions into 22 ministries. Thus, the MoEWRI was established in 2017 after merging two former ministries - Ministry of Energy and Ministry of Irrigation. The MoEWRI's primary responsibilities includes the formulation of legislation, policies and standards; energy infrastructure construction; sector coordination; national/regional/international transmission lines, trade on energy and international agreements on water resources; execution of federal and inter-provincial multipurpose projects; energy tariff and service standards; renewable and alternative energy; and investments in electricity development. There are seven organisations under MoEWRI with the AEPC being one of them.

ii) Alternative Energy Promotion Centre

The AEPC was established in 1996, under the then Ministry of Science and Technology with the objective of developing and promoting renewable/alternative energy technologies in Nepal. Following the restructuring of federal ministries in 2019, AEPC is currently under the MoEWRI. It has an 11-member board with representation from the government, industry and non-governmental organisations. AEPC promotes RE such as micro/mini hydropower plants, domestic/institutional/commercial biogas, improved water mills, improved cook stoves, solar home systems, bio-fuel, mills, institutional solar system & solar water pumps, solar dryer & cooker, other mini grids and hybrid systems including innovative and hybrid technologies (e.g. solar-wind hybrid).

iii) Nepal Electricity Authority

The NEA is the sole electricity utility in the country and is responsible for generation, transmission and distribution of power in Nepal's power system both interconnected and isolated. It's major responsibilities are to recommend to the GoN, short and long-term plans and policies for the power sector, recommend and realise tariff structure for electricity consumption with prior approval of GoN, and build capacity in the electricity sector. It is managed by a Board of Directors with the Hon. Minister of MoEWRI as Chairman. Currently, there are eight regional offices headed by Directors/regional chiefs to manage distribution and consumer services activities under the Distribution and Consumer Services Directorate (DCSD). The major activities of this directorate include planning, expansion, operation, maintenance & upgradation of the electricity distribution networks including substations up to 33 kV voltage level, operation and maintenance of off grid small hydro plants, and consumer services activities such as new consumer connections, meter reading, billing, and revenue collection. NEA's restructuring plan includes establishment of provincial distributional entities.

iv) Provincial Government

The Constitution of Nepal 2015 stipulated three levels of government – one of them being the PGs – one in each of the seven provinces. The PG is structured with six Ministries which are Ministry of Physical Infrastructure Development (MoPID), Ministry of Economic Affairs and Planning, Ministry of Social Development, Ministry of Internal Affairs and Law, Ministry of Industry, Tourism, Forest and Environment, Ministry of Land Management and Agriculture and Co-operatives (See organogram in annex-6). Amongst them, the MoPID, as per the Business Allocation Rules of Province 2017 is responsible for research, policy, planning, implementation, maintenance, coordination, investment promotion, and regulation of energy at the province level. See the organograms of Provinces Karnali, 2 and 5 in annexes 7-9.

v) Local Government

In the seven provinces, 753 LGs units have been established with 6 Metropolitan Cities (Mahanagarपालिका), 11 Sub metropolitan Cities (Upamahanagarपालिका), 276 UMs (Nagarपालिका) and 460 RMs (Gaunपालिका). The disaggregation of different types of local governments are shown in Table 5. The LGs are responsible for research, policy, planning, implementation, maintenance, coordination, investment promotion, and regulation of up to 1 MW RE. See the organogram in annex-10.

Table 5: Number of Rural and Urban Municipalities by Province

Province	No.of urban municipalities				No. of rural municipalities	Total # of municipalities
	Metropolitan City	Sub-Metropolitan	Urban municipality	Total		
1	1	2	46	49	88	137
2	1	3	73	77	59	136
3	3	1	41	45	74	119
Gandak (4)	1	0	26	27	58	85
5	0	4	32	36	73	109
Karnali (6)	0	0	25	25	54	79
Sudur Paschim (7)	0	1	33	34	54	88
Total	6	11	276	293	460	753

4. CHALLENGES AND OPPORTUNITIES IN ENERGY SECTOR GOVERNANCE

Based on the analysis of constitutional mandates, existing legal provisions and the institutional structure at national and sub-national levels, the following gaps are identified and opportunities are proposed:

a. Policies and other enablers

- **Gaps/challenges:** For the effective implementation and viability of RE at the provincial and local level, appropriate policies, directives and guidelines are required to empower PGs and LGs. Furthermore, drafting and approving policies, guidelines, directives need uniformity and consistencies at all levels of government. This has yet to be in place for seven Provinces in the energy sector.
- **Opportunities:** Sub national governments needs to develop specific RE policies and other directives, acts, mechanisms, guidelines and working modalities. There is a potential to be 'local specific' and design appropriate enablers suited to the needs of each province. The LGs are most appropriate for managing RE development at local level as they are also closer to developers and users who can make them more accountable. The enablers however need to be coherent with the federal ones.

