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Strengthening Disaster Risk Reduction through the Licence Policy for Standardised Building Constructions in Sleman Regency

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ABSTRACT: The increasing numbers of catastrophic disasters that have resulted in more and more massive casualties like in Turkey have recently made people aware of the importance of mitigation programs for disaster risk reduction by standardizing buildings and structures. This research raises the issue of whether regulations on disaster risk reduction through standardization of buildings and structures are sufficient and what are the failure factors that cause disaster risk reduction programs to be ineffective? A normative-empirical technique and a comparative strategy, which is an approach that compares a legal issue as perceived from a variety of legal systems, are both utilized in this study project. This research yields answers that quantitatively have produced and developed sufficient legal and policy products to carry out disaster risk reduction by standardizing buildings and various types of buildings. however, in terms of the quality of law and policy products, they have not been designed in a comprehensive and holistic standard so that environmental, economic and social aspects are integrated in one effective objective. The factors that failed to be found in this study were untransformative laws, law enforcement institutions that were not experts, support for technological devices that were not adaptive and a low level of community legal culture.

KEYWORDS: Building structure, Disaster Risk Mitigation, standardized construction.

I. INTRODUCTION

Law Number 11 of 2020 concerning Job Creation revoked and invalidated Government Regulation Number 36 of 2005 concerning Regulations for Implementing Law Number 28 of 2002 concerning Buildings, so the government issued a new regulation, Government Regulation Number 16 of 2021. Buildings Law 28 of 2002 allows for changes, deletions, and new configurations.[1]Building Approvals under Article 1 point 11 of the Law allow building owners to build, change, enlarge, shrink, and maintain buildings in line with building technical requirements.[2]A building permit (IMB) provides certainty and legal protection for the building it covers. IMB buildings sell for more. IMB is required to convert building use rights into ownership certificates since they have a lower legal status and to maintain order, harmony, comfort, and safety in an owned building.[3]

According to SjachranBasah, carrying a permission is a one-sided state administrative legal act that applies regulations in concrete terms based on the requirements and procedures as provided by the provisions of the legislation. This act applies regulations in concrete terms.[4]

As a follow-up to changes to the Law, Government Regulation Number 36 of 2005 concerning Regulations for Implementing Law Number 28 of 2002 concerning Buildings is revoked and declared invalid. In Article 1 number

[1] Roman Situngkir. PeralihanIzinMendirikanBangunanMenjadiPersetujuanBangunan GedungBerdasarkanUndang-UndangNomor 11 Tahun 2020 TentangCiptaKerja. *IURIS STUDIA: Jurnal Kajian Hukum.* 2021. Volume 2 Nomor 3, hlm. 664-672.

[2]Pasal 1 angka 11 Undang-UndangNomor 11 Tahun 2020 tentangCiptaKerja.

[3] I GedeAndhika Kusuma Darsana, I KetutKasta Arya Wijaya, Luh Putu Suryani, PenertibanIzinMendirikanBangunan (IMB) Di Kecamatan Kuta Utara KabupatenBadung, *JurnalPrefesi Hukum*. 2021,Vol. 2, No. 1, hlm. 62-67.

[4] Ridwan HR, *Hukum Administrasi Negara*, Jakarta: Raja GrafindoPersada, 2016, p.198-199.

17, it states that the Building Approval, hereinafter abbreviated as PBG, is a permit granted to building owners to build new, change, expand, reduce, and/or maintain buildings in accordance with building technical standards.[5]

The Sleman Regency Government has changed policy in accordance with Article 1 number 17 of Government Regulation Number 16 of 2021 concerning Regulations for Implementing Law Number 28 of 2002 concerning Buildings (PP 16/2021) and Regional Regulation Number 18/2021 concerning Building Approval Retribution. Building management regional government legal certainty and order.[6]If a building meets technical building standards, it gets a PBG.

