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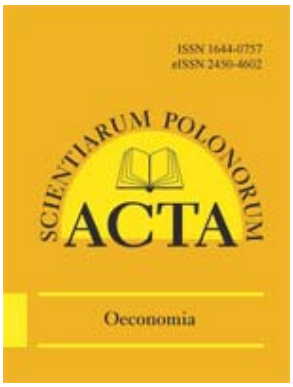
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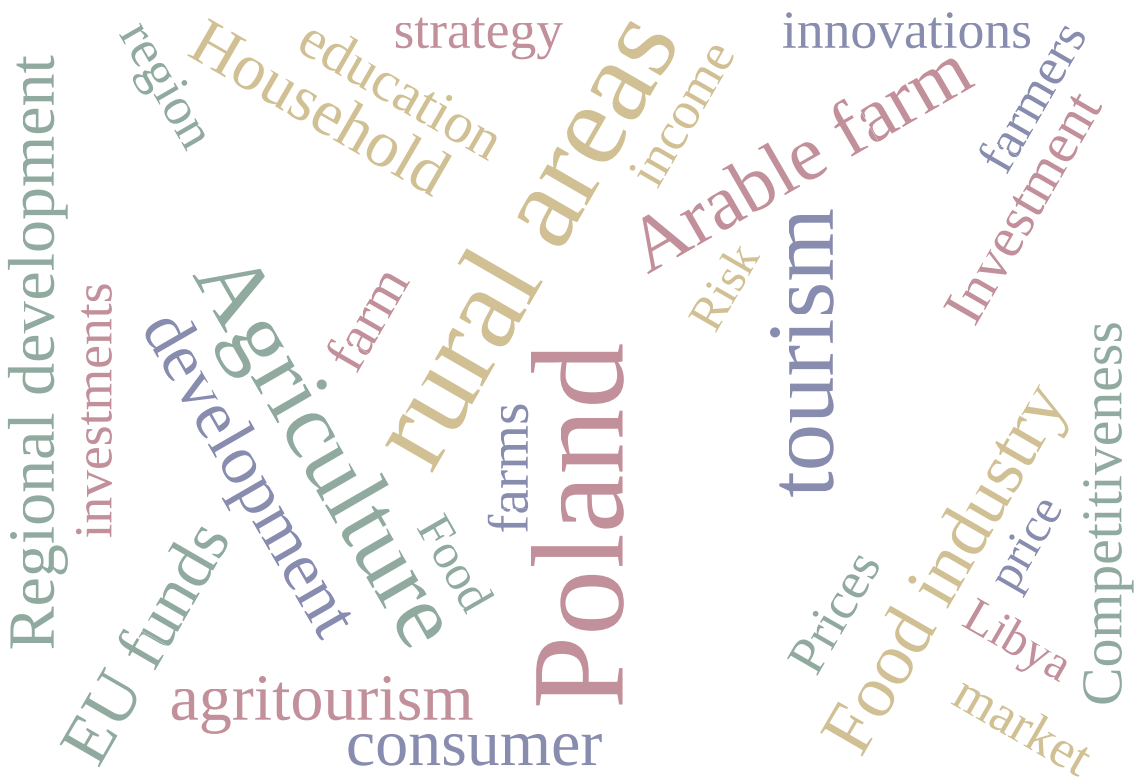
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ORIGINAL PAPER

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PROBLEMS OF BASIC HEALTH SERVICES IN THE BORDER AREAS OF INDONESIA'S NUSA TENGGARA TIMUR PROVINCE

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ABSTRACT

This study aims to learn about the implementation of health policies dealing with malnutrition, as well as the factors that drive and hinder the application of these policies, in the Nusa Tenggara Timur (NTT) Province of Indonesia (East Nusa Tenggara, in English). The results show that the border regions, specifically the Kupang and Timor Tengah Utara (North Central Timor) Regencies, suffer the worst conditions and have the greatest need for priority attention. Areas with better conditions are the Alor and Malaka Regencies, which should be given second priority. The Belu Regency produces better results than the other regencies and should be given third priority. Some programs and health service improvements must be carried out, such as the development and empowerment of Human Resources in the health sector, and improvement of the facilities and infrastructure of Community Health Centers (*Puskemas*) with their networks.

