



नेपाल सरकार  
उर्जा, जलस्रोत तथा सिंचाइ मन्त्रालय  
जलस्रोत तथा सिंचाइ विभाग  
जावलाखेल, ललितपुर

प.सं.: ०६९  
च.नं.: ६६२

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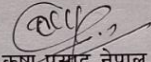
फ्याक्स: ९७७-१-५५३७१६९

मिति: २०७८/०७/११

श्री आयोजना/कार्यालय (सबै)  
जलस्रोत तथा सिंचाइ विभाग

विषय: "Norms for Environmental, Social and Forest Assessment-2078" प्रयोग सम्बन्धमा ।

प्रस्तुत विषयमा, जलस्रोत तथा सिंचाइ विभागको मिति २०७८/०६/१४ को विभागस्तरीय निर्णयानुसार स्वीकृत भएको Norms for Environmental, Social and Forest Assessment-2078 को एक प्रति यसै पत्रसाथ संलग्न राखि सोही अनुसार अध्ययन/अनुसंधान गर्नु/गराउनु हुन निर्देशानुसार अनुरोध छ ।

  
कृष्ण प्रसाद नेपाल  
उप महानिर्देशक



GOVERNMENT OF NEPAL  
MINISTRY OF ENERGY WATER RESOURCES AND IRRIGATION  
DEPARTMENT OF WATER RESOURCES AND IRRIGATION



NORMS FOR ENVIRONMENTAL, SOCIAL AND FOREST ASSESSMENT  
OF  
WATER RESOURCES AND IRRIGATION PROJECTS

2078

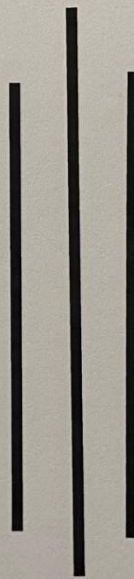


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Director General



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DEPARTMENT OF WATER RESOURCES AND IRRIGATION



NORMS FOR ENVIRONMENTAL, SOCIAL AND FOREST ASSESSMENT  
OF  
WATER RESOURCES AND IRRIGATION PROJECTS

2078

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Director General





## ABBREVIATIONS AND ACRONYMS

BES	: Brief Environmental Survey
CF	: Community Forest
DFO	: District Forest Officer
DFS	: Detailed Feasibility Study
DPR	: Detailed Project Report
EIA	: Environmental Impact Assessment
EPA	: Environmental Protection Act
EPR	: Environmental Protection Rules
Er.	: Engineer
GCA	: Gross Command Area
GIS	: Geographic Information System
Ha	: Hectare
HH	: Household
HP	: Hydropower
HPP	: Hydro Power Project
IEE	: Initial Environmental Examination
IP	: Irrigation Project
Km	: Kilometer
LIP	: Lift Irrigation Project
LS	: Lump Sum
m	: Meter
MW	: Megawatt
NP	: National Park
RBL	: River Bank Length
RoW	: Right of Way
SD	: Scoping Document
TL	: Team Leader
TLL	: Transmission Line Length
ToR	: Terms of Reference
VAT	: Value Added Tax
MoFE	: Ministry of Forest and Environment



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# 1. Preparation of Prior Consent

Preparation of Prior Consent (Permission) for Environmental Study Report									
Section A: Human Resource		* Unit	Draft Preparation		Final Report Preparation		Total Person Days	Remarks	Total Input Person Month *
SN	Expertise		Field Work	Desk Work	Desk Work	Desk Work			
1	Environmentalist (TL)	days	3	2	2	7	Key Staff	0.24	
2	Water Resources Expert	days	2	2	0	4	Key Staff	0.14	
3	Biodiversity/ Forestry Specialist	days	2	2	1	5	Key Staff	0.17	
4	Socio-Economist	days	2	2	0	4	Key Staff	0.14	
5	GIS Expert	days	2	1	1	4	Key Staff	0.14	
6	Assistant	days	6	0	0	6	Non Key Staff	0.20	
Sub Total-A									0.20
Section B: Reimbursable									
1	Travel Cost					15% of Section A			
2	Equipments					7% of Section A			
3	Laboratory Analysis					7% of Section A			
4	Stationary					10% of Section A			



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**Director General**

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**2.0 Brief Environmental Study**

