# Integrating Green Sukuk and Cash *Waqf* Linked Sukuk, the Blended Islamic Finance of Fiscal Instrument in Indonesia: A Proposed Model for Fighting Climate Change

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#### Abstract

Indonesia is the first global and retail sovereign Green Sukuk issuer in the world. Since its first issuance in 2018, Green Sukuk for four years has been issued seven times to finance and/or refinance the projects/programs of Eligible Green Sectors. Then, in order to support the development of social investment and productive waaf, the Government of Indonesia (GoI) also issues Cash Waaf Linked Sukuk (CWLS) by blending Islamic finance and impact investing for the Sustainable Development Goals (SDGs). CWLS is the first blended Islamic finance for the fiscal instrument in Indonesia which integrates Islamic commercial finance and Islamic social finance. In order to tackle climate change, this study promotes the integration between Green Sukuk and CWLS as well as adopting the *Esham* concept toward Perpetual Green CWLS as a new green financing alternative. This collaboration can be an innovative one in the future as a fiscal funding source to fight climate change which today becomes the development agenda priority in line with the intensified intension of extraordinary weather. Absolutely, climate change has brought a high-cost impact on vulnerable and low-income people. Along with efforts to the SDGs and Paris Agreement targets achievement, a financing gap holds in the route to tackle climate change. Therefore, by using a literature study on the best practice of Green Sukuk and CWLS in publications mainly sourced from the Ministry of Finance (MoF) Republic of Indonesia, this conceptual paper focuses on three issues, namely: (1) Describing Indonesia's sovereign Green Sukuk; (2) Describing the CWLS; (3) Explaining a proposed Perpetual Green CWLS as Islamic green financing alternative.

Keywords: CWLS, esham, green financing, green sukuk, perpetual sukuk, perpetual green CWLS

#### **INTRODUCTION**

Indonesia is the first global and retail sovereign Green Sukuk issuer in the world. The issuance of Green Sukuk is intended to finance and/or refinance the projects/programs of Eligible Green Sectors. Ministry of Finance of the Republik of Indonesia [MoF] (2020a, 2021), MoF & United Nations Development Programme [UNDP] (2018), Musari (2021) claimed that Indonesia's commitment to combating climate change by participating in a low carbon and climate-resilient movement is demonstrated by the issue of Green Sukuk. Indonesia adopted the Paris Agreement in 2016 and submitted its Nationally Determined Contributions as a member of the responsible and committed international community (NDCs).

Then, the Government of Indonesia (GoI) also issues Cash *Waqf* Linked Sukuk (CWLS) by fusing Islamic finance with impact investing for the Sustainable Development Goals (SDGs) in order to encourage the growth of social investment and productive *waqf* (SDGs). CWLS is the country of Indonesia's first blended Islamic financial product that combines Islamic social and commercial financing. Indonesia has the chance to play a significant role in the development of this blended Islamic finance because it has the largest Muslim population and the most Islamic financial institutions worldwide. MoF (2020b), Directorate General of Budget Financing and Risk Management [DJPPR] (2020a), Pridityo (2020),

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Hadiningdyah (2020a, 2020b), denoted that CWLS is exactly the cash *waqf* placed on a sovereign sukuk to be organized productively.

In line with the issue of the financing gap in an effort to achieve the SDGs, as United Nations The Economic and Social Commission for Asia and the Pacific [UN ESCAP] (2014,2019), Yu (2016), MoF & UNDP Indonesia (2018), Musari & Sayah (2021), Musari & Hidayat (2021) mentioned, a financing gap stands also in the way of fighting the climate change. Stewart & Mok (2022) It has been shown that the majority of nations are currently searching for creative financial solutions to deal with the triple dilemma of extraordinary climate change, natural loss, and debt levels. Currently, the largest asset class in the portfolios of many institutional investors is sovereign bonds. They reflect almost 40% of the \$100 trillion global bond market. One instrument to connect the environmental and national climate commitments with sustainable sovereign financing is sustainability-linked bonds (SLBs), which are now being examined by sovereign issuers and emerging fast in the corporate debt market.