According to Minister of Housing Regulation No. 8 of 2007, a livable residence meets building safety, space, and health standards. The building's foundation's strength to withstand natural forces. The minimal dwelling space for human movement is strongly related to the minimum space area. The tenants' health is protected from environmental factors here.[7]So in planning that functions as a settlement, it must pay attention to everything related to the building layout plan and the environment. This is intended so that the arrangement of the residential environment can be more optimal and by carrying out this arrangement a clear mapping of land use will be created. One of the things included in the building and environmental planning that needs to be pursued if it is related to a disaster is the existence of a disaster safe zone.[8]

The investigation found seven probable risks in Sleman Regency: flash floods (rainfall lava floods), extreme weather, earthquakes, forest and land fires, droughts, volcanic eruptions, and landslides. Risks are computed from vulnerability and capacity levels of the seven hazards. Analysis shows that most dangers are high-risk. The highest kelurahan risk class determines the sub-district risk class.[9]Architectural Disaster Response must be used to develop adaptive structures in Sleman, with form, structure, and functionality that respond to natural conditions. Rescue Disaster-resistant architecture minimizes disaster damage to structures and regions.[10] Disasters can damage Sleman. Thus, catastrophe response requires building and land use policies.[11]

From the reasons and facts described above, the authors are interested in conducting further research regarding the rules for changing building permits in an effort to strengthen Sleman Regency's disaster response with the title "Strengthening Disaster Risk Reduction Through the License Policy for Building Constructions in Sleman Regency". Based on this description, the main problems that arise are as follows: How is the development of disaster response strengthening in the building construction permission policy in Sleman Regency? and to what extent has the revised policy for the issuance of building construction licenses in Sleman Regency been successful?

[5]Pasal 1 angka 17 PeraturanPemerintahNomor 16 Tahun 2021 tentangPeraturanPelaksanaanUndang-UndangNomor 28 Tahun 2002 tentangBangunan Gedung

[6]PerkimProv Banten, *KebijakanBangunan Gedung di Indonesia*,https://perkim.bantenprov.go.id/kebijakan-bangunan-gedung-di-indonesiapembangunan-nasional-untuk-memajukan-kesejahteraan-umum-sebagaimana-dimuat-di-dalam-undang-undang-dasar-1945-pada-hakekatnya-adalah-pembangunan-manusia-i/diakses pada tanggal 26 Oktober 2022.

[7]Ria Wikantari, et al.,PerencanaanLingkungan dan RumahTanggapBencana di PulauSapuliKabupatenPangkajene dan Kepulauan, Sulawesi Selatan. *TEPAT:JurnalTeknologiTerapanuntukPengabdian Masyarakat*. 2018. Vol. 2, No. 1, hlm. 119.

[8] I Gede Surya Darmawan, I Wayan WiryaSastrawan. PenerapanMitigasiBencana Pada Arsitektur dan LingkunganPesisir di PulauSeranganPascareklamasi. *WICAKSANA:JurnalLingkungan& Pembangunan*. 2020. Vol. 4 No. 2, hlm. 39-51.

[9]Dokumen Kajian RisikoBencanaKabupaten Sleman 2021-2025.

[10]Khega Ananda Persada, 2019, "Redesign Kawasan WisataWatuNgelakdenganPendekatanArsitekturTanggapBencana di DesaWisataPuton Yogyakarta", (SkripsiFakultas Teknik Universitas Atma Jaya Yogyakarta).hlm. 7.

[11]Sutriani, Muhammad Harum, Penataan Pola Bangunan dan LingkunganTanggapBencana pada Daerah Pesisir di KabupatenMajene Sulawesi Barat, *LOSARI: JurnalArsitektur, Kota dan Permukiman*, 2021, Vol.6 No.1 hlm. 2

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II. Development of Strengthening Disaster Response in Building Permit Policy in Sleman Regency

A. SlemanRegency Geography

One of Yogyakarta's regencies is Sleman. The Sleman Regency Land and Spatial Planning Service reported 57,261 Ha of land in 2020, divided into 17 Kapanewon and 86 settlements. Astronomically, Sleman Regency is 7o 34'51" - 7o 47'03" South Latitude and 110o 13'00" - 110o 33'00" East Longitude. Sleman Regency borders Boyolali Regency, Magelang Regency, Yogyakarta City, Bantul Regency, Gunungkidul Regency, Klaten Regency, and Kulonprogo Regency.

In 2020, the Sleman Regency Land and Spatial Planning Service reported 57,261 Ha of land with 86 settlements and 17 Kapanewon. The 2020–2021 Sleman Regency population is expected to reach 1,136,474. BPS and 2020 census data were used. An accurate population estimate is needed to calculate how many people in Sleman Regency could be at risk from a calamity. Based on the psychological makeup of high-risk areas.