Key words: border area, Nusa Tenggara Timur, basic health services, Human Development Index
JEL codes: I18, O11

INTRODUCTION

In Indonesia, quality health services can only be obtained by the people who have access to good health care facilities. This accessibility can be based on: geographical location (quality healthcare is found only in big cities that have complete and competent facilities and clinicians); access to finance (only the upper-middle class who can pay out-of-pocket can get quality services); access to relatives or relationships with the right people (such as fellow doctors or family doctors who can provide services "like to their own family"); access to information (only certain people can obtain information on the quality of specific health service facilities) and various other exclusive accesses [Utarini 2011].

In the border areas of Indonesia, people still have difficulty accessing basic services, such as education, healthcare, nutritional adequacy, and employment. Therefore, the border areas must become a standard interface space where the border community's cosmopolitanism is seen as the power to build a prosperous Homeland front page [Kennedy et al. 2018]. In fulfilling the basic rights of a community, one of the most important is providing access to health services [Bappenas 2017].

The Nusa Tenggara Timur (NTT) Province (known as East Nusa Tenggara in English) is the southernmost province in Indonesia, consisting of more than 500 islands. NTT Province is both a sub-district and a district / city area that is geographically and demographically bordered by the country of Timor Leste. Generally speaking, a nation's border area is one that is geographically adjacent to a neighboring country, on land or by water. The boundaries are determined according to the functions of state defense and security,

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economic growth, public welfare, and environmental sustainability. The border area of NTT Province is a land border that administratively covers four Regencies, namely Kupang Regency, Timor Tengah Utara (North Central Timor) Regency, Belu Regency, Malaka Regency. Alor Regency is a district on the edge that borders the sea with Timor Leste.

In order to access health services, the Community Health Centers (*Puskesmas*) are the health facilities most frequently used by the people of NTT. In general, outpatient care without intensive medical treatment at the *Puskesmas* is the most common service. Still, the cost is more expensive than the national average, and there are only 1.4 doctors per NTT *Puskesmas*, which is lower than the national average of 1.8 doctors per *Puskesmas*. Midwives work at the health centers in NTT and are also paid less than the national average. The limited number of general practitioners, specialists, and dentists can reduce the quality of services provided to residents in the *Puskesmas* service area. The province of NTT is also one of the regions with the highest number of malnutrition sufferers in Indonesia [Ramadhini 2015].

AIM AND METHOD

This study aims to learn about the implementation of health policy in NTT Province. Specifically, in the context of implementing strategies to deal with nutrition in NTT, influenced by the power and interests of policymakers.

The research method in the study uses a quantitative description approach. The researcher uses various literature reviews and several data sources as secondary data. The data was obtained from the Deputy for Regional Development of Indonesia, and is devoted to analytical methods with a thematic approach; namely, to determine which policies had priority in the planning periods for health policy in the NTT Province.

Table 1. Scope and variables of thematic health of Nusa Tenggara Timur Province

Category	Component	Indicator
Availability	health workers	– midwife ratio per 100,000 people; – ratio of doctors per 100,000 people; – the ratio of other health workers per 100,000 people.
	health facility	– integrated service post managed by the community (*Posyandu*) ratio per 3,000 residents; – Community Health Centers (*Puskesmas*) ratio per 120,000 people; – the ratio of sub-health centers per 3,000 residents; – hospital ratio per 240,000 people.
Accessibility	proximity to the closest health facilities	– distance to inpatient community health centers (*Puskesmas*); – distance to community Health Centers (*Puskesmas*) without hospitalization; – distance to sub-health centers; – distance to the hospital; – distance to the doctor's clinic.
	infrastructure	
Affordability	ownership of health insurance from the government	percentage of health insurance from government ownership.
Sustainability	supporting the availability of health workers in the future	the existence of tertiary institutions in areas that have majors in the field of health.
Stability	disaster risk	District Indonesian Disaster Prone Index.

Source: [Bappenas 2017].

A structured holistic analysis method was used, with a scope divided into five categories, namely: availability, accessibility, affordability, sustainability, and stability (Table 1). This thematic level analysis aims to map districts in the border region of NTT Province with thematic composite values at low, medium, and high levels of achievement [Bappenas 2017].