Brief Environmental Study for Lift Irrigation Project (GCA25 Hectare)											
Section A: Human Resource			ToR Preparation		Draft Preparation		Final Report Preparation		Total Person Days	Remarks	Total Input Person Month
SN	Expertise	Unit	Field Work	Desk Work	Field Work	Desk Work	Desk Work				
1	Environmentalist (TL)	days	1	2	3	4	2	12	Key Staff	0.40	
2	Water Resources Expert	days	1	1	2	2	1	7	Key Staff	0.24	
3	Biodiversity/ Forestry Specialist	days	1	1	1	1	1	5	Key Staff (Optional-Project Specific)	0.17	
4	Socio-Economist	days	1	1	2	2	1	7	Key Staff	0.24	
5	Geologist/Er.	days	1	1	1	1	1	5	Key Staff (Optional-Project Specific)	0.17	
6	GIS Expert	days	0	1	1	1	1	4	Key Staff	0.14	
7	Legal Expert	days	0	0	0	1	1	2	Non Key Staff	0.07	
8	Language Expert	days	0	0	0	0	1	1	Non Key Staff	0.04	
9	Assistant	days	2	0	6	0	4	12	Non Key Staff	0.40	
<b>Sub-Total A</b>											0.40
<b>Section B: Reimbursable</b>											
1	Travel Cost		15 % of Section A								
2	Equipments		7% of Section A								
3	Laboratory Analysis		7% of Section A								
4	Stationary		10% of Section A								
<b>Section C: Notice and Allowances</b>											
1	News Paper Notice Publication		LS								
2	Public Hearing and Other Expenses		LS								
<b>Sub-Total B</b>											
<b>Sub-Total C</b>											
<b>Total</b>											<b>A+B+C=D</b>

For Gross Command Area above 25 hectare the total person input shall be increases by a factor (CA/25)<sup>0.13</sup>  
 5% of the total input shall be added if the proposal consist of any pond/storage structure



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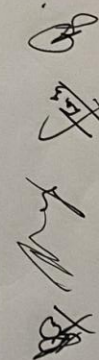
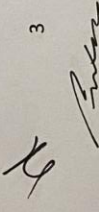
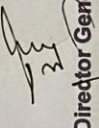
3.0 IEE study of Lift Irrigation

Initial Environmental Examination (IEE) study for Lift Irrigation (GCA≥100 hectare)

Section A: Human Resource		ToR		Draft Preparation		Final Report Preparation		Total Person Days	Remarks	Total Input Person Month
SN	Expertise	Unit	Field Work	Desk Work	Field Work	Desk Work	Desk Work			
1	Environmental (TL)	days	2	2	6	8	4	22	Key Staff	0.73
2	Water Resources Expert	days	2	2	4	4	2	14	Key Staff	0.47
3	Biodiversity/ Forestry Specialist	days	2	2	4	4	2	14	Key Staff	0.47
4	Socio-Economist	days	2	2	4	4	2	14	Key Staff	0.47
5	Geologist/Er.	days	2	2	2	2	1	9	Key Staff (Optional-Project Specific)	0.30
6	GIS Expert	days	1	1	4	4	2	12	Key Staff	0.40
7	Legal Expert	days	0	1	0	4	2	7	Non Key Staff	0.23
8	Language Expert	days	0	2	0	4	2	8	Non Key Staff	0.27
9	Assistant	days	4	4	12	16	8	44	Non Key Staff	1.47
<b>Sub-Total A</b>										
<b>Section B: Reimbursable</b>										
1	Travel Cost	15% of Section A								
1	Equipments	7% of Section A								
2	Laboratory Analysis	7% of Section A								
3	Stationary	10% of Section A								
<b>Section C: Notice and Allowances</b>										
1	News Paper Notice Publication	LS								
2	Public Hearing and Other Expenses	LS								
<b>Total</b>										
									<b>Sub-Total C</b>	<b>A+B+C=D</b>

For Gross Command Area above 100 hectare the total person input shall be increases by a factor (CA/100)<sup>0.3</sup>  
 5% of the total input shall be added if the proposal consist of any pond/storage structure



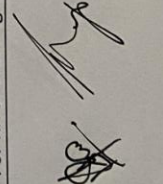
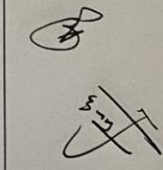
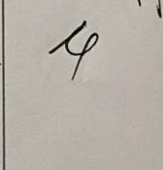
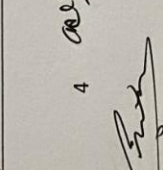
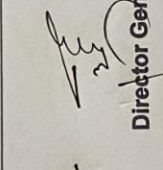



  
 Director General

4.0 IEE study of River Training Project

Initial Environmental Examination (IEE) study for River Training (River Bank Length ≤20 Km)											
Section A: Human Resource		ToR			Draft Preparation		Final Report Preparation		Total Person Days	Remarks	Total Input Person Month
		Field Work	Desk Work	Field Work	Desk Work	Desk Work	Person Month				
SN	Expertise	Unit	days	2	2	6	8	4	22	Key Staff	0.73
1	Environmental (TL)	days	days	2	2	4	4	2	14	Key Staff	0.47
2	Water Resources Expert	days	days	2	2	4	4	2	14	Key Staff	0.47
3	Biodiversity/ Forestry Specialist	days	days	2	2	4	4	2	14	Key Staff	0.47
4	Socio-Economist Geologist/Er.	days	days	2	2	4	4	2	14	Key Staff (Optional-Project Specific)	0.30
5	Geologist/Hydrologist	days	days	1	1	4	4	2	12	Key Staff	0.40
6	GIS Expert	days	days	0	1	0	4	2	7	Non Key Staff	0.23
7	Legal Expert	days	days	0	2	0	4	2	8	Non Key Staff	0.27
8	Language Expert	days	days	4	4	12	16	8	44	Non Key Staff	1.47
9	Assistant										
<b>Section B: Reimbursable</b>											
1	Travel Cost							15 % of Section A			
2	Equipments							7% of Section A			
3	Laboratory Analysis							7% of Section A			
4	Stationary							10% of Section A			
<b>Section C: Notice and Allowances</b>											
1	News Paper Notice Publication							LS			
2	Public Hearing and Other Expenses							LS			
										<b>Sub-Total B</b>	
										<b>Sub-Total C</b>	
										<b>Total</b>	<b>A+B+C=D</b>