b. Organisational Structure (MoPID)

- **Gaps:** PGs and LGs are functioning, but they are not fully structured. There is no separate section/unit for the RE in the Water Resource and Energy Development division of the MoPID. **Similarly**, the LGs have no specific unit for energy.
- **Opportunities:** Some Provinces such as Karnali have revised the organisational structure of their MoPID by establishing a Directorate of Physical Infrastructure Development. MoPID of Province 2 is planning to revise the current organisational structure as part of its O&M study. The MoPID of Province 5 is planning to revise the Water Resource and Energy Development (WRED) division by establishing a separate Energy Development Division with three sections - hydro energy development section, RE development section and general administrative section. RE will be properly addressed at the provincial level once these restructurings are completed. Similarly, at the LG level, establishing a separate energy unit within the Infrastructure Development and Environment Section would be good opportunity to address RE implementation in the future.

c. Institutional Capacity and intergovernmental co-ordination

- **Gaps:** Strengthening capacities for effective governance need to be holistic, encompassing horizontal capacity to empower inter-governmental agencies as well as the private sector, and vertical capacity to strengthen institutions at FG, PG and LG levels. The horizontal linkage of the MoPID with other provincial ministries and agencies is weak and formal coordination through MoPID or Province Planning Commissions (PPC) is highly limited. The vertical linkage of the MoPID with

federal agencies and local agencies is also highly limited with major gaps in energy data, policy and planning thereby facing challenges for the preparation of mid- and long-term vision and plans.

- **Opportunities:** Provincial and local institutions have shown interest in developing institutional development strategies and plans to guide and develop institutional capacity and common understanding on RE issues. The Provincial Energy Coordination Committee (PECC) can fill the missing gap for linking vertical and horizontal decision making and implementing agencies; local level information can be exchanged and shared through PECCs which will leverage missing information from rural areas, influence decision making through data and profiles, and prepare champions for the sector. Increased improvements in capacity building, recruitment, institutional reformation, policy formulation and harmonising standards can be influenced through PECCs.

d. Public finance

- **Gaps:** Critical to LGs is their financing ability as they meet only 5 percent expenditure requirements from their own-source and revenues. In addition, capacity to spend on RE is limited. Facilitation is needed in the planning process so that LGs are able to include RE and allocate budgets.
- **Opportunities:** Developing PG and LG 'Revenue Improvement Plans' will support the identification of new avenues of own-source revenues that will enhance financing capability in the RE sector. A study on the opportunity for internal income source and public finance mechanism/process will assist in enhancing PG and LG financing capacity.

e. Transparency and accountability

- **Gaps:** User/communities participation in planning budgets and its implementation is missing. The link between users/communities and LG needs to be developed for downward accountability.
- **Opportunities:** PGs and LGs have shown their interest to develop energy plan at their level. Peoples engagement in the planning process will increased the transparency in the planning and budgeting process. Addressing the peoples need through the energy plan will also create a better space for government to fulfil its responsibility effectively and support to enhance the downward accountability.

5. POSSIBLE ENGAGEMENT AREAS

Based on the gaps and opportunities analysis, governance assessment of province 2,5 and Karnali and in-depth consultation with RE stakeholders and RERL/UNDP program, possible engagement areas for the period of short term, medium term and long term are identified below.

Table 6: Scope and engagement areas

Areas	Provincial			Local		
	Short – term (one year)	Medium-term (2-3 Years)	Long -term (4-5 years)	Short – term (one year)	Medium-term (2-3 Years)	Long -term (4-5 years)
Institutional Assessment	<ul style="list-style-type: none"> Set-up and operationalize Energy coordination committee Develop institutional strategy and plan Review Organogram of MoPID Develop concept paper to setup energy division and RE unit in MoPID of Province-5 	<ul style="list-style-type: none"> Support to implement institutional development strategy and plan 	<ul style="list-style-type: none"> Support to implement institutional strategy and plan 	<ul style="list-style-type: none"> Develop concept paper to activate energy sub-committee Develop Strategy/ies and plan Review the LG organogram Develop ToR to establish energy unit 	<ul style="list-style-type: none"> Support to implement institutional strategy and plan 	<ul style="list-style-type: none"> Support to implement institutional strategy and plan
Policies	<ul style="list-style-type: none"> Draft generic policy/ies for promotion of RE up to 20 MW (power wheeling, local distribution, energy bank, etc.) Guidelines for harmonized decision-making tool 	<ul style="list-style-type: none"> Guidelines for specific policy design based on requirements of PG (resource potential, technology penetration, etc.) 	<ul style="list-style-type: none"> Update policies and guidelines as per requirements Capacity on policies etc. 	<ul style="list-style-type: none"> Orientation on roles and responsibilities of LG on RE Identification of gaps in policy Draft Generic Policy 	<ul style="list-style-type: none"> Guidelines for specific policy design based on local requirements (resource potential, technology penetration, GESI, credit etc.) 	<ul style="list-style-type: none"> -Update policies and guidelines as per requirements Capacity on implementation

