

**FIELD REPORT**

**The Social Impact of Road  
Improvement in Kabupaten Dompu,  
Nusa Tenggara Barat (NTB)**

**Sri Budiyati**

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Jakarta  
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# ABSTRACT

## **The Social Impact of Road Improvement in Kabupaten Dompu, Nusa Tenggara Barat (NTB)**

Sri Budiyati, Yudi Fajar M. Wahyu, Tuti Widiastuti, and  
Graham Gleave (*Project Consultant*)

This study is part of the monitoring and evaluation for the Eastern Indonesia National Road Improvement Project (EINRIP) in Kabupaten (District of) Dompu, West Nusa Tenggara (NTB) Province, with a particular focus on Desa (Village of) Nanga Tempu in Kecamatan (Subdistrict of) Manggelewa. EINRIP is a joint project between the Indonesian and Australian governments to increase the quality of national roads in order to promote the economic and social development of communities in eastern Indonesia.

The study finds that road improvements have brought about many social and economic changes in local communities. The project has led to effective outcomes for programs aimed at increasing agricultural productivity, especially in Kabupaten Dompu's priority areas of cattle, corn, and seaweed farming. Government officials have been making more regular visits to the area to monitor the pilot project together with the community. The local community has been planting more corn because it is now better able to market it. The construction of several storage facilities and processing plants by investors from outside Kecamatan Manggelewa has also made it easier for local agricultural produce to be sold in surrounding areas. Local residents in Desa Nanga Tumpu have enthusiastically welcomed the introduction of electricity that came about after the road improvements were completed. Access to health, education, and market infrastructure has also improved. However, economic competition in the transport and restaurant sectors has increased, which has led to reduced income. In addition, between 2008 and 2013 a change in the prosperity levels among Desa Nanga Tumpu residents occurred with the emergence of a group of very wealthy residents, which has further widened the welfare gap. This change significantly differs from the results of the baseline study in 2008.

In general, the improvements to national roads have accelerated development in Kabupaten Dompu, while also increasing social and economic activity in the community.

Keywords: monitoring, evaluation, road improvements, Eastern Indonesia, NTB

# TABLE OF CONTENTS

ACKNOWLEDGEMENTS	i
ABSTRACT	ii
TABLE OF CONTENTS	iii
LIST OF TABLES	iv
LIST OF FIGURES	iv
LIST OF ABBREVIATIONS	v
I. INTRODUCTION	1
1.1. Background	1
1.2. Objectives	1
1.3. Procedures and Location	2
II. FINDINGS	5
2.1. General Description of Area	5
2.2. Regional Economy	8
2.3. Transport Industry and Services	12
2.4. Village Economy, Livelihoods, and Living Standards	14
2.5. Social Service Provision	19
III. CONCLUSIONS	25
3.1. Economic Development	25
3.2. Transport Sector	25
3.3. Social Changes	25
3.4. Health Services	26
3.5. Education	26
3.6. Community Views of EINRIP	26

## LIST OF TABLES

Table 1.	GRDP of Dompu District, 2008-2010	8
Table 2.	Dompu District's HDI	9
Table 3.	Poverty Rate for Dompu District	9
Table 4.	Gini Ratio for Dompu District 2008-2011	10
Table 5.	Dompu District Share of Income by Quintile (2008 and 2011)	10
Table 6.	Production of Corn and Rice in Dompu District	11
Table 7.	Livestock in Dompu District	12
Table 8.	Household Classification in Nanga Tumpu Village (Women's FGD)	18
Table 9.	Household Classification in Nanga Tumpu Village (Men's FGD)	18
Table 10.	Selected Characteristics of Welfare Groups (Women's FGD)	19
Table 11.	Net Enrolment Rate (NER) of Dompu District in 2008, 2011 & 2012	22

## LIST OF FIGURES

Figure 1.	Location of Project Road and Sample Village in Dompu District	3
Figure 2.	Administrative Boundary of Dompu District	6
Figure 3.	Socio-economic Map of Nanga Tumpu Village	7
Figure 4.	Lorenz Curve: Dompu District Income Distribution by Quintile	10
Figure 5.	A photograph of a road in front of a school with a zebra crossing, sidewalk, and school safety zone (in red) following road improvement work by EINRIP.	23

## LIST OF ABBREVIATIONS

ACCESS	Australian Community Development and Civil Society Strengthening Scheme
AKAP	<i>Antar Kota Antar Provinsi</i> (Intercity Inter Province)
APBN	<i>Anggaran Pendapatan dan Belanja Negara</i> (National Budget)
BLSM	<i>Bantuan Langsung Sementara Masyarakat</i> (Temporary Direct Cash Transfer)
BLT	<i>Bantuan Langsung Tunai</i> (Direct Cash Transfers)
BSM	<i>Bantuan Siswa Miskin</i> (Assistance for Poor Students)
CV	<i>Persekutuan Komanditer</i> or <i>Commanditaire Vennootschap</i> (Limited Partnership)
CSR	Corporate Social Responsibility ( <i>Tanggung Jawab Sosial Perusahaan</i> )
DAU	<i>Dana Alokasi Umum</i> (General Allocation Fund)
Dispenda	<i>Dinas Pendapatan Daerah</i> (Regional Revenue Agency)
DLAJR	<i>Dinas Lalu Lintas dan Angkutan Jalan Raya</i> ( <i>City Traffic and Land Transportation Agency</i> )
Dolog	<i>Depot Logistik</i> (Logistics Depot)
DPRD	<i>Dewan Perwakilan Rakyat Daerah</i> (Regional House of Representatives)
EINRIP	Eastern Indonesia National Road Improvement Project
FGD	Focus Group Discussion
FHO	Final project handover
GK	<i>Garis Kemiskinan</i> (Poverty Line)
GRDP	Gross Regional Domestic Product
Ha	Hectare
HDI	Human Development Index
HGU	<i>Hak Guna Usaha</i> (rights of exploitation or land cultivation permit)
JAKKAD	<i>Jaminan Kesehatan Masyarakat Dompus</i> (Health Insurance for the Dompus Community)
Jamkesda	<i>Jaminan Kesehatan Daerah</i> (Regional Social Health Insurance)
Jamkesmas	<i>Jaminan Kesehatan Masyarakat</i> (Health Insurance for the Poor)
JTR	<i>Jaringan Tegangan Rendah</i> (Low Voltage Network)
KK	<i>Kepala Keluarga</i> (Head of Household)
KPM	<i>Kader Pemberdayaan Masyarakat</i> (Community Empowerment Cadres)
KPS	<i>Kartu Perlindungan Sosial</i> (Social Protection Card)
MI	<i>Madrasah Ibtidaiyah</i> (Islamic primary school)
MTs	<i>Madrasah Tsanawiyah</i> (Islamic junior highschool)
MoU	Memorandum of Understanding
P1	<i>Indeks Kedalaman Kemiskinan</i> (Poverty Gap Index)
P2	<i>Indeks Keparahan Kemiskinan</i> (Poverty Severity Index)
PAD	<i>Pendapatan Asli Daerah</i> (Locally generated revenue)
PDAM	<i>Perusahaan Daerah Air Minum</i> (Regional Water Supply Company)

PDRB	<i>Produk Domestik Regional Bruto</i> (Gross Domestic Regional Product)
PHO	Project Hand-Over
PIDRA	Participatory Integrated Development in Rain-fed Areas
PIJAR	<i>Sapi, Jagung dan Rumput Laut</i> (The Bupati (Regent) of Dompu's programme to increase the production of the three main commodities, i.e., cattle, corn, and seaweed.)
PKB	<i>Pengujian Kendaraan Bermotor</i> (Motor Vehicle Inspection )
PKBM	<i>Pusat Kegiatan Belajar Masyarakat</i> (Education outside of School)
PLN	<i>Perusahaan Listrik Negara</i> (National Electricity Company)
PNPM	<i>Program Nasional Pemberdayaan Masyarakat</i> (National Programme for Community Empowerment)
PPL	<i>Penyuluh Pertanian Lapangan</i> (Agricultural Field Extension Worker)
PPK	<i>Pejabat Pembuat Komitmen</i> (Subdistrict Development Projects)
PU	<i>Pekerjaan Umum</i> (Office of Public Work)
Puskesmas	<i>Pusat Kesehatan Masyarakat</i> (Community Healthcare Centre)
Puskesmas	<i>Pusat Kesehatan Hewan</i> (Animal Healthcare Centre)
Raskin	<i>Beras Untuk Rumah Tangga Miskin</i> (Rice for Poor Programme)
RMPS	<i>Regional Management Pulau Sumbawa</i> (Sumbawa Island Regional Management)
ROSCA	Revolving Savings and Credit Associations ( <i>Arisan</i> )
SatPol PP	<i>Satuan Polisi Pamong Praja</i> (Public Order Agency)
SD	<i>Sekolah Dasar</i> (Primary School)
SIM	<i>Surat Izin Mengemudi</i> (Driving Licence)
SMA	<i>Sekolah Menengah Atas</i> (Senior High School)
SMK	<i>Sekolah Menengah Kejuruan</i> (Senior Vocational High School)
SMP	<i>Sekolah Menengah Pertama</i> (Junior High School)
SNVT	<i>Satuan Non-Vertikal Tertentu</i> (Provincial Specific Non-Vertical Work Unit)
SPP	<i>Simpan Pinjam Perempuan</i> (Women's Savings and Loan)
STD	Sexually Transmitted Disease
TKI	<i>Tenaga Kerja Indonesia</i> (Indonesian Migrant Workers)
TKW	<i>Tenaga Kerja Wanita</i> (Indonesian Women Migrant Workers)
TM	<i>Tegangan Menengah</i> (Medium Voltage)
UGD	<i>Unit Gawat Darurat</i> (Accident and Emergency Unit)
UKS	<i>Unit Kesehatan Sekolah</i> (School Health Unit)
UPTD	<i>Unit Pelaksana Teknis Dinas</i> (Regional Technical of Implementation Unit)

# I. INTRODUCTION

## 1.1. Background

Efforts to improve road infrastructure in eastern Indonesia continue to be carried out to promote the economic and social development of communities. One project is the widening and improvement of roads in Kabupaten Dompu, West Nusa Tenggara (NTB) Province. The work was completed in 2011 through EINRIP, a joint project between the Indonesian and Australian governments to improve road infrastructure. The project is aimed at increasing the standard of living of communities in eastern Indonesia by improving the quality of roads to bring them in line with national standards.