In order to fight climate change, Moghul & Safar-Aly (2014) addressed that many leading environmentalists adduce the potency of religious role or at least philosophical approaches referring from religion, to face the environmental crisis. In *shari'a*, it comprises a settled ethical framework of caring for the environment and its various occupants. Likewise, Alam, Duygun, & Ariss (2016) also cited the main goal behind the development of Green Sukuk is to robust the *shari'a* existence for preserving the environment. Therefore, the allocation and impact of Green Sukuk must be the manifestation of the *maqasid al-shari'a*.

# **RESEARCH METHOD**

This study is qualitative research with an explanation approach to discovering the new relationship between Green Sukuk and CWLS as the phenomenon. No doubt, climate change today becomes the development agenda priority in line with the intensified intension of extraordinary weather so as bring a high-cost impact on vulnerable and low-income people. Ahead with works to achieve the Paris Agreement and SDGs targets, a financing gap holds in the route to tackle climate change. This study promotes the integration between Green Sukuk and CWLS as well as adopting the *Esham* concept toward Perpetual Green CWLS as a new green financing alternative. The collaboration of these three instruments can be an innovative one as a fiscal funding source to fight climate change.

By using a literature study on the best practices of Green Sukuk and CWLS on publications mainly sourced from MoF, then coupled with the argument for presenting the concept of *Esham* theoretically, this research also can be categorized as a Conceptual Paper with Models research design as a methodological approach. Referring to Jaakkola (2020), by excepting literature reviews and meta-analyses, there are four methodological approaches that can be used in providing structured arguments and their development in the Conceptual Paper, namely Theory Synthesis, Theory Adaptation, Typology, and Models. By focusing to propose a new relationship/construct "Perpetual Green CWLS" as a new insight, then developing a logical argument about this association rather than testing it empirically, the objective of this study is indeed to develop the rationality of the proposed Models. Meredith (1993) and MacInnis (2011) explained, Models research design in Conceptual Paper offers a significant improvement to build valid theories in their field of science. This method leads naturally to synthesizing previous research thus serving as an external validity check of research findings. This is critical to the strength of academic fields, whether it is manifest in purely conceptual papers or in conceptual–empirical blends.

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In line with Xin, Tribe, & Chambers (2013) who stated about a dearth of research on conceptual research, Green (2014) also criticized that conceptual framework is a term that is regularly used in research but rarely explained. Casanave & Li (2015) mentioned that conceptual research is to see beyond the concrete data to higher levels of abstraction. In order to build a theoretical framework that predicts relationships between concepts in Conceptual Papers, according to Cornelissen (2017), there are three common styles of theorizing, their basic forms and typical problems, namely: Proposition-based style, Narrative-based style, and Typology-based style. In building concepts and theories, this study is closer to the Narrative-based style. Narrative-based style is the specification of a process model that lays out a set of mechanisms explaining events and outcomes. Likewise, this study focuses on three issues, namely: (1) Explaining Indonesia's Green Sukuk; (2) Explaining the CWLS; and (3) Explaining a proposed Perpetual Green CWLS as an Islamic green financing alternative.

### **RESULTS AND DISCUSSION**

### Indonesia's Sovereign Green Sukuk

By using the Republic of Indonesia (RoI) Green Bond/Sukuk Framework, MoF (2019, 2020a, 2021), MoF & UNDP (2018), and Musari (2021) mentioned that GoI transforms the climate change issues into planning and budgeting systems and creates a budget tagging mechanism to parallel with the national budget into the climate change impacts. Then, the Green Sukuk fund will be distributed strictly according to Eligible Green Sectors to finance and/or refinance the projects/programs. There are nine eligible green industries, according to the Framework: renewable energy, sustainable management of natural resources, energy efficiency, green tourism, resilience to climate change for highly vulnerable areas and industries/disaster risk reduction, green buildings, sustainable transportation, sustainable agriculture, waste to energy & waste management.

MoF (2019, 2020a, 2021), MoF & UNDP (2018), and Musari (2021) highlighted that Eligible Green Sectors refer to projects/programs which encourage the growth of climate-resilient and transition to a low-emission economy, including biodiversity, climate mitigation and adaptation in concert with the criteria and process bring up in the Framework. Moreover, the following will not be included in the list of "Eligible Green Sectors": (1) New fossil fuel-based electric power generation capacity; (2) Large-scale hydropower plants (>30 megawatt capacity); (3) Nuclear and nuclear-related assets; and (4) Expenditures related to improving the efficiency of fossil fuel-based electric power generation.

