



From Regulation to Ethics: The Legal Effectiveness of Smart Village Policy through Village SDGs and *Maqāṣid al-Sharīah*

Sheila Kusuma Wardani Amnesti

Faculty of Sharia, UIN Maulana Malik Ibrahim, Malang, Indonesia

Email: sheilakusuma@uin-malang.ac.id

Hasnan Bachtiar

Deakin Institute for Citizenship and Globalisation, Deakin University, Australia

Email: hasnan.bachtia@deakin.edu.au

Rayno Dwi Adityo

Faculty of Sharia, UIN Maulana Malik Ibrahim, Malang, Indonesia

Email: raynodwiadityo@uin-malang.ac.id

Siti Zulaichah

Faculty of Sharia, UIN Maulana Malik Ibrahim, Malang, Indonesia

Email: zulaichah@uin-malang.ac.id

**Corresponding Author*

DOI: 10.21154/justicia.v21i1.xxxx

Received: Feb x, 20xx

Revised: May xx, 20xx

Approved: June xx, 20xx

Abstract: Digital transformation in rural areas through the Smart Village concept has become a key strategy in sustainable development. Ministerial Decree No. 55 of 2024 on General Guidelines for Smart Village Development serves as the legal foundation for implementing the Smart Village policy, which aligns with the achievement of the Sustainable Development Goals (SDGs). By limiting the regulatory analysis to Ministerial Decree No. 55 of 2024, this article examines: (1) data standards and connectivity, (2) data protection and privacy, (3) financing and procurement, and (4) multi-stakeholder collaboration. The assessment of policy success is framed through five *maqashid al-shariah* dimensions: *hifz al-din* (ethical and inclusive governance), *hifz al-nafs* (health, safety, and food security), *hifz al-aql* (education and digital literacy), *hifz al-nasl* (family welfare and environmental sustainability), and *hifz al-mal* (economic empowerment and asset governance). Specifically, we contextualized our findings through case studies of Ponggok and Grajagan. The findings indicate that although the legal framework is clear, it remains limited to symbolic information and technology (ICT) infrastructure projects. Law enforcement and legal culture, which require partnerships among village officials, facilitators, and residents, receive insufficient attention. Other barriers include human resources, weak digital infrastructure, and poor coordination across actors. We recommend issuing a Village Regulation (*Perdes*) to operationalize Ministerial Decree No. 55 of 2024, which establishes data standards that are connected and easy to use, includes data

protection clauses, and appoints trained village digital stewards. This study is intentionally limited to Ministerial Decree No. 55 of 2024; other regulations are noted as limitations and avenues for future research.

Keywords: legal effectiveness; smart village; village SDGs; *maqashid al-shariah*.

Abstrak: Transformasi digital di wilayah pedesaan melalui konsep Smart Village merupakan salah satu strategi penting dalam pembangunan berkelanjutan. Keputusan Menteri Desa, Pembangunan Daerah Tertinggal, dan Transmigrasi No. 55 Tahun 2024 menjadi dasar hukum bagi pelaksanaan kebijakan Smart Village yang selaras dengan pencapaian Tujuan Pembangunan Berkelanjutan Desa (Village SDGs). Dengan membatasi analisis regulatif pada Kepmen 55/2024, artikel ini mengkaji (1) standar dan keterhubungan data, (2) perlindungan data atau privasi, (3) pembiayaan dan pengadaan, dan (4) kolaborasi berbagai pihak. Keberhasilan diukur melalui lima dimensi *maqashid al-syariah*, yakni *hifz al-din* (tata kelola etis dan inklusif), *hifz al-nafs* (kesehatan, keselamatan, ketahanan pangan), *hifz al-aql* (pendidikan dan literasi digital), *hifz al-nasl* (kesejahteraan keluarga dan keberlanjutan lingkungan), dan *hifz al-mal* (pemberdayaan ekonomi dan tata kelola aset). Secara spesifik, mengaitkan analisis regulatif ini dengan studi kasus di Desa Ponggok dan Grajagan. Temuan kami menunjukkan adanya kerangka hukum yang sudah jelas, tetapi pelaksanaan di lapangan sering berhenti pada simbol pembangunan infrastruktur Teknologi Informasi dan Komunikasi (TIK). Aspek penegakan dan budaya hukum, yang menuntut kemitraan antara aparatur desa, pendamping, dan warga, belum mendapat perhatian memadai. Hambatan lain muncul dari terbatasnya SDM, infrastruktur digital, dan koordinasi antar-aktor. Kami merekomendasikan Peraturan Desa (Perdes) pelaksana Kepmen 55/2024 yang memuat standar data yang saling terhubung dan mudah digunakan, dan klausul perlindungan data, serta penunjukan pengelola digital desa yang terlatih. Studi ini secara sengaja dibatasi pada Kepmen 55/2024; regulasi lain dicatat sebagai batasan dan agenda riset lanjutan.

Kata Kunci: efektivitas hukum; desa cerdas; SDGs desa; *maqashid al-shariah*.



Copyright: © 2025 by author (s). This work is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/).

Introduction

Village development has been a national priority in Indonesia, with the establishment of the Ministry of Villages in 2014 providing further support.¹ With

¹ Ministry of Villages, “Profil Kemendesa,” 2016, <https://kemendesa.go.id/berita/view/kemendesa/1/sejarah-singkat>; Lukman Santoso, “Construction of Village Autonomy Regulation in Achieving People’s Welfare: Critical Review Law Number 6 of 2014 on Villages,” *Al-Daulah: Jurnal Hukum Dan Perundangan Islam* 11, no. 1 (2021): 47–74, <https://doi.org/10.15642/ad.2021.11.1.47-74>.

more than 83,794 villages recorded in 2022,² Indonesia faces complex rural development challenges, including achieving equitable growth and improving the quality of life across physical, social, and economic dimensions. To preserve Islamic identity and the purity of religious practices, various civil society organisations, such as the Wahid Foundation and the Setara Institute, have raised economic, social, cultural, and environmental issues.³ Law No. 6 of 2014 emphasises community empowerment and sustainable village development.

The digital era and the transition from the Industrial Revolution 4.0 to the Society 5.0 era present significant challenges, particularly for villages implementing the Smart Village concept. The Smart Village concept represents innovative approaches in village development.⁴ This concept integrates information and communication technology (ICT) into various aspects of village life, including governance, the economy, education, health, and the environment.⁵ Its primary objectives are to enhance the efficiency of public services, foster community participation, and promote technology-driven local economic growth.⁶ From a contextual *maqashid* perspective, which refers to a way of reasoning built upon the noble objectives of the shariah, it is committed to upholding human dignity and fostering human development.⁷ Smart Village-based development is not confined to a single objective. Instead, it spans multiple dimensions, most prominently intersecting with the protection of community economy (*hifz al-mal*), the development of intellectual capacity through innovation and/or participation (*hifz al-'aql*), and the fulfillment of basic needs through the optimization of public services (*hifz al-nafs*).⁸

The Indonesian government, through Ministerial Decree No. 55/2024, has adopted the Smart Village concept to guide village development programs that are

² Central Bureau of Statistics of the Republic of Indonesia, *Data Desa Dan Kelurahan di Indonesia* (Jakarta, 2022).

³ Titing Kartika, "Dampak Pengembangan Pariwisata Terhadap Aspek Ekonomi, Sosial Budaya Dan Lingkungan Fisik Di Desa Panjalu," *Journal Hospitaliti Dan Pariwisata* 3, no. 1 (2016): 01-19.

⁴ Novie Indraswari Sagita Hafny Aisyatul Huda, Utang Suwaryo, "Pengembangan Desa Berbasis Smart Village (Studi Smart Governance Pada Pelayanan Prima Desa Talagasari Kabupaten Karawang)," *Moderat: Jurnal Ilmiah Ilmu Pemerintahan* 6, no. 3 (2020), <http://dx.doi.org/10.25157/moderat.v6i3.3406>.

⁵ Dian Herdiana, "Pengembangan Konsep Smart Village Bagi Desa-Desa Di Indonesia (Developing the Smart Village Concept for Indonesian Villages)," *IPTEK-KOM Jurnal Ilmu Pengetahuan Dan Teknologi Komunikasi* 21, no. 1 (2019): 1-16, <https://doi.org/10.17933/iptekkom.21.1.2019.1-16>; Anindya Puteri Eka Susilowati et al., "Smart Village Concept in Indonesia: ICT as Determining Factor," *Heliyon* 11, no. 1 (2025), <https://doi.org/10.1016/j.heliyon.2025.e41657>.

⁶ Eliyah A M Sampetoding et al., "Sosialisasi Konsep Smart Village Berdasarkan SDGs," *Compromise Journal : Community Proffesional Service Journal* 2, no. 1 (2024): 01-10, <https://doi.org/10.57213/compromisejournal.v2i1.152>.

⁷ Traditionally, Muslim jurists refrain from giving a precise definition of *maqashid*, allowing it to remain abstract and flexible, to be grasped as the overarching purposes of the sharia. By contrast, in more recent times, scholars like Jasser Auda conceive of it as progressive and humanistic purposes of the sharia, placing emphasis on the welfare of human life in line with contemporary commitments to human rights and development. See Jasser Auda, *Membumikan Hukum Islam Melalui Maqashid Al-Syari'ah* (Mizan, 2015).