Four sections of NTB's road network spanning 82 kilometers on Sumbawa Island have been designated as focus areas for EINRIP. The project is important because provincial roads in NTB provide a gateway to land transportation and the distribution of trade goods between eastern Indonesia and the areas west of Sumbawa (Java and Bali). The improvement and upgrading of these roads is expected to accelerate development in eastern Indonesia by enhancing the welfare of communities, especially those located near the improved roads.

SMERU, in cooperation with consultants engaged by AusAID, conducted three monitoring and evaluation activities in NTB in 2008, 2011, and 2013. In 2008, SMERU carried out a baseline study in Desa Nanga Tumpu, Kabupaten Manggalewa, Kabupaten Dompu (Budiyati and Hutagalung, forthcoming). In 2011, SMERU completed a study which examined roads under repair across Sumbawa (Budiyati, Wahyu, and Gleave, forthcoming). In 2013, SMERU conducted a study on the social impact of road improvements in Desa Nanga Tumpu. This impact study aims to observe socioeconomic changes using the results of the 2008 baseline study for comparison.

This report is the culmination of the three monitoring activities above. Its main focus will be on the results of the monitoring and evaluation of the impact of road improvements on the welfare of communities. In particular, it will focus on changes in social and economic activities in Kecamatan Manggalewa. We will compare the 2008 baseline study's findings with the community's socioeconomic conditions in 2013.

This continuous monitoring and evaluation study uses the same methodology for each year; while a number of the respondents for the 2008 and 2013 studies are also the same. We therefore hope it will show the impact in a more reliable way.

## 1.2. Objectives

Monitoring the changes in communities' social and economic conditions is an important element of any development programme, including road improvement. It is necessary to measure the extent to which the affected community benefits from the programme and to identify the reasons for any adverse impacts. This information can then be used to improve the design of future projects.

The Monitoring and Evaluation (M&E) design for the AusAID funded Eastern Indonesia National Road Improvement Project (EINRIP), which is improving 400 km of roads in seven provinces of eastern Indonesia, involves quantitative surveys of road conditions, traffic

volumes and vehicle speeds, together with a programme of qualitative social research in four selected locations. The qualitative social research is designed to determine the impact of the project on the social and economic life of sample communities affected by the road improvement programme.

The research involves three stages:

- **Baseline:** providing information on the social and economic conditions, and on expectations of the community before programme implementation.
- **Construction Impacts:** information collected during construction, concentrating on employment, health and environmental impacts of construction activities.
- **Monitoring:** information on social and economic conditions approximately one year after the completion of the project, and on local perceptions of the effects of road improvements on their way of life.

This is the first monitoring report, carried out in Sumbawa, and it documents the changes in:

- the local economy (occupations and income, access to credit/loan, marketing of produce, and prices of products and consumer goods);
- human development (health conditions, education, social interaction, social relationships);
- transport and security (transport facilities, personal mobility, traffic accidents, security level);
- the dissemination of information / plans to improve road conditions, and government policy regarding compensation for land used for road widening;
- the community's views on problems emerging during and after the road improvements; and
- the community's perceptions of the impacts and benefits of the road improvements.

## **1.3. Procedures and Location**

### **1.3.1. Location**

This first Monitoring study was carried out in Dompu District in Sumbawa to examine the impacts of the ENB 03: Cabdin Dompu – Banggo road improvement. The project improved approximately 24 km of road, in two separate sections. ENB 03 is part of the overall improvement of the Sumbawa – Banggo road (164 km), which consists of four AusAID funded road sections, totalling 82 km; improvements to the remaining sections were carried out by Bina Marga using national budget (APBN) funding (see map below). The AusAID funded sections were:

- ENB 01A/B: Sumbawa Bypass: km 0 – km 11<sup>1</sup> (11 km)
- ENB 01C: Lapa – Plampang; km 28 – 60 (32 km)

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<sup>1</sup>Kilometer posts for ENB 01 and ENB 02 are measured from Sumabawa; those for ENB 03 are measured from Bima.

- ENB 02: Empang – Cabdin Dompu km 116 – 131 (15 km)
- ENB 03: Cabdin Dompu – Banggo km 86 – 101 and km 116 – 125 (24 km)

It should be noted that the second section of ENB 03 is contiguous with ENB 02, forming a 24 km section of road.

The road in Dompu District serves long-distance passenger and freight vehicles, as well as local traffic serving the predominantly agricultural economy. The traffic volumes remain generally light, but have increased substantially following the road improvements.

Interviews were carried out throughout Dompu District, and village level enquiries centred on Nanga Tumpu in Manggelewa Subdistrict, located between the two sections of ENB 03, on a section improved with APBN funding (Figure 1).



**Figure 1. Location of Project Road and Sample Village in Dompu District**

### 1.3.2. Procedures

The study used qualitative methods and the data was collected through in-depth interviews and focus group discussions (FGDs).

#### a) In-depth Interviews

The informants, who consisted of relevant local government officials at the district (*kabupaten*), sub-district (*kecamatan*) and village levels, as well as business operators, were

interviewed using semi-structured interview guidelines. Whenever possible, the interviews in 2013 were held with respondents that participated in the 2008 interviews.

In 2008 (Baseline), a total 36 informants were interviewed, with a further 40 informants in 2011(Construction Impacts) and 95 informants in 2013 (Monitoring).

The purpose of the interviews with local government officials was to get a full understanding of:

- the condition and the value of the national roads both before and after improvement;
- the problems in provision of public services due to the condition of these roads;
- the socioeconomic conditions of the communities served by these roads; and
- the impacts of the project both during and after the road improvements.

The purpose of the interviews with local business operators was to gather information on how transport services were affected by the condition of the project road.

For the Baseline survey, 10 household respondents from Nanga Tumpu (4 female and 6 male) were interviewed using a semi-structured questionnaire; this year (2013) 14 households (9 female and 7 male) interviews were carried out. In both cases, the respondents were selected to provide a sample representing all welfare classes, types of occupation and locations (sub-villages). The SMERU team was able to locate 2 households from the Baseline survey for re-interview this year. The majority of respondents from poor households who were interviewed during the baseline survey had either died or moved from Nanga Tumpu Village. It was also difficult to revisit the respondents from the rich households as it was harvest time and they were working in the fields from seven in the morning until seven in the evening. The interviews were designed to collect data regarding their livelihoods, the problems they faced due to the poor condition of the roads before improvement, and their perceptions of the impact of the road improvements, both during and after construction.

## **b) Focus Group Discussions**

Two FGDs were organised in Nanga Tumpu village (separate FGDs for men and women), with participants from all of the sub-villages. The purpose of the FGDs was to discuss the welfare of the local community, identifying welfare classes and changes in welfare during the period 2005-2008 (Baseline) and 2008 – 2013 (Monitoring). In addition, the participants also discussed factors that influence the welfare of the local community and the impacts of changes in road conditions. The 2013 FGDs included 4 women and 4 men who had participated in the 2008 FGDs.

## **c) Dates**

The Baseline field study in Dompu District was conducted from 12 to 21 July 2008, the Construction Impacts study was carried out from 21 to 25 July 2011, while the 2013 Monitoring field study was conducted from 31 March to 10 April. Full time SMERU researchers collected the data, with the assistance (in 2008) of a local researcher. Two of the SMERU team have participated in all three surveys.

## II. FINDINGS

### 2.1. General Description of Area

#### 2.1.1. Dompu District

Dompu District is located on Sumbawa Island in the eastern part of West Nusa Tenggara Province, at longitude 117° 42'-118° 30' East and latitude 8° 06'-9° 05' South, at an altitude of between 15 to 62 meters above sea level. The district borders the Flores Sea and Kabupaten Bima to the north; Kabupaten Bima to the east; the India Ocean to the south; and Kabupaten Sumbawa to the west (Figure 2). The total area of the district is around 2,324 sq. km.

It is divided into 8 administrative sub-districts (Hu'u, Pajo, Dompu, Woja, Kilo, Kempo, Manggelewa, and Pekat); there were 70 villages and 9 *kelurahan* (urban villages) in 2011 (in 2008 there were 61 villages and 9 *kelurahan*).