In Sovereign Green Sukuk issuance, Perusahaan Penerbit SBSN Indonesia (PPSI) III ---a subsidiary company that is formed to undertake a specific business purpose or activity--- becomes a special purpose vehicle (SPV). As a legal entity which is founded by the GoI, one of PPSI III's tasks is for issuing sukuk in form of foreign currencies in the global markets. DJPPR (2018, 2019a, 2019b), The first sovereign green offering in USD in either sukuk or conventional forms was made with the announced issuance of the first Global Green Sukuk in March 2018. Then, as a sign of commitment to the Paris Agreement, the GoI issued the second Global Green Sukuk in February 2019 to maintain Indonesia's commitment, leadership, and contribution to the international community in relation to climate change funding. Additionally, the first Retail Green Sukuk in the world was released in November 2019.

According to MoF (2019, 2020a), each Global Green Sukuk issuance was designed with a 49 percent new project finance component and a 51 percent current project refinancing component. The underlying assets for each issuance were divided into the following categories: (1) Project assets that are being built

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or will be built (49 percent); (2) State-owned assets, which include land and buildings (51 percent). Table 1 provides an overview of Indonesia's Sovereign Green Sukuk for the years 2018 through 2021, comprising Global Green Sukuk and Retail Green Sukuk.

Year	2018	2019		2020		2021	
Issuance Time	March	June	November	June	November	June	November
Contra of	Global	Global	Retail	Global	Retail	Global	Retail
Series of Green Sukuk	USD Wakala Trust Certificate	USD Wakala Trust Certificate	ST006	USD Wakala Trust Certificate	ST007	USD Wakala Trust Certificate	ST008
Total	USD1.25	USD0.754	IDR1,459.88	USD0.750	IDR5,421.26	USD750	IDR5,000
Amount	billion	billion	billion	billion	billion	million	billion
Total/ Origin of Investors	Islamic Malaysia, and Middle East investors (32%), Indonesia (10%), Asia, excluded Indonesia (25%), US (18%), and Europe (15%)	Islamic Malaysia, and Middle East investors (29%), US (23%), Europe (22%)	7,735 Investors	32% to Islamic and Middle East investors (32%), Indonesia (5%), Asia, excluded Indonesia (40%), US (12%), and Europe (11%)	16,992 Investors	Islamic and Middle East investors (8%), Indonesia (6%), Asia, excluded Indonesia, Malaysia, and Brunei (34%), US (27%), and Europe (25%)	14,337 Investors
Yield	3.75%	3.9%	6.75% (Floating with Floor)	2.3%	5.50% (Floating with Floor)	3.55%	4.80% (Floating with Floor)
Tenor	5 Years	5.5 Years	2 Years	5 Years	2 Years	30 Years	2 Years

Source: MoF (2019, 2020a, 2021), DJPPR (2019a, 2019b, 2020b, 2020d, 2021b, 2021d), processed by Author

Until the end of 2021, GoI has issued Green Sukuk seven times to finance and/or refinance the projects/programs of Eligible Green Sectors. In 2021, there were several new things in the issuance of Green Sukuk. In the Global Green Sukuk, the GoI introduced the Green Sukuk format on a 30-year tenor for the first time, which also the first in the world. This issuance was expected to be evidence for Indonesia's long-term commitment to green and sustainable finance, as well as pioneering financing methods in the fight against climate change. DJPPR (2021b) reported that Global Green Sukuk with a *wakalah* contract with 30-year tenor has obtained sharia opinion from National Sharia Board - Indonesian Council of Ulama (DSN-MUI), HSBC's Global Sharia Supervisory Committee, Citi Islamic Investment Bank E.C.'s Shari'a Advisory Board, the Global Sharia Supervisory Committee of Standard Chartered Bank, and the Fatwa and Sharia Supervisory Board of Dubai Islamic Bank PJSC. The GoI's commitment to growing and enhancing the liquidity of the sukuk market in the Asian region, as well as the State Budget financing strategy, are both realized by this transaction.