Table 2.2 Population Density Level of Sleman Regency
Source: BPS, Population Census 2020

Subdistrict	Population Density by District(Jiwa/KM^2)					
	Total population		An area		Density	
	2020	2021	2020	2021	2020	2021
Moyudan	33.514,00	33.842,00	27,62	27,62	1.213,40	1.225,27
Minggir	32.110,00	32.459,00	27,27	27,27	1.177,48	1.190,28
Seyegan	51.231,00	51.967,00	26,63	26,63	1.923,81	1.951,45
Godean	72.255,00	73.036,00	26,84	26,84	2.692,06	2.721,16
Gamping	103.192,00	104.020,00	29,25	29,25	3.527,93	3.556,24
Mlati	100.524,00	100.707,00	28,52	28,25	3.524,68	3.531,10
Depok	131.005,00	131.242,00	35,55	35,55	3.685,09	3.691,76
Berbah	59.004,00	59.976,00	22,99	22,99	2.566,51	2.608,79
Prambanan	53.113,00	53.859,00	41,35	41,35	1.284, 47	1.302,52
Kalasan	86.163,00	87. 357,00	35,84	35,84	2.404,10	2.437,42
Ngemplak	67.555,00	68.576,00	35,71	35,71	1.891,77	1.920,36
Ngaglik	105.612,00	106.173,00	38,52	38,52	2.741,74	2.756,31
Sleman	71.888,00	72.972,00	31,32	31,32	2.295,27	2.329,89
Tempel	53.628,00	54.164,00	32,49	32,49	1.650,60	1.667,10
Turi	36,559,00	36.980,00	43,09	43,09	848,43	858,20
Pakem	37.320,00	37.656,00	43,84	43,84	851,28	858,94
Cangkringan	31.131,00	31.488,00	47,99	47,99	648,70	656,14
KABUPATEN SLEMAN	1.125.804,00	1.136.474,00	574,82	574,82	1.958,53	1.977,10

From the table, Kapanewon Depok has the highest population density and growth. Sleman Regency's population increase accelerated in 2020–2021. Sleman Regency has more exposed souls. Population conditions affect disaster likelihood. Society and nature interact under certain demographic conditions, which can be healthy or detrimental for wildlife.

Sleman Regency's geological formations are largely volcanic deposits, sediments, and intrusive rocks. Lava and ash cover 90% of Sleman Regency. Mount Merapi's volcanic material is an aquifer. Most of this material is volcanic sand from Merapi's youthful volcanic deposits.Sleman, Yogyakarta, and Bantul run the north-to-south aquifer system.

Sleman Regency features four spring belts: Bebeng, Sleman Cangkringan, Ngaglik, and Yogyakarta. Springs provide pure water for agriculture. 154 Sleman Regency springs feed the Boyong, Kuning, Gendol, and Krasak rivers

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Table 2.3 Records of Natural Disaster Events in Sleman Regency 2011-2020

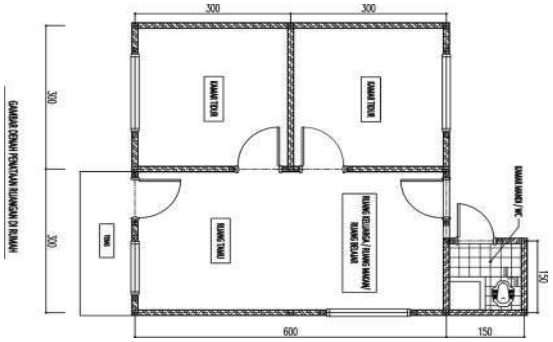
Disaster	Amount Incident	Die	Wounded	Suffer	Evacuate	Heavily Damaged House	Educational Facilities	Medical Facilities	Religious Facilities	Office	Bridge	Stall
Rain Lava Flood	20	2	7	28	3.979	48	1		2	1	11	
Landslide	16	7	7	29	30	22	1				1	
Extreme Weather	89	6	66	123	20	3.916	19	1	15	2		9
Earthquake	1											
Volcano Eruption	11			8.915	1.576							
Total	***137***	***15***	***80***	***9.095***	***5.605***	***3.986***	***21***	***1***	***17***	***3***	***12***	***9***

Source: Indonesia Disaster Data and Information For 2021

B. Technical Standar for Building Contruction in Sleman Regency

Safety, Health, Comfort, and Convenience for occupants are required by Building Law 28 of 2002. Safety, Health, Comfort, and Convenience for occupants are required by Building Law 28 of 2002.[12]Article 15 of Sleman Regent Regulation Number 49 of 2012 about Instructions for Implementation of Sleman Regency Regional Regulation Number 5 of 2011 concerning Buildings specifies Sleman Regency building technical standards:Building technical criteria include layout and reliability.Disaster-resistant building design must include spatial planning, mass layout, shape, materials, and occupants. Adding evacuation signs.[13]

Sleman Regency's catastrophe response residential constructions are based on self-supporting house prototypes.[14]Article 21 paragraph (4) of Law no. 1 of 2011 on Housing and Residential Areas stipulates that self-help houses are organized by the community, individually and collectively.[15]Self-supporting houses are created using healthy home principles and earthquake-resistant materials.