Besides the indigenous Dompu, the population is made up of many migrants from Java, Bali, Lombok, Bima, Sumbawa and Bugis, who have long been resident (since 1964) in the district. The local government has distributed arable land to migrants for cultivation and animal husbandry. In 2007, the total population was 208,867; by 2012, it had risen to 223,678.

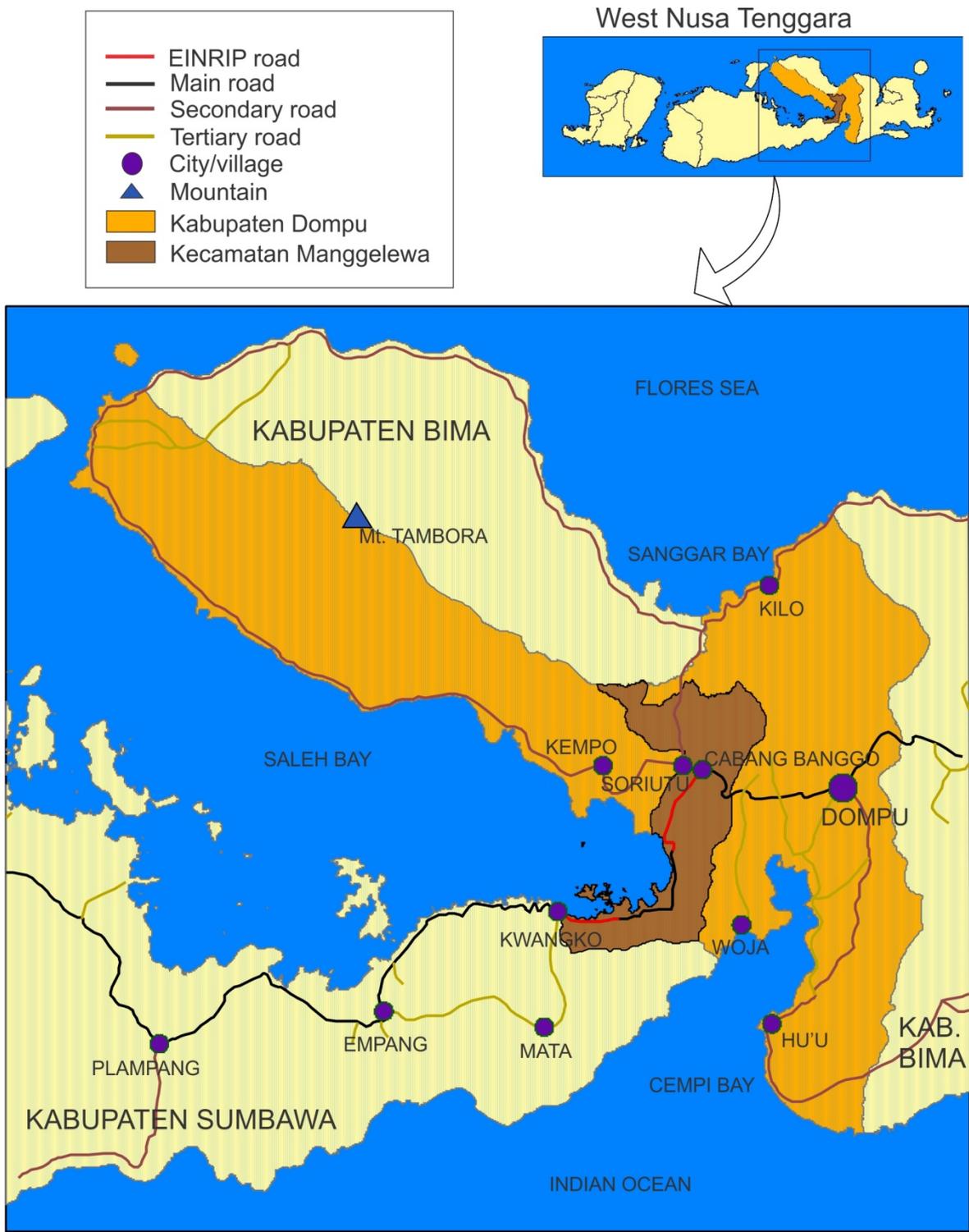
#### 2.1.2. Nanga Tumpu Village

The sample village – Nanga Tumpu Village – is one of nine villages in Manggelewa Subdistrict, which shares a border with Kabupaten Sumbawa. This sub-district is strategically situated on the road to Sumbawa, and includes the busy Banggo crossroads (Cabang / Simpang Banggo). The road is used by people from Java, Bali, and Lombok traveling to the eastern part of West Nusa Tenggara and East Nusa Tenggara (and vice versa).

Nanga Tumpu shares its southern border with Kwangko Village, which borders Kabupaten Sumbawa. To the north, Nanga Tumpu shares a border with Desa Banggo, to the east with Desa Riwo, and to the west with the Gulf of Sape. Most of the land in the village (65%) is classified as a flat, 20% as hilly, 5% as river, and 10% as sea. A large part of the village is covered with forest, 90% of which is state owned.

Nanga Tumpu is 40 km from Dompu City, the district capital, and 19 km from Soriutu, the capital of the sub-district. Until 1997, Nanga Tumpu was part of Kwangko Village.

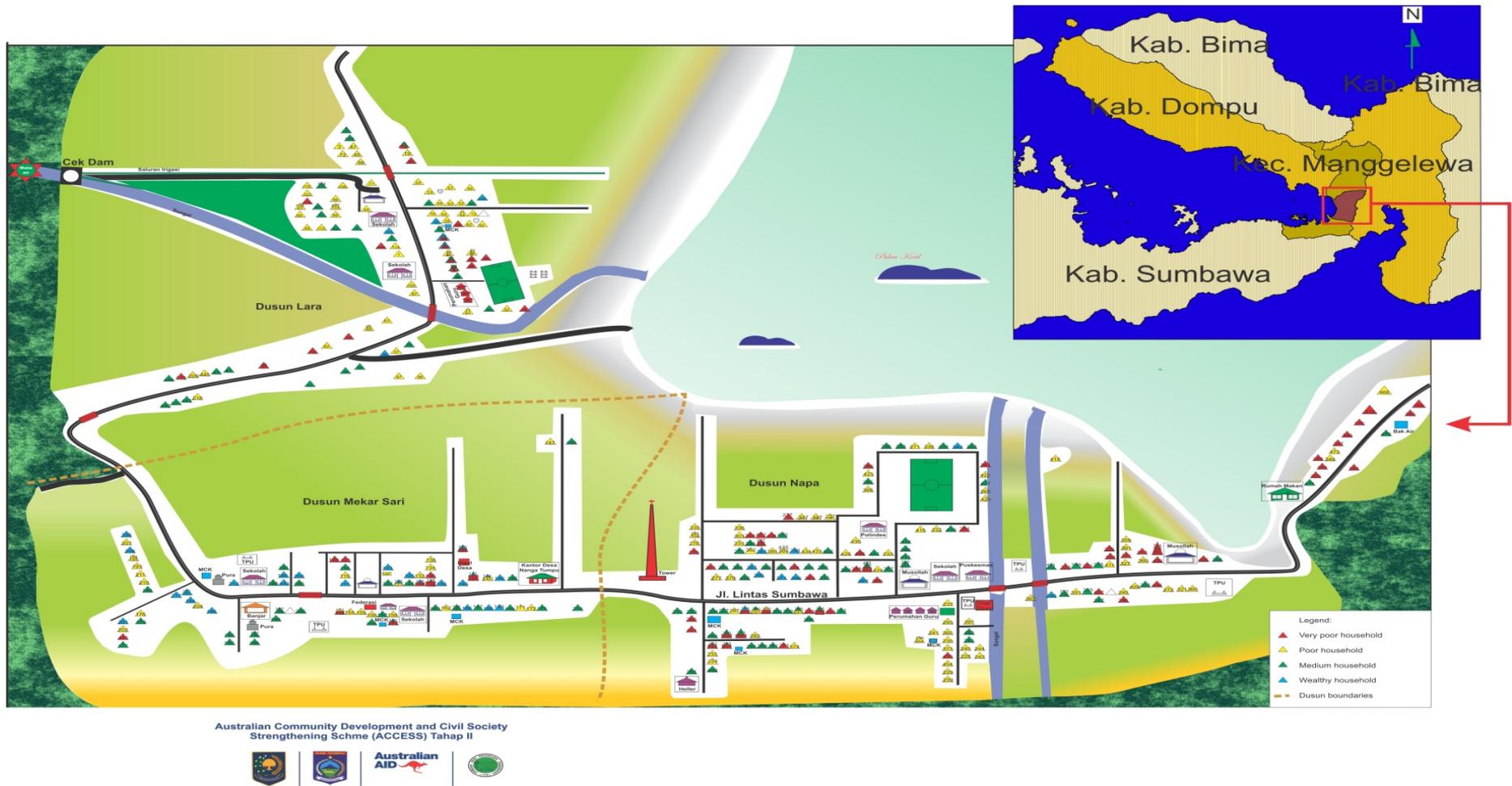
The village covers an area of 12 sq. km, and consists of 3 hamlets (*dusun*): Lara, Mekarsari, and Napa. All the hamlets are located along the national road.