Then, in the issuance of Retail Green Sukuk ST008, DJPPR (2021d) reported this serial has been developed and expanded into the SDGs Government Securities Framework which incorporates additional aspects of the SDGs into the framework, to cover not only sectors/projects that contribute to climate change mitigation and adaptation efforts (green focus), but also to the progress of the blue economy (blue focus) and positive social outcomes (social focus). Previously, Global and Retail Green Sukuk referred to the RoI Green Bond/Sukuk Framework. The SDG Government Securities Framework has received a Second Party Opinion (SPO) from Centre for International Climate Research (CICERO) and the International Institute for Sustainable Development (IISD) to ensure that the framework is in accordance with globally recognized principles and standards.

# Cash Waqf Linked Sukuk (CWLS) in Indonesia

In dealing with the economic impact of the Covid-19 pandemic, Pridityo (2020), Ascarya (2020, 2021), Bashori (2020), Juwaini (2020) and Hassan, Muneeza, & Sarea (2021) highlighted that the Islamic social finance sector, which includes *zakat*, *infaq*, *sadaqa*, and *waqf*, is one of the cornerstones in supporting the provision of social safety nets for affected communities, provide a helping hand to those in need without incurring debt, play an active role in economic recovery --especially for micro-small enterprises (MSEs)-- and can help the government to recover from the crisis.

When Islamic social finance is integrated with Islamic commercial finance, Ascarya (2020) mentioned that this sector has great potential to play an important role in achieving economic development goals, social and environmental goals, including the SDGs. Musari (2021) wrote that *waqf* and sukuk today are going into the phenomenal two Islamic financial instruments. Each of them has evoluted toward two types instrument, namely sukuk linked *waqf* (SLW) and *waqf* linked sukuk (WLS). They currently become the new blended Islamic finance for modern *waqf* instrument.

Musari (2021) explained that SLW was initially developed in Indonesia. SLW used *waqf* assets as the underlying, then the collected funds were used to construct productive projects on *waqf* assets. The GoI has problems for performing this model. Afterwards, WLS is developed into CWLS to cope the infirmity of SLW. CWLS has been launched by the GoI at the Annual Meetings of International Monetary Fund (IMF) and World Bank in Nusa Dua, Bali, October 12-14, 2018. Then, on November 1, 2018, a memorandum of understanding (MoU) was signed between the Ministry of Finance (MoF), Indonesian *Waqf* Board (BWI), Central Bank of Indonesia (BI), and the Ministry of Religious Affairs (MoRA) for the development of CWLS. CWLS is guaranteed by the Government Islamic Securities (SBSN) Act and the State Budget (APBN) Act.

MoF (2020b), DPS (2020a), Pridityo (2020), Hadiningdyah (2020a), Musari (2021) noted that CWLS was issued for the first time in March 2020 with a value of IDR50.8 billion with series SW001. The placement of cash *waqf* funds is carried out by Indonesian *Waqf* Agency (BWI) through the private placement method in its position as *nazhir* (*waqf* manager). BWI will pay the discount once up front and utilize it for renovations and the procurement of medical equipment to help build a retina center at Wakaf Achmad Wardi Hospital in Serang, Banten Province. The coupons, which are paid for each month, are used to buy ambulances and provide free cataract surgery to the underprivileged at Achmad Wardi Hospital (the goal is to assist 2,513 underprivileged patients over the course of five years). At the SW001 maturity date, the *waqf* sukuk monies will be returned in full to the *waqif*.

Although MoF takes a while almost two years to issue the first CWLS despite it has launched since 2018, Musari (2022) confirmed that MoF remain committed to address CWLS as a productive *waqf* engine in Indonesia. The issuance of the CWLS is a form of the GoI's commitment to support the development of social investment and the development of productive *waqf*. CWLS serves for *waqf* investment as well as a way out of financing the achievement of SDGs. Table 2 shows the terms & conditions of the CWLS series since its first issuance until end of 2021.

Description	SW001	SWR001	SWR002	SWR003*
Issuance Time	March 2020	November 2020	June 2021	July 2022
Nominal of Issuance	IDR50.849 billion	IDR14.912 billion	IDR24.141 billion	n.a
Trading Terms	Non-tradable	Non-tradable	Non-tradable	Non-tradable
Structure	Wakala	Wakala	Wakala	Wakala
Yield	6.15%	5.5% p.a	5.57% p.a.	5.05% p.a
Coupon Rates p.a	5.00%	5.5%	5.57%	n.a
Tenor	5 Years	2 Years	2 Years	2 Years
Number of Wagif	-	1,041	591	n.a

#### Table 2. The Terms & Conditions of the CWLS SW and SWR Series

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Offering Method	Private placement	Book building	Book building	Book building			
Source: DJPPR (2020a, 2020c, 2021a, 2021c, 2022), processed by Author							
* The offering period lasts for April 11-July 7, 2022.							

