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The Electronic Government Policy-Based Green Constitution Towards Good Governance

Nilam Firmandayu[1]*, Khalid Eltayeb Elfaki[2]

[1]*Faculty of Law, Universitas Sebelas Maret, Surakarta, Indonesia.*
[2]*University of Gezira, Wad Medani, Sudan.*

** Correspondence: nilamfir7@gmail.com*

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Abstract: In fact, e-government policy in Indonesia has not yet finished discussing regulations and implementations in government institutions. E-government policies are still regulated at the institutional field specifically or still at the respective regional governments. The nature of the policy is still partial so that there is no structural regulation as a rigid policy implementer that regulates the implementation of e-government in Indonesia. However, the implementation of e-government that uses technology, information and communication equipment will have a negative impact on environmental sustainability, one of them is an increase e-waste from the government sector. This research uses normative legal analysis to find legal facts and formulate a green constitution-based electronic government policy model to realize efficiency, effectiveness, accountability, and transparency of governance and public services towards good governance. This research proves the urgency of implementing regulations as an innovation model for e-government policies based on a green constitution to ensure the reduction of e-waste in Indonesia using green ICT. Therefore, it is important to develop guiding regulations which are Government Regulation for the implementation of e-government in both the central and regional government bureaucracies.

Keywords: Electronic Government; Green Constitution; Policy;

INTRODUCTION

The regulation of e-government in Indonesia still needs to be completed at the stages of regulation and implementation of policies on institutional elements of central and regional government. Although e-government has been regulated in the Presidential Instruction of the Republic of Indonesia Number 3 of 2003 concerning National Policy and Strategy for E-Government Development [1] and Presidential Regulation of the Republic of Indonesia Number 95 of 2018 concerning Electronic Based Government Systems, in this case, the position of the Presidential Instruction which is not included in the hierarchy of laws and regulations in Indonesia because they are only limited to regulating and directing specifically at specific institutions, resulting no sanctions if the relevant institution does not carry out these instructions. Besides that, the position of the Presidential Regulation should function to implement government regulations vertically, but there is still no structural government

[1] Anggita Doramia Lumbanraja, 'Urgensi Transformasi Pelayanan Publik Melalui E-Government Pada New Normal Dan Reformasi Regulasi Birokrasi', *Administrative Law and Governance Journal*, 3.2 (2020), 225 https://doi.org/10.14710/alj.v3i2.220-231

regulation as a rigid policy implementer that regulates the implementation of e-government in Indonesia.[2]

The rapid advancement of information and communication technology opens up great opportunities to improve the efficiency, effectiveness, accountability and transparency of governance and public services to achieve a good governance system. Regulations and policies for implementing e-government require uniformity of understanding and integration of steps from all elements of government institutions, but based on the Presidential Instruction of the Republic of Indonesia Number 3 of 2003 e-government management has still partial and has a long sectoral command system. Such sectoral commands will impact sectoral ego issues that can affect the performance of government agencies.[3] This kind of mentality will be related to the implementation and mindset of being reluctant to share information with elements of one government institution and another.

Digital transformation as a form of technological and information advancement should be an opportunity to realize good governance that leads to the development of digital democracy. Digital democracy can be interpreted that the government must be able to provide various platforms for the community to engage in dialogue by facilitating openness of opinion and community involvement in the democratic process.[4] The government must strive to change the operational standards of public services towards the application of Information and Communication Technology (ICT) and increase public satisfaction with public services and information.[5] The number of computing technology usage affects the level of use of electronic devices and the internet, based on the International Renewable Energy Agency (IRENA) in the Internet of Things Innovation Landscape Brief predicting that by 2025 there will be around 70 billion electronic devices connected to the internet worldwide and there will be around 110 million tons of e-waste by the end of 2050.[6] The manufacture, use, and disposal of waste ICT equipment contributes to global CO_2 emissions, such as components of cell phone waste, cell phones, public switched telephone network (PSTN) devices, personal computers (PC), laptops, printers, and others. In this regard, innovation is needed to accommodate the concept of using environmentally friendly ICT.