**Figure 2. Administrative Boundary of Dompu District**

Source: BPS (2010), NTB Province Wall Map (National Coordinating Agency for Surveying and Mapping [Bakosurtanal], 2002), and Cardno consulting (2013).

Note: The sources used to create this map included digital and hard copy images which SMERU overlaid using mapping software.



**Figure 3. Socio-economic Map of Nanga Tumpu Village**

Source: Australian Community Development and Civil Society Strengthening Scheme (ACCESS) Phase II

In 2007, Nanga Tumpu had a population of 1,610 people (829 male and 781 female, 416 households); by 2012 this had risen to 1,748 (913 male and 835 female, around 550 households). The population is made up of indigenous Dompu, Javanese, Balinese, and people originally from Lombok, Bima, Sumbawa, and Bugis. In-migration began in 1964/5 and continues to this day. In general, social, religious, and economic relationships are harmonious, though there have been some cases of cattle theft. Only a few Balinese still practice the Hindu culture and religion, and they have two temples in Dusun Lara and Dusun Mekar Sari.

In 2008, Nanga Tumpu was the only village in Manggelewa Subdistrict without a mains electricity supply. In 2013, the State Electricity Company (PLN) provided a mains supply, with the power line running along the national road. However, most households cannot afford to connect to the PLN line, and continue to use wall lamps (with kerosene) and solar panels for lighting. The government granted a generator to the village, but it is not large enough to serve all households. The generator is managed by the community and usually operates from 5.00 pm to 10.00 pm. A substantial proportion of resident's expenditure goes on electricity and water.

## 2.2. Regional Economy

### 2.2.1. Gross Regional Domestic Product

Dompu's economy grew at a rate of 4.6% in 2010. This figure indicates a slower growth rate than the previous year. This is due to a decline in the production of rice and a number of other secondary crops and plantation crops, as a result of bad weather and disease. In 2010, as a result of the PIJAR programme<sup>2</sup>, there was a 300% increase in the area used for corn production for the 2011/12 cultivating season. Along with infrastructural improvements, the Dompu District government is confident that this will result in a growth rate of over 5% (RKPD 2013 Dompu District, 2012: III-2).

The PDRB or Gross Domestic Regional Product (GDRP) of Dompu District in 2010, calculated based on the current price rate, was Rp 1.984 trillion (Table 1). This is an increase of 12.35% from 2009 (Rp 1.766 trillion). The GDRP based on the constant price<sup>3</sup> also experienced an increase from Rp 890.891 billion (2009) to Rp 931.591 billion (2010).

**Table 1. GRDP of Dompu District, 2008-2010**

Year	GRDP (Current Price) (Rp million)	GDRP (Constant Price) Year 2000 (Rp million)	Growth Rate of GRDP (%)	
			Current Price	Constant Price
2008	1,552,126	846,152	11.6	4.1
2009	1,766,189	890,891	13.8	5.3
2010*	1,984,268	931,592	12.4	4.6

\*: temporary calculation  
Source: BPS Dompu District (2012)

<sup>2</sup>The Bupati of Dompu's programme to increase the production of the three main commodities, i.e., cattle, corn, and seaweed.

<sup>3</sup>The purpose of calculating based on constant price is to eliminate the influence of price fluctuations so that the growth of real production of products and services can be determined. The constant price is based on 2000 price rates.

### 2.2.2. General Welfare

The general welfare of the population of the District of Dompu is improving rapidly, as shown by the increase in its Human Development Index (HDI) from 2008 to 2011 (Table 2). It is believed that the increase in Dompu's HDI is the result of the district government's efforts to improve the local economy through the Cattle, Corn, and Seaweed programme (PIJAR). Dompu district's HDI has increased from a middle category index ( $50 < \text{HDI} < 66$ ) to an upper-middle category index ( $66 < \text{HDI} < 80$ ).

**Table 2. Dompu District's HDI**

Year	Life Expectancy (years)	Literacy Rate (%)	Average Years of Schooling	Expenditure per Head (Rp)	Score
2008	60.8	82.8	7.0	631.5	64.4
2009	60.9	82.8	7.2	635.5	64.9
2010*)	61.1	83.7	7.3	683.5	65.5
2011	61.2	86.4	7.4	641.8	66.7

\*) : temporary calculation  
Source: BPS Dompu District

Poverty dropped in percentage terms from 24.5 in 2008 to 18.2 in 2011 (Table 3). The proportion of the poor, as measured by the poverty gap index (P1<sup>4</sup>) and the poverty severity index (P2<sup>5</sup>) has also decreased since 2008. This shows that, in general, the condition of the poor has improved in comparison with previous years.

**Table 3. Poverty Rate for Dompu District**

Year	Poor Population (000)	Proportion of Poor (%)	P1 (Poverty Gap Index)	P2 (Poverty Severity Index)	Poverty Line <sup>6</sup> (Rp/Capita/Mon)
2008	54.7	24.5	5.9	1.8	151,445
2009	49.5	21.8	3.4	0.8	182,699
2010	43.7	19.9	2.9	0.8	199,312
2011	40.3	18.2	3.0	0.7	211,464

Source: BPS District/City Poverty Data and Information

### 2.2.3. Income Distribution

Official government data shows that there has been an increase in the income gap between the rich and the poor (Table 4). The Gini Ratio for Dompu District increased from 0.28 (2008) to 0.38 (2011), although this figure is still less than the national figure.

<sup>4</sup>P1 is the average rate of expenditure gap of each poor resident against the poverty line, the higher the index, the farther the average expenditure rate of the poor will be from the poverty line.

<sup>5</sup>P2 indicates the distribution of expenditure among the poor. The higher the index score, the higher the expenditure gap among the poor.

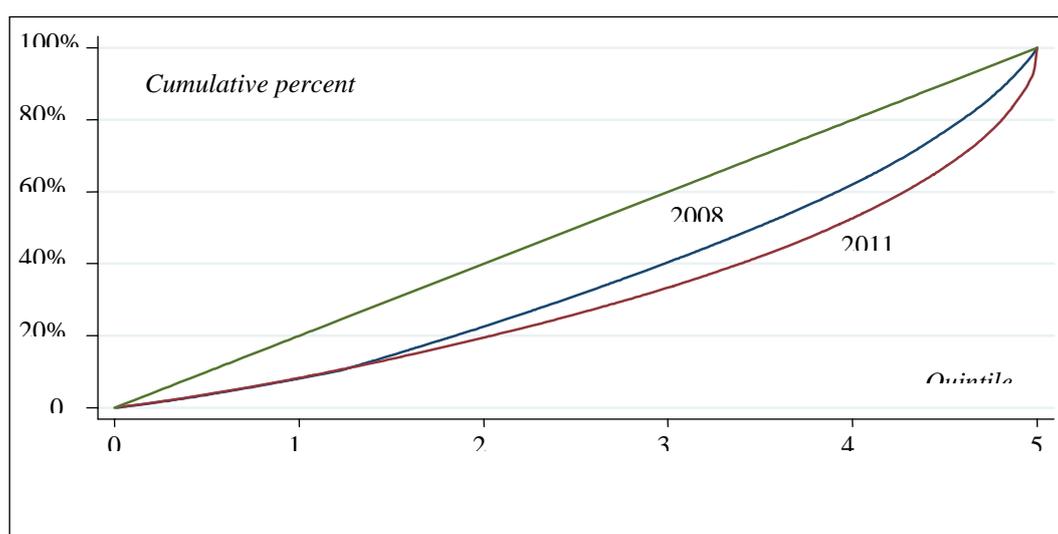
<sup>6</sup>The poverty line is the sum of the food poverty line and the non-food poverty line. Those who have an average expenditure rate per capita per month below the poverty line are categorised as poor.

**Table 4. Gini Ratio for Dompu District 2008-2011**

Year	Gini Ratio		
	Dompu District	West Nusa Tenggara Province	Indonesia
2008	0.28	0.33	0.35
2009	0.34	0.35	0.37
2010	0.29	0.40	0.38
2011	0.38	0.36	0.41
2012	n.a.	0.35	0.41

Source: Susenas 2008-2011 and BPS 2012 (Trends of Selected Socio-Economic Indicators of Indonesia)

The shift in the Gini Ratio from 0.28 to 0.38 is shown in the Lorenz Curve (Figure 4). The gap between the actual lines (the 2008 line and the 2011 line) and the 45° line is even wider. The data shows that the increase in inequality was almost entirely the result of the rich getting richer (+9.61) at the expense of the lower-middle income (Q2), middle income (Q3) and upper-middle income (Q4) groups (Table 5). It is interesting to note that the poor also experienced an increase in their share of income, albeit very small (+0.09).