For River Training Work above 20 km length the total person input shall increase by a factor (Length/20)<sup>0.7</sup>



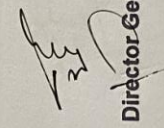
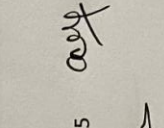
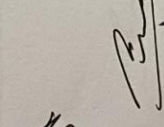
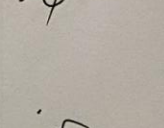
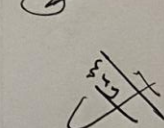

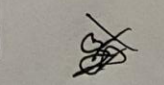





  
**Director General**

**5.0 EIA Study of River Training Project**

Environmental Impact Assessment (EIA) study for River Training (River Bank Length ≤20 Km)											
Section A: Human Resource		ToR		Draft Preparation		Final Report Preparation		Total Person Days		Total Input	
SN	Expertise	Unit	Field Work	Desk Work	Field Work	Desk Work	Desk Work	Total Person Days	Remarks	Person Month	
1	Environmentalist (TL)	days	4	6	15	15	5	45	Key Staff	1.50	
2	Water Resources	days	4	5	12	12	5	38	Key Staff	1.27	
3	Biodiversity/ Forestry	days	3	3	8	10	5	29	Key Staff	0.97	
4	Socio-Economist	days	3	3	15	15	5	41	Key Staff	1.37	
5	Geologist/Er.	days	1	1	2	2	1	7	Key Staff (Optional-Project Specific)	0.23	
6	Geologist/Hydrologist	days	2	2	5	5	3	17	Key Staff	0.57	
7	Legal Expert	days	0	2	0	5	2	9	Non Key Staff	0.30	
8	Language Expert	days	0	2	0	5	2	9	Non Key Staff	0.30	
9	Assistant	days	8	12	30	30	0	80	Non Key Staff	2.67	
<b>Section B: Reimbursable</b>										Sub-Total A	
1	Travel Cost							15 % of Section A			
2	Equipments							7% of Section A			
3	Laboratory Analysis							7% of Section A			
4	Stationary							10% of Section A			
<b>Section C: Notice and Allowances</b>										Sub-Total B	
1	News Paper Notice Publication							LS			
2	Public Hearing and Other Expenses							LS			
<b>Total</b>										Sub-Total C	
<b>Total</b>										A+B+C=D	

For River Training Work above 20 km length the total person input shall increase by a factor (Length/20)<sup>0.7</sup>

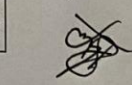
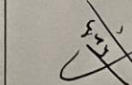
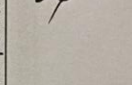
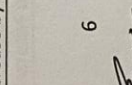
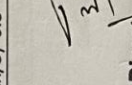



  
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**Director-General**

**6.0 IEE study of Irrigation Project**

Initial Environmental Examination (IEE) study for Irrigation Project (GCA: ≤500ha, Canal Lengths≤5 Km)												
Section A: Human Resource			ToR		Preparation		Draft Preparation		Final Report Preparation		Total Input	
S	N	Expertise	Unit	Field Work	Desk Work	Field Work	Desk Work	Desk Work	Desk Work	Total Person Days	Person Month	
1		Environmental (TL)	days	2	2	6	8	4	4	22	0.73	
2		Water Resources Expert	days	2	2	4	4	2	2	14	0.47	
3		Biodiversity/ Forestry Specialist	days	2	2	4	4	2	2	14	0.47	
4		Socio-Economist	days	2	2	4	4	2	2	14	0.47	
5		Geologist/Er.	days	2	2	2	2	1	1	9	0.30	
6		Geologist/Hydrologist	days	2	2	4	4	2	2	14	0.47	
7		Legal Expert	days	0	1	0	4	2	2	7	0.23	
8		Language Expert	days	0	2	0	4	2	2	8	0.27	
9		Assistant	days	4	4	12	16	8	8	44	1.47	
<b>Section B: Reimbursable</b>												
1		Travel Cost		15% of Section A								
2		Equipments		7% of Section A								
3		Laboratory Analysis		7% of Section A								
4		Stationary		10% of Section A								
<b>Section C: Notice and Allowances</b>												
1		News Paper Notice Publication		LS								
2		Public Hearing and Other Expenses		LS								
<b>Sub-Total B</b>												
<b>Sub-Total C</b>												
<b>Total A+B+C=D</b>												
For Irrigation Projects above 500 ha GCA, the total person input shall increase by a factor (GCA/500) <sup>0.3</sup>												
For the length of canal above 5 Km, the total person input shall increase by a factor (Length/5) <sup>0.3</sup>												