⁸ Mukti. Tabrani, "Maqâshid Revitalization in Global Era: Istidlâl Study from Text to Context," *AL-IHKAM: Jurnal Hukum & Pranata Sosial* 13, no. 2 (2018): 310-33.

responsive to local needs and aligned with the values of *maqashid*.⁹ The effectiveness of Smart Village policies, such as Decree No. 55/2024, depends not only on the clarity of their legal framework but also on practical implementation, which requires adequate human resources, technological readiness, stakeholder collaboration, and active community participation, aligning with *maqashid* principles when law is effectively applied (*tahqiq al-manat*).¹⁰ Law in this context is considered to achieve *maqashid* if it is supported by human resources, technology, social acceptance, and collective legitimacy, as evidenced by stakeholder support.

Village development in Indonesia is also aligned with efforts to achieve the Sustainable Development Goals (SDGs).¹¹ In the village context, the SDGs are adapted into Village SDGs, comprising 18 goals that cover social, economic, environmental, and institutional dimensions.¹² The legal foundation for sustainable village development is established in Ministerial Regulation No. 21 of 2020, which aims to enhance the effectiveness and efficiency of implementing village development and empowering village communities. The implementation of Regulation 21/2020 includes policy direction for Village Development and village community empowerment as well as a mechanism for monitoring, evaluation, supervision, and guidance based on the principles of Village SDGs. We observe that the SDGs and *maqashid* are aligned because both aim to create a society that is not only just and prosperous, but also sustainable.^{13 14} However, the expression of the SDGs is more akin to *maqashid* values that have been contextualized and then promoted through a linguistic articulation that has been objectified.¹⁵ Regarding this last point, *maqashid* can be understood not only by Muslims but also in a more inclusive way that applies to diverse communities.

In the context of implementing the Village SDGs, the Ministry of Villages categorises villages into 9 (nine) types: Poverty and Hunger-Free Village, Economic Growth Village, Health Care Village, Environment-Care Village, Education-Care

⁹ Achmad Firdaus Masrifah, Atika Rukminastiti, "The Framework of Maslahah Performa as Wealth Management System and Its Implication for Public Policy Objectives," *Media Syari'ah: Wahana Kajian Hukum Islam Dan Pranata Sosial* 18, no. 2 (n.d.): 235–64.

¹⁰ and Aji Pangestu. Khaliq, Muhammad Nur, "Teori Maqasid Syari'ah Klasik (Asy-Syatibi)," *Risalah Jurnal Pendidikan Dan Studi Islam* 11, no. 1 (2025): 149–62.

¹¹ Xiaojuan Zhang and Zhengang Zhang, "How Do Smart Villages Become a Way to Achieve Sustainable Development in Rural Areas? Smart Village Planning and Practices in China," *Sustainability* 12, no. 24 (2020): 10510, <https://doi.org/10.3390/su122410510>.

¹² Regulation of the Minister of Villages, Disadvantaged Regions, and Transmigration Number 21 of 2020 concerning General Guidelines for Village Development and Village Community Empowerment.

¹³ Ishmah Afiah, "The Existence of Islamic Law in Indonesia in the Millennial Era in Supporting the Sustainable Development Goals (SDGs): Maqashid Sharia Perspective," *Demak Universal Journal of Islam and Sharia* 3, no. 1 (2025): 27–40.

¹⁴ Slamet Firdaus, "Al-Qur'an Dan Pembangunan Lingkungan Berkelanjutan Di Indonesia: Analisis Maqashid Syariah Untuk Pencapaian SDGs," *Al-Mustashfa: Jurnal Penelitian Hukum Ekonomi Syariah* 7, no. 2 (2022): 120–38.

¹⁵ Dendi Nugraha et al., "Paradigma Ilmu Integralistik Dalam Pemikiran Kuntowijoyo: Integralisasi Dan Objektifikasi Islam," *AL-MIKRAJ Jurnal Studi Islam Dan Humaniora* 5, no. 2 (2025): 1587–611, <https://doi.org/10.37680/almikraj.v5i2.7218>.

Village, Women-Friendly Village, Networked Village, Culturally Responsive Village, and Pancasila Village.¹⁶ Several Village SDGs, such as those related to clean energy, innovation, infrastructure, cooperation, and cultural strengthening, align closely with the Smart Village concept, ensuring that digital transformation promotes not only technological advancement, but also inclusive, sustainable, and *maqashid*-aligned development.

Smart Village development becomes more effective when cooperation with communities and stakeholders is optimised.¹⁷ This can be seen in Ponggok Village, Polanharjo District, Klaten Regency, Central Java, where the development of Tourism Sites, managed by Village-Owned Enterprise (*BUMDes*), actively involves residents.¹⁸ The community participated in decision-making, program implementation, and benefits sharing from the management of Umbul Ponggok, which has led Ponggok Village to become known as the wealthiest village in Central Java. A similarly strong model of community participation is found in Balun Village, Lamongan, known as a Pancasila Village.¹⁹ The high level of community concern is due to the family factor that is actively involved in the development activities of Balun Village. We argue that such villages exemplify the development models that integrate the SDGs and the Smart Village framework with the contextual values of *maqashid*, although in practice this integration is not without its challenges.²⁰

Active community participation is essential for the success of Smart Village development. However, in Grajagan Village, low levels of community engagement have hindered the effective implementation of digital public services, despite regional initiatives that have been in place since 2016.²¹ Although digitalisation aims to modernise public services under the Smart Village and Smart City paradigms, factors such as community age, education, and economic status affect user acceptance, creating a gap between government reform efforts and community readiness.

¹⁶ Daerah tertinggal dan Transmigrasi Kementerian Desa, "Mendes PDDT Jadikan SDGS Desa Sebagai Langkah Strategis Bangun Bangsa," 2020, <https://kemendes.go.id/berita/view/detil/3415/mendes-pddt-jadikan-sdgs-desa-sebagai-langkah-konkret-bangun-bangsa>.

¹⁷ Sheila Kusuma Wardani Amnesti et al., "Enhancing Sustainable Development Efficiency Through a Single Smart City Platform: A Cost-Benefit Policy Perspective from Indonesia," *Volksgeist: Jurnal Ilmu Hukum Dan Konstitusi*, May 26, 2025, 151–69, <https://doi.org/10.24090/volksgeist.v8i1.12584>.

¹⁸ Bagas Orlando Wibowo, "Partisipasi Masyarakat Lokal Terhadap Pengembangan Obyek Wisata Umbul Ponggok" (*Skripsi*) UIN Sunan Kalijaga Yogyakarta, 2019). 69-95.

¹⁹ Nur Hidayati, "Partisipasi Masyarakat Dalam Membangun Civic Virtue Di Desa Balun Kecamatan Turi Kabupaten Lamongan," *Kajian Moral Dan Kewarganegaraan* 5, no. 1 (2017), <https://doi.org/10.26740/kmkn.v5n01.p%25p>.

²⁰ Mega Puspita and Khairul Umami, "Optimizing Village Governance: A Siyasa Dusturiyah Perspective on Law No. 3/2024," *Bestuurskunde: Journal of Governmental Studies* 5, no. 2 (2025): 133–44, <https://doi.org/10.53013/bestuurskunde.5.2.133-144>.

²¹ Pemerintah Kabupaten Banyuwangi, "Menkominfo Luncurkan Smart Kampung Kabupaten Banyuwangi," 2016, <https://banyuwangikab.go.id/berita/video/besok-menkominfo-luncurkan-smart-kampung-banyuwangi>.

This study exclusively examines the legal effectiveness of Decree No. 55/2024 in advancing Smart Village development through the integration of digital transformation, Village SDGs,²² and a *reinterpretation of maqashid*, unlike previous research that focused on development models without legal analysis. It offers a value-based framework that bridges national law, global goals, and local religious values, promoting ethical and sustainable village development.²³ Using a qualitative study design that combines empirical juridical methods²⁴ and a *maqashid* perspective to compare Smart Village implementation under Decree No. 55/2024 in Grajagan and Ponggok, analysing interviews and literature to assess how differing community participation and legal alignment affect outcomes across five *maqashid* dimensions.

SDGs and the Smart Village in Indonesia

The Bright Village concept is an initiative to modernize village development by leveraging information and communication technology (ICT) to enhance public services,²⁵ foster community participation, and improve socio-economic welfare.²⁶ Amid rapid global digital development, this approach serves as a strategic solution to reduce disparities between urban and rural areas.²⁷ By positioning technology as the primary driver, smart villages are designed to address local challenges more efficiently and sustainably.²⁸ The Indonesian government, through the Ministry of Villages, Development of Disadvantaged Regions, and Transmigration (Kemendes PDTT),²⁹ has introduced several strategic policies to support this agenda, including Ministerial Decree No. 55/2024, which concerns the general guidelines for Smart Village development. This document serves as a practical guide for villages across Indonesia in designing, developing, and evaluating innovative village programs

²² A A Aziiza and T D Susanto, "The Smart Village Model for Rural Area (Case Study: Banyuwangi Regency)," *IOP Conference Series: Materials Science and Engineering* 722, no. 1 (2020): 012011, <https://doi.org/10.1088/1757-899X/722/1/012011>.