Previous research explained that the rate of use of computing technology also affects the level of consumption of energy sources equivalent to an increase in carbon

[2] Ahmad Husen, 'Eksistensi Peraturan Presiden Dalam Sistem Peraturan Perundang-Undangan', *Lex Scientia Law Review*, 3.1 (2019), 75 https://doi.org/10.15294/lesrev.v3i1.30733

[3] Minardi, 'Dinamika Deradikalisasi: Merajut Kompromi Dua Lembaga Negara', *Junal Ilmu Pemerintahan Semesta*, 2.1 (2021), 61 https://doi.org/10.47431/governabilitas.v2i1.108

[4] Dirk Helbing and others, 'Democracy by Design: Perspectives for Digitally Assisted, Participatory Upgrades of Society', *SSRN Electronic Journal*, 71.November 2022 (2022), 15 https://doi.org/10.2139/ssrn.4266038

[5] Ines Mergel, Noella Edelmann, and Nathalie Haug, 'Defining Digital Transformation: Results from Expert Nterviews', *Government Information Quarterly*, 36.4 (2019), 1 https://doi.org/10.1016/j.giq.2019.06.002

[6] Francisco Boshell and Nadeem Goussous Sean Ratka, Arina Anisie, 'Internet of Things-Innovation Landscape', *Cyber Resilience of Systems and Networks*, July 2016, 2019, 1687–88 https://doi.org/10.1007/978-3-319-77492-3_16

dioxide emissions,[7] such as base transceiver stations (BTS) which require large electrical energy. According to Sakshi, the ICT sector has influenced the way things work and increased the productivity of institutions, but its implementation will risk environmental stability, namely the emission of greenhouse gases, so according to Sakshi there is a need for an ICT paradigm shift towards renewable energy sources. Green ICT is proven to reduce the energy consumption of ICT contributors, such as using data centers, access networks, base stations, smart user devices/sensors, and green-based NB-IoT. [8] In addition, in order to create green ICT innovations in government institutions, skills and employability are needed in the context of green jobs and skills.[9] According to the International Labor Organization (ILO) green jobs are the axis of sustainable development to preserve and restore the environment. Green jobs and green skills focus on corporate green and green jobs programs to, improve energy and resource efficiency, limit greenhouse gas emissions, minimize waste and pollution, protect and restore ecosystems, mitigate the impact of climate change, and enable adaptability to climate change.[10] However, what is being discussed further so that green ICT can be implemented optimally is related to policy arrangements.

Therefore, the Indonesian government needs to develop e-government in the context of implementing smart governance, namely to improve efficiency and quality of services related to the performance of government institutions, especially in developing countries and also improve public services. The green constitution-based e-government policy model is an innovation in developing application systems and government bureaucracy by combining green concepts, one of which is stipulated in Article 28H paragraph (1) of the 1945 Constitution of the Republic of Indonesia. This innovation is also a form of realizing concern for the environment in accordance with points 7 and 13 sustainable national development goals (Sustainable Development Goals/SDGs) by adopting the green ICT concept in their application. This study focuses on normative research to find legal facts about the importance of green constitution-based e-government arrangements.[11]

METHOD

This research uses normative legal research that uses secondary data, namely primary and secondary legal materials, to find legal facts about existing e-government policies in Indonesia and then formulate a Green Constitution-Based E-Government policy model by considering pre-existing regulations. The type of approach used is a

[7] Bassem Kahouli and others, 'Understanding the Relationship Between Electric Power Consumption, Technological Transfer, Financial Development and Environmental Quality', *Environmental Science and Pollution Research*, 29.12 (2022), 3 https://doi.org/10.21203/rs.3.rs-591084/v1

[8] Sakshi Popli, Rakesh Kumar Jha, and Sanjeev Jain, 'A Comprehensive Survey on Green ICT with 5G-NB-IoT: Towards Sustainable Planet', *Computer Networks*, 199 (2021), 44 https://doi.org/10.1016/j.comnet.2021.108433

[9] Kor Ah-Lian and others, 'Education in Green ICT and Control of Smart Systems: A First Hand Experience from the International PERCCOM Masters Programme', *IFAC-PapersOnLine*, 52.9 (2019), 91–96 https://doi.org/10.1016/j.ifacol.2019.08.114

[10] Katharina Bohnenberger, 'Is It a Green or Brown Job? A Taxonomy of Sustainable Employment', *Ecological Economics*, 200.November 2021 (2022), 2 https://doi.org/10.1016/j.ecolecon.2022.107469