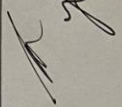

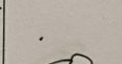
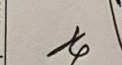
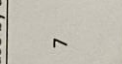
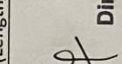
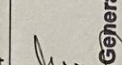





  
**Director General**

7.0 EIA Study of IP

Environmental Impact Assessment of Irrigation Project (GCA: ≤2000ha, Canal Lengths≤10 Km)											
Section A: Human Resource		SD/ToR		Preparation		Draft Preparation		Final Report Preparation		Total Input	
S	N	Expertise	Unit	Field Work	Desk Work	Field Work	Desk Work	Desk Work	Total Person Days	Remarks	Person Month
1	Environmentalist (TL)*	days	4	6	15	5	15	5	45	Key Staff	1.50
2	Water Resources Expert Biodiversity/ Forestry	days	4	5	12	5	12	5	38	Key Staff	1.27
3	Specialist	days	3	3	8	10	5	5	29	Key Staff	0.97
4	Socio-Economist	days	3	3	15	15	5	5	41	Key Staff	1.37
5	Geologist/Er. Geologist/Hydrologist	days	1	1	2	2	1	1	7	Key Staff (Optional-Project Specific)	0.23
6	GIS Expert	days	2	2	5	5	3	3	17	Key Staff	0.57
7	Legal Expert	days	0	2	0	5	2	2	9	Non Key Staff	0.30
8	Language Expert	days	0	2	0	5	2	2	9	Non Key Staff	0.30
9	Assistant	days	8	12	30	30	0	0	80	Non Key Staff	2.67
										Sub-Total A	
<b>Section B: Reimbursable</b>											
1	Travel Cost	15 % of Section A									
2	Equipments	7% of Section A									
3	Laboratory Analysis	7% of Section A									
4	Stationary	10% of Section A									
<b>Section C: Notice and Allowances</b>											
1	News Paper Notice Publication	LS									
2	Public Hearing and Other Expenses	LS									
										Sub-Total B	
										Sub-Total C	
										Total A+B+C=D	

For Irrigation Projects above 2000 ha GCA, the total person input shall increase by a factor (GCA/2000)\*0.2  
 For the length of canal above 10 Km, the total person input shall increase by a factor (Length/10)\*0.4










  
 Director General



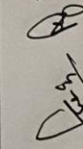
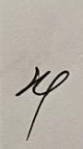
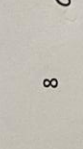
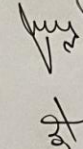
8.0 IEE Study of HPP

Initial Environmental Examination of Hydropower Project (Capacity ≥ 5 MW)												
Section A: person Resource		ToR			Draft Preparation		Final Report Preparation		Total Person		Total Input	
SN	Expertise	Unit	Field Work	Desk Work	Field Work	Desk Work	Desk Work	Desk Work	Days	Person	Remarks	Person Month
1	Environmentalist (TL)	days	2	2	6	8	4	4	22	22	Key Staff	0.73
2	Water Resources Expert	days	2	2	4	4	2	2	14	14	Key Staff	0.47
3	Biodiversity/ Forestry Specialist	days	2	2	4	4	2	2	14	14	Key Staff	0.47
4	Socio-Economist	days	2	2	4	4	2	2	14	14	Key Staff	0.47
5	Geologist/Er.	days	2	2	2	2	1	1	9	9	Key Staff (Optional-Project Specific)	0.30
6	GIS Expert	days	2	2	4	4	2	2	14	14	Key Staff	0.47
7	Legal Expert	days	0	1	0	0	2	2	7	7	Non Key Staff	0.23
8	Language Expert	days	0	2	0	0	2	2	8	8	Non Key Staff	0.27
9	Assistant	days	4	4	12	16	8	8	44	44	Non Key Staff	1.47
											Sub-Total A	
<b>Section B: Reimbursable</b>												
1	Travel Cost		15% of Section A									
2	Equipments		7% of Section A									
3	Laboratory Analysis		7% of Section A									
4	Stationary		10% of Section A									
<b>Section C: Notice and Allowances</b>												
1	News Paper Notice Publication		LS									
2	Public Hearing and Other Expenses		LS									
											Sub-Total B	
											Sub-Total C	
											Total A+B+C=D	

For every 1 MW increase in capacity above 5 MW, additional input shall increase by a factor (Capacity/5) \* 0.3

For every addition of headwork/water abstraction infrastructure 5% of input required (person days) shall be added to the estimate