²³ Suresh Renukappa et al., "Evaluation of Smart Village Strategies and Challenges," *Smart and Sustainable Built Environment* 13, no. 6 (2024): 1386–407, <https://doi.org/10.1108/SASBE-03-2022-0060>.

²⁴ Sheila Kusuma Wardani Amnesti et al., "Legal Protection of Personal Data Security in Indonesian Local Government Apps: Al Farabi's Perspective," *Legality: Jurnal Ilmiah Hukum* 33, no. 1 (2024): 1–19, <https://doi.org/10.22219/ljih.v33i1.34623>.

²⁵ Rifki Muhammad et al., "Creating Community Resilience through Social Safety Nets for Poverty Alleviation in the Rural Areas," in *Community Climate Justice and Sustainable Development*, ed. Parimal Kumar Roy et al. (IGI Global, 2025), <https://doi.org/10.4018/979-8-3373-0619-3.ch006>.

²⁶ H.S. Tisnanta et al., "Navigating Legal Complexities in Localising the Sustainable Development Goals Agenda for Village Governance in Indonesia," *Sriwijaya Law Review* 8, no. 2 (2024): 335–57, <https://doi.org/10.28946/slrev.Vol8.Iss2.2997.pp335-357>.

²⁷ A J Silubun et al., "Village Authority and Position in Realizing Village Autonomy," *IOP Conference Series: Earth and Environmental Science* 473, no. 1 (2020): 012032, <https://doi.org/10.1088/1755-1315/473/1/012032>.

²⁸ Veronika Zavrtnik et al., "Sustainable and Community-Centred Development of Smart Cities and Villages," *Sustainability* 12, no. 10 (2020): 3961, <https://doi.org/10.3390/su12103961>.

²⁹ Rury Febrina et al., "Economic Development and the Rural Environment: BUMDES Development Strategy," *E3S Web Conf.* 506 (2024), <https://doi.org/10.1051/e3sconf/202450602005>.

based on each village's local potential.³⁰ The primary objective of innovative village development is to enable villages to utilize technology to enhance the quality of life for their residents. To achieve this, six pillars must be fulfilled: innovative governance, intelligent people, a smart environment, smart living, a creative economy, and smart mobility.³¹ These pillars encompass the digitalization of village governance, utilizing technology in economic sectors such as agriculture and "Micro, Small, and Medium Enterprises" (MSMEs), improving environmental quality, and providing technology-based education and health services.³² However, these efforts face significant challenges, as many ICT initiatives fail not due to technological implementation but because of a "design-reality gap."³³

One of the key strategies for Smart Village development in Indonesia is its integration with the Village SDGs, which represent a localised adaptation of the global SDGs.³⁴ This approach ensures that village digital transformation is not limited to technological modernisation, but is also aligned with inclusive social, economic, and environmental impacts. Some relevant SDGs include goal 9 (industry, infrastructure, and innovation), goal 11 (sustainable settlements), and goal 17 (development partnerships).

Innovative village initiatives have been implemented in several regions in Indonesia.³⁵ One notable example is Ponggok Village in Polanharjo District, Klaten Regency, which adopted Smart Village practices even before the concept was formally introduced at the national level. This reflects co-production, where "citizens and public agents jointly produce public services," turning participation into shared delivery and stewardship."³⁶ As the principle of community empowerment, the Ponggok village government provides opportunities for the community to be active in the process of identifying, analysing, and planning the development of Ponggok village. This approach aims to empower local

³⁰ Anindya Puteri Eka Susilowati et al., "Smart Village Concept in Indonesia: ICT as Determining Factor," *Heliyon* 11, no. 1 (2025), <https://doi.org/10.1016/j.heliyon.2025.e41657>.

³¹ Muhammad Setiawan Kusmulyono, "Collaborative Youth Action to Alleviate Digital Inequality in Rural Areas in Indonesia," in *Sustainable Development and the Digital Economy: Human-Centricity, Sustainability and Resilience in Asia*, ed. Mohammad Nabil Almunawar et al. (Taylor and Francis, 2023), <https://doi.org/10.4324/9781003388753-5>.

³² Kementerian Desa, "Kemendes Gandeng Bank Dunia Wujudkan Desa Cerdas," 2022, <https://kemendes.go.id/berita/view/detil/4452/kemendes-pdtt-gandeng-bank-dunia-wujudkan-desha-cerdas>.

³³ Silvia Masiero, "The Origins of Failure: Seeking the Causes of Design-Reality Gaps," *Information Technology for Development* 22, no. 3 (2016): 487-502, <https://doi.org/10.1080/02681102.2016.1143346>.

³⁴ Iqra Sugandi et al., "Achievement of SDGs Desa in Villages Planning and Budgeting Documents," *IOP Conf. Ser. Earth Environ. Sci.* 1211, no. 1 (2022), <https://doi.org/10.1088/1755-1315/1211/1/012001>.

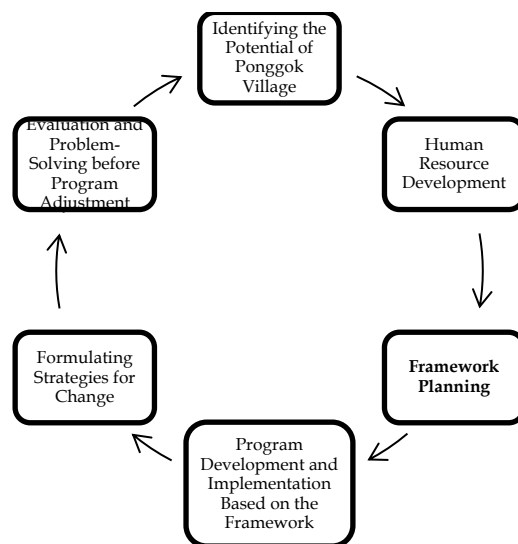
³⁵ H.S. Tisnanta et al., "Vernacularization of Sustainable Development Goals (SDGs): Diffusing Global Values in Indonesia's Village Government," *Law Reform: Jurnal Pembaharuan Hukum* 21, no. 2 (2025): 346-78, <https://doi.org/10.14710/lr.v21i2.61705>; Silubun et al., "Village Authority and Position in Realizing Village Autonomy."

³⁶ Elinor Ostrom, "Crossing the Great Divide: Coproduction, Synergy, and Development," *World Development* 24, no. 6 (1996): 1073-87, [https://doi.org/10.1016/0305-750X\(96\)00023-X](https://doi.org/10.1016/0305-750X(96)00023-X).

communities as the primary actors in development, rather than merely recipients of assistance. This principle is reflected in the Village Mid-Term Development Plan (*RPJMDes*), which was prepared based on 4 (four) key strategies, namely strengthening village planning and budgeting, positioning *BUMDes* as the driver of the local economy, developing high-quality human resources, and utilising information technology.³⁷

Ponggok Village implements an active community empowerment strategy by involving residents in every stage of village meetings. The process of active community involvement led to an agreement to develop the *RPJMDes* in an aspirational and responsive manner, in accordance with village conditions, so that it is more bottom-up rather than top-down, driven by the village head and the community.³⁸ The implementation of the Participatory Rural Appraisal (PRA) model in innovative village development in Ponggok Village is illustrated in the following figure:

Figure 1. Participatory Rural Appraisal (PRA) Model in Ponggok Village Smart Village Development



Source: Processed by Researchers

³⁷ "RPJMDes Desa Ponggok Berdasarkan Wawancara Kepala Desa Ponggok," Klaten, 2024.; I. Made Yudhiantara et al., "Governance Perspective on Village Development in Bali: A Study of Tegal Harum Smart Village," *International Journal of Religion* 5, no. 11 (2024): 7499-511, <https://doi.org/10.61707/ddkxwr09>.

³⁸ *Dokumen RPJMDes (Rencana Pembangunan Jangka Menengah Desa) Desa Ponggok* (Klaten, 2017).

Based on Figure 1, human resources development serves as a foundational milestone before the implementation of the Smart Village development program in Ponggok Village. As part of community empowerment, sharing knowledge on smart village principles is essential to provide residents with an initial understanding of the importance of motivation and active participation in the success of innovative village development in Ponggok Village. As a result, the community's knowledge of smart villages principles strengthens the implementation of the Smart Village work program. This aligns with the pillars of community empowerment, as outlined by the chamber, including the people's centre, where innovative village development in Ponggok Village applies the principle of 'by villagers, for villagers'. The second pillar is participation, involving the active involvement of the Ponggok Village community in the planning, preparation, and implementation of Village programs. The third is empowering the community's potential by upholding the principles of togetherness and fostering active partnerships to optimally manage village resources for economic improvement, starting with the management of water parks, hotels, fishing spots, restaurants, and processed food products.