[11] Ibrahim H. Osman and Fouad Zablith, 'Re-Evaluating Electronic Government Development Index to Monitor the Transformation Toward Achieving Sustainable Development Goals', *Journal of Business Research*, 131 (2021), 426–27 https://doi.org/10.1016/j.jbusres.2020.10.027

conceptual approach, namely to find the right policy model for the basis of implementing green constitution-based e-government. The data analysis technique used is a descriptive analysis technique that will describe the green constitution-based e-government policy model with the concept of green ICT. Beside that, this research uses a frame of mind by mapping the existing e-government policy problems in Indonesia and then needs to be refined in order to achieve good and clean governance. However, in this all-digital era, apart from bringing a lot of speed and ease of access to information technology, it also presents problems for the environment, one of which is e-waste in government. Therefore, it is necessary to have a Green Constitution-Based E-Government policy model as stated in Article 28F paragraph (1) of the 1945 Constitution of the Republic of Indonesia which contributes to reducing environmental problems by adopting the existing green ICT concept.

RESULT AND DISCUSSION

The Existence of Electronic Government Policy in Indonesia

The rapid progress of information and communication technology brings great potential for the government in opening opportunities for the public to access, process and utilize information accurately and quickly. Based on the public value theory which posits the goals and values of e-government, e-government must be able to produce good public, administrative and social services.[12] Besides that, it can meet community expectations regarding increased efficiency and quality of service in every government agency.[13] With an understanding of these public values, the government can also create democratic public services so that it can guarantee community involvement as a form of participation.

Table 1. E-Government Development Index by Region-Asia (United Nations-2022)

No.	Rank	Country	Ratting Class	EGDI	Online Service Index	Telecommunication Infrastructure Index	Human Capital Index
1	77	Indonesia	HV	0.7160	0.7644	0.6397	0.7438
2	53	Malaysia	V1	0.7740	0.7630	0.7945	0.7645
3	12	Singapore	VH	0.9133	0.9620	0.8758	0.9021

Source: Departement of Economic and Social Affairs, United Nations E-Government Survey 2022

Based on the E-Government Survey in 2022 that conducted by the United Nations to find out the level of optimization of e-government in a country can be measured by three sub-indexes on the overall value of the E-Government Development Index (EDGI).[14] In Table 1, the Indonesian Online Service Index (OSI) sub-index increased by 0.082 from the 2020 survey in Table 2. It can be concluded that there has been an

[12] Jean Damascene Twizeyimana and Annika Andersson, 'The Public Value of E-Government', *Government Information Quarterly*, 36.2 (2019), 168 https://doi.org/10.1016/j.giq.2019.01.001

[13] Qi Zou and others, 'Vision and Reality of E-Government for Governance Improvement: Evidence from Global Cross-Country Panel Data', *Technological Forecasting and Social Change*, 194.May (2023), 3 https://doi.org/10.1016/j.techfore.2023.122667

[14] Atta Ullah and others, 'The Role of E-Governance in Combating COVID-19 and Promoting Sustainable Development: A Comparative Study of China and Pakistan', *Chinese Political Science Review*, 6.1 (2021), 97 https://doi.org/10.1007/s41111-020-00167-w

increase in the provision of online services, which is expressed as an OSI value. In line with the Telecommunications Infrastructure Index (TII) sub-index, which increased by 0.0728 from the 2020 survey, this means that there is the development of telecommunications infrastructure that meets the TII score. Meanwhile, the Indonesian Human Capital Index (HCI) sub-index also increased by 0.0096 from the 2020 survey, meaning that there has been an increase in the development of human capital. Indonesia managed to move up 11 rankings from 88th to 77th with the "high-very high" HV class rating indicator, or between high and very high. However, when compared with the EDGI scores of Singapore and Malaysia, Indonesia is still below both. Singapore was able to reach the 12th rank even though it dropped 1 rank from the 2020 survey with a "very high" rating class VH indicator, while Malaysia dropped 6 ranks from the 2020 survey with a "very high 1" V1 indicator. [15]

Table 2. E-Government Development Index by Region-Asia (United Nations-2020)

No.	Rank	Country	Ratting Class	EGDI	Online Service Index	Telecommunication Infrastructure Index	Human Capital Index
1	88	Indonesia	H3	0,6612	0,6824	0,5669	0,7342
2	47	Malaysia	V1	0,7892	0,8529	0,7634	0,7513
3	11	Singapore	VH	0,915	0,9647	0,8899	0,8904