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	<ul style="list-style-type: none"> Guideline for formulation of Policy (incl. GESI, Subsidy/Grant/Credit) 				<ul style="list-style-type: none"> Draft Generic Policy for promotion of RE up to 1 MW Capacity strengthening on design 	
Law and Regulation	<ul style="list-style-type: none"> Identification of gaps law, regulation, implementation strategies and other activities related to RE Water-use Rights registration mechanism (Policy, F&F) 	<ul style="list-style-type: none"> Templates and Guideline for Contracts and Agreements Registration of Developers Conflict Resolution Mechanisms (e.g., licensing) 	<ul style="list-style-type: none"> Update as per necessary 	<ul style="list-style-type: none"> Identification of gaps implementation strategies and other activities related to RE Water-use Rights registration mechanism (Policy, F&F) 	<ul style="list-style-type: none"> Templates and Guideline for Contracts and Agreements Conflict Resolution Mechanisms 	<ul style="list-style-type: none"> Update as per necessary
Standards	<ul style="list-style-type: none"> Share existing manuals, procedures, guidelines, technical standards Technical Standard of up to 20 MW hydropower and Alternative Energy Technical Standard of PVPS, ISPS, Mini-grid, 	<ul style="list-style-type: none"> Quality Assurance Plan (QAP) and control mechanism of project, program, product and process for LG and PG Technical Standard technologies upto 20 MW 	<ul style="list-style-type: none"> Updated list of products and services (online) Updated list of applicable products (RE) for Customs 	<ul style="list-style-type: none"> Share existing manuals, procedures, guidelines, technical standards Technical Standard of 1 MW hydropower and Alternative Energy 	<ul style="list-style-type: none"> Quality Assurance Plan (QAP) and control mechanism of project, program, product and process Technical Guideline for Feasibility Study, Project Design, 	<ul style="list-style-type: none"> Updated list of products and services (online) Updated list of applicable products (RE) for Customs

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	Grid connection, Biomass, Biogas, Wind, Hybrid, PEU Technologies (for <1 MW)	(incl. large scale irrigation) <ul style="list-style-type: none"> • Technical Guideline for Feasibility Study, Project Design, Implementation, Testing, Commissioning and Verification • Capacity building in standards 	<ul style="list-style-type: none"> • Complaints and Feedback mechanism • Capacity building in standards 	<ul style="list-style-type: none"> • Technical Standard of PVPS, ISPS, Mini-grid, Grid connection, Biomass, Biogas, Wind, Hybrid, PEU Technologies 	Implementation, Testing, Commissioning and Verification <ul style="list-style-type: none"> • Capacity building in standards 	<ul style="list-style-type: none"> • Complaints and Feedback mechanism • Capacity building in standards
Planning	<ul style="list-style-type: none"> • Guideline for Provincial Energy Plan (PEP) • Guideline for Harmonized MEP and PEP and Resource sharing • Manual for software operation • Forms and Formats 	<ul style="list-style-type: none"> • Guideline including formulation of Provincial Energy Profiles (Capacity strengthening) • Link with PEP with National Energy Plan 	<ul style="list-style-type: none"> • GIS based Software • Monitoring 	<ul style="list-style-type: none"> • Guideline for Municipal Energy Plan, Feasibility Study, BAT, ESS and Resource Assessment • Forms and Formats 	<ul style="list-style-type: none"> • R/Municipal Energy Plan • Link with R/MEP with Provincial and National Energy Plan 	<ul style="list-style-type: none"> • GIS based Software • Monitoring
Monitoring	<ul style="list-style-type: none"> • Monitoring & evaluation manual 	<ul style="list-style-type: none"> • Guideline and manual for gap assessment and measures 		<ul style="list-style-type: none"> • Monitoring & evaluation manual 	<ul style="list-style-type: none"> • Project management software 	
Partnership	<ul style="list-style-type: none"> • Guideline for private developers 	<ul style="list-style-type: none"> • Business Plan 		<ul style="list-style-type: none"> • Guideline for private developers 	<ul style="list-style-type: none"> • Business Plan 	

6. WAY FORWARD

This paper provides an overview of governance related to RE during the initial stages in the transition to federalism. The critical issues are:

- There needs to be a common understanding at all levels of government and related institutions and the private sector on their roles and responsibilities related to RE. All sectors should be encouraged to realise their limits and remain within the principles of coordination and collaboration.
- Strengthening the capacities of the institutions for effective governance need to be holistic in nature. This is needed particularly at the sub national levels to empower inter-governmental agencies as well as the private sector.
- The need to strengthen administration, especially adjustments of civil servants, at the three different tiers of government remains. Effective implementation also depends on deployment of civil servants at sub national levels. Currently, there are less than 50 percent staff of the total required staff at the PG and LG level.
- For the effective implementation and viability of RE at the provincial and local level, appropriate policies, directives and guidelines are required. Furthermore, drafting and approving policies, guidelines, directives need uniformity and consistency across all levels of government. Capacity is weak and this needs to be supported.
- One of the most critical issues concerning LGs is their ability to finance RE. LGs meet only 5 percent expenditure requirements from their own-source revenues. A major area of progress would be for LGs to explore new avenues for revenue generation and innovative approaches, coupled with strengthened capacity, to utilise revenues efficiently and effectively.
- Improvement of resource utilisation at provincial and local level with improved coordination and partnership with NNRFC, Ministry of Federal Affairs and General Administration (MoFAGA), private sector, institutions, financial entities, community based organisations, non-government organisations etc. and orienting the results towards improved RE market is needed.
- There is a need to conduct the following assessments to realize the challenges and opportunities mentioned in Chapter 4:
 - Revenue Improvement Plan
 - Internal Budget Analysis
 - Provincial Energy Profile and Implementation + Investment Plan
 - Public Finance Mechanism/Process of LG & PG (need to strengthen)
 - Institutional Strategy and Plan
 - Templates and Guidelines for Contracts and Agreements, ToR, Service Agreements, Financing/Closure agreements, MoU, Energy Contracting- Generation, Distribution and Retail, etc.

The entry points of the interventions can be developed through stakeholder consensus and participatory planning during detailed institutional assessments. The PECCs can also be an important conduit for

implementation of recommendations from the assessments. High level coordination between sub-national entities towards a collaborated results output and integration of Common Integrated Target and Activities (CITA) is also required mid-to long term.

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<http://mopid.karnali.gov.np>

ANNEXES

Annex 1: Schedule - 5. List of Federal Power

(Relating to clause (1) of Article 57, and Article 109)

1. Relating to defense and military
 - a) Protection of national unity and territorial integrity
 - b) Relating to national security
2. War and defense
3. Arms and ammunitions factories and production thereof
4. Central Police, Armed Police Force, national intelligence and investigation, peace, security
5. Central planning, central bank, finance policies, monetary and banking, monetary policies, foreign grants, aid and loans
6. Foreign and diplomatic affairs, international relations and United Nations related matters
7. International treaties or agreements, extradition, mutual legal assistance and international borders, international boundary rivers
8. Telecommunications, allocation of radio frequency, radio, television and postal matters
9. Customs, excise-duty, value-added tax, corporate income tax, individual income tax, remuneration tax, passport fee, visa fee, tourism fee, service charge and fee, penalty
10. Federal civil service, judicial service and other government services
11. Policies relating to conservation and multiple uses of water resources
12. Inland and inter-State electricity transmission lines
13. Central statistics (national and international standards and quality)
14. Central level large electricity, irrigation and other projects
15. Central universities, central level academies, universities standards and regulation, central libraries
16. Health policies, health services, health standards, quality and monitoring, national or specialized service providing hospitals, traditional treatment services and communicable disease control
17. Federal Parliament, Federal Executive, Local Level related affairs, special Structure
18. International trade, exchange, port, quarantine

19. Civil aviation, international airports
20. National transportation policies, management of railways and national Highways
21. Laws relating to the Supreme Court, High Courts, District Courts and administration of justice
22. Citizenship, passport, visa, immigration
23. Atomic energy, air space and astronomy
24. Intellectual property (including patents, designs, trademarks and copyrights)
25. Measurement
26. Mines excavation
27. National and international environment management, national parks, wildlife reserves and wetlands, national forest policies, carbon services
28. Insurance policies, securities, cooperatives regulation
29. Land use policies, human settlement development policies, tourism policies, environment adaptation
30. Criminal and civil laws making
31. Security printing
32. Social security and poverty alleviation
33. Constitutional Bodies, commissions of national importance
34. Sites of archaeological importance and ancient monuments
35. Any matter not enumerated in the Lists of Federal Powers, State Powers and Local Level Powers or in the Concurrent List and any matter not specified in this Constitution and in the Federal laws

Annex 2: Schedule - 6 List of State Power

(Relating to clause (2) of Article 57, clause (4) of Article 162, Article 197, clause (3) of Article 231, clause (7) of Article 232, clause (4) of Article 274 and clause (4) of Article 296)