The development of Ponggok Village toward a community-based smart village aligns with the principle of Village Sustainable Development Goals (Village SDGs), which serve as a localisation of SDGs based on the Presidential Regulation No. 111 of 2022. The transformation of the SDGs into Village SDGs is necessary because policymakers at the regional level recognize the need to work collaboratively with villages to accelerate development. The implementation of the Village SDGs in the Smart Village programs of the Ponggok Village government is illustrated in the following table:

Table 2: Implementation of Village SDGs in the Ponggok Village Program

Village Principles	SDGS	Ponggok Village Program	Stakeholders Involved	Ponggok Village Development Approach
Villages Without Poverty (Principle 1) and Village Economic Growth (Principle 8)		BUMDes Development and Strengthening, MSME Business Management Training, Household Economic Management Training, Entrepreneurial Card	Village Government, Academia, Community, Industry	Human Resource Development Approach
Villages Without Hunger (Principle 2) and Villages		Household Economic Management Training, Entrepreneur Card	Village Government, Academia,	Human Resource Development Approach

Without Inequality (Principle 10)		Community, Industry	
Healthy and Prosperous Villages (Principle 3)	Healthy Card Program, Mother and Child Card, Village Hospital Development	Village Government, Academia, Community, Industry	Human Resource Development Approach and Spatial Approach (Spatial)
Quality Village Education (Principle 4)	Smart Card Program 1 houses one scholar, an English Course, and the Development of Village Development Study Centre	Village government, community, industry	Human Resource Development Approach
Involvement of Women (Principle 5)	Mother and Child Card Program	Village Government, Academia, Community, Industry	Human Capital Development Approach
Water and Sanitation Adequate Villages (Principle 6)	Development and strengthening of BUMDes in collaboration with Industry	Village Government, Academia, Society, Industry	Human Resource Development Approach and Spatial Approach
Appropriate Village Infrastructure and Innovation (Principle 9)	Utilisation of ICT in village administration activities through E-Village, E-APBDES, E-Licensing, Dea Website Development, Information Media Utilisation (RT-RW NET)	Village Government, Academia, Society, Industry	Human Capital Development Approach, Spatial Approach, and ICT Approach
Safe and Comfortable Village Settlement Areas (Principle 11), Environmentally Conscious Village Consumption and Production (Principle 12), and Village Care for the Land Environment (Principle 15)	Integrated agricultural management with corporate farming concept, Waste management with Waste Bank model, and Development of Village Development Study Centre	Village Government, Academia, Society, Industry	Human Resource Development Approach, BUMDes Sectoral Approach, and Spatial Approach (Spatial)
Partnership for Village Development (Principle 17)	Involvement of experts (academics) and investors in village development, both physical and non-physical development	Village Government, Academia, Society, Industry	Human Resource Development Approach, BUMDes Sectoral Approach, Spatial Approach, and ICT Approach

Source: processed by researchers

The 18 Village SDGs represent Indonesia's localized adaptation of the 17 global SDGs, as outlined in Presidential Regulation No. 111/2022. Based on this framework, Ponggok Village has implemented, or is in the process of implementing, 13 goals through programs under its Village Medium-Term Development Plan (RPJMDes). This progress is strongly supported by the involvement of key stakeholders, including the Ponggok Village government components, local communities, academic experts, and industry partners in realising Ponggok Smart Village Development.

The application of the smart village concept is not only implemented in Ponggok Village, Banyuwangi Regency, but it has also adopted digitalisation initiatives through the development of application-based public services and local economic programs under the "Smart Kampung" model. Launched in 2015 by the Banyuwangi local government, Smart Kampung has become a leading example of technology-driven village governance, serving as one of the flagship programs for improving public services. Some of the public services available through the Smart Kampung application are: (1) Family Card Management; (2) Electronic ID Card Management; (3) Child Indonesia Card (KIA) Management; (4) Resident Movement Management; (5) Residence Certificate (SKTT) Management; (5) Birth Certificate Management; (6) School licensing, taxes and levies and several other information about Banyuwangi Regency Government activities. However, implementing the application in the field is far more challenging than simply developing it; ensuring the sustainability of using the "Smart Kampung" application is also a concern. One of the villages in Banyuwangi that has experienced ineffectiveness in implementing the "Smart Kampung" program is Grajagan Village, located in the Purwoharjo District of Banyuwangi Regency.

Grajagan Village, with a coastal village typology and located far from the city centre, faces unique challenges in implementing the Smart Kampung Banyuwangi program. Network limitations caused by its coastal areas reduce community access to stable internet connectivity and hinder optimal smartphone use. Additionally, the age factor among Grajagan Village residents, who are predominantly over 45 years old, presents obstacles to adopting new applications for administrative services and other public needs.³⁹ Limited community engagement, insufficient among village officials regarding the implementation of

³⁹ Ainnur Rosyida Luthfiana, "Urgensi Smart Kampung Dalam Peningkatan Pelayanan Publik Desa Grajagan" ((Skripsi) UIN Maulana Malik Ibrahim Malang, 2025).

Smart Village, weak partnerships with industry parties, and minimal expert collaboration further contribute to the program's lack of success in innovative village development in Grajagan Village. As sociotechnical studies demonstrate, technologies are enacted in practice, not merely installed; outcomes depend on the roles, rules, and routines surrounding the tools.⁴⁰

Table 3: Comparison of Village SDGs Implementation in Ponggok Village and Grajagan Village

	Ponggok Village (Successful/Optimal)	Grajagan Village (Less Optimal)
Community Participation	High, with active participation through the <i>Participatory Rural Appraisal</i> (PRA) model; villagers are actively involved in planning, implementation, and benefiting from program outcomes.	Low, weak motivation to use the Smart Kampung application; most residents are over 45 years old, limiting adoption of new technology.
Role of Village Government	Progressive, providing ample space for participation, developing the RPJMDes in an aspirational and responsive (<i>bottom-up</i>) manner.	Limited, as village officials have a minimal understanding of digitalisation implementation.
Access & Technological Infrastructure	Relatively adequate; village potential (tourism, creative economy) supported by basic facilities.	Constrained; limited internet connectivity due to its coastal location far from the city centre.
Partnership & Collaboration	Strong, involving BUMDes, academics, and the tourism sector; the village is branded as the "Richest Village in Central Java."	Weak and minimal partnerships with industry, and limited cooperation with experts.
Economic Factors	Local economic diversification encompasses a range of industries, including water parks, hotels, restaurants, and processed food products, which directly benefit the community.	Economic potential is underdeveloped; a strengthened local economy has not accompanied the digitalisation of public services.
Image/Legitimacy	Serves as a national role model for a tourism village based on the bright village concept.	Recognised as a case facing challenges in implementing the Smart Kampung program.

Source: processed by researchers

⁴⁰ Wanda J Orlikowski, "Using Technology and Constituting Structures: A Practice Lens for Studying Technology in Organizations," *Organization Science* 11, no. 4 (2000).

The implementation of Smart Village varies across locations, depending on the readiness of infrastructure and human resources.⁴¹ Program evaluation in Indonesia has yielded several notable achievements, including increased efficiency of administrative services, improved access to public information, and local economic growth. However, some villages have not succeeded because key constraining factors remain unaddressed, and thus Smart Village development continues to face significant challenges. Limited digital infrastructure, particularly in remote areas with unstable internet connectivity, poses a considerable challenge. In addition, the capacity of human resources, including village officials and the community, remains a significant obstacle, particularly in terms of digital literacy and managing technology-based systems. The funding aspect is also a critical concern. The implementation of a digitalisation program requires a significant amount of initial investment, while many villages are still limited in budget capacity.

A multi-stakeholder collaboration model is needed, involving the industrial sector, NGOs, and academics from the education sector, to support the sustainable development of the Smart Village. To ensure the program's success, a clear and measurable evaluation and monitoring system is necessary. Evaluation may include assessments of the effectiveness of technology use, community participation, economic and social impacts, as well as sustainability aspects. With reliable and measurable data, both village and central governments can develop policies that are more adaptive and based on the real needs of the town. The development and evaluation of smart villages in Indonesia remain a dynamic process that requires long-term commitment. Theoretically, durable innovation emerges from coordinated ties among government, industry, academia, and community that co-produce solutions.⁴² By strengthening the synergy between institutions, increasing the capacity of human resources, and ensuring community involvement at every stage, Smart Villages can become a crucial pillar in creating equitable, competitive, and sustainable development in Indonesia.

Legal Effectiveness of the Smart Village Implementation under Ministerial Decree No. 55 of 2024

⁴¹ Rusli Kustiaman Iskandar and Fabian Fadhly Iambak, "village law in the struggle of indonesian legal policy," *petita: jurnal kajian ilmu hukum dan syaria* 10, no. 1 (2025): 384–403, <https://doi.org/10.22373/petita.v10i1.469>.

⁴² Panos Panagiotopoulos et al., "Public Value Creation in Digital Government," *Government Information Quarterly* 36, no. 4 (2019): 101421, <https://doi.org/10.1016/j.giq.2019.101421>.