In determining district cities, we have thematic composite values: low, medium, and high achievement levels (Table 1), established by the following three criteria:

- Low thematic achievement levels – if the assessment from the district is smaller than the provincial and national values.
- Middle thematic achievement levels – if the assessment from the district is greater or equal to the provincial value, and smaller than the national benefit. Or, the number of municipal areas is greater or equal to the domestic value and lower or equal to the provincial value.
- High thematic achievement levels – if the assessment from the district is higher than the provincial and national values.

ACCESS TO HEALTH SERVICES IN COMMUNITY HEALTH CENTERS

Healthcare development aims to maintain public health so that the community can live longer and more productively by increasing individual health services (curative and rehabilitative) and public health services (preventive and promotive). Health services are carried out through health facilities and Community Based Health Efforts to be able to reach all members of the community. The strengthening of quality primary healthcare services is the main goal for healthcare policy in Indonesia's 2015–2019 Five-Year Development Plan [Perpres 2015]. However, a more operational strategy needs to be formulated. This policy of strengthening essential health efforts needs to be translated into operational plans. At the global level, the primary health care approach (Primary Health Care) has been recognized as the right approach in achieving health for all.

Access to health services according to the international Governance and Decentralization Survey is defined as a way for a person to obtain health services, that are [Pattinasarany and Kusuma 2008]:

- available continuously, when the community needs it, and able to be accessed at any time;
- able to obtain health workers/facilities easily and quickly, which relates to geographical aspects of location, distance traveled, ease of transportation, and other factors;
- an affordable cost of health services for the community, especially for the poor .

According to the Indonesian Ministry of Health [2012], in the Guidelines for Improving Access to Health Services, there are several ways to provide health services through the Presidential Instruction program and foreign aid programs that are routinely carried out in almost all districts in Eastern Indonesia, even in limited conditions. There are several methods used, namely: (1) the sovereignty approach, (2) the welfare approach. In the implementation of health services in disadvantaged areas, borders and islands need to establish cooperation and integration between ministries and related institutions, local governments, the business world, the private sector and non-governmental organizations (NGOs). This was done to increase the leverage of programs/activities carried out for communities in the region [Ministry of Health 2012].

In the National Health System [Perpres 2012], the first healthcare revitalization approach includes: Coverage of fair and equitable health services; Providing quality health services that are in line with the interests and expectations of the people; and Public health policies to improve and protect public health, professionalism in health development. Community Health Centers (in Indonesia called *Puskesmas*), the center for community health in Indonesia, are the first-level health facilities established to reduce disparities in health development in all regions.

Community Health Centers (*Puskesmas*) are the leading health service facilities built by the government in 1968, ten years before the Alma Ata Declaration in 1978. In 1975, to accelerate the equitable distribution of health services, the construction of *Puskesmas* was determined through a Presidential Instruction, which allocated one *Puskesmas* in each sub-district. As such, *Puskesmas* is the leading health care unit. In subse-

quent developments, to expand the reach of health services, an auxiliary health center (*Pustu*) was built under the coordination and fostering of a *Puskesmas*. The number of sub-health centers is determined by the needs of the working area of the *Puskesmas*. In addition to the *Pustu*, *Puskesmas* are also strengthened by mobile health centers (*Pusling*) in the form of four-wheeled vehicles (in some areas by ships/boats).

Puskesmas provide support for five types of essential services in an integrated manner, namely: (1) Health of mother and child; (2) Family planning; (3) immunization; (4) nutrition; (5) diarrhea treatment. However, in 1984, to overcome maternal and child health problems, *Posyandu* (Integrated Service Post) was developed. *Posyandu* is a health service post designed and managed by the community, so it is not part of government-owned services. Until the end of 1999, before the decentralization policy was implemented, the *Puskesmas, Pustu, Pusling*, and *Posyandu* policies, coupled with an intensive national family planning program, succeeded in increasing family planning coverage, immunization coverage, and coverage of under-fives. Many countries have appreciated this success, and Indonesia is often used in comparative studies and provides training to other countries, especially developing countries.