Source: Departement of Economic and Social Affairs, United Nations E-Government Survey 2020

Meanwhile, if look at the potential for implementing e-government in Indonesia, based on the 2020 E-Government Survey by the United Nations Department of Economic and Social Affairs in Table 2.[16] It can be seen that there is an increase in Indonesia's EDGI rating class from H3 "high 3" to HV "high-very high", so that it can be concluded that the potential for e-government development in Indonesia has increased in rating from year to year. In line with the E-Government Development Index (EGDI) by Region-Asia (United Nations-2018) survey, Indonesia is ranked 107th. In this way, there was an increase in ranking to 88th position. However, based on the two tables above when compared with Singapore and Malaysia, it can be seen that Indonesia's e-government is still lagging behind. There are several factors that determine the success of implementing e-government in a country, namely (1) clear policies and regulations, (2) institutions and human resources, (3) planning and budgeting, and (4) infrastructure and applications.[17]

One of the obstacles to the realization of e-government in Indonesia is the limited regulation that rigidly and firmly regulates the mechanism for implementing e-government.[18] E-government in Indonesia is regulated in several laws and regulations,

[15] Department of Economic and Social Affairs United Nations, E-Government Survey 2022, The Future of Digital Government, 2022.

[16] United Nations, *E-Government Survey 2020 - Digital Government in the Decade of Action for Sustainable Development*, *United Nations E-Government Surveys*, 2020.

[17] United Nations, *United Nations E-Government Survey 2018*, 2019 https://doi.org/10.18356/9f7b9b76-en

[18] Vani Wirawan, 'Penerapan E-Government Dalam Menyongsong Era Revolusi Industri 4.0 Kontemporer Di Indonesia', *Jurnal Penegakan Hukum Dan Keadilan*, 1.1 (2020), 2 https://doi.org/10.18196/jphk.1101

such as Article 28F of the 1945 Constitution of the Republic of Indonesia, Law Number 19 of 2016 concerning Amendments to Law Number 11 of 2008 concerning Information and Electronic Transactions, Law Number 14 of 2008 concerning Public Information Disclosure, Government Regulation Number 82 of 2012 concerning Implementation of Electronic Systems and Transactions, Government Regulation Number 61 of 2010 concerning Implementation of Law Number 14 of 2008 concerning Public Information Disclosure, but these regulations do not clearly mention e-government. E-government arrangements are still explicitly stated in the Presidential Instruction of the Republic of Indonesia Number 3 of 2003 concerning National Policy and Strategy for E-Government Development. The government's main strategy contained in the Presidential Instruction includes: (1) The development of a service system that is reliable and trustworthy and accessible to the wider community. (2) Structuring the management system and working processes of the central government and regional governments in a holistic manner. (3) Optimum utilization of information technology. (4) Increasing the participation of the business world and developing the telecommunication and information technology industry. (5) Developing human resources in government and increasing e-literacy in society. (6) Implementation of systematic development through realistic and measurable stages. The basic strategy of the Presidential Instruction actually still seems very general and has the potential for multiple interpretations by government institutions and the bureaucracy, both central and regional.

At the state administrative law and constitutional law, the Presidential Instruction is a legal instrument that is concrete and individual in the hierarchical relationship of an agency. In this case, the legal force of the Presidential Instruction is only binding on certain institutions. This is different from the binding nature of statutory regulations, such as the Government Regulation or the Presidential Regulation which have binding power for the public.[19] Thus, there are no rigid and firm implementing regulations governing e-government as the legal protection for its implementation in government institutions. Supposedly, higher regulations are still needed to guide the implementation of e-government in general.