**Figure 4. Lorenz Curve: Dompu District Income Distribution by Quintile**

Source: Susenas 2008 & Susenas 2011 (calculated by SMERU)

**Table 5. Dompu District Share of Income by Quintile (2008 and 2011)**

Year	Share of Income by Quintile				
	Q1 (poorest)	Q2	Q3	Q4	Q5 (richest)
2008	8.2	14.5	18.1	21.5	37.7
2011	8.3	11.2	13.9	19.3	47.3
<i>Change</i>	+0.1	-3.3	-4.2	-2.3	+9.6

Source: Susenas 2008 & Susenas 2011 (calculated by SMERU)

The increase in the income gap between the poor and the rich is evident from an interview with the owner of a diner in Cabang Banggo. In 2011, he rented half a hectare of land in Soriotu, which increased to 4 hectares in 2013. He explained that land owners who have no capital to cultivate corn or rice will choose to rent out their land. Farmhands' wages increased from Rp 25,000 per day in 2011 to Rp 40,000 per day in 2013. At the same time, his profit also increased due to an increase in production and selling price of dried corn, from Rp 1,000/kg (2008) to Rp 2,700/kg (2013). Rice, on the other hand, is usually grown for subsistence; part of the harvest was sold at Rp 2,700/kg in 2008 and Rp 3,200/kg (2013).

The area lacks major irrigation systems. Many crops depend entirely on rainfall, while others are watered by tapping rivers or from boreholes. A new dam is to be built at Tanju Village, Manggelewa Sub-district to supply water to Manggelewa, Woja, and the Dompu area (between the end of ENB 03 and Dompu).

The PIJAR agricultural development programme, which is designed to increase the output of cattle, corn, and seaweed, was introduced by the District Government of Dompu in 2010.

The corn programme involves the distribution of hybrid seeds, which require little water. The local government also guarantees to purchase corn at a fixed price. The area devoted to corn in Dompu has increased by around 25% since 2010, and now amounts to 25,000 ha (2012). The agricultural agency estimates that corn farmland may continue to increase and reach up to 50,000 hectares in 2013. According to data from the Dompu District BPS, corn production increased by 145%, and the area of land for harvest increased from 5,957 ha in 2010 to 14,611 ha in 2011 (see Table 6).

**Table 6. Production of Corn and Rice in Dompu District**

Year	Corn			Rice (wet paddy and dry paddy)		
	Harvest Area (Ha)	Average Production (quintal/ha)	Total Production (ton)	Harvest Area (Ha)	Average Production (quintal/ha)	Total Production (ton)
2008	3,953	33.4	13,203	33,290	46.2	153,733
2009	6,526	31.1	20,309	34,907	45.9	161,135
2010	5,957	31.1	18,523	34,467	45.7	160,090
2011	14,611	35.1	51,284	35,467	46.6	165,205

Source: *Dompu Dalam Angka 2012*, BPS Dompu District (2012)

There has been a corresponding increase in storage and processing facilities. A new processing plant has recently been opened in Manggelewa, just beyond the end of ENB 03, and four new storage facilities have either been opened or are under construction, one of which is on ENB 03. The facility owners have reported that the road improvement programme was one of the factors influencing their decision to invest.

Cattle numbers increased by 25% in the three years 2010 – 2012, as did the number of other livestock (Table 7).

**Table 7. Livestock in Dompu District**

Year	Cows	Buffaloes	Horses	Goats	Pigs	Free range Chickens	Purebred Chickens	Ducks
2010	74,889	17,276	6,715	50,285	2,991	147,587	35,400	25,656
2011	85,612	19,431	7,387	51,319	3,349	162,713	64,658	28,478
2012	96,205	20,411	8,119	62,889	4,154	184,426	75,355	33,895

Source: The Office of Animal Husbandry of Dompu District

Seaweed is a completely new crop, and is used as a base for sweets and medicines. Output now exceeds 9,000 tons p.a. Nanga Tumpu is one of the main production areas. At present the crop is sold unprocessed to traders for processing in Surabaya, but recently some small local processing industries have started up. Interviews with local people suggest the road improvements have facilitated the growth of the seaweed industry, as the number of traders visiting the area has increased.

## 2.3. Transport Industry and Services

The national road connecting Dompu and Sumbawa is very busy where it runs through urban areas, especially Cabang Banggo. Outside these areas, traffic has increased by over 50% since the road was improved, but remains moderate, at less than 3,000 vehicles per day. Various types of vehicles, including trucks loaded with agricultural produce and cattle, inter-provincial and inter-district buses, motorbike taxis, and horse drawn carriages, all use the road. The horse drawn carriages are normally used for short journeys, bringing students to school and women to market<sup>7</sup>. The number of buses usually increases significantly around *Lebaran*, particularly on the Bima-Sumbawa route.

In 2008, the national road was only 4.5 m wide, which was considered too narrow, because trucks were forced to reduce their speed to avoid being forced onto the hard shoulder by oncoming traffic. All sections of the improved road (both EINRIP and APBN) are now 6 m wide, eliminating this particular problem.

### 2.3.1. Passenger Transport

#### a) Intercity Services

Intercity services are provided by two companies. The evening buses depart at 7.30 pm and 8.00 pm from Ginte bus station. The operators regularly purchase new vehicles to ensure that their fleets are up to date. They report that travel times have been reduced significantly since the road was improved, as have vehicle maintenance costs, particularly tyre replacements.

Passengers report that journeys are not only faster, but much more comfortable. However, passenger volumes have fallen despite reductions in fares, which the operators attribute partly to increased competition from air transport, but mainly to the increase in the numbers of privately owned motorcycles.

<sup>7</sup>The cost is Rp. 2,000 per passenger and Rp. 1,000 for student.

There is usually an increase in the number passengers from May to August, during the harvest and school/university enrolment period. The intercity buses that leave in the evening have to pay a *retribusi* (government payment collected in return for a service), which can be as much as Rp 10,000 for a single trip from Ginte bus station.

## **b) Local Services**

Village and intercity services run from the public transport terminal in Cabang Banggo. The village public transport service takes passengers along the national road, from the terminal to the most remote village, Kwangko Village. There are only two minibuses that operate in the morning, from 6.00 to 10.00 am. Transport to Dompu city is by *bemo/colt* (minibus). All public transport has to use the terminal and pay a fee of Rp 500-Rp 1,000 per vehicle.

The microbus operators report that passenger numbers are falling as motorcycle ownership is increasing. As a result, they are now making deliveries of small items such as seeds or fuel for fishermen, to supplement their income.

*Ojek* routes and operational hours are more flexible; they can take customers to Dompu and Sumbawa, but passengers have to bargain. Now that the road has been improved, *ojeks* are able to travel further and at night. The numbers of *ojeks* in operation has increased steadily over the years, but *ojek* drivers report that competition has increased significantly and fares have fallen.

Horse drawn carriages (*cidomos*) can still be found, but their numbers are decreasing. There are a number of reasons for this: it is now easier to buy a motorcycle on credit; more residents work as *ojek* drivers; and the regular *cidomo* customers (school children and women going to the market) prefer *ojeks* because they are faster and more practical, and cost the same amount.

### **2.3.2. Freight Transport Operations**

The traders in Nanga Tumpu normally use pick-up trucks to transport agricultural products and cattle that they buy from local farmers. Transport to other districts or other provinces is normally by larger trucks. Since the road condition has improved, new types of heavy trucks, such as container trucks, use the road through Cabang Banggo.

Usually, most trucks operate at night to avoid tire damage caused by high road temperatures during the day. In 2008, several road sections around Cabang Banggo and the national road near the border between Kwangko Village and Kabupaten Sumbawa were in poor condition, which meant high maintenance costs for transport operators, as tires and shock absorbers needed frequent replacement. Since the road was improved, travel times have been reduced and maintenance costs have fallen. Tyres, which previously had to be changed every two months, now last 4 months.

Most trucks are overloaded. For example, a Fuso truck with a capacity of 15 tonnes can be modified to carry 20-22 tonnes of freight. There are 3 control posts from Dompu to Sumbawa (at the border of Bima-Dompu, in Manggelewa, and Empang in Sumbawa), managed by the respective district revenue offices. Truck drivers are normally charged Rp 10,000-Rp 20,000 for overloading when they pass through the control posts, which is registered as a third party

contribution<sup>8</sup>. Another unofficial fee, '*uang rokok*' (cigarette money), is paid to the police or traffic control staff (Rp 5,000-Rp 10,000 per person).

### **2.3.3. Road Safety**

The most common type of traffic accident involves motorcycles, and human error is the main cause. Until the road was improved, accidents involving motorcycles falling into potholes (particularly at night) were common; these accidents no longer occur. Another major cause of accidents is animals wandering on the road. There has been a reduction in such accidents in recent years, as fewer people now allow their animals to roam, but they remain a problem, particularly for bus and truck operators who have to pay compensation for any animals they hit.

Livestock are prohibited from grazing on the side of the road: *Perda* (Local Government Regulation) No. 9, Year 2006. The fine is Rp 250,000 per cow and Rp 50,000 per goat. The Satpol PP is in charge of implementing the regulations. However, with limited facilities, infrastructure and budget, they can only enforce livestock grazing regulations around the Dompu city area. The Dompu district government provides an area for livestock grazing at the foot of Tambora Mountain.

Road conditions deteriorate during the wet season. Not only does the road become more slippery, but some sections of the main road (particularly on the bend just after Nanga Tumpu towards Kwangko Village) are prone to landslides, even following the road improvements. According to the head of the infrastructure division of the Dompu *Bappeda* (Development Planning Board), the land in Dompu District is sandy and unstable, so the road is more prone to damage.

Improved road conditions have resulted in fewer accidents involving trucks and buses driving through the mountains near Nanga Tumpu. Truck and bus drivers also no longer feel threatened by thugs because the road from Cabang Banggo to Pelabuhan Poto Tano is a lot safer. Bus drivers in particular, feel that they are less likely to encounter criminals now that they can travel faster. Therefore, both truck and bus drivers no longer need to travel along the road in groups.