It is important to note that two policies influence the development of Community Health Centers in Indonesia (*Puskesmas*), namely: (1) Regulation No.71/2013 on Health Services in the National Health Insurance, which sets *Puskesmas* as a First Level Health Facility in National Health Insurance implementation; (2) Regulation No.75/2014 concerning *Puskesmas*. In Regulation No.71/2013, it was determined that the *Puskesmas* is a First Level Health Facility that works closely with government health insurance and "must" provide individual, comprehensive health services. The intended comprehensive health services include promotive, preventive, curative, rehabilitative, midwifery, and medical emergency health services. Medical emergency health services include supporting services such as simple laboratory examinations and pharmaceutical services. Furthermore, Regulation No.75/2014, mentioned that *Puskesmas* are health service facilities that carry out first level public health efforts and individual health efforts, by prioritizing promotive and preventive efforts, to achieve the highest possible level of public health within their working areas.

HEALTH INDICATORS FROM THE NTT PROVINCE[1]

From the 2017 data, there are three health problems faced by NTT Province, namely: a high percentage of unhealthy people, as much as 64%; a high percentage of citizens who have not participated in the National Health Insurance, as much as 60.4%; and the fact that there are as many as 75.7% of smokers in the family, with the number of hypertension sufferers who take irregular treatment as high as 61.1%. The high number of unhealthy community presentations makes NTT one of the priority target areas by the government.

The life expectancy of the NTT population every year is increasing but not too significantly, only by around 1–5 months. The life expectancy of NTT residents in 2015 was 65.96 years, which means that children born in 2015 are expected to live on average until the age of 66. In 2016 the life expectancy rate was 66.04, which means that children born in 2016 are expected to live on average until the age of 67, and in 2017 the life expectancy rate is 66.07 [BPS-NTT 2018]. The percentage of children under five years of age in the province of NTT declined from 2015 to 2017 but is still the highest in Indonesia. The increase occurred in the percentage of children under five and under five years old wasting and underweight.

Integrated Service Post Ratio (Posyandu) Per Unit Toddler

The development of the Integrated Service Posts, managed by the community (*Posyandu*) in 2013–2017 has increased. Still, the ratio is fluctuating with toddlers (babies under the age of five) that are served. The 2013 rate was 15.18; in 2014, it was 16.45, and in 2017 it was 15.89, which means that 15 *Posyandu* can accommodate 1000 children (15 : 1000). Even though

[1] Based on: [RPJMN-NTT 2018].

Table 2. Integrated Service Post (*Posyandu*) Ratio per Toddler Unit of Nusa Tenggara Timur Province in 2013–2017

Description	2013	2014	2015	2016	2017
Integrated Service Post (*Posyandu*)	9,368	10,323	10,178	10,033	10,053
Number of Toddlers	617,216	627,547	622,757	627,471	632,639
Posyandu Ratio / Unit Toddler	15.18	16.45	16.34	15.99	15.89

Source: [Pemda-NTT 2018].

it has passed the ideal condition, where ten *Posyandu* serve 1000 children, the activity of the *Posyandu* is still low; in 2017, the percentage of active *posyandu* only reached 50.78%. *Posyandu* development and ratios are shown in Table 2.

Health Infrastructure Ratio per Population Unit

In 2016, the number of Community Health Centers (or *Puskesmas*) was 384, with a ratio of 1 : 13,550 inhabitants; in 2017 it increased to 396 Puskesmas with a rate of 1 : 13,351 inhabitants. The ideal condition, where one *Puskesmas* serves 16,000 residents, but within geographical limits, means that there is a need to increase the number of *Puskesmas* to help residents in the remote, border, and island areas. The increase in the number of *Puskesmas* was also offset by the rise of *Polindes* (village service post) and clinics / health centers, which in 2017 each had a ratio of 1 : 5513 people for *Polindes* and a rate of 1 : 550,760 people for clinics / health centers. However, Helper Health Centers have decreased so that the proportion of helper health centers in 2017 was 1 : 4,979, which means it has not met the ideal ratio of 1 : 1,500 residents. This can be seen in Table 3.

Hospital Ratio per Population Unit

The number of hospitals in the 2013–2017 period showed an increasing trend. In 2013 there were 43 hospitals registered, increasing in 2017 to 50 hospitals. Compared with the total population, the ratio of hospitals to total population in 2013–2017 is not sufficient. In 2017 there was a ratio of 1 : 103,672 people, while ideally there should be one hospital per 1000 residents in the community (by WHO). Addition of hospital facilities and their rates is shown in Table 4.

