

SELUMA REGENCY – NATURAL DISASTER VULNERABILITY PROFILE

This profile summarises the vulnerability of the Natural, Built, Social and Cultural, and Economic environments of Seluma Regency to natural hazards. The Disaster Risk Reduction initiatives of the local government are also described.

2015



Rice fields and palm plantations dominate the Seluma coastal plain



NATURAL ENVIRONMENT

Seluma Regency is located on the west coast of Sumatra, Indonesia, and has a land area of 2400 km². Mountainous, forested terrain forms the western part of the district, while a broad plain exists along the 70 km of coastline adjacent the Indian Ocean.

Hazards and Risks

Seluma is prone to sizeable tsunami, large earthquake, annual flooding and landslides. The district is also susceptible to forest fire, drought and coastal erosion, and global warming may exacerbate these hazards. Seluma has a BNPB Disaster Risk Index score of 191 (high) and it is ranked 73rd out of 496 districts assessed (BNPB 2013).

Natural Environment Vulnerability

The Seluma coastline is vulnerable to erosion and aggradation and potential loss of mangroves, a key ecology for fisheries. Groundwater and land in low-lying areas are susceptible to salt water contamination from tsunami inundation. River drainage patterns may change in the event of an earthquake, affecting land-use. Forest and crop cover will change with climate extremes related to global warming. Deforestation, illegal logging and conversion of forests to plantations modifies catchments, increases and concentrates run-off and thereby increases landslide, erosion and flood potential and potentially exacerbates the fire hazard.



Table 1. Assessment of risk from hazards for Seluma (Disaster Risk Index– 2013).

Threat	Earthquake	Tsunami	Flood	Landslide	Coastal Erosion	Forest fires	Extreme weather	Drought
Risk	High	High	High	High	High	High	Moderate	High

SOCIAL AND CULTURAL VULNERABILITY

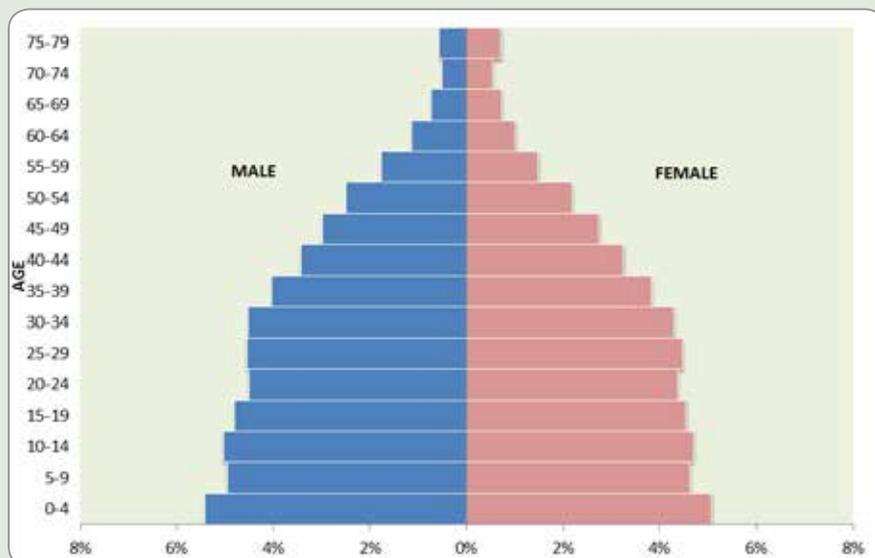
The population of Seluma in mid-2012 was 178688, with a population density of about 74 people per km². The population is made up of a number of ethnicities and is predominantly Muslim.

Youthful Population

About 60% of the population of Seluma is younger than 35. Anecdotally, many people are considered poorly educated and live in poverty, and therefore maybe more vulnerable to hazards. While younger people may be more vulnerable to disasters, there is an opportunity to educate the population on hazards and potential impacts through schools and utilizing social media.

Immigration

Despite successful transmigration, there are still ethnic, racial, religious and social tensions. Migrant population from outside the district may be more a vulnerable to hazards as they are often unaware of the hazards and the risk reduction measures in place.



BUILT ENVIRONMENT VULNERABILITY

Poor construction and development control

Many buildings and developments in Seluma do not have permits and commonly do not adhere to spatial planning and building regulations. Land conditions, including hazards, are often not considered despite risk maps being available for the district.

At-risk transport network

The roads in Seluma are generally in poor condition, and travel is slow. The District is reliant on roads to get primary produce to the port and airport in Bengkulu City. The roads and bridges are vulnerable to flood and landslide hazards. Damage to the road network will impact on the ability to transport goods, and the disruption to the gateways in Bengkulu City would also have significant impacts on the economy of Seluma.

ECONOMIC VULNERABILITY

Vulnerable Economy

The economy is based predominantly on agricultural crops such as rice, rubber, coffee and palm oil, which are vulnerable to drought, fire, floods, tsunami, pests and diseases. The produce-based economy can also be vulnerable to disruption of the transport network.