Respondents commented favourably on the provision of road signs and markings on the EINRIP sections, in particular, the provision of school safety zones and safety barriers. However, some remarked that many motorists failed to slow down in the safety zones.

## **2.4. Village Economy, Livelihoods, and Living Standards**

The information presented in this section comes from in-depth interviews with local government officials, households and business people in Nanga Tumpu, and the findings of the FGDs.

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<sup>8</sup>Officially, the Ministry of Home Affairs prohibits the levying of any retribution charges on the movement of agricultural products.

### 2.4.1. Overview

Most villagers in Nanga Tumpu make a living from dry land cultivation, animal husbandry and fishing. Dry land is usually cultivated with rice, secondary crops (such as corn, red onion, mung beans, soy beans) and coconuts. Since 2010, corn has become more important and some farmers have taken up seaweed cultivation.

Most farmers work on their own land, usually an area of between 1 to 3 hectares. Only a few farmers own more than ten hectares, and they employ others to work on their land. Results from the FGDs suggest that there has been some concentration of landholdings in the last 5 years, and an increase in in-migration of people from Bima District, who work mainly as farm labourers.

Rice is cultivated only once a year because there is no irrigation. A large part of the rice production is for subsistence purposes. Secondary crops, on the other hand, are mostly grown for sale. Most farmers also raise cattle, buffalos, horses, goats or chickens, which are sold if the farmers need to raise large amounts of capital.

During the dry season, most farmers earn their living from fishing, in the rivers or at sea. The fish is both for their own consumption and for sale in the market. They earn additional income by collecting honey and fire wood in the forest.

Since 2010, The District Head of Dompu has been running the PIJAR regional income acceleration programme. The programme is responsible for an increase in corn production, which has been helped by improvements to the roads. The number of corn warehouses in Manggelewa Sub-district has increased from two to five warehouses. The farmers not only sell corn kernels but also the stalks and ears.

Many of the rich households have started up new businesses, such as wholesale shops, shallot farming, seaweed farming and wooden furniture making ventures. These new economic activities have been supported by improvements to the road, which have made it possible for a number of Dompu government agencies (*Dinas*) to distribute assistance packages. For example, the assistance package for growing seaweed, which includes ropes, floats, and 600 kg of seeds for each seaweed farmer. Staff from the agriculture agency now frequently come to the village to provide information on good farming methods. In addition, distributors are now more able to travel longer distances to deliver goods to wholesale shop owners.

A few people also work in the service sector, as *cidomo/delma/benbur*<sup>9</sup> drivers, teachers, government officials and traders. Nanga Tumpu villagers are still willing to rent out their land to farmers from Bima for cultivating red onion.

The farmers usually sell their produce to intermediaries from Dompu, Bima and Sumbawa because the cost of transporting agriculture products to the nearest market is expensive. Since the road has improved, the number of traders visiting the village has increased and the additional competition has resulted in higher prices for farmers. There are still many Nanga Tumpu Village residents who sell their agricultural produce to middlemen at the *dusun* (hamlet) level where they live. Usually, these middlemen have already obtained approval from their local farmers' group.

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<sup>9</sup>A horse drawn carriage, usually used by local people for transporting passengers or agricultural produce.

The women in the village also play an important economic role. Besides working on the land, they actively participate in savings and loan groups and trading activities (as intermediaries for rice and secondary crops, and as mobile fish and vegetable traders). The savings and loans programme is exclusively managed by women, with assistance from an international non-government organisation (IFAD-International Fund for Agricultural Development) through a programme called PIDRA<sup>10</sup> (Participatory Integrated Development in Rain-fed Areas). They are also supported by Plan International, which runs programmes relating to the healthcare of under-fives, and pregnant and breast-feeding women.

In general, the division of labour between the women and men of Nanga Tumpu Village is highly dependent on the physical condition of the household members and their income levels. Rich households will usually hire a labourer to work in the rice field or to plant seaweed. In middle-class households, the women usually help their husbands work in the fields, from planting the seeds through to harvesting. If the husband is ill or unable to work, the wife will do all the work herself. In general, all farmers work in their own rice fields.

Since the baseline study in 2008, the people of Nanga Tumpu Village are still hoping that the district government will build irrigation channels for their rice fields.

## 2.4.2. Income Distribution

### a) BLT and Raskin Programmes

Despite the variety of agricultural activity in Nanga Tumpu, the welfare levels remain fairly low. In 2008, 325 households (75% of total households in the village) were categorised as poor and were entitled to assistance from the government unconditional cash transfer programme (*Bantuan Langsung Tunai* – BLT). By 2013, the number of unconditional cash transfer programme recipients (Temporary Direct Cash Transfer—*Bantuan Langsung Sementara Masyarakat* – BLSM) had fallen to 104 households (19% of total households in the village).

In 2013, the central government introduced a social protection card (*Kartu Perlindungan Sosial /KPS*) to integrate three types of government assistance for poor households: Raskin, BLSM and BSM (Assistance for Poor Students/*Bantuan Siswa Miskin*). The Indonesian post office company, PT POS Indonesia, sent the social protection cards to the Nanga Tumpu village administration office in August 2013. The village authorities then asked the head of each *dusun* to distribute the cards to the target households. There was a discrepancy between the data on Raskin recipients (105 head of households) and the number of KPS recipients. The Nanga Tumpu village authority explained that this was due to a confusion between two households with similar names, who turned out to be the same household.

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<sup>10</sup>Officially, PIDRA ended in 2009. However, the activities are still on-going.

## **b) ACCESS Study of Socio-Economic Conditions**

### **The ACCESS Social Mapping Programme**

The village social mapping programme<sup>11</sup>, which was initiated by the Australian Community Development and Civil Society Strengthening Scheme (ACCESS), in collaboration with the Dompu District government and five local NGOs..

The process of identifying welfare groups in the villages involved all members of the community (based on census data). The Community Empowerment Cadres (*Kader Pemberdayaan Masyarakat-KPM*) together with members of the community determined the welfare indicators used to classify welfare groups. The social mapping was replicated in 59 villages in 2012 using funds from the local budget. In general, the fund needed was Rp 33.3 million per village.

It is intended that the district head (*bupati*) will issue a district head regulation so that the regional government apparatus work units (SKPD) and regional governments use ACCESS data in their planning, such as in the Village Mid-term Development Planning, Village Development Work Plan, Village Development Planning Meeting.

The ACCESS data was used by Bappeda to develop a home renovation programme proposal 2013 to the Ministry of Public Housing for people who do not own a proper home. In 2012, the 3,180 units were approved for renovation, and in year 2013, Bappeda proposed data of 4,500 units for the whole of Dompu district. The units of houses approved in 2013 are 2,050 units comprising 1,700 units in 21 villages in Manggelewa and Woja sub-districts, and 350 additional units. In 2012, every household that was approved for the renovation programme received Rp 6 million. In 2013, different categories of funding allocation were set based on three criteria: small damages, medium damages, and heavy damages, with funding starting from Rp 10 million, Rp 15 million, and up to Rp 20 million.

### **Welfare Map for Nanga Tumpu**

The geo-spatial welfare map of Nanga Tumpu Village was produced in 2011 and has not been updated since. When conducting the population welfare census, KPM did not analyse the cause of the welfare inequality and did not examine the impact of the road improvement on the community's welfare.

Based on the 2011 ACCESS census data on family welfare classification of Nanga Tumpu Village, the population consisted of 151 very poor head of households (31.7%), 162 poor households (34%), 117 middle-class households (24.6%), and 46 rich head of households (9.7%). The total population was 1,679 people and 476 head of households. There are six aspects used as a basis for the welfare classification, i.e., the condition of the house (roof, ceiling, floor, and size), number of cattle owned (buffalo, cow, horse, goat), size of land owned, ability to put children to school, income, and ability to obtain medical treatment.

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<sup>11</sup>Village social mapping is a set of processes used by the community to identify who are poor or marginalised in their village, what are the welfare criteria, where are they living, what have they achieved in their life. The data collected will depict the poor, where they live, and their proportion at the *dusun* to village levels. The data is represented in a picture format (geo-spatial welfare map).

### c) Focus Group Discussions

The FGD provided a more detailed picture of income levels in the village, although the women and men groups came up with slightly different welfare classifications. In 2008, the women's group identified three welfare classes: the poor (*miskin*), the medium (*sedang*) and the rich (*kaya*). In 2013, they identified 5 groups (very wealthy, wealthy, medium, poor and very poor). In contrast, in 2008 the men's group identified four welfare classes: the destitute (*sangat miskin*), the poor (*miskin*), the medium (*sedang*) and the rich (*kaya*).

The characteristics that distinguished the welfare classes, among others, are the size of the arable land owned by the household, the number of cattle, housing condition, ownership of agricultural and/or fishing tools, asset ownership, educational attainment, and the usage of medical services.

As presented in Table 8, in 2008, the women's group categorised 38% of the households as poor, while 51% were medium and the rest were rich. In 2013, they identified a substantial increase in the numbers of wealthy and very wealthy (from 11% to 19%), a reduction in the middle group from 51% to 25%, with very little change in the numbers of poor, but a substantial group of very poor people (19%) appears to have emerged.