Regarding the implementation of e-government in Indonesia, one of them is the SIOLA (*Sistem Informasi Layanan Administrasi*) application at the Ministry of Home Affairs of the Republic of Indonesia. The average public satisfaction with e-government performance in Indonesia still tends to be minimal, so much evaluation is needed to determine how the implementation and policies govern it. The SIOLA is not optimal on the timeliness indicator, so there are still services that exceed the deadline for completion and on the empathy indicator SIOLA has not yet provided a one stop information channel for applications, but still utilizes other communication media, such as WhatsApp.[20] Management of e-government in several regions is also not good enough, there are still obstacles such as strong sectoral egos between

[19] Fajar Sugianto, Denny Ardhi Wibowo, and Tomy Michael, 'Kedudukan Instruksi Presiden Republik Indonesia Nomor 1 Tahun 1991 Tentang Penyebarluasan Kompilasi Hukum Islam Dalam Sistem Hukum Kewarisan Indonesia', *Jurnal Aktual Justice*, 5.1 (2020), 32 https://doi.org/10.47329/aktualjustice.v5i1.518

[20] Muhammad Ikhsan and others, 'Analisis Kesuksesan Sistem Informasi Online Layanan Administrasi Di Kementerian Dalam Negeri', Jurnal Ilmu Pemerintahan, 9.2 (2023), 408 https://doi.org/10.25157/moderat.v9i2.2588

institutions, lack of direction from sub-government agencies, and lack of supervision in terms of website management.[21] In this case, it is necessary to strengthen e-leadership between existing government institutions, so that it will encourage the creation of clear legal policies and it is hoped that it will minimize overlapping regulations in one region to another.[22]

On the other hand, the change in governance from conventional to digital also has a negative impact, especially on environmental sustainability because it increases the use of e-waste.[23] The problem of e-waste requires special attention from the government in policy making and is related to reuse, refurbish and recycle (3R) e-waste.[24] The implementation of e-government is very influential on the use of electronic equipment to support the provision of its services so that it can be concluded that the government will also contribute to the massive use of electronic equipment in every existing office and agency. In 2012 the government initiated the concept of green IT as stated in the Circular Letter Number 01/SE/M.Kominfo/4/2012 concerning Utilization of Environmentally Friendly Information and Communication Technology (green ICT). This Circular Letter is the basis for the development of green and environmentally friendly information and communication technology or green ICT. However, the power of the Circular Letter is not categorized in the hierarchy of laws and regulations and only contains information or notifications about something that is considered urgent. The Circular Letter as a guideline for the implementation of e-government is not binding in general and does not have sanctions. Thus, this Circular has not been able to accommodate the implementation of e-government in a rigid.

Based on the explanation above, Indonesia needs a policy model that can integrate e-government with the concept of a Green Constitution, namely the application of ecocracy in a country's constitution that exists as a response to environmental sustainability, namely in Article 28H paragraph (1) of the 1945 Constitution of the Republic of Indonesia which reflects the right to the environment and the addition of a paragraph to Article 33 of the 1945 Constitution of the Republic of Indonesia, namely Article 33 paragraph (4) of the 1945 Constitution of the Republic of Indonesia which relates to the concept of sustainable development, the main reference being to a sustainable and environmentally sound national economy. Thus, there is no Indonesian government policy that clearly and generally regulates green-based e-government. Therefore, policies are needed that can regulate and answer the various problems above so that they can create benefits for the community and the

[21] Intan Pratiwi, 'Manajemen E-Government Dalam Meningkatkan Minat Wisata Di Kota Ternate Provinsi Maluku Utara', *Jurnal Pendidikan Dan Konseling*, 4.5 (2023), 2637 https://doi.org/10.31004/jpdk.v5i2.13646

[22] Diana Sari, 'Percepatan Implementasi E-Government Di Kota Banjar (Acceleration of E-Government Implementation in City of Banjar)', *Masyarakat Telematika Dan Informasi : Jurnal Penelitian Teknologi Informasi Dan Komunikasi*, 9.2 (2018), 86 https://doi.org/10.17933/mti.v9i2.121

[23] Muhammad Umaid Bukhari and others, 'Waste to Energy: Facile, Low-Cost and Environment-Friendly Triboelectric Nanogenerators Using Recycled Plastic and Electronic Wastes for Self-Powered Portable Electronics', *Energy Reports*, 8 (2022), 1687 https://doi.org/10.1016/j.egyr.2021.12.072

[24] Abhishek Kumar Awasthi and others, 'Modelling the Correlations of E-Waste Quantity with Economic Increase', *Science of the Total Environment*, 613–614 (2018), 46 https://doi.org/10.1016/j.scitotenv.2017.08.288

environment. It is hoped that there will be a clear planning consolidation, a guarantee of bureaucratic integration vertically, horizontally and longitudinally so that public services and digital information can be accessed more effectively, efficiently and integrated.