Figure 1 provides a general illustration of the CWLS mechanism (via book creation). *Waqif* invests the *waqf* fund in one of two ways: either permanently in a cash *waqf* or temporarily in a cash *waqf*, through nazhir partners or a Sharia Financial Recipient Institution (LKS-PWU). The LKS-PWU next provides the *waqif* with a Cash *Waqf* Certificate (SWU) and *Waqf* Pledge Deed (AIW). LKS-PWU has finished buying Retail CWLS from MoF. At the time of initial placement, MoF releases Retail CWLS with serial number SWR and pays the discount to LKS-PWU. The coupons are then periodically paid to LKS-PWU each month by MoF. LKS-PWU continues to give nazhir the coupons and discounts. The principal *waqf* fund redemption is returned to LKS-PWU by MoF at the maturity date. Then, LKS-PWU continues to give the money to the permanent cash *waqf* (Nazhir) or *waqif* in full (temporary cash *waqf*). For social initiatives and projects—not for government projects or programs—Nazhir offers discounts and coupons. Nazhir has two options with regard to the main *waqf* fund: reinvest in retail CWLS or distribute to social programs and projects (not government programs and projects). Prior to now, nazhir and LKS-PWU entered into a partnership agreement for the management of the cash *waqf* funds. Additionally, by using the *Waqf* Core Principles in funding and allocating, BWI, as the *waqf* regulator, is obligated to assure the openness and governance of *waqf* funds management by nazhir and LKS-PWU (WCP).



Figure 1. CWLS Mechanism (through Bookbuilding)

Source: Developed by Author

Overall, referring to DPS (2020a, 2020c, 2021a, 2021c), MoF (2020b), Hadiningdyah (2020a, 2020b), from 2018 to 2021, the total amount received by CWLS was IDR89.902 billion. The social projects that are supported by these three series include: creating new *waqf* assets through renovations and purchases of medical equipment and to assist in the construction of a retina center; providing free cataract surgery for the underprivileged; purchasing the medical equipment; procuring ambulances and mobile health clinics; constructing clinics at Islamic boarding schools and assisting teachers; funding the education of underprivileged/orphaned students; providing scholarships; and empowering the agricultural economic; constructing the low-cost housing; funding, training, and supporting the MSMEs such as the cattle and other livestock breeders; as well as rice barns *waqf*.

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# Perpetual Green CWLS, A Proposed Model

Not many Islamic economics scholars are aware of the criticism of the integration of sukuk and *waqf* in a single structure. Musari (2021) noted that the criticism can be found in papers such as "Merging *Waqf* and Sukuk", "Can there be Innovation in Islamic Finance? Case Study: *Esham*", "Modernizing a Historical Instrument (*Esham*) for Growth and Financial inclusion", and "Proposal for Innovation in the Capital Markets, *Esham*". Çizakça (2013a, 2013b, 2014a, 2014b, 2016, 2018, 2021) recommends *esham* as a more appropriate instrument to combine with *waqf*. With all the knowledge that he has gathered during almost half a century of his academic work in comparative economic history and Islamic finance, the viewpoint of Çizakça cannot be ignored. As the origin of sukuk and probably the first securitization in the Islamic world that facilitated government borrowing from the public without interest, Çizakça (2013b, 2018) confirmed that *esham* which was invented by the Ottoman government can be modernized so that it can drive the sustainable economic growth and financial inclusion.

Although *esham* in the fact is dissimilar with sukuk, Çizakça (2014b) mentioned that *esham* practice is closer to a perpetual sukuk in modern language. Musari (2022) highlighted that Islamic financial engineering should develop an instrument that does not only meet sharia principles and is able to help the state finance to meet the fiscal needs. However, the instrument must also not create new debt that burdens the state. Public involvement to finance economic development and other fiscal needs is a logical option. However, the instrument that is established must not only please the market or investors, but must also help the state by not making it a burden for inheritance in the future. Today, in Islamic finance perspective, Green Sukuk is a better and more dignified financing instrument as an option than bond or seeking foreign debt to fight climate change. In addition to complying with sharia principles, Green Sukuk contains elements of cooperation and investment.