The basic principles of Smart Village implementation are outlined in Ministerial Decree No. 55 of 2024. The Village Government uses this decree as a reference and a basis for village development, so that the realisation of smart villages becomes more focused by meeting the indicators outlined in the regulation. The village government can use six Smart Village pillars to build a smart town, including: (a) Smart Community; (b) Smart Economy; (c) Smart Governance; (d) Smart Environment; (e) Smart Life or Welfare; and (f) Smart Mobility. The implementation of the six pillars of smart villages in village development begins with the Preconditioning Stage. The precondition stage is the first step in identifying and mapping data on village needs and infrastructure availability as initial information for implementing innovative village development. The Preparation Stage, the next phase following Preconditioning, is used to guide the implementation of work programs. This includes ensuring the readiness of Smart Village cadres, preparing work plans, and establishing partnership networks for effective implementation. The Implementation Stage constitutes the core phase of Smart Village programs. After the implementation stage, impacts are assessed during the evaluation phase, which includes the output stage to ensure the sustainability of Smart Village development.⁴³

Table 4: Framework for Smart Village Implementation

	Explanation
Legal Basis	Ministerial Decree No. 55 of 2024 on Villages, Disadvantaged Regions, and Transmigration provides the primary legal framework for Smart Village development.
Six Pillars	(a) Smart Society; (b) Smart Economy; (c) Smart Governance; (d) Smart Environment; (e) Smart Life/Welfare; (f) Smart Mobility.
Stages of Implementation	1. Preconditioning: Mapping village needs and infrastructure readiness. 2. Preparation: Capacity building of Smart Village cadres, planning, and partnership formation. 3. Implementation: Execution of Smart Village programs. 4. Evaluation: Assessing outputs and outcomes for sustainability.
Legal Effectiveness (Friedman)	- Structure: Institutions and enforcers (village government, facilitators, agencies). - Substance: Clear and relevant legal norms aligned with village needs. - Culture: Community values, attitudes, and acceptance of law and technology.
Legal Effectiveness (Soekanto)	Five supporting factors: (a) Legal factors; (b) Law enforcement; (c) Community; (d) Facilities and infrastructure; (e) Legal culture.
Challenges	Limited digital infrastructure, low digital literacy, and limited human resources.

⁴³ Keputusan Menteri DDTT No 55 Tahun 2024 (2024).

Key Strategy	Multi-stakeholder collaboration (penta-helix: government, community, academia, industry, NGOs) to strengthen the sustainability and effectiveness of Smart Village development.
--------------	---

Source: processed by researchers

The theory of legal effectiveness, in the context of Smart Village implementation as regulated by the Minister of Villages, Development of Disadvantaged Regions, and Transmigration's Decree No. 55 of 2024, can be analyzed through Lawrence M. Friedman's three main components: legal structure, legal substance, and legal culture. The legal structure comprises institutions and law enforcement officials involved in implementing the Smart Village program, including the village government, village facilitators, and related agencies. Legal substance refers to the content of Decree No. 55/2024, which provides general guidelines for the development of Smart Villages, encompassing six main pillars: smart society, innovative economy, smart governance, smart environment, intelligent life, and smart mobility. Legal culture refers to villagers' attitudes, values, and perceptions towards the laws and technologies implemented in the Smart Village program. The legal effectiveness of program implementation depends on the synergy among legal structure, legal substance, and legal culture. A strong and competent legal framework ensures that program implementation is conducted in accordance with existing regulations. A clear and well-aligned legal substance facilitates program implementation, aligning with the needs of the village community. Additionally, a supportive legal culture enhances community participation and compliance with the program. Despite the program's potential, implementation still faces challenges, including limited technological infrastructure, low digital literacy of village communities, and limited human resources. Collaborative efforts among the government, community, academia, and the private sector are needed to overcome these issues. A penta-helix approach involving various stakeholders can help improve the legal effectiveness of Smart Village implementation. Thus, legal effectiveness theory can be used as an analytical framework to evaluate and enhance the successful implementation of the Smart Village in Indonesia.⁴⁴

The implementation of smart villages can be examined through Soerjono Soekanto's perspective on legal effectiveness, which is informed by five main factors, namely legal factors, law enforcement factors, community factors, legal

⁴⁴ Widya Yeshiana Ririn Yulianti, Mira Andriani, "Model Pengembangan Desa Cerdas (Smart Village) Dengan Pendekatan Penta-Helix Untuk Mewujudkan Masyarakat Desa Di Era Society 5.0," *Moderat: Jurnal Ilmiah Ilmu Pemerintahan* 11, no. 1 (2025): 132–33, <https://doi.org/10.25157/moderat.v11i1.4503>.

facilities and infrastructure factors, and legal culture. These factors provide a robust analytical framework for understanding the digital transformation of villages; however, their effectiveness depends on the synergy among them.

The first aspect concerns legal factors. Decree No. 55/2024 provides general guidelines for Smart Village development, encompassing six pillars: a smart society, an innovative economy, smart governance, a smart environment, an intelligent life, and smart mobility. This legal substance of the decree provides clear guidance for villages in implementing digital technology to enhance the community's quality of life. However, successful implementation depends not only on the existence of regulations but also on the clarity of norms, consistency with other regulations, and the ability of these regulations to answer the needs of village communities. The second factor concerns law enforcement. An effective legal structure requires village officials, village facilitators, and related agencies with the capacity and integrity to implement the Smart Village program. Training and capacity building of human resources are crucial to ensuring that law enforcement personnel can carry out their duties effectively. For example, Dlingo village in Bantul successfully implemented innovative governance through the procurement of ICT infrastructure and human resource training, highlighting the crucial role of law enforcement in implementing this program.

The third factor concerns the community. The active participation of village communities is critical to the success of Smart Village implementation. Communities with strong digital literacy and an understanding of the benefits of technology are more likely to accept and support the program. Empowering the community through training and socialisation can further enhance their awareness and participation in technology-based village development. The availability of technological infrastructure, including internet access, hardware, and software, is a crucial factor in implementing the Smart Village initiative. Without adequate facilities, the program cannot be implemented effectively. Investment in ICT infrastructure and its ongoing maintenance is essential to support the digital transformation of villages. The fourth factor concerns the legal culture. The village community's legal culture, encompassing values, attitudes, and perceptions towards law and technology, has a significant impact on the effectiveness of Smart Village implementation. Communities with a legal culture that supports innovation and change are more likely to accept and apply technology in their daily lives. Conversely, if there is resistance to change or distrust of technology, the implementation of this program will face obstacles. An educational and transformative approach is necessary to cultivate a legal culture that is adaptable

to change. Although the smart village regulations do not impose sanctions, an optimal legal culture, shaped by positive values, attitudes, and motivation, as well as high awareness of village development, can enable the progressive and sustainable implementation of Smart Village programs.

The implementation of Smart Villages in Indonesia is guided by Decree No. 55/2024, which establishes six main pillars (smart society, innovative economy, smart governance, smart environment, intelligent life, and innovative mobility) serving as the framework for technology-driven village development. The process unfolds in stages, beginning with preconditioning, followed by preparation, implementation, and impact evaluation. From a legal theory perspective, implementation effectiveness can be assessed using Friedman's framework (legal structure, legal substance, and legal culture) as well as Soekanto's approach (legal factors, law enforcement, community, facilities and infrastructure, and legal culture). It can be argued that the success of Smart Village development depends not only on the existence of regulations but also on stakeholder synergy, the readiness of infrastructure, digital literacy, the community's legal culture, and multi-stakeholder collaboration (penta-helix) to ensure sustainable and dynamic digital transformation of villages.

***Maqashid* Analysis of the Smart Village Regulation, Implementation, and Its Legal Effectiveness**

The implementation of Smart Village initiatives in Indonesia can be examined through the perspective of *maqashid al-shariah*, which provides an ethical and religious foundation, as well as strategic guidance for technology-driven rural development. From a *maqashidi* perspective, this program is oriented towards digital modernisation. Additionally, it reinforces the importance of protecting wealth (*hifz al-mal*) through economic empowerment, safeguarding life (*hifz al-nafs*) through healthcare and food security, preserving intellect (*hifz al-aql*) through education and digital literacy, and ensuring lineage (*hifz al-nasl*) through women's empowerment and child welfare. The religious foundation (*hifz al-din*) is reflected in participatory, transparent, and just village governance, which aims to prevent corruption and reinforce the collective good (*maslahah*). In addition, the Smart Village framework also reflects progressive *maqashid values*, emphasising human rights, dignity, freedom of belief, ecological sustainability, and broader human development.

Table 4: Smart Village Implementation, Comparative Insights, and *Maqashid*-Based Analysis

Aspect/ Principle	Ponggok Village Program and Best Practice	Comparison with Grajagan Village	Smart Village Framework	Alignment with <i>Maqashid al-Shariah</i>
Poverty & Economic Growth (SDG 1 & 8)	BUMDes development and strengthening, MSME business management training, and Entrepreneurial Card	Ponggok: strong economic diversification (tourism, creative economy). Grajagan: weak economic digitalisation.	Innovative Economy (pillar); supported by legal substance (Decree of the Minister of Villages of the Republic of Indonesia Number 55 of 2024).	Hifz al-Mal (Protection of Wealth): Empowering livelihoods, ensuring sustainability of income. Human development (economic empowerment, reducing poverty).
Food Security & Equality (SDG 2 & 10)	Household economic management training, entrepreneurial programs	Ponggok: high participation, inclusive growth. Grajagan: low adoption due to demographics.	Smart Life/Welfare pillar requires a strong community factor.	Hifz al-Nafs (Protection of Life): Access to food and reduced inequality secure basic survival. Human dignity (right to adequate living standards).
Health & Welfare (SDG 3)	Health Card, Mother-Child Card, Village Hospital	Ponggok: health programs integrated. Grajagan: limited due to weak digital infrastructure.	Smart Life pillar; part of social welfare policies.	Hifz al-Nafs: Ensuring community health, reducing maternal and child risk. Human development (healthcare, life expectancy).
Education (SDG 4)	Smart Card (1 house, one scholar), English courses, Study Centre	Ponggok: proactive with schooling. Grajagan: lagging due to digital illiteracy.	Smart Society pillar: Preconditioning and HR training.	Hifz al-'Aql (Protection of Intellect): Promotes knowledge, literacy, and human capital.