The Electronic Government Policy-Based Green Constitution Towards Good Governance Bureaucratic System in Indonesia

The formulation of an e-government policy based on a green constitution at both the central and regional levels is something that must be done, bearing in mind that there is an era of transformation from conventional to digital. This policy will become a foothold in implementing green constitution-based e-government in Indonesia, as well as legitimizing the importance of implementing green constitution-based e-government. This green-based policy model also shows the government's consistency and focus on the environment in accordance with Article 28H paragraph (1) of the 1945 Constitution of the Republic of Indonesia which reflects the right to the environment. Awareness of the importance of implementing Green Constitution-Based E-Government can also be seen in the image above, based on data from The Global E-Waste Monitor 2020, the Asian continent has participated in calculating 24.9 Mt (million metric tons) and Indonesia is one of the countries in the Southeast Asia which contributes the highest e-waste, which is 1,618 kg per capita, above Thailand (621 kt) and the Philippines (425 kt).[25]

The main challenges of e-waste treatment include the collection, segregation and inhomogeneity of waste, low energy density, prevention of further waste, emissions and cost-effective recycling. Since 2014 a number of countries have adopted international e-waste policies, from 61 countries to 2022 reaching 78 countries that currently have laws related to electronic waste, including Indonesia. Such legislation has not been implemented effectively in most areas, such as developing countries in Southeast Asia.[26] The urgency of forming an e-government policy on a green basis needs to be followed up considering the impact of e-waste is very dangerous for the environment. E-waste contains several toxic additives, such as mercury, Brominated flame retardants (BFR), and Chlorofluorocarbons (CFC), or Hydrochlorofluorocarbons (HCFC).[27] If these substances are released into the environment, they will have an impact on the health of living things. In addition, e-waste management also contributes to global warming. Thus, there is a need for new innovations in terms of policy models and regulations from e-government that can perfect existing implementations as well as combine them with green concepts as stated in Article 28H paragraph (1) of the 1945 Constitution of the Republic of Indonesia.

[25] Hem Ghimire and Parisa A. Ariya, 'E-Wastes: Bridging the Knowledge Gaps in Global Production Budgets, Composition, Recycling and Sustainability Implications', *Sustainable Chemistry*, 1.2 (2020), 159 https://doi.org/10.3390/suschem1020012

[26] M. Shahabuddin and others, 'A Review of the Recent Development, Challenges, and Opportunities of Electronic Waste (e-Waste)', *International Journal of Environmental Science and Technology*, 20.4 (2023), 4513 https://doi.org/10.1007/s13762-022-04274-w

[27] Vanessa Forti and others, The Global E-Waste Monitor 2020, Quantities, Flows, and the Circular Economy Potential, 2020 https://doi.org/https://ewastemonitor.info/gem-2020/

This research offers an innovative policy model with the concept of utilizing environmentally friendly the e-government policy-based green constitution to minimize the adverse effects of using technology on the environment. Green ICT or also often called "green technology" was chosen to present the concept in e-government policies that are environmentally friendly. According to Stollenmayer in the journal Green ICT Handbook: A Guide to Green ICT, the benefits of Green ICT are (1) reduced energy consumption, (2) reduced use of raw materials, (2) reduced use of water, (4) reduced amount of waste and increased amount of recycling, and (5) reduced pollution.[28]

In forming policy regulations, policymakers must pay attention to three main foundations, namely philosophical, sociological, and juridical foundations. The philosophical foundation of this policy model is the embodiment of Articles 28F and 28H of the 1945 Constitution of the Republic of Indonesia and Pancasila in terms of providing proper green-based public service facilities. The sociological foundation includes the government's duty to carry out the function of social justice, namely in guaranteeing people's access to welfare and convenience in public services. The juridical basis, in the form of all laws and regulations related to information and communication technology that support e-government in a rigid and firm manner. Thus, these three foundations are absolutely necessary for a new policy regarding e-government based on the green constitution to be made.[29]