Table 3. The Ratio of Community Health Centers Per Population of NTT Province in 2013–2017

Description	2013	2014	2015	2016	2017
Community Health Centers (*Puskesmas*)	368	379	383	384	396
– *Puskesmas* ratio	1 : 13,461	1 : 13,289	1 : 13,368	1 : 13550	1 : 13,351
Supporting Health Centers	1,080	1,081	1,088	1,081	1,062
– Ratio of Supporting *Puskesmas*	1 : 4,587	1 : 4,659	1 : 5,625	1 : 4,814	1 : 4,979
Village service posts (*Polindes*)	755	1,022	710	944	959
– *Polindes* ratio	1 : 6,561	1 : 4,928	1 : 7,211	1 : 5,512	1 : 5,513
Clinic / Health Center	0	0	0	29	96
– Clinic / Health Center Ratio	0	0	0	1 : 179,431	1 : 550,760
Total population	4,953,967	5,036,897	5,120,061	5,203,514	5,287,302

Source: [Pemda-NTT 2018].

Table 4. Number and Ratios of Hospitals per Population of NTT Province in 2013–2017

Description	2013	2014	2015	2016	2017
Hospital	43	44	46	47	51
Total population	4,953,967	5,036,897	5,120,061	5,203,514	5,287,302
Hospital Ratio	1 : 115,208	1 : 114,474	1 : 111,305	1 : 110,713	1 : 103,672

Source: [Pemda-NTT 2018].

The Ratio of Doctors and Medical Personnel Per Unit Population

Health development must include the availability of medical personnel and health infrastructure. In 2017 the rate of medical staff (specialist doctors, general practitioners, and dentists) was 17 per 100,000 population, an increase from 2013 of 14 per 100,000 people. The ratio of midwives rose from 56 per 100,000 people in 2013 to 74 per 100,000 people in 2017, while the proportion of nurses decreased from 108 per 100,000 people in 2013 to 97 per 100,000 people in 2017. Other health workers (nutritionists, sanitarians, pharmacists and pharmacist assistants, public health workers, physical therapists, and medical engineers) rose from 39 per 100,000 people in 2013 to 67 per 100,000 people in 2017. Although the ratio of health workers tends to be increasing, it is still far below standard conditions. This can be seen in Table 5.

Health Problems at the Border of NTT

When seen from the determinants of supply, an essential issue in remote areas of the border region is transportation problems and the question of *Puskesmas* resources. Therefore, the development of transportation needs an appropriate plan. Estimates regarding the need for transportation depend on several factors, including regional conditions, the number and distribution of service targets and the number and types of activities carried out [Reinke 1994].

Regencies included in the border of NTT Province and the State of Timor Leste are the Regencies of Malaka, Alor, Kupang, Timor Tengah Utara, and Belu. Table 6 shows the status of health services in the border regions of NTT and Timor Leste.

It can be seen from Table 6 that the variables which most need to be considered as a priority by each border district are:

- Malaka: affordability and sustainability;
- Alor: accessibility, affordability, and stability;
- Kupang: availability, sustainability, and stability;
- Timor Tengah Utara: availability, affordability, sustainability, and stability;
- Belu: affordability.

The worst Regency in terms of health services is Timor Tengah Utara Regency, and the best is Belu Regency. Of the five variables, the main issue is affordability, namely that there is limited ownership of health insurance provided by the government. Additionally,

Table 5. The Ratio of Health Workers by Health Facility of NTT Province in 2013–2017

Types of Health Workers	The Ratio of NTT Health Workers per 100,000 population year					Standard
	2013	2014	2015	2016	2017	
Medical personnel	14	20	15	15	17	62
Midwife	56	56	72	72	74	100
Nurse	108	108	91	92	97	173
Power Health Others	39	39	55	48	67	83

Source: [Pemda-NTT 2018].

Table 6. Result of Thematic Analysis of Health in NTT Province Border Region

Name of Regency	Availability	Accessibility	Affordability	Sustainability	Stability
Malaka					
Alor					
Kupang					
Timor Tengah Utara					
Belu					

= Low Status — Priority 1
= Medium Status — Priority 2
= High Status — Priority 3

Source: Modified Analysis of Profile Formation and Regional Analysis [Bappenas 2017].

when considering the matter of sustainability, the main problem is the limited number of universities/colleges in the area that have departments of health. Problems of availability and stability arise especially in the Kupang and Timor Tengah Utara Districts. Based on the results shown in Table 6, the main problems, program goals, and needed actions for achieving them can be seen in Table 7.