**Table 8. Household Classification in Nanga Tumpu Village (Women's FGD)**

Year	Very Wealthy %	Wealthy %	Medium %	Poor %	Very Poor %
2013	2	17	25	37	19
2008	~	11	51	38	~
2005	~	9	21	70	~

~ Group not identified in 2008

According to the men's group in 2008, 10% of the households were categorised as destitute, 66% were poor, 22% were medium and only 2% were rich<sup>12</sup> (Table 9). In 2013, the total of wealthy and very wealthy had increased to 14%, the medium group had increased to 40% and the numbers of poor had fallen from 66% to 30%. As with the women's group, the numbers of very poor had increased from 10% to 16%.

**Table 9. Household Classification in Nanga Tumpu Village (Men's FGD)**

Year	Very Wealthy %	Wealthy %	Medium %	Poor %	Very Poor %
2013	1	13	40	30	16
2008	~	2	22	66	10
2005	~	1	14	68	17

~ group not identified in 2008

<sup>12</sup>Members of the village administration attended the men's FGD and insisted on the proportion of BLT recipients; this has potentially created a bias that caused the discrepancy between the result of men's and women's FGD.

At first glance, it would appear that both groups had identified a significant increase in the numbers of very poor. This, together with the substantial increase in the number of wealthy, would suggest a major increase in inequality. However, a closer look at the criteria used to categorise the income groups shows that the definitions of poverty have changed over the last 5 years and the poor now (in 2013) have many of the characteristics of the medium group of 2008, notably in food consumption and education. See Table 10 below. Similarly the household interviews in 2008 suggested that only the rich had motorcycles. Today, the rich have cars, while the middle and poor groups have motorcycles.

**Table 10. Selected Characteristics of Welfare Groups (Women’s FGD)**

Variable	Year	Medium	Poor	Very Poor
Housing	2008	Permanent, concrete floor	Bamboo / stay with others	Not applicable
	2013	Permanent, tiled floor	Stilt house	Bamboo hut
Food intake	2008	Needs met	Eat once a day	Not applicable
	2013	Eat 3 times a day	Eat two – three times a day	Eat twice a day, but not enough
Education	2008	Senior HS	Primary	Not applicable
	2013	Bachelor (S1) degree	Junior high school	Primary, junior HS

Both the FGD and the household interviews suggest that there has been some increase in the size of the landholdings by the rich and very rich. In 2008, the rich were cited as having land in excess of 3 ha and owning 5 to 6 goats or cows; in 2013, the area had risen to 10 ha and the number of animals to over 50. Similarly, land holdings of those judged to be middle class have risen from less than 1 ha to 2 ha, and animal ownership from 3 – 5 to “less than 10”.

Two distinct groups of poor and very poor people were identified: those who were no longer able to look after themselves, such as the very old with no relatives; and recently arrived migrants, who were either unemployed or in low paying work.

Interestingly, while the 2008 FGDs attributed the improvements in living standards over the previous 4 years to government welfare programmes, the 2013 FGD attributed the improvements since 2008 to increased economic activity, which they attributed to the road improvements. In particular, they cited increased competition between traders leading to higher prices for farmers, and more local commerce such as warungs and a new night market. The area also benefits from remittances from overseas workers, who were rare in 2008.

Finally, it is interesting to note that in 2013, unlike 2008, the FGD participants attributed differences in economic welfare, at least in part, to character traits. The wealthier groups were described as hard working and careful with their money, while the poorer groups were described as spendthrift and unwilling to save.

## 2.5. Social Service Provision

### 2.5.1. Health

The health care facilities available in the village are a secondary health centre (*puskesmas pembantu -pustu*) equipped with a nurse, and a village maternity clinic (*pondok bersalin desa -*

*polindes*) equipped with a midwife. The *pustu* is only 50 meters away from the nearest housing complex and can be reached on foot. However, the closest *puskesmas* is located in Cabang Banggo, near the capital of the sub-district, which is some 17 km away from the village.

Following the road improvement, access to the *puskesmas* by public or personal transport is now much easier. The ambulances can respond more quickly as the journey from Nanga Tumpu to the Banggo has been reduced from 1 hour to 30 minutes. The road improvements have greatly helped the *puskesmas's* ambulance in transporting women who are about to give birth. Patients are not charged (services are free). If patients want to be taken home, then they are charged Rp 50,000 for the cost of fuel.

The *puskesmas* opens for five working days (Monday to Friday), but there is a 24 hour emergency service 7 days a week. The centre also caters for in-patient treatment. There is staff of 20 working in the facility. Starting in 2008, the local government launched a free medication policy for all (not only the poor) through a programme called JAKKAD (*Jaminan Kesehatan Masyarakat Dompu* – Health Insurance for the Dompu Community). The cost of hospital treatment in third-class room will also be paid by the government. However, most people have not yet enjoyed this benefit.

In 2008, the services in *pustu* and *polindes* were often abandoned because the nurse and the midwife are spending more time in their private practice. However, following the road improvement and the availability of electricity (PLN), it has been possible to recruit full-time staff, who are prepared to live in the village.

In the 2008 and 2013, the cost of health examination and treatment provided by the midwife did not changed much, staying at about Rp 10,000 (including medicine), while the medication cost of the nurse in the *pustu* and the doctor in the *puskesmas* is Rp 15,000 for treatment during office hours.

In 2008, there was no complaints about the time spent queuing because poor road conditions made people choose to seek treatment in their own village using the services of a midwife or nurse. If they have to, they can get treatment after office hours by paying Rp 20,000, as medicines come from the doctor's or nurse's private stock. In 2013, people often go to a doctor's private practice that is located next to the *puskesmas* because the service is faster even though they have to pay between Rp 20,000 and Rp 25,000 for each visit.

There has been no dentist in Soriotu Puskesmas for 5 years. Patients with toothaches are seen by a dental nurse.

In 2008, the most common diseases are malaria, followed by influenza, diarrhoea, and headache. In 2013, they were diarrhoea, fever, cough and cold, and when the harvesting time came, complaints of pain in the joint areas of the body were also frequent. Malaria has become less frequent as a result of the distribution of mosquito nets to every house in 2012. When the roads have been improved, however, there were many motorcycle accidents with a number of 3 to 4 casualties per week.

With the emergence of many new stalls at the side of the road, there were rumours of dimly-lit stalls at the border of Dompu District and Sumbawa District. In the 2011 study a health officer at Kwangko Village said that sexually transmitted diseases, such as gonorrhoea were found in youths (teenagers, especially boys 16 to 20 years old) who have had sex. Condoms are still seen by the community as something that not should be discussed in public. In 2013,

health officers at Kwangko Village have not received patients with STD or reports of patients with STD. Until today, they have no health equipment to enable them to detect HIV-AIDS in their patients.

The nutritional status of children is relatively low because of the lack of balance in their diet. They usually eat dried fish and sour soup (*sayur asam*).

Traditional healers still have a role, but child birth is usually assisted by a midwife although it costs around Rp. 400,000. Only among the poor and the destitute is child birth assisted by traditional healers, because the payment is voluntary depending on the capability of the patient. If the family members of the poor and the destitute get sick, they also seek treatment from traditional healer or buy medicine from local drug store. Even though they can get free medication in *puskesmas*, they cannot afford the transport cost to the *puskesmas*.

## **2.5.2. Education**

### **a) Dompu District**

In 2008 and 2012 in Dompu District, almost all school age children attended primary schools, but with a proportion of under 60% of children who have attended senior secondary school. By 2012, the number of female students in junior secondary school and senior high school had raised to 79% and 54% respectively (see Table 11 overleaf). Starting on 1 January 2008, the Dompu District government provides free education for all primary, junior secondary and senior secondary students.

Based on sex, the mean years of schooling<sup>13</sup> for boys in Dompu District in 2010-2011 was 8.49 years, while for girls it was 7.37 years. Based on Susenas 2008-2012, the number of school-age boys in school at the primary, junior secondary, and senior secondary schools was still higher than the number of school-age girls in schools at the same levels.

### **b) Nanga Tumpu**

The education facilities in Nanga Tumpu consist of four primary schools (3 SD and 1 MI), and two junior secondary schools (1 SMP and 1 MTs). There is no senior high school (SMA) in the village, and the closest SMA is located in Cabang Banggo (17 km from the village). There are two SMA and 2 SMK (vocational senior high school) in the sub-district capital. Transport cost is a burden because it can cost Rp. 20,000 a day (return). That is the reason why they usually send their high school age children to stay with relatives or friends in Dompu or in Cabang Banggo.

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<sup>13</sup>The mean years of schooling shows the number of years spent by the village population, 15 years and older, in school in each formal education level. The highest score is 15 years and the lowest is 0 years (KPPPA & BPS, 2012: 132).