Picture 1.1 Room Arrangement at Home

Source: Fundamentals of Healthy Homes, Research and Development Center, Settlements, Research and Development Agency, Ministry of Public Works, 2016.

The planning of building structures is required to take into account the effects of the planned earthquake in accordance with the level of earthquake risk and the level of structural performance, as stated in the sixth paragraph of Article 29 of Government Regulation Number 16 of 2021 Concerning Regulations for Implementing Law Number 28 of 2002 Concerning Buildings. This regulation was created to implement Law Number 28 of 2002 Concerning Buildings.[16]The essential requirements for an earthquake-resistant building are that the building materials be of a high quality, that the structure be present and of the proper dimensions, that all of the primary structural parts be well connected, and that the construction be of a high standard.[17]

[12]GustiWinarni dan PujiWulandariKuncorowat, 2020. PenerbitanSertifikat Laik Fungsi (Slf) Oleh PemerintahKabupaten Sleman. *Jurnal Pendidikan Kewaraganegaraan dan Hukum*. Vol. 9 No. 5.

[13]Kevin Ananda. 2018. PermukimanTanggapBencana di Kampung Jogoyudan (PenerapanArsitekturTanggapBencanaSebagai Dasar Perancangan). (SkripsiFakultas Teknik Sipil dan Perencanaan Universitas Islam Indonesia), hlm. 65

[14]Interview with Ms. Yeni, January 11, 2023 at the Public Works Office for Housing and Settlement Areas, Sleman Regency

[15]Pasal 21 ayat (4) Undang-Undang No. 1 Tahun 2011 tentangPerumahan dan Kawasan Permukiman

[16] Article 29 paragraph (6) Government Regulation Number 16 of 2021 concerning Regulations for Implementing Law Number 28 of 2002 concerning Buildings.

[17]Slideshare. PetunjukKontruksiBangunanRumah BSPS Tahun 2021. 29 Januari 2023. https://www.slideshare.net/bogesi/petunjuk-konstruksi-bangunan-rumah-bsps-nahp?from_action=save. (18.46)

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Picture 1.2 Earthquake Resistant Building Construction

Source: 2021 BSPS House Building Construction Guidelines

The following components make up the primary framework of a residential building and are present in a good building:[18]

1. House Foundation

Building foundations are crucial. The foundation, at the structure's base, evenly distributes the load. Foundations must be 60–80 centimeters deep.[19]When the ground is firm enough, river stone is used to construct the base of the building.

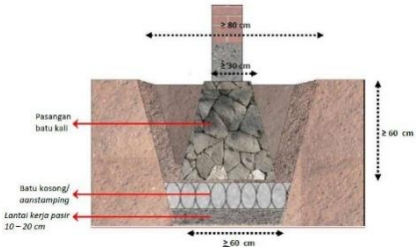

Figure 1.2 The use of river stone foundations.
Source: 2021 BSPS House Building Construction Guidelines

2. Beams binding / sloof

The binding beam/sloof has the following specifications:

a. The size of the binding beam/sloof is 15 x 20 cm;
b. Diameter of main reinforcement 10 mm;
c. The diameter of the reinforcement bars is 8 mm;
d. The distance between the reinforcement bars is 15 cm; and
e. The thickness of the concrete cover from the outside of the joint is 15 mm

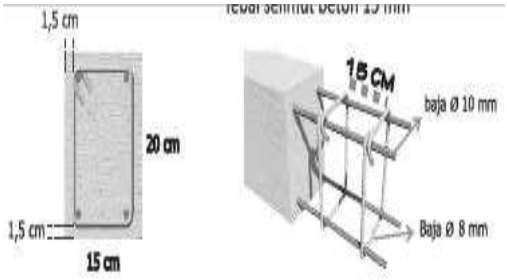

Figure 1.3 Dimensions of Binding Beams
Source: 2021 BSPS House Building Construction Guidelines

3. Column;

The column of a building has the following specifications:

a. Column size 15 x 15 cm;
b. The diameter of the main steel reinforcement is 10 mm;
c. The diameter of the steel reinforcement bar is 8 mm;
d. The distance between the reinforcement bars is 15 cm; And
e. The thickness of the concrete cover from the outside of the joint is 15 mm.