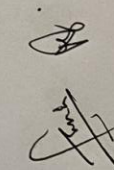

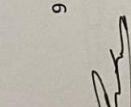

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9.0 EIA Study of HPP

Environmental Impact Assessment of Hydropower Project (Capacity>50 MW)												
Section A: Human Resource		SD/ToR Preparation		Draft Preparation		Final Report Preparation		Total Person		Total Input		
SN	Expertise	Unit	Field Work	Desk Work	Field Work	Desk Work	Desk Work	Days	Person	Remarks	Person Month	
1	Environmentalist (TL)	days	4	6	15	15	5	45	1	Key Staff	1.50	
2	Water Resources Expert	days	3	4	10	10	5	32	1	Key Staff	1.07	
3	Biodiversity/ Forestry Specialist	days	3	3	8	10	5	29	1	Key Staff	0.97	
4	Socio-Economist	days	3	3	15	15	5	41	1	Key Staff	1.37	
5	Geologist/Er.	days	2	2	3	3	2	12	1	Key Staff (Optional-Project Specific)	0.40	
6	GIS Expert	days	2	2	5	5	3	17	1	Key Staff	0.57	
7	Legal Expert	days	0	2	0	5	2	9	1	Non Key Staff	0.30	
8	Language Expert	days	0	2	0	5	2	9	1	Non Key Staff	0.30	
9	Assistant	days	8	12	30	30	0	80	1	Non Key Staff	2.67	
Sub-Total A												
<b>Section B: Reimbursable</b>												
1	Travel Cost		15% of Section A									
2	Equipments		7% of Section A									
3	Laboratory Analysis		7% of Section A									
4	Stationary		10% of Section A									
<b>Section C: Notice and Allowances</b>												
1	News Paper Notice Publication		LS									
2	Public Hearing and Other Expenses		LS									
Sub-Total B												
Sub-Total C												
Total A+B+C=D												

For every 1 MW increase in capacity above 50 MW, additional input shall increase by a factor (Capacity/50)<sup>0.6</sup>  
 For every addition of headwork/water abstraction infrastructure 5% of input required (human days) shall be added to the estimate









  
**Director General**

**10.0 IEE Study of Transmission Line**

IEE Study of Transmission Line Project (TL Lengths ≤ 5 Km, ROWs ≤ 15m)												
Section A: Human Resource			ToR		Preparation		Draft		Final Report Preparation		Total Input	
S	N	Expertise	Unit	Field Work	Desk Work	Field Work	Desk Work	Field Work	Desk Work	Total Person Days	Remarks	
1		Environmental (TL)	days	2	2	6	8		4	22	Key Staff	0.74
2		Biodiversity/ Forestry Specialist	days	2	2	4	4		2	14	Key Staff	0.47
3		Socio-Economist	days	2	2	4	2		2	12	Key Staff	0.40
4		Electrical Engineer	days	2	2	4	2		2	12	Key Staff (Optional-Project Specific)	0.40
5		GIS Expert	days	2	2	4	4		1	13	Key Staff	0.44
6		Legal Expert	days	0	1	0	4		2	7	Non Key Staff	0.24
7		Language Expert	days	0	2	0	4		2	8	Non Key Staff	0.27
8		Assistant	days	2	4	12	16		8	42	Non Key Staff	1.40
<b>Section B: Reimbursable</b>											Sub-Total A	
1		Travel Cost								15% of Section A		
2		Equipments								7% of Section A		
3		Laboratory Analysis								7% of Section A		
4		Stationary								10% of Section A		
<b>Section C: Notice and Allowances</b>											Sub-Total B	
1		News Paper Notice Publication								LS		
2		Public Hearing and Other Expenses								LS		
											Sub-Total C	
											Total A+B+C=D	

For Transmission Line above 5 km length the total person input shall increase by a factor (Length/5)<sup>0.6</sup>

For the width above 15m right of way, the total person input shall increase by a factor (RoW/15)<sup>0.1</sup>



**Director General**

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11.0 EIA Study of Transmission Line

Environmental Impact Assessment of Transmission Line Project (TL Lengths 10 Km, Rows 15m)

Section A: Human Resource		SD/ToR Preparation		Draft Preparation		Final Report Preparation		Total Input	
SN	Expertise	Field Work	Desk Work	Field Work	Desk Work	Desk Work	Total Person Days	Remarks	Person Month
1	Environmental (TL)	4	6	15	15	5	45	Key Staff	1.50
2	Biodiversity/ Forestry	3	3	8	10	5	29	Key Staff	0.97
3	Specialist	3	3	15	15	5	41	Key Staff	1.37
4	Socio-Economist	3	3	12	12	5	35	Key Staff	1.17
5	Electrical Engineer	1	1	1	1	1	5	Key Staff (Optional-Project Specific)	0.17
6	Geologist/Hydrologist	2	2	3	3	2	12	Key Staff	0.40
7	GIS Expert	0	2	0	5	2	9	Non Key Staff	0.30
8	Legal Expert	0	2	0	5	2	9	Non Key Staff	0.30
9	Language Expert	8	12	30	30	0	80	Non Key Staff	2.67
Sub-Total A									
Section B: Reimbursable									
1	Travel Cost	15 % of Section A							
2	Equipments	7% of Section A							
3	Laboratory Analysis	7% of Section A							
4	Stationary	10% of Section A							
Section C: Notice and Allowances									
1	News Paper Notice Publication	LS							
2	Public Hearing and Other Expenses	LS							
Sub-Total B									
Sub-Total C									
Total A+B+C=D									

For Transmission Line above 10 km length the total person input shall increase by a factor (Length/10)\*0.6  
 For the width above 15m right of way, the total person input shall increase by a factor (RoW/15)\*0.1