				Human development (education, digital literacy).
Women Empowerment (SDG 5)	Mother-Child Card, Women's Inclusion	Ponggok: progressive role. Grajagan: weak due to social structure.	Smart Society & Smart Governance require legal culture support.	Hifz al-Nasl (Protection of Lineage/Family): Protecting women, children, and family well-being. Human rights (gender equality, child protection, intergenerational justice).
Water, Sanitation, Infrastructure (SDG 6 & 9)	BUMDes-industry partnerships, E-Village, E-Licensing, RT-RW Net	Ponggok: ICT supported. Grajagan: weak connectivity, limited digital adoption.	Innovative Environment & Smart Governance pillars.	Hifz al-Nafs & Hifz al-Mal: Protects health via sanitation and improves efficiency of resources. Human rights (gender equality, child protection, intergenerational justice).
Environment & Sustainability (SDG 11, 12, 15)	Corporate farming, Waste Bank, Environmental study centre	Ponggok: integrated eco-approach. Grajagan: limited due to weak partnerships.	Smart Environment pillar, ICT & spatial approaches.	Hifz al-Nafs & Hifz al-Mal: A Sustainable environment secures life and wealth for future generations. Ecological sustainability (clean water, healthy environment).
Partnership & Collaboration (SDG 17)	Multi-actor partnership (Gov, academia, industry, community)	Ponggok: strong collaboration, branded "Richest Village." Grajagan: weak, minimal industry linkages.	Penta-helix collaboration (key strategy); supported by Friedman's legal structure & culture.	Hifz al-Din & Hifz al-Mal: Collective good governance reflects ethical stewardship and economic justice. Freedom of belief, dignity, and accountable governance.

Source: processed by researchers

First, the aspects of poverty alleviation and economic growth (SDG 1 & 8) demonstrate how Ponggok has successfully diversified its economy by

strengthening BUMDes, MSME training, and innovations such as the Entrepreneur Card. These initiatives enable the village economy to expand into tourism, the creative sector, and micro-enterprises, thereby enhancing its overall growth and development. In contrast, Grajagan continues to lag due to its minimal digitalization of its economy, leaving much of its local potential untapped. From the perspective of the Smart Economy framework outlined in Ministerial Decree No. 55/2024, this success underlines that regulation must be supported by actor capacity and local innovation. Within the *maqashid* framework, this aligns with *hifz al-mal* (protection of wealth), as economic empowerment provides the foundation for sustainable livelihoods, while also reflecting the progressive dimension of human development by empowering communities and reducing poverty.⁴⁵⁴⁶

When examining the aspects of food security and equality (SDG 2 & 10), apparent differences in community participation emerge. Ponggok has successfully developed a household economic training and inclusive entrepreneurship program, ensuring a more equitable distribution of benefits. Grajagan, by contrast, has been less adaptive due to its demographic composition, which is dominated by older age groups, resulting in lower program adoption. The Smart Life/Welfare framework requires active community engagement, and in this regard, Ponggok performs more strongly. The principle of *hifz al-nafs* is highly relevant in this context. Access to food and the reduction of inequality are fundamental foundations for ensuring the continuity of life. This also reflects a progressive commitment to human dignity, understood as every citizen having a decent standard of living and the equitable distribution of social welfare.

The aspect of health and well-being (SDG 3) in Ponggok has also been realised through the provision of the Health Card, the Mother-Child Card, and the establishment of a village hospital. These innovations demonstrate that healthcare services are easily accessible to the community. Grajagan, however, struggles to keep pace due to weak digital and health infrastructure, which hampers the integration of the welfare program. The Smart Life pillar places health as an essential part of social policy and then as a foundation for human development. From the perspective of *maqashid al-shariah*, this relates directly to *hifz al-nafs*, as it concerns the protection of life, especially for mothers, children, and other

⁴⁵ Roza Hazli Zakaria Zailani, Muhammad Nooraiman, Nurulhuda Mohd Satar, "A Review of Indicators for the Preservation of Wealth (Hifz al-Mal) Based on Maqasid al-Shariah," *Journal of Islamic Philanthropy & Social Finance (JIPSF)* 4, no. 1 (2022): 23–29.

⁴⁶ Jasser Auda, *Membumikan Hukum Islam Melalui Maqashid Al-Syari'ah*.

vulnerable groups. At the same time, it also affirms the progressive vision of building a healthier society for all.⁴⁷

The education aspect (SDG 4) emphasizes the importance of digital literacy and human capacity development. Ponggok has introduced the Smartcard program, English courses, and study centres, which support the development of a competitive generation. In contrast, Grajagan struggles due to low levels of digital literacy. This falls under the Smart Society pillar, which begins with the prerequisite stage of human resource training. Beyond simple knowledge transfer, these efforts are linked to human development because education and digital literacy open up opportunities and ensure employability, while also building resilience in the face of technological change. In *maqashid* lenses, this resonates with *hifz al-'aql* (the protection of the intellect), ensuring the development of knowledge, literacy, and human capital.^{48,49}

The aspect of women's empowerment (SDG 5) also reveals a notable contrast. Ponggok has successfully integrated women into its program through the Mother-Children Card (*Kartu Ibu-Anak*) initiative and by increasing participation in social activities. In comparison, Grajagan shows weaker outcomes because its more conservative social structure hinders women's involvement. The pillars of Smart Society and Smart Governance can function optimally only when supported by an inclusive legal culture. This is closely related to *hifz al-nasl*, reflecting the broader principle of human rights, which encompasses gender equality, child protection, and intergenerational justice, serving as the moral backbone of sustainable development.^{50,51}

The aspect of water, sanitation, and infrastructure (SDG 6 & 9) underscores the importance of digital infrastructure. Ponggok has successfully established a partnership between BUMDes and the industry, launched E-Village and E-Licensing, and developed RT-RW Net to enhance internet access. Grajagan is weaker due to limited connectivity and low digital adoption. The pillars of Smart Environment and Smart Governance serve as key instruments for ensuring these basic services. From the *maqashid* perspective, this dimension relates to *hifz al-nafs*

⁴⁷ Jasser Auda, *Maqashid Al-Shari'ah as Philosophy of Islamic Law: A Systems Approach* (London; Washington: The International Institute of Islamic Thought, 2008), 24-25; 248.

⁴⁸ Hidayatus Sholichah Syamraeni, Syamraeni, "Transformasi Nilai Religius Di Era Digital: Analisis Literatur Berdasarkan Tujuan Hifz al-'Aql," *Socio Religia* 5, no. 2 (2024).

⁴⁹ Jasser Auda, *Maqashid Al-Shari'ah as Philosophy of Islamic Law: A Systems Approach* (London; Washington: The International Institute of Islamic Thought, 2008): 248.

⁵⁰ Nazifah Hanafiah, "Relevansi Maqashid Syariah Dalam Kebijakan Perlindungan Perempuan Dan Anak Pada Hukum Keluarga Di Indonesia," *Integrated Education Journal* 1, no. 2 (2024): 112-25.

⁵¹ Jasser Auda, *Membumikan Hukum Islam Melalui Maqashid Al-Syari'ah*.

(protecting health through adequate sanitation) as well as *hifz al-mal* (enhancing the efficient use of resources).⁵²

Next, the dimensions of environment and sustainability (SDG 11, 12, 15) illustrate how Ponggok has successfully implemented corporate farming, waste management through the Waste Bank, and established an environmental study centre. Grajagan, however, remains underdeveloped due to its limited partnerships with external stakeholders. The Smart Environment pillar, supported by spatial planning and ICT, plays a crucial role in strengthening long-term sustainability development. The relevant *maqashid* are *hifz al-nafs* and *hifz al-mal*, since protecting the environment means safeguarding life and securing economic resources for future generations.^{53,54}

Last but not least, the aspect of partnership and collaboration (SDG 17) plays a crucial role in integrating all the previous dimensions. Ponggok demonstrates a strong multi-actor partnership involving the government, academia, industry, and the community, earning it the reputation as the wealthiest village in the region. In contrast, Grajagan struggles because of its weak connections with industrial and academic partners. The penta-helix collaboration framework is consistent with Friedman's theory of legal effectiveness, which emphasises structure, substance, and culture. In the *maqashid* perspective, this reflects *hifz al-din* (ethical and trustworthy governance) and *hifz al-mal* (economic justice through sustainable partnerships).