**Table 11. Net Enrolment Rate (NER) of Dompu District in 2008, 2011 & 2012**

Education Level	2008			2011			2012		
	M	F	All	M	F	All	M	F	All
<b>Primary School</b>	93.9	93.2	93.6	89.1	87.8	88.4	93.8	92.9	93.3
SD	~	~	88.8	~	~	83.3	~		
MI	~	~	4.8	~	~	5.2	~		
Paket A	~	~	~	~	~	~	~		
<b>Junior Secondary</b>	56.9	69.6	62.4	70.6	57.2	65.01	84.2	78.9	81.7
SMP	~	~	58.3	~	~	60.5	~		
MTs	~	~	4.1	~	~	4.6	~		
Paket B	~	~	~	~	~	~	~		
<b>Senior Secondary</b>	69.5	43.9	56.5	61.5	58.0	59.9	61.6	54.4	58.0
SMA	~	~	51.2	~	~	56.9	~	~	~
MA	~	~	5.3	~	~	3.1	~	~	~
Paket C	~	~	~	~	~	~	~	~	~

Source: Susenas 2008, 2011 & 2012 (calculated by SMERU)

~ not available

Because the location of the SMA is quite far from the village, in 2008, respondents reported that only boys got the priority to continue their education. Most parents could not afford the transport costs and afraid to let their daughters to stay away from home, so most girls do not continue schooling to senior high school, and instead help their parent with domestic work, or get married.

Following the road improvement, the number of female students continuing their schooling increased. While the teacher absentee level was still high for the one-roofed junior secondary school in the *dusun* of Lara. In fact, a junior secondary school located farther in Kwangko Village, with a distance of 5 kilometers from Nanga Tumpu Village, is a school of better quality.

SMP 4 in Manggelewa now starts 15 minutes earlier (at 07.15). Previously it started at 07.30. Better road condition caused children to be less interested to enrol in SMP 4 (in the past there were 70-80 students; now there are only 50) because they prefer to go to SMP 1, which is a reputable school, by motorcycle.

The 2008 study showed that dropping out of school among boys is usual because they have to help their parents in the fields or with raising cattle. Because the location of the farm land is far from home, no one will take care of the young children if all of the teenagers go to school. In the 2013 study, teachers of primary school (SD) 25 in Naga Tumpu Village observed that parents' awareness of the importance of sending their children to school had increased. Nevertheless, school attrition still occurs although very seldom. Usually, during the harvesting season, children from poor family are required to help in the fields. The schools have tried to solve the problem of transportation cost by renting a *benbur* to pick up students from the *dusun* of Napa, where costs are taken from the budget of the School Operational Assistance (BOS) programme.

In general, better road condition is encouraging teachers and students to go to school. Since two years ago, teachers who live in Dompu District were able to commute every day without having to stay the night at the village. Teachers are comparing the road improvement made by PT Cakre with that made by PT Waskita (the EINRIP road) and the former was assessed as being less successful. This is because PT Waskita has painted zebra crosses and school safety zones on the roads in front of the school.



**Figure 5. A photograph of a road in front of a school with a zebra crossing, sidewalk, and school safety zone (in red) following road improvement work by EINRIP.**

### **2.5.3. Policing**

Road safety is, in principle, the joint responsibility of the local public works office that takes care of road maintenance, the transportation office that manages traffic signs and road markings, and the traffic police that manage security. However, the coordination is often not effective. Notably, reports from the police regarding road accidents due to road damage often receive no response. Joint surveys are hardly ever conducted, although they are crucial in order to develop policy regarding sufficient provision of traffic signs and road markings.

The traffic police of Dompu District determine the placement of traffic control posts (*pos lalu lintas – poslantas*) in strategic places. The function of the *poslantas* is to manage traffic in the surrounding sub-districts. When traffic accidents occur, the post is the first to come and observe the location and provide first aid.

The current posts are located in Kecamatan Kempo, Calabai, Pekat and Manggelewa. The number of posts is considered sufficient, but their operation is impaired by a lack of personnel and operational budget. Because of the limited number of personnel, the police cannot serve the public for 24 hours a day, and the operational budget only covers 25% of the operational need. The activity of the posts is also hindered by the limited number of communication tools, such as telephone and walky-talky.

At present, the police are unable to prosecute overloaded trucks because there is no proof from the weighbridge, (which is managed by transport office). However, the Police do check car and driving licenses. The control on public transport is limited to advising the bus companies to place baggage or passengers on the vehicle roof.

With more new businesses emerging, there is greater coordination between the corn warehouse owners and the police, and there is a police officer who guards the warehouse. Because there are not that many police officers in Manggelewa Precinct, the Sector Police cannot guard the warehouse around the clock, as requested by the warehouse owners.

#### **2.5.4. Impacts of Road Improvements**

##### **a) Compensation for Land Acquisition**

Compensation for loss of land, buildings, crops etc. was paid to all the people affected by EINRIP construction. However, no such compensation was made for the APBN construction works, and this caused some resentment among the residents of Nanga Tumpu.

##### **b) Importance of the Road Improvement**

All respondents, both public and private sector thought that the road had promoted improvements in economic conditions and living standards. The general view was that:

- It had facilitated access to the village by traders and increased the competition for farm output, thus raising farmers' incomes.
- It had also helped strengthen social relationships.
- Women were now more mobile, as they felt safe riding motorcycles at night, which made it easier for them to participate in social activities.
- Similarly, visits by family members from outside the area were more common.
- It made it easier for children to attend senior high school (in Banggo, 17 km away from Nanga Tumpu).
- It had encouraged in-migration (generally seen as a good thing)

A further, unexpected, benefit of the road improvement was the arrival of mobile salesmen, who used motorcycles to bring food (including ready-made meals) and other supplies to the households in the village. This is seen as liberating by the local women as it reduces the time they need to spend on shopping and cooking.

##### **c) Other Priorities**

Road access is not the only problem faced by the people of Nanga Tumpu. Other infrastructure that is still required includes irrigation and improvement to local roads.

## III. CONCLUSIONS

The improvement of the national road (both the EINRIP and the APBN funded sections) has been very beneficial for the villagers living near the road and community members in general, who on a daily basis travel by land to other cities and provinces.

### 3.1. Economic Development

The Dompu District government appears to have been able to synergise the moment of the national road improvement work with the PIJAR cow, corn, and seaweed programme and the instalment of electricity by the PLN. Mentoring/facilitation activities conducted by the Dompu District agencies with the community groups have increased now that access is easier. With access to electricity, villagers enter the modern world, such as having to be able to watch the national news programme on TV.

The prices of seaweed and corn hasve increased occurred and the home industry has also experienced growth. Investment in the private sector has started to grow which is apparent in the establishment of the corn drying factory. The road improvement is a supporting factor of this smooth progress.

Many new businesses have emerged and competition has increased. This is particularly noticeable in the restaurant and local transport services industries.

### 3.2. Transport Sector

In the transportation sector, better road condition has made it possible for heavy-loaded trucks, such as container trucks, to go through the road. The road is also busy during the night. The competition amongst transport services is getting tougher. Bus drivers and drivers of trucks carrying goods or animals, *ojek* motorist, as well as ambulance drivers are all very grateful that the EINRIP road is completed, especially the road at the mountain side (from Cabang Banggo to Nanga Tumpu Village) because time on the road is reduced and the road is safer and travelling is less uncomfortable. However, on the other hand, the number of bus and microbus passengers is decreasing with the increase of motorcycle ownership and the increase availability of the *ojek*. Also with more mobile vegetable and fish sellers, it will reduce the need to go to the traditional market to buy the community's needs.

### 3.3. Social Changes

In terms of social aspect and the behaviour of community members, a significant change is apparent in the daily activities of the women, where they experience more mobility because they can travel by motorcycle. Women become more independent in carrying out economic and religious activities. However, youngsters tend to speed when they ride motorcycles.

The national road improvements have made it worthwhile to improve district and village roads. In a number of places, the village roads have been macadamised by PNPM Mandiri Perdesaan programme. However, improved access is not without disadvantages: the road improvements have made it easier for rustlers to steal cattle at night and make a fast get-away.

### **3.4. Health Services**

In terms of health, the villagers feel that it is easier and faster to obtain the services of an ambulance for pregnant women in critical condition. On the other hand, the smooth condition of the road has encouraged people to directly go the *puskesmas* and acquire treatment from a doctor at the *puskesmas*. This serves as a new challenge for the *puskesmas* in terms of providing quality services, such as dealing with the long queue.

### **3.5. Education**

Changes in the education-related aspects are apparent in the greater number of junior secondary and senior secondary students using the motorcycle as a means of transportation to travel to school. These students are too young to have a driving licence. However, the police do not enforce the regulation because the motorcycles are only used to go to school. In addition, the good road condition encourages parents to enrol their children (boys and girls) in prestigious schools although the distance is longer from home because it is located in another village or the sub-district capital. Even teachers who live in Dompus can commute every day (Monday to Saturday) by microbus.

### **3.6. Community Views of EINRIP**

The quality of the road improvement which was supported by EINRIP was highly regarded by all segments of the community as well as the local government, both from the physical aspect (the provision of school safety zones and safety barriers) and the ease when going through the road. The villagers call the EINRIP road the Australian road, and use the EINRIP road as a reference for comparison with the quality of the APBN-funded road.

The community also considers the method used for the EINRIP road improvement as a new approach which differs from previous methods. This new approach highly values and takes into account the voice of the people.

The Public Works Agency of Dompus District is so inspired by the EINRIP road and considers it as a good example of best practice for planning, monitoring, and implementation.

The good road condition has reduced the obstacles becomes a necessary condition for faced by the Dompus District government in realizing its in order for community welfare programmes to run smoothly.

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