Therefore, this paper proposes Perpetual Green CWLS as Islamic green financing alternative. This scheme is the development of a number of schemes that have been previously developed by by Musari (2021, 2022) and Musari & Sayah (2021). By integrating Green Sukuk, CWLS, and *Esham* principles, Perpetual Green CWLS is expected to improve the weaknesses that exist in the instrument that formed it. This scheme can be adopted also to finance and/or refinance the environmental conservation projects/program, solar power plant, natural disaster mitigation and recovery projects/program through Green Sukuk, Blue Sukuk, White Sukuk and/or Catastrophe Sukuk. As Çizakça (2018) mentioned, "perpetual" may solve the problem by allowing the *waqf* not to redeem the shares purchased. Investors would simply be rewarded by the payment of annuities in perpetuity, while the *waqf* would maintain its capital and could also function in perpetuity.

In simply, the flow of Perpetual Green CWLS can be explained in Figure 2. Retail *waqif* invests Perpetual Green CWLS in Selling Agent/Islamic Banks. Selling Agent/Islamic Banks then submits SWU and After completing the purchase of Perpetual Green CWLS for the Government/MoF, AIW to the *waqif*. At the time of initial placement, the Selling Agent/Islamic Banks split the discount from the Perpetual Green CWLS that the Government/MoF issues with a special serial number. To continue financing and/or refinancing the social green initiatives and programs, the selling agent and Islamic banks continue to give nazhir a discount. Through State-owned Enterprises or the State Investment Agency, the Government/MoF uses these money as green working capital or green investment.

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Figure 2. Perpetual Green CWLS

Source: Developed by Author

Furthermore, the green productive projects/program of State-owned Enterprises/State Investment Agency become underlying asset at once also to pay profit/loss sharing to Government/MoF period. The profit/loss sharing then is distributed to Selling Agent/Islamic Banks by Government/MoF periodically. Selling Agent/Islamic Banks continues to pay the profit/loss sharing to nazhir to finance and/or refinance the social green projects/program and *waqif* with a predetermined proportion. Nazhir serves the profit/loss sharing to the social green projects/programs (not government projects/programs). In Perpetual Green CWLS, there is no maturity date. The maturity date can occur if the Government/MoF intends to stop this mechanism by redeeming the *waqif*'s principal funds. Regarding *waqf* Authority in this scheme has responsible to ensure the transparency and governance of *waqf* funds management by nazhir and Selling Agent/Islamic Banks in funding and allocating by referring to WCP.

# CONCLUSION

As the first global and retail sovereign Green Sukuk issuer in the world, Indonesia can be a lesson for finding the new green financing to fight climate change. The Green Sukuk initiative in Indonesia has paved the way for the flow of sustainable financing through Islamic green financing. Then, as the first blended Islamic finance for the fiscal instrument in Indonesia, CWLS can be a lesson also to find innovative instruments to finance the various social projects/programs. CWLS initiative in Indonesia has paved the way for the development of social investment and productive *waqf* by integrating Islamic commercial finance and Islamic social finance as well as bringing impact investing for the SDGs.

However, each Green Sukuk and CWLS still have weaknesses, namely the existence of redemption which at maturity date requires the state to return the principal funds. Thus, by adopting the *Esham* concept within the integration between Green Sukuk and CWLS, Perpetual Green CWLS is intended to be a new Islamic green financing alternative. As a socially responsible investment instrument, this scheme can be adopted and developed as an innovative sustainable financing model in the future as a fiscal funding source to fight climate change. Public engagement to tackle climate change is a logical option. For this reason, Islamic public/domestic borrowing instruments must receive attention. Green Sukuk and CWLS need to be continually developed in order to provide several schemes so that the public with its various characteristics can choose and take part in green economy programs, including addressing climate change. The Perpetual Green CWLS is one of the alternative schemes that can be explored. The presence of *Esham* in developing the Islamic financial engineering for public/domestic borrowing through Perpetual Green

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CWLS is intended for this scheme not only to fulfill sharia principles and is able to help the state to finance its fiscal needs. In addition, this scheme is intended not to create new debt for the state.

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