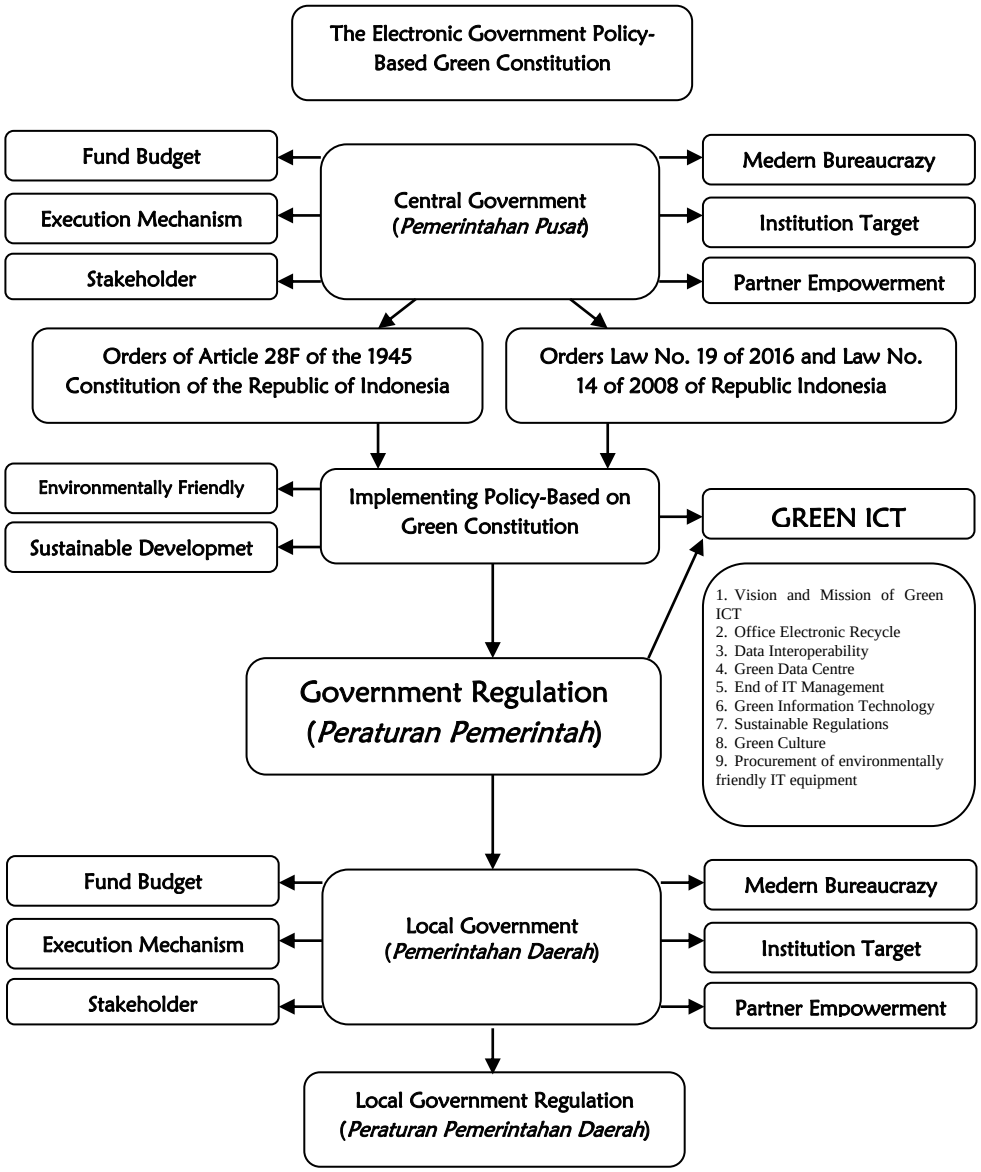
Based on Chart 1 below, the E-Government Policy-Based Green Constitution model is regulated rigidly through the Government Regulation (*Peraturan Pemerintah*). The Government Regulation is a statutory regulation that is then determined by the president in order to carry out the law as it should. The Government Regulation functions to carry out orders from higher statutory regulations or in exercising government power, such as carrying out the mandate of Article 28F of the 1945 Constitution of the Republic of Indonesia, Law Number 19 of 2016 concerning Amendments to Law Number 11 of 2008 concerning Information and Electronic Transactions, Law Number 14 of 2008 concerning Public Information Disclosure.

