



SURAT KETERANGAN
MELAKUKAN KEGIATAN PENGABDIAN KEPADA MASYARAKAT
INSTITUT TEKNOLOGI NASIONAL
No. 633/C.02.01/LP2M/IX/2019

Yang bertanda tangan di bawah ini,

Nama : Dr. Tarsisius Kristyadi, S.T., M.T.
Jabatan : Kepala
Unit Kerja : LP2M-Itenas
JL. P.K.H. Mustafa No.23 Bandung

Menerangkan bahwa,

Nama	NPP	Jabatan
Dr.Eng. M. Candra Nugraha	20190301	Tenaga Ahli

Telah melakukan kegiatan Pengabdian kepada Masyarakat sebagai berikut:

Nama Kegiatan : Kajian Awal Kelayakan Pembangunan Pembangkit Listrik Berbasis Energi Terbarukan
Tempat : 7 Desa di Kab. Bombana, Konawe Selatan, Muna dan Muna Barat, Provinsi Sulawesi Tenggara
Waktu : 01 - 06 Agustus 2019
Sumber Dana : United Development Programme

Demikian surat keterangan ini dibuat untuk dapat dipergunakan sebagaimana mestinya.

Bandung, 04 September 2019

Lembaga Penelitian dan Pengabdian
kepada Masyarakat (LP2M) Itenas
Kepala,

Dr. Tarsisius Kristyadi, S.T., M.T.
NPP 960604

Laporan Pelaksanaan Kegiatan

Dr. Eng. M Candra Nugraha D

Jurusan Teknik Lingkungan

Nama	: Dr. Eng. M Candra Nugraha D	NIK	: 1780
Jabatan	: Dosen	Unit Kerja	: Teknik Lingkungan
Kegiatan	: Kajian Awal Kelayakan Pembangunan Pembangkit Listrik Berbasis Energi Terbarukan		
Sebagai	: Tenaga Ahli		
Tempat	: 7 Desa di Kab. Konawe Selatan, Bombana, Muna dan Muna Barat Prov. Sulawesi Tenggara		
Hari/Tanggal	: Kamis – Selasa / 1 – 6 Agustus 2019		

1. Rincian kegiatan adalah sebagai berikut:

No.	Hari/Tanggal	Kegiatan utama
1	Kamis/ 1 Agustus 2019	- Perjalanan Bandung – Jakarta – Makasar – Kendari - Diskusi pembuka dengan <i>liaison officer</i> UNDP - Pertemuan dengan staff Bappeda Prov. Sulawesi Tenggara
2	Jumat/2 Agustus 2019	- Perjalanan darat Kendari – Pelabuhan Amolengo - Perjalanan laut Pel. Amolengo – Desa Malaringgi - Survey dan pengkajian kondisi Desa Malaringgi - Perjalanan kembali ke Kendari
3	Sabtu/3 Agustus 2019	- Perjalanan darat Kendari – Desa Totole - Survey dan pengkajian kondisi Desa Totole - Perjalanan darat ke Pelabuhan Torabulu - Perjalanan darat ke Bombana
4	Minggu/4 Agustus 2019	- Perjalanan laut Pelabuhan Kasipute – Pulau Baliara dan Pulau Bangko - Survey dan pengkajian kondisi Desa Kep. Baliara dan Desa Bangko - Perjalanan kembali ke Pel. Kasipute
5	Senin/5 Agustus 2019	- Perjalanan darat Bombana – Pelabuhan Torabulu - Perjalanan laut Pel. Torabulu – Pulau Tasipi - Survey dan pengkajian Desa Tasipi - Perjalanan laut Pulau Tasipi – Pulau Santigi - Survey dan pengkajian Desa Santigi - Perjalanan kembali ke Pelabuhan Torabulu - Perjalanan darat ke Kendari
6	Selasa/6 Agustus 2019	Perjalanan Kendari – Makasar – Jakarta – Bandung