1. State police administration and peace and order
2. Operation of banks and financial institutions in accordance with the policies of Nepal Rastra Bank, cooperative institutions, foreign grants and assistance with the consent of the Centre
3. Operation of Radio, F.M., television

4. House and land registration fee, motor vehicle tax, entertainment tax, advertisement tax, tourism, agro-income tax, service charge, fee, penalty
5. State civil service and other government services
6. State statistics
7. State level electricity, irrigation and water supply services, navigation
8. State universities, higher education, libraries, museums
9. Health services
10. Matters relating to the State Assembly, State Council of Ministers
11. Intra-State trade
12. State highways
13. State bureau of investigation
14. Physical management and other necessary matters of State governmental offices
15. State Public Service Commission
16. Management of lands, land records
17. Exploration and management of mines
18. Protection and use of languages, scripts, cultures, fine arts and Religions
- 19 Use of forests and waters and management of environment within the State
- 20 Agriculture and livestock development, factories, industrialization, trade, business, transportation
- 21 Management of trusts (Guthi)

Annex 3: Schedule - 7 List of Concurrent Powers of Federation and State

(Relating to clause (3) of Articles 57, Article 109, clause (4) of Article 162, and Article 197)

1. Civil and criminal procedure, evidence and oaths (legal recognition, public acts and records, and judicial proceedings)
2. Supply, distribution, price control, quality and monitoring of essential goods and services
3. Preventive detention for reasons connected with the security of the country, prison and detention management, and maintenance of peace and order
4. Transfer of accused persons, detainees and prisoners from one State to another State
5. Laws relating to family affairs (marriage, transfer of property, divorce, persons on the verge of extinction, orphan, adoption, succession and joint family)
6. Acquisition, requisitioning of property and creation of right in property
7. Contracts, cooperatives, partnership and agency related matters
8. Matters relating to bankruptcy and insolvency
9. Drugs and pesticides
10. Planning, family planning and population management
11. Social security and employment, trade unions, settlement of industrial disputes, labour rights and disputes related matters
12. Legal profession, auditing, engineering, medicines, Ayurvedic medicines, veterinary, Amchi and other professions
13. State boundary river, waterways, environment protection, biological diversity
14. Matters related to means of communication
15. Industries and mines and physical infrastructures
16. Casino, lottery
17. Early preparedness for, rescue, relief and rehabilitation from, natural and manmade calamities
18. Tourism, water supply and sanitation
19. Motion pictures, cinema halls and sports
20. Insurance business operation and management
21. Poverty alleviation and industrialization

22. Scientific research, science and technology and human resources development
23. Utilization of forests, mountains, forest conservation areas and waters stretching in inter-State form
24. Land policies and laws relating thereto
25. Employment and unemployment aid

Annex 4: Schedule - 8 List of Local Level Power

(Relating to clause (4) of Article 57, clause (2) of Article 214, clause (2) of Article 221 and clause (1) of Article 226)

1. Town police
2. Cooperative institutions
3. Operation of F.M.
4. Local taxes (wealth tax, house rent tax, land and building registration fee, motor vehicle tax), service charge, fee, tourism fee, advertisement tax, business tax, land tax (land revenue), penalty, entertainment tax, land revenue collection
5. Management of the Local services
6. Collection of local statistics and records
7. Local level development plans and projects
8. Basic and secondary education
9. Basic health and sanitation
10. Local market management, environment protection and biodiversity
11. Local roads, rural roads, agro-roads, irrigation
12. Management of Village Assembly, Municipal Assembly, District Assembly, local courts, mediation and arbitration
13. Local records management
14. Distribution of house and land ownership certificates
15. Agriculture and animal husbandry, agro-products management, animal health, cooperatives
16. Management of senior citizens, persons with disabilities and the incapacitated
17. Collection of statistics of the unemployed

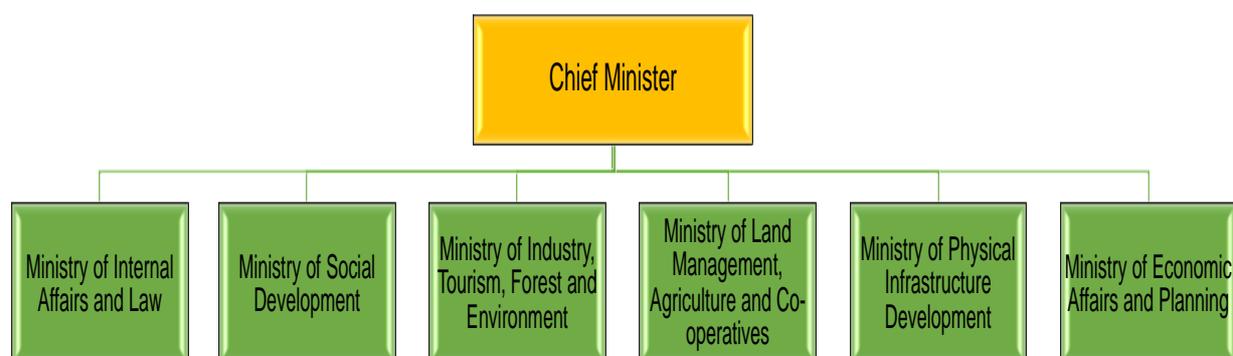
18. Management, operation and control of agricultural extension
19. Water supply, small hydropower projects, alternative energy
20. Disaster management
21. Protection of watersheds, wildlife, mines and minerals
22. Protection and development of languages, cultures and fine arts