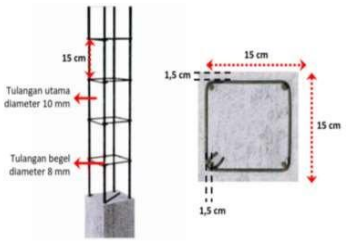

Figure 1.4 Column Bone Dimensions
Source: 2021 BSPS House Building Construction Guidelines

4. Beam around / ring

For sloof beams, columns, and ring beams, reinforcement bars are bent at 135° for 5 cm to form hoops. This reinforces the main reinforcement.

5. Roof structure.

The roof structure is very influential in building construction and functions to support the entire roof covering system above it. A good roof structure consists of:

[18] Ibid.
[19] DPUPKP KulonProgo. KonstruksiBangunanTahanGempa. 29 Januari 2023. https://dpu.kulonprogokab.go.id/detil/596/konstruksi-bangunan-tahan-gempa. (20.35)

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a. Wooden easels;

The roof is supported by 12-meter-long wooden trusses. Wooden trusses must be solid to carry loads. Two columns hold wooden easels as pedestals.

b. The mountains/ampig

The frame of the mountains/ampig is reinforced concrete with the following specifications: frame size 15 x 12 cm; primary reinforcement diameter 10 mm; stirrup reinforcement diameter 8 mm; and concrete blanket thickness 10 mm.Bricks are mortared and plastered to form mountains/ampig.

c. Lightweight

Materials like boards and Glassfibre Reinforced Cement (GRC) can also reduce earthquake damage.

d. Wind Bond.

Thewind connection holds the wooden horses, mountains/ampig, or both straight, firm, and parallel.

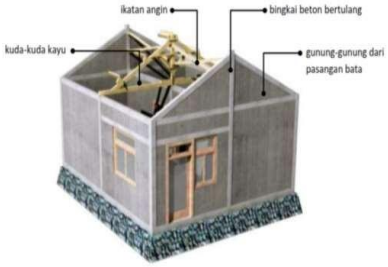

Figure 1.5 Roof Structure

Source: 2021 BSPS House Building Construction Guidelines

6. Wall Structure

The vertical wall divides indoor and outdoor environments. Walls can be building walls, boundary walls, or retaining walls.[20]Masonry bricks are cemented together with appropriate cement/sand (1 cement: 4 sand: adequate water) to form the walls. The maximum column distance is 3 m because the wall area is 9 m^2.

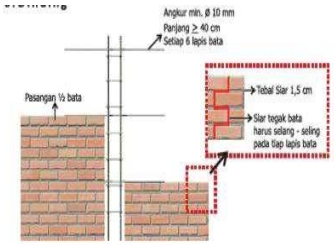

Figure 1.6. Wall Details

Source: 2021 BSPS House Building Construction Guidelines

When building the main structure, care must be taken to use the right method and make sure the sizes are right.

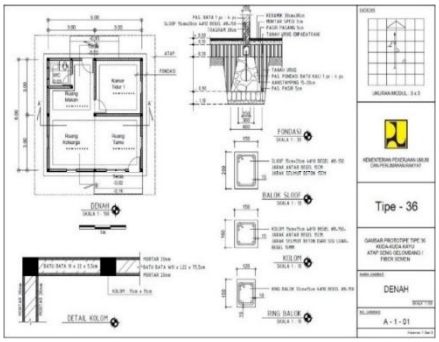

Figure 1.7 BSPS 1 House Prototype Design Public Works and Public Housing Office

Source: 2021 BSPS House Building Construction Guidelines

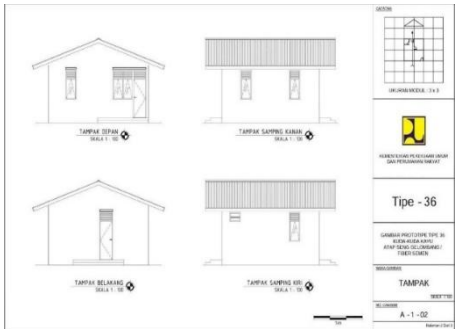

Figure 1.8 BSPS 2 House Prototype Design Public Works and Public Housing Office

Source: 2021 BSPS House Building Construction Guidelines

C. Government Efforts in Improving Disaster Response Buildings in Sleman Regency

1. Permanent Residential Development Post 2010 Mount Merapi Eruption.

In 2010, Mount Merapi erupted, destroying nearby towns and villages. 2,682 dwellings were unlivable, 156 were damaged, and 632 were significantly