DISASTER RISK REDUCTION CAPABILITY

The Seluma Agency for Disaster Management (BPBD) formed in 2009 has a disaster management mission “To create vigilant, responsive and resilient Seluma Regency society to disasters”. Disaster Management regulations in Seluma exist with provision for DRR initiatives which to date include:

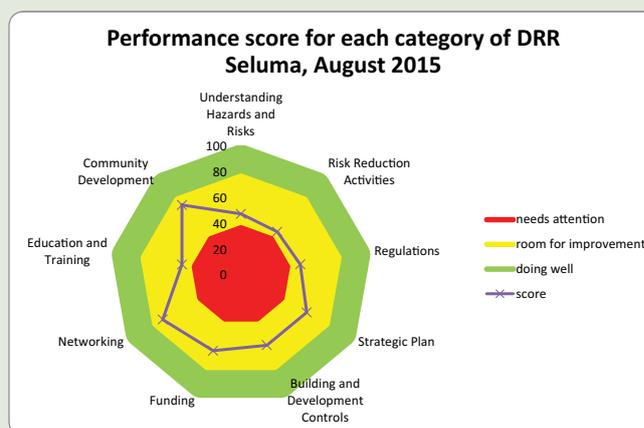
- One vertical evacuation tsunami shelter constructed at Ilir Talo;
- Identification of tsunami hazard and tsunami evacuation routes;
- tsunami emergency management volunteers training programme;
- social response training and quick response training;
- ‘Dujong’ (Tsunami Siren) installation with community involvement; and
- Implementing Resilient Village programme in with Kemendesa.

The budget for Disaster Management in 2014 was IDR3.23 billion (~USD\$350 k) and increased to IDR 7.48 billion (~USD\$570 k) in 2015.

Issues in the DRR Environment

The radar diagram (right) summarises the strengths and weaknesses of the DRR environment of Seluma based on a Disaster Risk Reduction, Local Government – Self Assessment Tool (LG-SAT) survey, August 2015. The survey indicates that there is room to improve all aspects of DRR in Seluma but in particular, Understanding Risk and Risk Reduction Activities, Regulations and Education and training require significant improvement.

Staff rotation at BPBD is very high, thus it is difficult to maintain capability and continuity of DRR initiatives. BPBD staff would benefit from more professional development. While there are hazard maps, they seem underutilized in forming policy, and there is also a lack of digital data and GIS analysis within the BPBD. Building and development controls need to be improved. Women feel underutilized in Disaster Preparedness activities although some consider that other social issues, such as household violence, should perhaps be more their cause for concern.



The Local Government – Self Assessment Survey (LG-SAT) diagram summarises the strengths and weaknesses of the DRR capability within Seluma District, August 2015.



DRR Action Planning

Coordination and networking

Stakeholder interaction and coordination in Seluma can be improved to include private sector and Universities. There is an opportunity to raise DRR awareness in the private sector for DRR and utilize the media more to disseminate disaster-related information. The formation of a specific DRR Forum would help coordination and networking amongst stakeholders.

Resources

The Disaster Risk Management Budget for Seluma was underspent in 2014, and many initiatives were not implemented.

ABOUT StIRRRD

STRENGTHENED INDONESIAN RESILIENCE: REDUCING RISK FROM DISASTERS



With funding support from the New Zealand Aid Programme, Universitas Gadjah Mada (UGM) is partnering with GNS Science in an Activity which supports the Indonesian Government to reduce the impacts of natural disasters through increasing the disaster risk reduction (DRR) capability of local government and local universities. The Activity assists 10 districts and associated universities to understand their DRR issues and priorities, helps develop their capability to understand and manage these issues, and then to develop an action plan and implementation programme.

A key part of this involves cementing relationships between local government and local universities who will develop teaching and research programmes in aspects of disaster risk management to support their local communities. The districts involved in the Activity will also provide peer support to each other on the learning journey. The Project is supported by the Indonesian National Agency for Disaster Mitigation (BNPB) and Kemendesa.

Sources:

BPS 2014. Kabupaten Seluma Dalam Angka 2014 (Seluma Regency in Figures 2014). Badan Pusat Statistik, Kabupaten Seluma, 2014.

BNPB, 2013. Indeks Rawan Bencana Indonesia. Badan Nasional Penanggulangan Bencana, 2013.

BNPB, 2014. Dokumen Jalur Evakuasi Bencana Tsunami, Kab. Seluma, Prov. Bengkulu Tahun 2014 - 2018. Badan Nasional Penanggulangan Bencana 2014.

Data & Informasi Bencana Indonesia (DIBI) 2013, <http://dibi.bnpb.go.id/>

National Agency for Surveys and Mapping/ Bakosurtanal

FOR MORE INFORMATION:

<http://StIRRRD.org> or

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