The Government Regulation was formed as the basis for the implementation of the Green Constitution-Based E-Government policy which must be supported by a good government system, namely having a modern bureaucracy, a realistic budget, determining effective and efficient policy implementation mechanisms, setting institutional targets, and empowering partners and stakeholders, so as to create public openness in obtaining information and improve democracy in Indonesia. The two main keys to democracy for realizing good governance are the existence of people's participation to participate in the implementation of government and politics, as well as the transparency of the government system itself. Henk Addink, classifies the theory of democracy and good governance into four main topics, namely

[28] R. Hilary A Yoga and others, 'Penanganan Limbah Elektronik (E-Waste) Di Indonesia Berbasis Seni Dan Drop Point', *Jurnal Serambi Engineering*, 5.4 (2020), 1407 https://doi.org/10.32672/jse.v5i4.2335
[29] Otti Ilham Khair, 'Analisis Landasan Filosofis, Sosiologis Dan Yuridis Pada Pembentukan Undang-Undang Ibukota Negara', *Jurnal Inovasi Riset Akademik*, 2.1 (2022), 2–3 https://doi.org/10.51878/academia.v2i1.1037

Democracy: Different Forms of Government, Democracy: Direct and Representative, Democracy and Transparency, Democracy and Participation.

Chart 1. Model of The Electronic Government Policy-Based Green Constitution



Source: compiled by researchers

Meanwhile, the green constitution is the application of ecocracy in the constitution of a country that exists as a response to the increasingly widespread problem of environmental damage.[30] The concept of the green constitution was adopted by Indonesia post-reform and is reflected in several articles in the 1945 Constitution of the Republic of Indonesia, as follows: Article 28H paragraph (1) of the 1945 Constitution of the Republic of Indonesia which reflects the right to the environment and the addition of paragraphs to Article 33 of the 1945 Constitution of the Republic

[30] Ulfa, 'Implementasi Electronic Government Di Dinas Penanaman Modal Dan Pelayanan Terpadu Satu Pintu Kota Palopo', Jurnal I La Galigo | Public Administration Journal, 1.1 (2018), 33 http://dx.doi.org/10.35914/ilagaligo.101

of Indonesia, namely Article 33 paragraph (4) of the 1945 Constitution of the Republic of Indonesia relating to the concept of sustainable development, the main reference is to a sustainable national economy. In addition, it is also contained in Law Number. 4 of 1982 concerning Basic Provisions for Environmental Management, Law Number 23 of 1997, and Law Number 32 of 2009 concerning Environmental Protection and Management.[31] This policy-based the green constitution will utilize the concept of green ICT, such as the existence of a common view between the government and the community regarding vision and mission, the government implements electronic office recycling of e-waste, data integration from the center to the regions by guaranteeing all public privacy data, green data center, end of IT management, green information technology, sustainable regulation, instilling a green culture throughout society, and procuring environmentally friendly IT equipment.

In this way, the Government Regulation can then be strengthened and autonomous with local regulations in their respective regions, bearing in mind the need for a system in different regions/cities. Regional regulations exist to underlie the implementation of E-Government Policy-Based Green Constitution in the respective regions. The importance of clear and binding policies in general is as a basis for legitimacy, regulatory uniformity, and continuous regulatory efforts. In addition, it also underlies the duties and authorities of each actor related to the implementation of this E-Government Policy-Based Green Constitution in order to minimize overlapping authority. Therefore, the government plays a big role in every policy formation and provision of supporting facilities for this E-Government Policy-Based Green Constitution.

CONCLUSION

E-government policies in Indonesia are still not centralized and partial according to the regulations that apply in their respective regions. Until now, there is no clear Indonesian government policy regulating e-government based green constitution in order to reduce environmental problems. Therefore, policies are needed that can regulate and answer the various problems above so that they can create benefits for the community and the environment. E-Government Policy-Based Green Constitution is policy model innovation serves to minimize energy use and increase e-waste in Indonesia. Green ICT or "green technology" was chosen to present environmentally friendly e-government policies. The Green Constitution-Based E-Government policy model is regulated in general in the form of government regulations which will be binding in general for all government bureaucracy in Indonesia. Therefore, it is necessary to have an understanding of the concept of green ICT so that this policy can be realized properly and guarantee public involvement, then to realize efficiency, effectiveness, accountability, and transparency of governance and public services towards good governance.

[31] I Gede Yusa and Bagus Hermanto, 'Implementasi Green Constitution Di Indonesia: Jaminan Hak Konstitusional Pembangunan Lingkungan Hidup Berkelanjutan', *Jurnal Konstitusi*, 15.2 (2018), 310 https://doi.org/10.31078/jk1524

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