A Smart Village is not merely a digitalisation initiative; it is an ethical and political arena for advancing social justice. Its success cannot be assessed through technology alone but through the extent to which digital tools are aligned with *maqashid al-shariah*. Within this framework, economic empowerment, food security, health, education, women's inclusion, infrastructure, environmental sustainability, and multi-actor collaboration function as moral pillars, not just technical indicators. Ponggok demonstrates that when participation is genuine and partnerships are robust, villages transition from being "smart" to becoming empowered, equitable, and sustainable. Grajagan, by contrast, highlights the

⁵² Sofyan Rizal. Isman, Mainul Fatah, Ummu Kaltsum, "The Relevance of Sustainable Development Goals (SDGs) in Maqāsid Al-Shari'ah Dimensions," *Proceeding of International Conference on Islamic Economics, Islamic Banking, Zakah and Waqf*, 2023, 1159–70.

⁵³ Achmad Muchsin, "Relationship Between Environmental Permitting Laws and Economic Development from the Perspective of Maqashid Al-Shariah," *Prophetic Law Review*, March 22, 2025, 263–86, [https://doi.org/10.20885/PLR.vol6.iss2.art6](https://doi.org/10.20885/PLR.vol6.iss2.art6;);

⁵⁴ Abdulloh Munir and Kusnadi Kusnadi, "Maintaining the Social Environment: Urgency and Principles in Maqasid Al-Shariah," *Tribakti: Jurnal Pemikiran Keislaman* 35, no. 2 (2024): 303–20, <https://doi.org/10.33367/tribakti.v35i2.5417>.

fragility of projects that lack participation and digital literacy. Ultimately, the Smart Village will succeed only when a holistic *maqashid* foundation integrates regulation, infrastructure, and legal culture into a single, transformative synergy, delivering development that is socially and economically inclusive, fair, and sustainable.

Conclusions

This article evaluates the effectiveness of Ministerial Decree No. 55/2024 in advancing Smart Villages initiatives aligned with the Village SDGs by applying five dimensions of *maqashid al-shariah*: protection of religion (*hifz al-din*), life (*hifz al-nafs*), intellect (*hifz al-'aql*), lineage and environment (*hifz al-nasl*), and wealth (*hifz al-mal*). The assessment is structured around four enabling conditions: data standards and connectivity, privacy protection, financing and procurement, and multi-stakeholder collaboration. The study finds the decree effective when translated into clear, operational practices such as clean, connected data, privacy safeguards, secure financing, and collaborative governance, delivering tangible improvements across the five *maqashid* dimensions. Field observation in Ponggok and Grajagan illustrates this. Ponggok exhibits stronger outcomes due to co-production models and improved governance through village-owned enterprises (BUMDes), whereas Grajagan lags due to weak infrastructure and inadequate collaboration. The findings suggest that effectiveness is less about technology itself and more about legal and institutional alignment, participatory governance, and the sociotechnical translation of regulation into practice. The article offers six recommendations: issuing village-level regulations, appointing trained digital stewards, utilizing simple monitoring tools, tailoring user training, institutionalizing co-production, and securing regular funding through formal collaboration agreements. The study acknowledges several limitations, including its exclusive focus on a single regulation, the limited scope of fieldwork, and its reliance on qualitative data, and recommends broader and longitudinal research. Theoretically, it advances the argument that Smart Villages should be understood as sociotechnical and socio-legal regimes, where legal effectiveness and community engagement shape meaningful digital transformation.

References

- Abdulloh Munir, and Kusnadi Kusnadi. "Maintaining the Social Environment: Urgency and Principles in Maqasid Al-Shariah." *Tribakti: Jurnal Pemikiran Keislaman* 35, no. 2 (2024): 303–20. <https://doi.org/10.33367/tribakti.v35i2.5417>.
- Achmad Muchsin. "Relationship Between Environmental Permitting Laws and Economic Development from the Perspective of Maqashid Al-Shariah." *Prophetic Law Review*, March 22, 2025, 263–86. <https://doi.org/10.20885/PLR.vol6.iss2.art6>.
- Afiyah, Ishmah. "The Existence of Islamic Law in Indonesia in the Millennial Era in Supporting the Sustainable Development Goals (SDGs): Maqashid Sharia Perspective." *Demak Universal Journal of Islam and Sharia* 3, no. 1 (2025): 27–40.
- Ainnur Rosyida Luthfiana. "Urgensi Smart Kampung Dalam Peningkatan Pelayanan Publik Desa Grajagan." *Skripsi*. UIN Maulana Malik Ibrahim Malang, 2025.
- Amnesti, Sheila Kusuma Wardani, Rayno Dwi Adityo, Siti Zulaichah, Hajar Salamah Salsabila Hariz, and Naeem AllahRakha. "Enhancing Sustainable Development Efficiency Through a Single Smart City Platform: A Cost-Benefit Policy Perspective from Indonesia." *Volksgeist: Jurnal Ilmu Hukum Dan Konstitusi*, May 26, 2025, 151–69. <https://doi.org/10.24090/volksgeist.v8i1.12584>.
- Amnesti, Sheila Kusuma Wardani, Siti Zulaichah, and Nurul Istiqomah. "Legal Protection of Personal Data Security in Indonesian Local Government Apps: Al Farabi's Perspective." *Legality : Jurnal Ilmiah Hukum* 33, no. 1 (2024): 1–19. <https://doi.org/10.22219/ljih.v33i1.34623>.
- Aziiza, A A, and T D Susanto. "The Smart Village Model for Rural Area (Case Study: Banyuwangi Regency)." *IOP Conference Series: Materials Science and Engineering* 722, no. 1 (2020): 012011. <https://doi.org/10.1088/1757-899X/722/1/012011>.
- Central Bureau of Statistics of the Republic of Indonesia. *Data Desa dan Kelurahan Di Indonesia*. Jakarta, 2022.
- Bagas Orlando Wibowo. "Partisipasi Masyarakat Lokal Terhadap Pengembangan Obyek Wisata Umbul Ponggok." *Thesis*. UIN Sunan Kalijaga Yogyakarta, 2019.
- Dendi Nugraha, Muhammad Aska Irfani, and Afdalul Ummah. "Paradigma Ilmu Integralistik Dalam Pemikiran Kuntowijoyo: Integralisasi Dan Objektifikasi Islam." *AL-MIKRAJ Jurnal Studi Islam Dan Humaniora* 5, no. 2 (2025): 1587–611. <https://doi.org/10.37680/almikraj.v5i2.7218>.
- Dian Herdiana. "Pengembangan Konsep Smart Village Bagi Desa-Desa Di Indonesia (Developing the Smart Village Concept for Indonesian Villages)." *IPTEK-KOM Jurnal Ilmu Pengetahuan Dan Teknologi Komunikasi* 21, no. 1 (2019): 1–16. <https://doi.org/10.17933/iptekkom.21.1.2019.1-16>.

- Dokumen RPJMDes (Rencana Pembangunan Jangka Menengah Desa) Desa Ponggok. Klaten, 2017.*
- Febrina, Rury, Auradian Marta, Raja Muhammad Amin, and Sofyan Hadi. "Economic Development and the Rural Environment: BUMDES Development Strategy." *E3S Web Conf.* 506 (2024). <https://doi.org/10.1051/e3sconf/202450602005>.
- Firdaus, Slamet. "Al-Qur'an Dan Pembangunan Lingkungan Berkelanjutan Di Indonesia: Analisis Maqashid Syariah Untuk Pencapaian SDGs." *Al-Mustashfa: Jurnal Penelitian Hukum Ekonomi Syariah* 7, no. 2 (2022): 120–38.
- Hafny Aisyatul Huda, Utang Suwaryo, Novie Indraswari Sagita. "Pengembangan Desa Berbasis Smart Village (Studi Smart Governance Pada Pelayanan Prima Desa Talagasari Kabupaten Karawang)." *Moderat: Jurnal Ilmiah Ilmu Pemerintahan* 6, no. 3 (2020). <http://dx.doi.org/10.25157/moderat.v6i3.3406>.
- Hanafiah, Nazifah. "Relevansi Maqashid Syariah Dalam Kebijakan Perlindungan Perempuan Dan Anak Pada Hukum Keluarga Di Indonesia." *Integrated Education Journal* 1, no. 2 (2024): 112–25.
- Iskandar, Rusli Kustiaman, and Fabian Fadhly Jambak. "Village Law In The Struggle of Indonesian Legal Policy." *Petita: Jurnal Kajian Ilmu Hukum dan Syariah* 10, no. 1 (2025): 384–403. <https://doi.org/10.22373/petita.v10i1.469>.
- Isman, Mainul Fatah, Ummu Kaltsum, Sofyan Rizal. "The Relevance of Sustainable Development Goals (SDGs) in Maqāsid Al-Shari'ah Dimensions." *Proceeding of International Conference on Islamic Economics, Islamic Banking, Zakah and Waqf*, 2023, 1159–70.
- Jasser Auda. *Membumikan Hukum Islam Melalui Maqashid Al-Syari'ah*. Mizan, 2015.
- Ministry of Villages. "Kemendes Gandeng Bank Dunia Wujudkan Desa Cerdas." 2022. <https://kemendes.go.id/berita/view/detil/4452/kemendes-pdtt-gandeng-bank-dunia-wujudkan-desha-cerdas>.
- Ministry of Villages. "Profil Kemendesa." 2016. <https://kemendes.go.id/berita/view/kemendesa/1/sejarah-singkat>.
- Ministry of Villages, Disadvantaged Regions, and Transmigration. "Mendes PD TT Jadikan SDGS Desa Sebagai Langkah Strategis Bangun Bangsa." 2020. <https://kemendes.go.id/berita/view/detil/3415/mendes-pdtt-jadikan-sdgs-desha-sebagai-langkah-konkret-bangun-bangsa>.
- Khaliq, Muhammad Nur, and Aji Pangestu. "Teori Maqasid Syari'ah Klasik (Asy-Syatibi)." *Risalah Jurnal Pendidikan Dan Studi Islam* 11, no. 1 (2025): 149–62.
- Kusmulyono, Muhammad Setiawan. "Collaborative Youth Action to Alleviate Digital Inequality in Rural Areas in Indonesia." In *Sustainable Development and the Digital Economy: Human-Centricity, Sustainability and Resilience in Asia*, edited by Mohammad Nabil Almunawar, Patricia Ordóñez de Pablos, and Muhammad Anshari. Taylor and Francis, 2023. <https://doi.org/10.4324/9781003388753-5>.