Annex 5: Schedule - 9 List of Concurrent Powers of Federation, State and Local Level

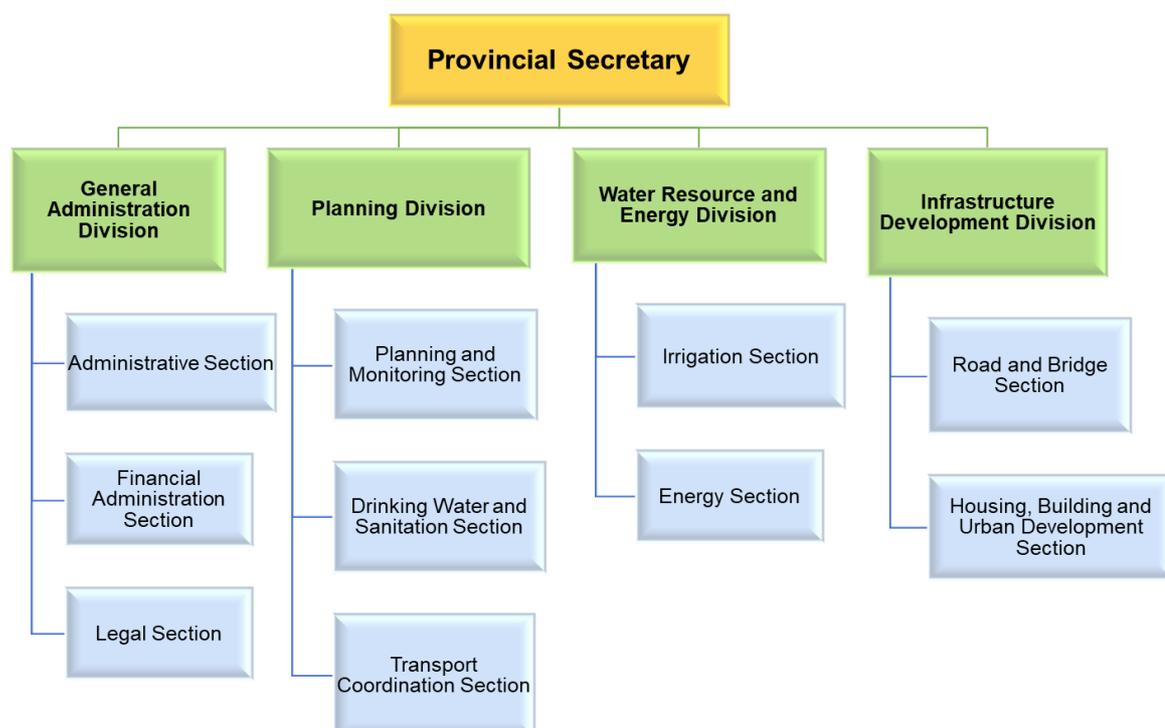
(Relating to clause (5) of Article 57, Article 109, clause (4) of Article 162, Article 197, clause (2) of Article 214, clause (2) of Article 221, and clause (1) of Article 226)

1. Cooperatives
2. Education, health and newspapers
3. Health
4. Agriculture
5. Services such as electricity, water supply, irrigation
6. Service fee, charge, penalty and royalty from natural resources, tourism fee
7. Forests, wildlife, birds, water uses, environment, ecology and biodiversity
8. Mines and minerals
9. Disaster management
10. Social security and poverty alleviation
11. Personal events, births, deaths, marriages and statistics
12. Archaeology, ancient monuments and museums
13. Landless squatters management
14. Royalty from natural resources
15. Motor vehicle permits