2. Hasil penilaian awal resiko untuk aspek sosial dan lingkungan adalah seperti pada lampiran.

Table 2. Rating the 'Impact' of a Risk

Score	Rating	Social and environmental impacts
5	Critical	Significant adverse impacts on human populations and/or environment. Adverse impacts high in magnitude and/or spatial extent (e.g. large geographic area, large number of people, transboundary impacts, cumulative impacts) and duration (e.g. long-term, permanent and/or irreversible); areas impacted include areas of high value and sensitivity (e.g. valuable ecosystems, critical habitats); adverse impacts to rights, lands, resources and territories of indigenous peoples; involve significant displacement or resettlement; generates significant quantities of greenhouse gas emissions; impacts may give rise to significant social conflict
4	Severe	Adverse impacts on people and/or environment of medium to large magnitude, spatial extent and duration more limited than critical (e.g. predictable, mostly temporary, reversible). The potential risk impacts of projects that may affect the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples are to be considered at a minimum potentially severe.
3	Moderate	Impacts of low magnitude, limited in scale (site-specific) and duration (temporary), can be avoided, managed and/or mitigated with relatively uncomplicated accepted measures
2	Minor	Very limited impacts in terms of magnitude (e.g. small affected area, very low number of people affected) and duration (short), may be easily avoided, managed, mitigated
1	Negligible	Negligible or no adverse impacts on communities, individuals, and/or environment

Table 3. Rating the 'Probability' of a Risk

Score	Rating
5	Expected
4	Highly Likely
3	Moderately likely
2	Not Likely
1	Slight

Table 4. Determining 'Significance' of Risk

Impact	5	Red	Red	Red	Red	Red
	4	Yellow	Yellow	Red	Red	Red
	3	Green	Yellow	Yellow	Yellow	Yellow
	2	Green	Green	Yellow	Yellow	Yellow
	1	Green	Green	Green	Green	Green
		1	2	3	4	5
Probability						
Green = Low, Yellow = Moderate, Red = High						

Malaringgi

Option #1: Slope plantation area

Potential risk(s):

land ownership (LO) ; community capacity (CC); Hazardous waste (HW)

Impact	5	Red	Red	Red	Red	Red
	4	Yellow	Yellow	Red	Red	Red
	3	Green	LO	CC	Yellow	Yellow
	2	Green	Green	Yellow	HW	Yellow
	1	Green	Green	Green	Green	Green
		1	2	3	4	5
Probability						
Green = Low, Yellow = Moderate, Red = High						



Malaringgi

Option #2: Flat futsal area

Potential risk(s): land ownership (LO); community capacity (CC); Climate factor (increase sea level) (CF); Hazardous waste (HW)

Impact	5					
	4				CF	
	3		LO	CC		
	2				HW	
	1					
		1	2	3	4	5
Probability						
Green = Low, Yellow = Moderate, Red = High						



Totole

Option: Flat area

Potential risk(s): community capacity (CC); Hazardous waste (HW)

Impact	5					
	4					
	3			CC		
	2				HW	
	1					
		1	2	3	4	5
Probability						
Green = Low, Yellow = Moderate, Red = High						



Baliara

Option: Flat area near to the sea

Potential risk(s): Community capacity (CC);

Climate factor (increase sea level) (CF);

Hazardous waste (HW)

Impact	5					
	4				CF	
	3			CC		
	2				HW	
	1					
		1	2	3	4	5
Probability						
Green = Low, Yellow = Moderate, Red = High						



Bangko

Option: Flat plantation area

Potential risk(s): community capacity (CC);

Hazardous waste (HW)

Impact	5					
	4					
	3			CC		
	2				HW	
	1					
		1	2	3	4	5
Probability						
Green = Low, Yellow = Moderate, Red = High						



Tasipi

Option: Flat and wet area near to the sea

Potential risk(s): community capacity (CC);

Climate factor (increase sea level) (CF);

Hazardous waste (HW)

Impact	5					
	4				CF	
	3			CC		
	2				HW	
	1					
		1	2	3	4	5
Probability						
Green = Low, Yellow = Moderate, Red = High						



Summary of significance of risks

- Land ownership: Moderate
- Community capacity: Moderate
- Climate factors which increasing of sea level: High
- Hazardous waste production – battery: Moderate