

COMPARATIVE ANALYSIS OF GREEN ECONOMY APPROACHES IN MALAYSIA AND INDONESIA

ANÁLISE COMPARATIVA DAS ABORDAGENS DA ECONOMIA VERDE NA MALÁSIA E NA INDONÉSIA

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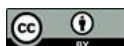
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Abstract

Malaysia and Indonesia are now the largest centers of green production in the region of Southeast Asia. They both attract huge flows of investments in this area, including such industries as the production of electric vehicles and solar energy equipment. In this paper, the authors analyze how approaches to the elaboration and implementation of green economy policy are arranged in each of these countries, highlighting its similarities and differences. When conducting the research, the authors take into account various factors, such as the type of political system, the type of the economy, legislative initiatives, participation in international initiatives, natural conditions, the level of social development, etc. The authors explore what principles Malaysia and Indonesia observe in the organization of the green economy sector and how they are building a policy of attracting investment in this sector. Here, the authors also emphasize the advantages that

Resumo

A Malásia e a Indonésia são atualmente os maiores centros de produção verde na região do Sudeste Asiático. Ambos atraem enormes fluxos de investimentos nessa área, incluindo setores como a produção de veículos elétricos e equipamentos de energia solar. Neste artigo, os autores analisam como as abordagens para a elaboração e implementação de políticas de economia verde são organizadas em cada um desses países, destacando suas semelhanças e diferenças. Ao conduzir a pesquisa, os autores levam em consideração vários fatores, tais como o tipo de sistema político, o tipo de economia, iniciativas legislativas, participação em iniciativas internacionais, condições naturais, o nível de desenvolvimento social, etc. Os autores exploram quais princípios a Malásia e a Indonésia observam na organização do setor da economia verde e como estão construindo uma política de atração de investimentos nesse setor. Aqui, os autores também enfatizam as vantagens



Malaysia and Indonesia have over other states of Southeast Asia. The authors pay the greatest attention to investment relations with the closest neighbors of these countries in the region. At the conclusion of the paper, the authors examine the successes achieved by each of the two countries, explain the origin of these achievements and give a forecast of the further development of the green economy in these countries.

Keywords: Green Economy. Green Policy. Green Taxation. Southeast Asia.

que a Malásia e a Indonésia possuem em relação a outros países do Sudeste Asiático. Os autores dedicam maior atenção às relações de investimento com os vizinhos mais próximos desses países na região. Na conclusão do artigo, os autores examinam os sucessos alcançados por cada um dos dois países, explicam a origem dessas conquistas e apresentam uma previsão do desenvolvimento futuro da economia verde nesses países.

Palavras-chave: Economia Verde. Política Verde. Tributação Verde. Sudeste Asiático.

1 THE STATE OF MATTERS

1.1 The emergence of green economy

The green economy is a concept of economic activity in which the well-being of individuals is still a key goal, but it is achieved by methods that do not cause or greatly minimize damage to the environment. The issue of transition to a green economy has become especially acute after the global financial crisis of 2007-2008 (Biely, 2014). Then, politicians and scientists came to the conclusion that the previous model of economic development (neoliberal) turned out to be unstable in economic aspects, and also led to the depletion of natural resources and environmental pollution. In order to ensure the survival and development of mankind in the long term, it was necessary to switch to more sustainable principles of economic activity.

In 2015, the UN member states agreed on a document entitled “Transforming our World: the 2030 Agenda for Sustainable Development” and thus determined the further vector of development of the world economy (United Nations, 2015). The program contains a set of goals for future international cooperation, which are comprehensive and ensure a balance between the three aspects (economic, social and environmental) of sustainable development. The concept of the green economy, which has been formed in the last two decades, is aimed at a more harmonious alignment of these components, which would be acceptable to all groups of countries.

The development of the green economy is receiving an increasingly wide public response. It is actively discussed by experts, politicians, and non-governmental organizations. The concept of the green economy includes the ideas of many areas in economics and philosophy related to the problems of sustainable development.

Many experts agree that a return to the old pre-crisis growth model hides serious dangers, including economic instability, lack of natural resources, climate change, environmental pollution, and a decrease in biodiversity. Despite the fact that the previously prevailing economic system has produced certain results in improving the living standards of people as a whole, and especially of its individual groups, the negative consequences of the functioning of this system are significant: These are environmental problems, depletion of natural capital, widespread poverty, shortage of fresh water, food, energy, inequality in the situation of countries and social groups. All this poses a threat to current and future generations. This model of economy is called the brown economy.