[20]Rowland B.E.T, Marthin D.J. Sumajouw, dan Reky S. Windah. 2014. Analisa Portal DenganDindingTembok Pada RumahTinggalSederhanaAkibatGempa. JurnalSipil Statik. Vol. 2 No. 6. Pg. 310-319.

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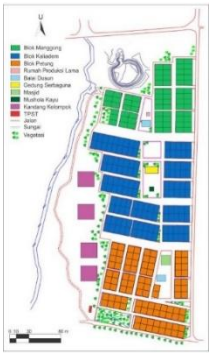
damaged. The governmentand society lost IDR 2,141 trillion in material goods in many categories.[21]

Picture 2.1. Condition of Buildings After the 2010 Merapi Eruption Disaster
Source: Republika.co.id 18 Jan 2011

Permanent housing is Sleman Regency Regional Government-renovated. For Mount Merapi victims. In Wukirsari Village, Argomulyo Village, Glagaharjo Village, KepuharjoKapanewonCangkringan Village, and HargobinangunKapanewonPakem Village, Sleman Regency erected 2,040 permanent dwellings and 14 temporary ones.[22]



Picture 2.2 Image of the 2014 Pagerjurang permanent residential site plan

Pagerjurang is a Sleman Regency government-built permanent residence. This permanent residence is situated Kepuharjo, Cangkringan, Sleman Regency. This residence occupies 50,365 m2. 301 KKs dwell in several hamlets. 97 families live in Petung Hamlet, 46 in Manggong, 14 in Kepuh, 8 in Pagerjurang, and 136 in Kaliadem.[23]The technical provisions for buildings and the environment in permanent residential areas are as follows:

a. The minimum plot area per home unit is 90 M2 (ninety square meters);
b. The maximum basic coefficient of building per house unit is 50%; and
c. Environmental infrastructure and facilities shall at least be public road facilities.

HuntapPagerjurang received 30 million rupiah every type 36 unit of government stimulus. The 100m2 unit was 10x10m or 8x12.5m. It must be earthquake-resistant. From 2012 to 2018, most apartments are still in good shape and undergoing modifications.[24]

Picture 2.3 PagerjurangHuntap Delineation

Source: Google Earth, 2023

[21]GardyasBidariAdninda, 2019. DualismePenerimaan Sarana Dan Prasarana Di HunianTetapPagerjurangKabupaten Sleman. *Jurnal Plano Madani*. Vol. 8 No.1. pg. 85-99.

[22] Interview with Mr. Heary on December 26, 2022, at the Sleman Regency Regional Disaster Management Agency Office.

[23]Ibid.

[24]FitriPrawitasari. 2019. EvaluasiPasca Huni HuntapPagerjurangDitinjau Dari AspekFungsional. *Jurnal SPACE*. Vol. 2 No. 1

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Picture 2.4 Pagerjurang Huntap Limits

2. Construction of Sabo Dam

Sabodam was created to keep back volcanic material or restrict lava flow by temporarily storing and sending some of it downstream.[25]In volcanic locations, sabodams are built when sediment accumulates. Sediment from volcanic eruptions has deepened the river channel there. The bedrock is deep, therefore the sabodam foundation floats.[26]

272 sabo dams have been built. 13.93 million m3 for Yogyakarta and Central Java Province. From 2018 to 2020, Magelang and Sleman Regencies built seven Sabo Dams.[27]Mount Merapi's 2010 eruption flooded 15 rivers that started there with cold lava. This closed the Yogyakarta Magelang National Road and damaged numerous Sabo Dams.