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12.0 Social Survey

Social Survey of Water Resources and Irrigation Projects (≤100 HH)									
Section A: Human Resource		Draft Preparation		Final Report Preparation		Total Person Days		Person Month	
SN	Expertise	Unit	Field	Desk	Desk	Desk	Remarks	Person Month	Person Month
1	Socio-Economist	100 Household	2	3	2	7	Key Staff	0.23	
2	Assistant/Social Mobilizer	100 Household	7	4	0	11	Non Key Staff	0.37	
<b>Section B: Travel, Logistics, Stationary</b>									
1	Travel					15% of Section A			
2	Stationary					10% of Section A			
<b>Section C: Stakeholders Meeting</b>									
1	Discussion with stakeholders					10% of Section A			
								Sub Total A	
								Sub Total B	
								Sub Total C	
								Total A+B+C=D	

For every HH above 100 HH the estimate shall increase by a factor  $(HH/100)^{0.8}$



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13.0 Forest Survey and Inventory

Forest Survey and Inventory (Forest Area ≤ 1 hectare)									
Section A: Human Resource			Draft Preparation		Final Report Preparation				
SN	Expertise	Number of Staffs	Number of Days		Total Person Days	Remarks	Person Month		
			Field	Desk					
1	Environment/Forestry/Botanist	1	4	1	2	7	Key Staff	0.23	
2	Assistant	2	4	1	0	10	Non Key Staff	0.33	
Sub Total A									
Section B: Travel, Logistics, Stationary									
1	Travel					10% of Section A			
2	Local Transportation					5% of Section A			
3	Stationary					10% of Section A			
Section C: Stakeholders Meeting									
1	Discussion with DFO/CF/NP					10% of total of Section Total Input			
Sub Total B									
Sub Total C									
Total A+B+C=D									

For every hectare of forest area above 1 hectare the estimate shall increase by a factor (Hectare/1)<sup>0.7</sup>



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**14.0 General Environment Survey/Monitoring/Auditing**

General Environment Study/Monitoring/Auditing (One Project)							
Section A: Human Resource			Draft Preparation		Final Report Preparation		
SN	Expertise	Unit	Field Work	Desk Work	Total Person Days	Remarks	
1	Environment Expert	days	7	8	3	18 Key Staff	0.60
2	Water Resources Expert	days	5	5	2	12 Key Staff	0.40
3	Biodiversity/Forestry Expert	days	5	5	2	12 Key Staff	0.40
4	Socio-Economic Expert	days	5	5	2	12 Key Staff	0.40
5	Assistant	days	10	0	0	Non Key Staff	0.33
Sub Total A							
Section B: Travel, Logistics, Stationary, Lab Work							
1	Travel Cost		15% of Section A				
2	Equipments		7% of Section A				
3	Laboratory Analysis		7% of Section A				
4	Stationary		10% of Section A				
Section C: Stakeholders Meeting							
1	Discussion with Stakeholders		10% of Section A				
Sub Total B							
Sub Total C							
Total A+B+C=D							



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**Director General**

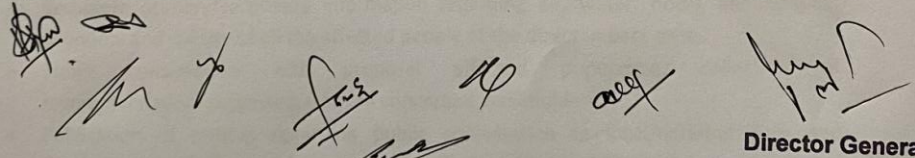
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### 15.0 General Provisions

SN	General Provisions
1	In case of donor funded projects additional experts and human input may be incorporated as per the scope of study.
2	The cost for public notice and public hearing shall be added as per the requirements of the terms of reference (scope of work).
3	In case of multipurpose purpose projects the estimate shall be done by taking 100% of the human input of main purpose and adding 70 % of human input from estimate for each additional purpose.
4	General scope of work for BES, IEE and EIA shall be as per Environment Protection Act, 2076 and Environment Protection Rules, 2077.
5	Complete census shall be considered for household survey and forest survey/inventory.
6	Qualification of experts shall be as per Environment Protection Rules, 2077.
7	Study period for 1. BES shall be of minimum 4 months, 2. IEE shall be of minimum 6 months, EIA shall be of minimum 1 year.
8	Study period for household survey, forest survey/inventory and environment monitoring and auditing shall be of minimum 3 months.
9	If forest area exceeds than 25 hectare, 75% of the human input shall be added as per the estimate for forest survey and inventory above 25 hectare.
10	If household number exceeds than 500, 75% of the human input shall be added as per the estimate for household survey above 500 household.
11	70% of the total cost estimate for BES, IEE and EIA shall be allocated for updating BES/IEE and Supplementary EIA study report.
12	The total person days of expert's input may be decreased depending upon the scope of work, but shall not be increased than set values.
13	The input of optional key expert shall be considered only if required by the specific project.
14	The cost estimate for BES/IEE/EIA study for category other than listed above can be adopted from the above mentioned cost estimate of most relevant nature of the work.
15	Value added tax and contingency shall be added to the estimate as per prevailing rules.