Table 7. Analysis Results of the Main Thematic Problems of Health in NTT Province Border Region

Categories	Main Problems	Program Goals	Needed Actions
1. Availability	– limited number of doctors, nurses, and midwives; – unequal placement of doctors; – unequal health service facilities in the rural, border, and remote areas; – there is still a minimum level in the quantity and quality of health service facilities and infrastructure.	improved health services	– develop and empower Human Resources in the health sector; – procure and improve facilities and infrastructure of Community Health Centers / *Puskemas*, assistants and their networks
2. Accessibility	limited supporting infrastructure to gain access to health services	development of supporting infrastructure.	develop transportation infrastructure
3. Affordability	limited ownership of health insurance from the government	promotion of health insurance from the government	improved health insurance services from the government
4. Sustainability	limited universities/academies in regions that offer studies in health	increasing human resources in the health sector.	provide and /or increase the quantity and quality of health studies in tertiary institutions/colleges in the regions.
5. Stability	the disaster risk index in several districts/cities is relatively high	disaster mitigation	– disaster risk prevention and reduction; – community empowerment in disaster preparedness; – preparation of preparedness and mitigation plans in the event of a disaster; – installation of an early warning system; – disaster information (disaster awareness culture).

Source: Modified Analysis of Profile Formation and Regional Analysis [Bappenas 2017].

The Ministry of Health needs to pay special attention to the border area by taking into account the region's condition, distribution of service targets, and the number and type of activities carried out. When looking at the determinants of demand for users of the healthcare system, the constraints that exist include: the distance of the user's residence from the place of service, the difficulty of access to the location of health care, lack of funds for transportation costs, and lack of funds for medical expenses due to the economic situation of the community.

CONCLUSION

The results obtained from the border regions of NTT show that the Kupang and Timor Tengah Utara Districts have the worst conditions and need to be given the most priority attention concerning healthcare. Areas with better conditions are the Alor and Malaka Districts, which should have second priority. The sector with third priority is the Belu District, which shows better results than the other districts but still requires improvements.

Health service programs that must be improved include: development and empowerment of Human Resources in the health sector; procurement and improvement of facilities and infrastructure of the Community Health Centers (*Puskesmas*) and their networks; promulgation and development of health insurance services from the government; improving human resources by providing and increasing the quantity and quality of health education in institutions/academies in the regions. And it is very important not to forget the need for strong disaster mitigation programs throughout the border areas.

In implementing health policies, it is necessary to implement strategies that can change people's behavior. Decision-makers have not yet implemented an optimal policy, which is the result of conflicting strengths and interests of political actors between the central and regional governments. It is necessary to develop a high-level governor's strategy, which would provide his authority to implement health policies that deal with malnutrition and related critical health problems in the NTT Province.

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PROBLEMY PODSTAWOWYCH USŁUG ZDROWOTNYCH NA OBSZARACH GRANICZNYCH INDONEZJI W PROWINCJI NUSA TENGGARA TIMUR

STRESZCZENIE

Celem artykułu było poznanie wdrażania polityki zdrowotnej w zakresie przeciwdziałania niedożywieniu, a także czynników, które kierują i utrudniają jej stosowanie jako polityki zdrowotnej w prowincji NTT. Wyniki uzyskane z obszarów przygranicznych, którym należy poświęcić najwięcej uwagi problemowi zdrowotnemu, to dzielnice Kupang i Timor Tengah Utara, jako obszary o najgorszych warunkach – przypisano im I priorytet. Obszary o lepszych warunkach to dzielnice Alor i Malaka – II priorytet. Trzecim priorytetem jest dystrykt Belu, który daje lepsze wyniki niż inne dystrykty. Badania wykazały, że konieczne jest wdrożenie dodatkowych programów i poprawienie usług zdrowotnych, takich jak rozwój i wzmocnienie zasobów ludzkich w sektorze zdrowia, poprawa obiektów i infrastruktury wspólnotowych ośrodków zdrowia (*Puskemas*) wraz z ich sieciami.

Słowa kluczowe: obszar przygraniczny, Nusa Tenggara Timur, podstawowe usługi zdrowotne, *Human Development Index*

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