Different-sized stages developed the Sabo Dam. The largest holds massive rocks, and the tiniest holds sand. Sabo Dam's bend's midpoint has varying heights. This drains water to bend sediment or cool lava deposits without interrupting water flow. If the bend fails, debris will pour through the top (overopping). Another weir below will stop debris flow. Depending on the bend, this happens repeatedly. So, Mount Merapi's lava flow doesn't reach the area downstream of the river, where it may damage buildings and block roads and bridges, making it hard for people to get about.[28]

Picture 2.6 Sabo Dam area of DI. Yogyakarta and Central Java Provinces
Source: Kementrian PUPR

Picture 2.7 Sabo Dam area of DI. Yogyakarta and Central Java Provinces
Source: Kementrian PUPR

III. Implementasi PBG in Sleman Regency

On August 2, 2021, IMB became PBG. Building Permits (IMB) were renamed Building Construction Agreements (BCA) under Law Number 11 of 2020 and Article 347 of Government Regulation Number 16 of 2021. (PBG)). [29]Sleman Regency officially implements PBG and uses the Building Management Information System (SIMBG) on September 1, 2021.[30]SIMBG, a web-

[25] Interview with Mr. Heary on 26 December 2022, at the Sleman Regency Regional Disaster Management Agency Office

[26]Cosmas Bambang Sukatja, ArdianAlfianto. 2017. RevitalisasiSabodamSebagaiPengendaliAliran Lahar (StudiKasus di Daerah Gunung Merapi). *Jurnal Teknik Hidraulik*, Vol. 8 No 1

[27]Interview with Mr. Heary, *Loc. Cit*

[28]PUPR. Kementrian PUPR RencanakanTambah 95 Sambo Dam BaruUntukKurangiResikoBencanaBanjir Lahar GunungApi, 30 Januari 2023. https://eppid.pu.go.id/page/kilas_berita/2184/Kementerian-PUPR-Rencanakan-Tambah-95-Sabo-Dam-Baru-untuk-Kurangi-Risiko-Bencana-Banjir-Lahar-Gunung-Merapi. (18.45)

[29] Kompas. PemerintahPercepatImplementasi PBG sebagaiPenggangi IMB, 02 Januari 2023, https://www.kompas.com/properti/read/2022/03/01/200000421/pemerintah-percepat-implementasi-pbg-sebagai-pengganti-imb?page=all , (15.29)

[30] Interview with Ms. Yeni, January 11, 2023 at the Public Works Office for Housing and Residential Areas, Sleman Regency.

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based electronic system, implements PBG, SLF, SBKBG, RTB, and Building Data Collection and collects building management data.[31]

Sleman Regency arranges PBG for unbuilt or 80%-completed buildings. SLF includes 100%-established buildings. If a building is built without an IMB, there will be two processing procedures, PBG and SLF, in the same application.[32]

Each building has a function and classification that must be used in line with the location allotted in the RDTR and the Building Approval. Buildings are planned, built, and supervised. Building approval precedes construction. The Regional Government issues a statement of compliance with building technical criteria for building permission.

The Sleman Regency SIMBG approach adjusts from Article 10 paragraph 2 of Regional Regulation Number 14 of 2021.[33]Sleman Regency structures must meet technical criteria, according to Article 10 paragraph 2 of Regional Regulation Number 14 of 2021.[34]

The application violated project technical specifications, including structure drawings. Attaching physical documents is a Sleman Regency protocol. To give the applicant a document, technical advice, and drawings. The Sleman district Public Works, Housing, and Settlement Area Office suggested Building Construction Approvals (PBG) and SLF using SIMBG from September 2021 to January 2023. This period saw 3,013 PBG requests and 1,688 SLF applications.[35]

SIMBG simplifies online PBG for the public. This will prevent applicants from continuously asking about the IMB process. Online licensing is not yet perfect. Due to the applicant's lack of online service expertise and education.[36]Some of the weaknesses of the SIMBG system are:[37]

1. Technically, this system still has several weaknesses, such as this system often has errors due to overcapacity because SIMBG is an expenditure system from the Central Government that does not have separate access for Regencies/Cities, so the Public Works, Housing, and Settlement Area Office of Sleman Regency does not have the right for intervention;
2. The SIMBG system has not been able to sort out new and old applications;
3. There is no notification to; and
4. The same application is in the follow-up procedure, such as the applicant uploading entire files that were previously returned by the Office of Public Works, Housing, and Settlement Areas.Efforts made by the Office of Public Works, Housing and Residential Areas in implementing PBG in Sleman Regency.