Annex 6: Organogram of Provincial Government

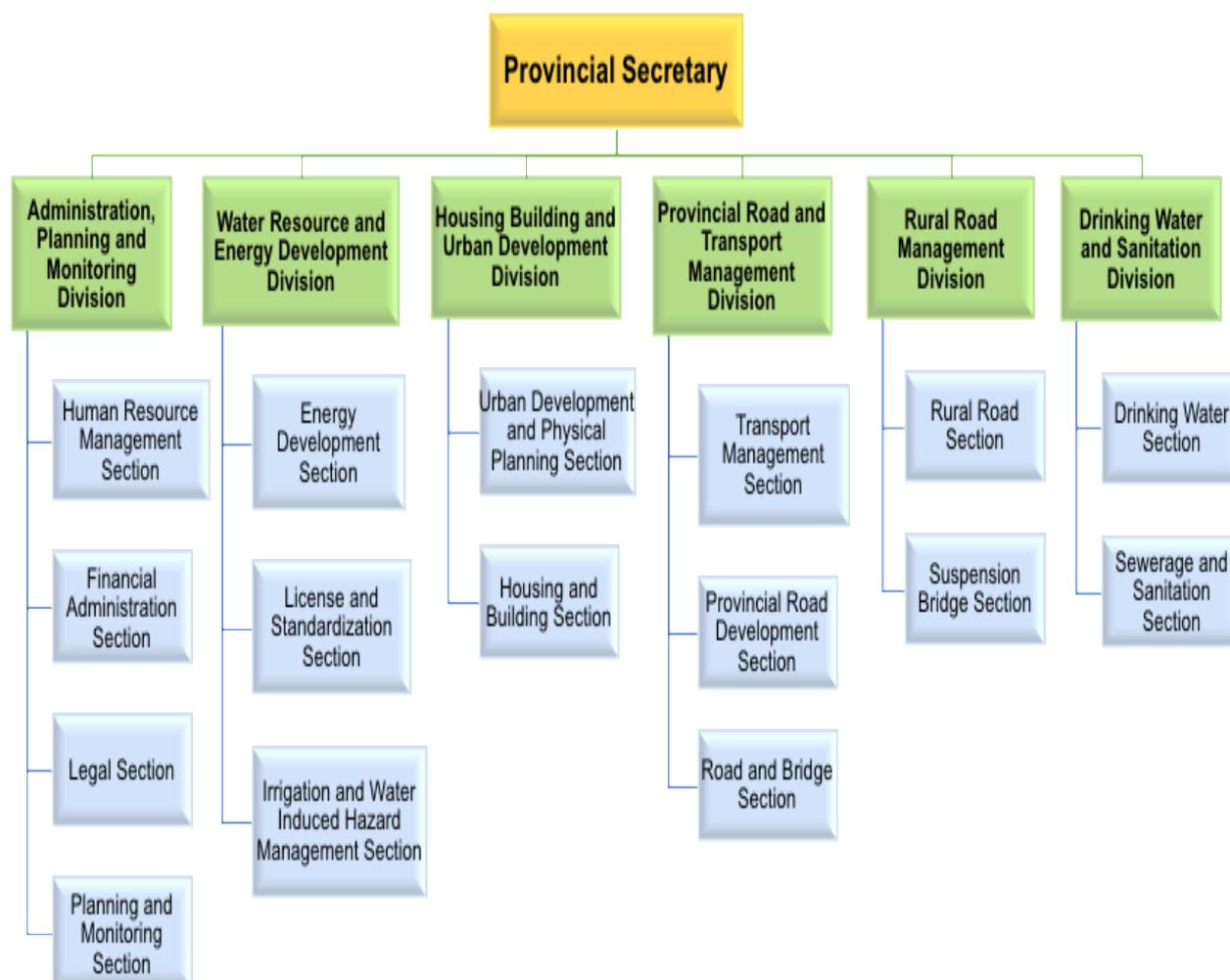


Annex 7: Organogram of Ministry of Physical Infrastructure Development Karnali



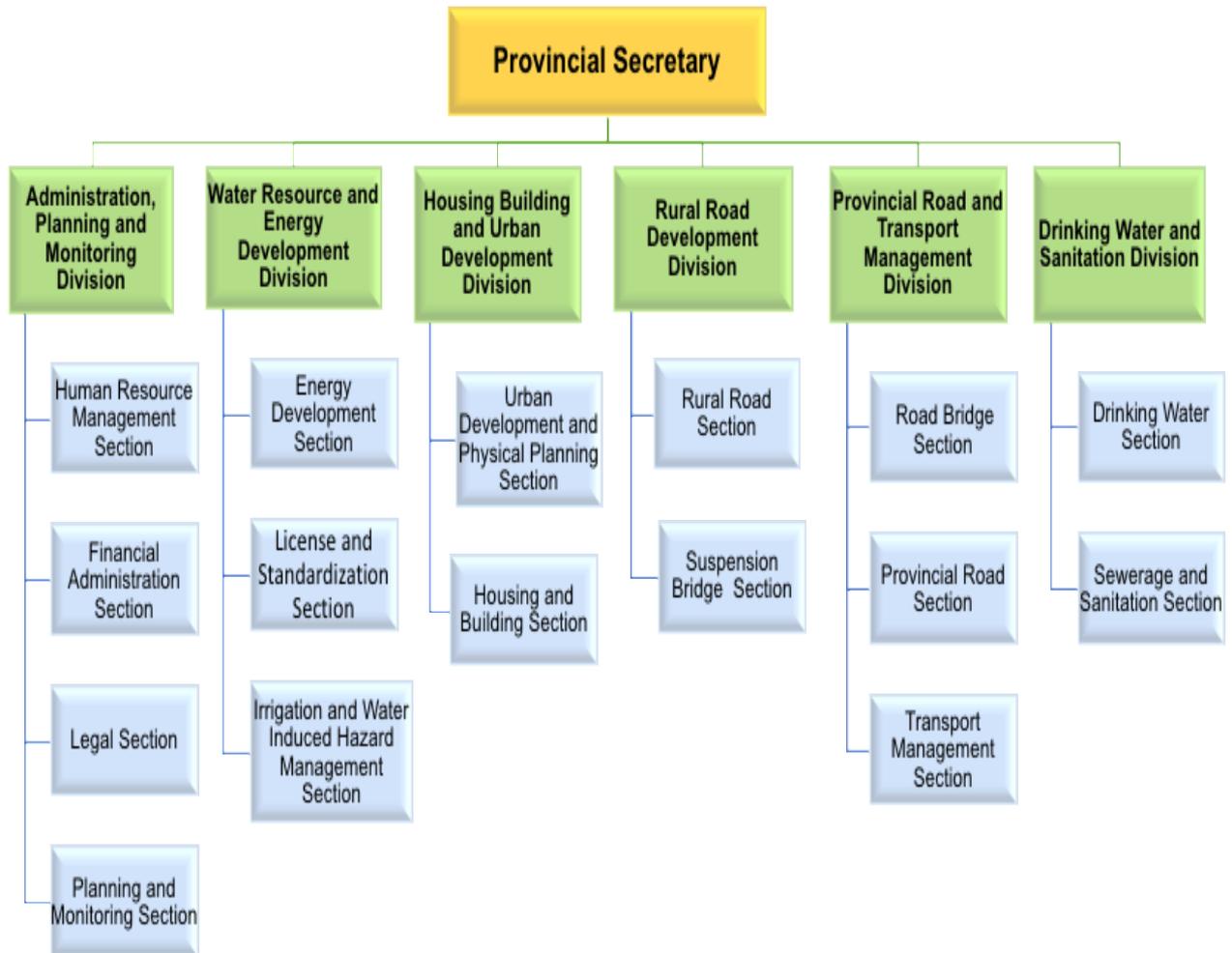
Source: <http://mopid.karnali.gov.np>

Annex 8: Organisational structure of Ministry of Physical Infrastructure, Pradesh 5



Source: <http://mopid.p5.gov.np>

Annex 9: Organisational structure of Ministry of Physical Infrastructure Development, Pradesh No. 2.



Source: <http://mopid.P2.gov.np>

Annex 10: Organisational structure of Local Government



Annex 11: Number of Municipalities by Districts in the Provinces – 2,5 and Karnali

Province	District	Metropolitan	Sub-Metropolitan	Municipality	Rural-Municipality	Total