**Director General**





## 16.0 General Scope of Work

### 16.1 Scope of Work for Prior Consent

- Review of DPR/DFS/BES/IEE/EIA and other published and unpublished reports pertaining to proposal.
- Field investigation and collection of physical, chemical, biological, social and cultural data of the proposal.
- Preparation and submission of report for Prior Consent (permission) for environmental study in the format prescribed by MoEWRI/MoFE/DNPWC/DoFSC or concerned agency.
- Consultation with concerned approving authority, correction/presentation (if necessary).

### 16.2 Scope of Work for BES

- a. General: To prepare terms of reference (ToR) and Brief Environmental Study (BES) report and present the report at concerned ministry/authority on behalf of the proponent as per Environment Protection Act (2076) and Environment Protection Rules (2077) and other guiding document(s), manual(s) published by authorized entity in the context.
- b. Specific
  - Review all the existing documents such as Detailed Feasibility Study Report (DFSR), Detailed Project Report (DPR), and Master Plan (MP) pertaining to proposal impact zone.
  - Briefing and debriefing meeting with the proponent regarding proposal.
  - Area delineation, categorization of Zone of Influence (Zol), Indirect Impact Zone (IIZ), Direct Impact Zone (DIZ), depiction of Area Delineation on map indicating all the impact zones.
  - Analysis of land use, geology and seismicity by preparing/depicting appropriate map.
  - Complete primary/secondary information regarding air, water, noise, demography, economy and culture of all the affected people of the direct impact zone.
  - Public consultation with proposal affected population, collection of recommendation/suggesting from all concerned stakeholders.
  - Publication of notices regarding public consultation in local/national daily and dissemination of information via various media as guided by EPR 2077.
  - Layout map for proposal components, labor camp site, stock piling sites, batching plants site.
  - Depiction of forest area, cultural and archeologically significant site in map if it falls under Zol.
  - Collection of complete information regarding land acquisition by the project. Preparation of cadastral map if necessary.

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- c. Preparation of ToR should be based on information gathered and assessed during field survey and review of other pertinent documents and as per Rule 5 (1-a) of EPR 2077, and the report should be prepared as prescribed in Annex 6 of EPR 2077.
- d. After the approval of ToR by concerned ministry, based on approved ToR the consultant is required to prepare a BES report. The process of BES study should follow as per Rule 5, 6 and 7 of EPR 2077, and the report should be prepared as prescribed in Annex 10 of EPR 2077.

(Note: Depending upon the nature and type of proposal the above scope of work can be modified accordingly)

### 16.3 Scope of Work for IEE

- a. General: To prepare scoping document (SD), terms of reference (ToR) and Environmental Impact Assessment Report and present the report at concerned ministry/authority on behalf of the proponent as per Environment Protection Act (2076) and Environment Protection Rules (2077) and other guiding document(s), manual(s) published by authorized entity in the context.
- b. Specific
  - Review all the existing documents such as Detailed Feasibility Study Report (DFSR), Detailed Project Report (DPR), Master Plan (MP), Geotechnical Investigation Report, Environmental and Social reports published by Central, Provincial and Local Governments, Seismic Reports, Climate Change and Natural Disaster Reports pertaining to proposal impact zone.
  - Briefing and Debriefing meeting with the proponent regarding proposal.
  - Area delineation, categorization of Zone of Influence (Zoi), Indirect Impact Zone (IIZ), Direct Impact Zone (DIZ), depiction of Area Delineation on map indicating all the impact zones.
  - Preparation of map using cadastral map and digitization of area occupied by proposal components permanently and temporarily.
  - Analysis of land use, geology and seismicity by preparing/depicting appropriate map.
  - Acquisition of air quality (PM<sub>10</sub>, PM<sub>2.5</sub>, CO, TSP, Wind Speed and Direction), water quality (TDS, DO, Conductivity, Total Nitrogen, pH, E.Coli, Arsenic), Equivalent Noise Level and soil quality data (NPK) relevant to proposal
  - Complete primary information regarding demography, economy and culture of all the affected people of the direct impact zone. Information from secondary source for denizens of zone of influence.
  - Public Consultation with proposal affected population, collection of recommendation/suggesting from all concerned stakeholders. Publication of notices regarding public consultation in local/national daily and dissemination of information via various media as guided by EPR 2076.
  - Layout map for proposal components, labor camp site, stock piling sites, batching plants site.

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- Depiction of forest area, cultural and archeologically significant site in map if it falls under Zol.
  - Information regarding other infrastructure such as Strategic Road Network, Dams, Transmission Lines, Major Irrigation Canal, Special Economic Zones, International Boundary if it falls under Zol.
  - Collection of complete information regarding land acquisition by the project using government issued cadastral maps.
- c. Preparation of ToR should be based on information gathered and assessed during field investigation and review of related documents and as per Rule 5 (1-b) of EPR 2077, and the report should be prepared as prescribed in Annex 7 of EPR 2077.
- d. After the approval of ToR by concerned ministry, based on approved ToR the consultant is required to prepare an IEE report. The process of IEE study should follow as per Rule 7 (5-b) of EPR 2077, and the report should be prepared as prescribed in Annex 11 of EPR 2077.