E-government, which emerged with technology, is directly tied to governance and cannot be divorced from good governance.[38] This technology strives to make government transparent, responsible, effective, and fair. Technology users matter in e-government. Technological complexity does not ensure greater service delivery, and various barriers prevent people from using government-developed technology. Relative Advantage, Compatibility, Complexity, Triability, and Observability are five indications of public service innovation.[39]

The Sleman Regency Public Works, Housing, and Settlement Area Office has taken several steps to alleviate neighborhood issues. Challenges fall into three categories: The Sleman Regency Public Works, Housing, and Settlement Area Office does community outreach. These

[31]JdihKemenkoBidangKemaritiman dan Investasi. SistemInformasiManajemenBangunan Gedung, 13 Januari 2023, https://jdih.maritim.go.id/infografis/sistem-informasi-manajemen-bangunan-gedung-simbg , (21.33)

[32]Interview with Ms. Yeni, Loc. Cit

[33]Interview with Ms. Yeni, Loc. Cit

[34]Article 10 paragraph 2 of Sleman Regency Regional Regulation Number 14 of 2021 Concerning Building Techniques

[35]. Interview with Ms. Yeni, Loc. Cit

[36]Fiyolla Junita Sari, NellisMardhiah. 2022. InovasiPelayanan Publik IzinMendirikanBangunan di Kota Bukittinggi. *JIAP JurnalIlmuAdministrasi Publik*. Vol. 10 No. 2

[37] Interview with Ms. Yeni, January 11, 2023 at the Public Works Office for Housing and Settlement Areas, Sleman Regency

[38]AiliaLailatulQodariah, Delly Maulana, dan RachmiYulianti, 2020. EfektivitasPelayananIzinMendirikanBangunan di KabupatenLebak. *JurnalIlmuAdministrasi Negara (AsIAN*). Vol 8 No. 2

[39]Maysara, Hasim As'ari. 2021. InovasiPelayanan Publik MelaluiSistemAplikasiPotensiInvestasi (Siapi) Di Dinas Penanaman Modal Dan PelayananTerpadu Satu Pintu Kota Dumai. JurnalManajemen dan Administrasi Publik. Vol 3 No. 3 Pg.215-226

efforts target MSMEs and homeowners, who usually need PBG and SLF arrangements.[40]

The Sleman Regency Public Works, Housing, and Settlement Area Service offers helpdesk services to residents who need assistance with SIMBG administration. These facilities aid Sleman Regency residents. The Office of Public Works, Housing, and Settlement Areas of Sleman Regency provides a WhatsApp Admin and unique services for this helpdesk.[41]

IV. CONCLUSION AND SUGGESTION

A. Conclusion

1. This research yields answers that quantitatively have produced and developed sufficient legal and policy products to carry out disaster risk reduction by standardizing buildings and various types of buildings. however, in terms of the quality of law and policy products, they have not been designed in a comprehensive and holistic standard so that environmental, economic and social aspects are integrated in one effective objective. More detailed, Regional Regulations and PBG guidelines for Sleman Regency do not yet include disaster-responsive building structure regulations. So the standard construction of disaster response buildings in Sleman Regency still follows the prototype design criteria for self-help housing buildings in Article 21 paragraph (4) of Law No. 1 of 2011 on Housing and Residential Areas. The Sleman Regency Government is creating 2040 permanent dwelling units in 14 temporary shelters in Wukirsari Village, Argomulyo Village, Glagaharjo Village, Kepuharjo Kapanewon Cangkringan Village, and Hargobinangun Kapanewon Pakemyang Village. 272 DI-area sabo dam components. Yogyakarta and Central Java were built to withstand volcanic debris. Since September 1, 2021, Sleman Regency has used SIMBG for PBG license. The Public Works, Housing, and Settlement Areas Office of Sleman Regency must overcome technical issues and a lack of public awareness of SIMBG, especially among the elderly, due to this licensing system shift.

2. The factors that failed to be found in this study were untransformative laws, law enforcement institutions that were not experts, support for technological devices that were not adaptive and a low level of community legal culture. In detail, In detail, the change that is not transformative is marked by the change from the IMB nomenclature (Building Permit) to the Permit to construct buildings.

B. Suggestion

1. There needs to be substantive changes and developments in laws and institutions as well as community culture so that disaster mitigation policies through standardization of buildings and structures run effectively

2. To the regional government of sleman regency to create specific regulations for disaster response building structures that will be utilized as the principal guides for development that meets disaster response building requirements.

3. To sleman regency's public works, housing, and settlement areas office to evaluate simbg's frequent technical issues.

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