2 (8)	Bara	0	2	5	9	16
	Dhanusa	0	1	11	6	18
	Mahottari	0	0	10	5	15
	Parsa	1	0	3	10	14
	Rautahat	0	0	16	2	18
	Saptari	0	0	9	9	18
	Sarlahi	0	0	11	9	20
	Siraha	0	0	8	9	17
	Sub-total	1	3	73	59	136
5 (12)	Arghakhanchi	0	0	3	3	6
	Banke	0	1	1	6	8
	Bardiya	0	0	6	2	8
	Dang	0	2	1	7	10
	Gulmi	0	0	2	10	12
	Kapilbastu	0	0	6	4	10
	Nawalparasi (West)	0	0	3	4	7
	Palpa	0	0	2	8	10
	Pyuthan	0	0	2	7	9
	Rolpa	0	0	1	9	10
	Rukum (East)	0	0		3	3
	Rupandehi	0	1	5	10	16
	Sub-total	0	4	32	73	109
Karnali (10)	Dailekh	0	0	4	7	11
	Dolpa	0	0	2	6	8
	Humla	0	0	0	7	7
	Jajarkot	0	0	3	4	7
	Jumla	0	0	1	7	8
	Kalikot	0	0	3	6	9
	Mugu	0	0	1	3	4
	Rukum (west)	0	0	3	3	6
	Salyan	0	0	3	7	10
	Surkhet	0	0	5	4	9
Sub-total	0	0	25	54	79	
(30)	Total	1	7	130	186	324