(Note: Depending upon the nature and type of proposal the above scope of work can be modified accordingly)

#### 16.4 Scope of Work for EIA

- a. General: To prepare scoping document (SD), terms of reference (ToR) and Environmental Impact Assessment Report and present the report at concerned ministry/authority on behalf of the proponent as per Environment Protection Act (2076) and Environment Protection Rules (2077) and other guiding document(s), manual(s) published by authorized entity in the context.
- b. Specific
- Review all the existing documents such as Detailed Feasibility Study Report (DFSR), Detailed Project Report (DPR), Master Plan (MP), Geotechnical Investigation Report, Environmental and Social reports published by Central, Provincial and Local Governments, Seismic Reports, Climate Change and Natural Disaster Reports pertaining to proposal impact zone.
  - Briefing and Debriefing meeting with the proponent regarding proposal.
  - Area delineation, categorization of Zone of Influence (Zol), Indirect Impact Zone (IIZ), Direct Impact Zone (DIZ), depiction of Area Delineation on map indicating all the impact zones.
  - Preparation of map using cadastral map and digitization of area occupied by proposal components permanently and temporarily.
  - Analysis of land use, geology and seismicity by preparing/depicting appropriate map.
  - Acquisition of air quality (PM<sub>10</sub>, PM<sub>2.5</sub>, CO, TSP, Wind Speed and Direction), water quality (TDS, DO, Conductivity, Total Nitrogen, pH, E.Coli, Arsenic), Equivalent Noise Level and soil quality data (NPK) relevant to proposal
  - Complete primary information regarding demography, economy and culture of all the affected people of the direct impact zone. Information from secondary source for denizens of zone of influence.
  - Public Consultation with proposal affected population, collection of recommendation/suggesting from all concerned stakeholders. Publication of notices





regarding public consultation in local/national daily and dissemination of information via various media as guided by EPR 2076.

- Layout map for proposal components, labor camp site, stock piling sites, batching plants site.
- Depiction of forest area, cultural and archeologically significant site in map if it falls under Zol.
- Information regarding other infrastructure such as Strategic Road Network, Dams, Transmission Lines, Major Irrigation Canal, Special Economic Zones, International Boundary if it falls under Zol.
- Collection of complete information regarding land acquisition by the project using government issued cadastral maps.

c. Scoping Document

The Scoping is an essential step of determining the range of issues to be analyzed during the EIA study of the proposal. It helps to know the issues and the scope of the works to be dealt with during the EIA report preparation. The Scoping process involves the following tasks:

- Involvement of the interested parties and the affected population;
- Identification of significant and/ or priority issues to be examined/ assessed during the EIA report preparation;
- Identification and selection of alternatives; and
- Providing input for the determination of the ToR for further study.
- Identification of other pertinent issues
- Area delineation, Zol, IIZ and DIZ

The process of scoping should follow as per Rule 5 (1) of EPA 2076; Rule 4 of EPR 2077, and the report should be prepared as prescribed in Annex 5 of EPR 2077.

d. Preparation of Terms of Reference (ToR)

Preparation of ToR should be based on information gathered and assessed during scoping and as per Rule 5 (1) of EPA 2076; Rule 5 (1-c) of EPR 2077, and the report should be prepared as prescribed in Annex 8 of EPR 2077.

e. Preparation of EIA Report

After the approval of SD and ToR by MoFE, based on approved ToR the consultant is required to prepare an EIA report. The process of EIA study should follow as per Rule 5 of EPA 2076; Rule 7 (5-c) of EPR 2077, and the report should be prepared as prescribed in Annex 12 of EPR 2077.

(Note: Depending upon the nature and type of proposal the above scope of work can be modified accordingly)

**16.5 Scope of Work for HH Survey**

- Preparation and approval of data collection checklist by the proponent.



- Complete count of the total population under question and collection of information according to approved checklist.
- Consolidation and analysis of data.
- Preparation and presentation of report.
- Approval of report by the proponent.

#### 16.6 Scope of Work for Forest Survey/Inventory

- Preparation and approval of forest survey and inventory checklist by the proponent.
- Complete count and enumeration of total species of the proposal area as per the methodology approved by authorized entity of government of Nepal.
- Consolidation and analysis of data.
- Preparation and presentation of report.
- Approval of report by the proponent.

#### 16.7 Scope of Work for General Environmental Survey/Monitoring/Auditing

- Review all the existing documents such as Detailed Feasibility Study Report (DFSR), Detailed Project Report (DPR), Master Plan (MP), Geotechnical Investigation Report, Environmental and Social reports published by Central, Provincial and Local Governments, Seismic Reports, Climate Change and Natural Disaster Reports, approved BES/IEE/EIA reports pertaining to proposal area.
- Selection of indicators/parameters for Environmental Survey/Monitoring/Auditing.
- Discussion with proponent and finalization of indicators/parameters for study.
- Approval of checklist and methodology by the proponent.
- Field visit, data collection, discussion with local stakeholders.
- Discussion with proponent regarding findings.
- Consolidation of data acquired and preparation of reports.
- Presentation and approval of report by the proponent.

Director General