- Masiero, Silvia. "The Origins of Failure: Seeking the Causes of Design-Reality Gaps." *Information Technology for Development* 22, no. 3 (2016): 487-502. <https://doi.org/10.1080/02681102.2016.1143346>.
- Masrifah, Atika Rukminastiti, and Achmad Firdaus. "The Framework of Maslahah Performa as Wealth Management System and Its Implication for Public Policy Objectives." *Media Syari'ah: Wahana Kajian Hukum Islam Dan Pranata Sosial* 18, no. 2 (n.d.): 235-64.
- Muhammad, Rifki, Ach Apriyanto Romadhan, and Ali Roziqin. "Creating Community Resilience through Social Safety Nets for Poverty Alleviation in the Rural Areas." In *Community Climate Justice and Sustainable Development*, edited by Parimal Kumar Roy, Mashitah Binti Hamidi, and Haris Abd Wahab. IGI Global, 2025. <https://doi.org/10.4018/979-8-3373-0619-3.ch006>.
- Nur Hidayati. "Partisipasi Masyarakat Dalam Membangun Civic Virtue Di Desa Balun Kecamatan Turi Kabupaten Lamongan." *Kajian Moral Dan Kewarganegaraan* 5, no. 1 (2017). <https://doi.org/10.26740/kmkn.v5n01.p%25p>.
- Orlikowski, Wanda J. "Using Technology and Constituting Structures: A Practice Lens for Studying Technology in Organizations." *Organization Science* 11, no. 4 (2000).
- Ostrom, Elinor. "Crossing the Great Divide: Coproduction, Synergy, and Development." *World Development* 24, no. 6 (1996): 1073-87. [https://doi.org/10.1016/0305-750X\(96\)00023-X](https://doi.org/10.1016/0305-750X(96)00023-X).
- Panagiotopoulos, Panos, Bram Klievink, and Antonio Cordella. "Public Value Creation in Digital Government." *Government Information Quarterly* 36, no. 4 (2019): 101421. <https://doi.org/10.1016/j.giq.2019.101421>.
- Banyuwangi Regency Government. "Menkominfo Luncurkan Smart Kampung Kabupaten Banyuwangi." 2016. <https://banyuwangikab.go.id/berita/video/besok-menkominfo-luncurkan-smart-kampung-banyuwangi>.
- Puspita, Mega, and Khairul Umami. "Optimizing Village Governance: A Siyasah Dusturiyah Perspective on Law No. 3/2024." *Bestuurskunde: Journal of Governmental Studies* 5, no. 2 (2025): 133-44. <https://doi.org/10.53013/bestuurskunde.5.2.133-144>.
- Renukappa, Suresh, Subashini Suresh, Wala Abdalla, Nisha Shetty, Nagaraju Yabbati, and Rahul Hiremath. "Evaluation of Smart Village Strategies and Challenges." *Smart and Sustainable Built Environment* 13, no. 6 (2024): 1386-407. <https://doi.org/10.1108/SASBE-03-2022-0060>.
- Ririn Yulianti, Mira Andriani, Widya Yeshiana. "Model Pengembangan Desa Cerdas (Smart Village) Dengan Pendekatan Penta-Helix Untuk Mewujudkan Masyarakat Desa Di Era Society 5.0." *Moderat: Jurnal Ilmiah Ilmu Pemerintahan* 11, no. 1 (2025): 132-33. <https://doi.org/10.25157/moderat.v11i1.4503>.

- Sampetoding, Eliyah A M, Muhammad Sadno, A. Muh. Amil Siddik, Edy Saputra Rusdi, Hendra Mesra, and Jeriko Gormantara. "Sosialisasi Konsep Smart Village Berdasarkan SDGs." *Compromise Journal: Community Proffesional Service Journal* 2, no. 1 (2024): 01-10. <https://doi.org/10.57213/compromisejournal.v2i1.152>.
- Santoso, Lukman. "Construction of Village Autonomy Regulation in Achieving People's Welfare: Critical Review Law Number 6 of 2014 on Villages." *Al-Daulah: Jurnal Hukum Dan Perundangan Islam* 11, no. 1 (2021): 47-74. <https://doi.org/10.15642/ad.2021.11.1.47-74>.
- Silubun, A J, J J J Kalalo, A B Inggit, C N Kalalo, and E B Rahail. "Village Authority and Position in Realizing Village Autonomy." *IOP Conference Series: Earth and Environmental Science* 473, no. 1 (2020): 012032. <https://doi.org/10.1088/1755-1315/473/1/012032>.
- Susilowati, Anindya Puteri Eka, Rini Rachmawati, and R. Rijanta. "Smart Village Concept in Indonesia: ICT as Determining Factor." *Heliyon* 11, no. 1 (2025). <https://doi.org/10.1016/j.heliyon.2025.e41657>.
- Syamraeni, Syamraeni, Hidayatus Sholichah. "Transformasi Nilai Religius Di Era Digital: Analisis Literatur Berdasarkan Tujuan Hifz al-'Aql." *Socio Religia* 5, no. 2 (2024).
- Tabrani, Mukti. "Maqâshid Revitalization in Global Era: Istidlâl Study from Text to Context." *AL-IHKAM: Jurnal Hukum & Pranata Sosial* 13, no. 2 (2018): 310-33.
- Tisnanta, H.S., Ria Wierma Putri, Yuga Narazua Khanza, Lenilde Pereira, and FX Joko Priyono. "Vernacularization of Sustainable Development Goals (SDGs): Diffusing Global Values in Indonesia's Village Government." *Law Reform: Jurnal Pembaharuan Hukum* 21, no. 2 (2025): 346-78. <https://doi.org/10.14710/lr.v21i2.61705>.
- Tisnanta, H.S., Febryani Sabatira, Ria Wierma Putri, Lenilde Pereira, and Desia Rakhma Banjarani. "Navigating Legal Complexities in Localising the Sustainable Development Goals Agenda for Village Governance in Indonesia." *Sriwijaya Law Review* 8, no. 2 (2024): 335-57. <https://doi.org/10.28946/slrev.Vol8.Iss2.2997.pp335-357>.
- Titing Kartika. "Dampak Pengembangan Pariwisata Terhadap Aspek Ekonomi, Sosial Budaya Dan Lingkungan Fisik Di Desa Panjalu." *Journal Hospitaliti dan Pariwisata* 3, no. 1 (2016): 01-19.
- Yudhiantara, I. Made, Ni Putu Dinda Kalpika Putri, I. Gede Agus Wibawa, and Lilik Antarini. "Governance Perspective on Village Development in Bali: A Study of Tegal Harum Smart Village." *International Journal of Religion* 5, no. 11 (2024): 7499-511. <https://doi.org/10.61707/ddkxwr09>.
- Zailani, Muhammad Nooraiman, Nurulhuda Mohd Satar, Roza Hazli Zakaria. "A Review of Indicators for the Preservation of Wealth (Hifz al-Mal) Based on

- Maqasid al-Shariah." *Journal of Islamic Philanthropy & Social Finance (JIPSF)* 4, no. 1 (2022): 23–29.
- Zavratnik, Veronika, Dan Podjed, Jure Trilar, Nina Hlebec, Andrej Kos, and Emilija Stojmenova Duh. "Sustainable and Community-Centred Development of Smart Cities and Villages." *Sustainability* 12, no. 10 (2020): 3961. <https://doi.org/10.3390/su12103961>.
- Zhang, Xiaojuan, and Zhengang Zhang. "How Do Smart Villages Become a Way to Achieve Sustainable Development in Rural Areas? Smart Village Planning and Practices in China." *Sustainability* 12, no. 24 (2020): 10510. <https://doi.org/10.3390/su122410510>.
- Regulation of the Minister of Villages, Disadvantaged Regions, and Transmigration Number 21 of 2020 concerning General Guidelines for Village Development and Village Community Empowerment.
- Ministerial Decree No. 55 of 2024 on General Guidelines For The Development Of Smart Villages.