The United Nations Environment Programme (UNEP) defines the green economy as an economy that contributes to “improving human well-being and social equality and significantly reducing environmental risks and environmental problems” (United Nations, 1972). Development should contribute to the preservation, enhancement and, if necessary, restoration of natural capital as an important economic resource and source of public wealth. Human rights and the environment are closely linked due to the right of every resident to a clean, healthy, and productive environment. Over time, along with green economics, other expressions such as green growth, green incentives, green technologies, green sectors of the economy, green business and green jobs came into common use. The concept of the green economy emphasizes the importance of the principle of equity in economic and social development from the point of view of different generations. It is based on the presumption that the benefits of investing in environmental sustainability outweigh the costs of not making such investments, since the costs of protecting ecosystems from damage associated with the non-green (brown) economy exceed the projected costs of investing in environmental sustainability.

The instruments of the green economy include: green investment, resource payments, carbon taxes, green bonds, environmental insurance, targeted financing of green projects, setting energy efficiency standards, investing in the development of green infrastructure, public procurement policy that encourages the production of eco-friendly

products and the use of production methods consistent with the principles of sustainable development, social strategies, designed to ensure consistency between social goals and existing or proposed economic strategies, etc. (Dubrova *et al.*, 2021).

1.2 Overview of malaysian and indonesian economy and environmental issues

Southeast Asia (SEA) is now one of the fastest growing economic centers in the world. The countries of the region attract investments from all over the world, demonstrate a steady trend towards impressive GDP growth over a long period of time and have notable successes in the development of the modernizing industry. In the context of the region, the cases of Malaysia and Indonesia are important – large countries with a vast territory that have a similar economic structure and demonstrate similar development trends. In both countries, GDP has been steadily growing by 4-6% annually since the 1990s (except of the COVID-19 pandemic period) (ASEAN, 2023). Within the framework of SEA, Indonesia is the first country in terms of nominal GDP, Malaysia is in 5th place (ASEANStats, 2022). According to the World Bank, Indonesia ranked 16th in terms of nominal GDP in the global context in 2022, while Malaysia ranked 36th (out of 213 countries and territories) (World Bank Group, 2024).

At the same time, countries demonstrate achievements not only in quantitative, but also in qualitative indicators. Within the framework of SEA, labor productivity indicators for Malaysia and Indonesia are ranked 2nd and 4th, respectively (Our World in Data, 2019). Malaysia is ahead only of Singapore, and Indonesia is also ahead of Thailand. Malaysia and Indonesia are ranked 27th and 50th out of 141 countries, respectively, in the World Economic Forum's ranking on economic competitiveness (Global Competitiveness Report) (World Economic Forum, 2020). Within the region, this rating repeats the situation with labor productivity: 2nd and 4th place, respectively, before Malaysia – Singapore, before Indonesia – also Thailand (Kim & Woon, 2020). World experts predict a great future for both countries: it is expected that by 2045 Indonesia may become the 4th largest country in the world in terms of GDP (Cabinet Secretariat of the Republic of Indonesia, 2017), and Malaysia will be able to obtain the status of a high-income country already in 2024 (World Bank Group, 2021).

It is important to note that the history of the economies of these countries is quite similar, as is the current structure of their GDP (ASEANStats, 2022). Both countries owe the modern high level of development of industry and other sectors of the economy, primarily to foreign multinational corporations and foreign investors. The countries had similar initial conditions: a large but low-level population, a similar structure of natural resource deposits, similar geographical conditions, etc. Thanks to companies from the former metropolises (Great Britain and the Netherlands), as well as businessmen from the USA, Japan and, a little later, Germany and Singapore, industrial production began to develop actively in these countries in the 1980s and 1990s: oil and gas production, electronics manufacturing, automotive, chemical industry, metallurgy (ASEAN, 2015). The food industry was also important, as Malaysia and Indonesia are the largest producers of palm oil, and also have a developed fishing industry. The economic model of both countries was oriented towards exports to developed countries. Of course, this allowed countries to experience significant economic growth, but the development of the economy here was carried out in a fairly intensive way, often with a negligent attitude to the environment, which by the beginning of the XXI century had a negative effect.

Today, Indonesia ranks 6th in the world in terms of greenhouse gas emissions, Malaysia is in 23rd place, which is not the best indicator for a medium-size country (Crippa *et al.*, 2023). Both countries are suffering from deforestation associated with palm oil production and the disruption of marine ecosystems due to fishing and seafood (ASEAN, 2015). The destruction of natural ecosystems has brought some animal species, such as orangutans, to the brink of extinction. The same food industry and agriculture, which accounts for about 10% of GDP in both countries (ASEANStats, 2022), is associated with slash-and-burn operations, which leads to air pollution and the appearance of a specific haze that covers the rest of the region's countries – and it comes mostly from Indonesia and also from Malaysia. Pollution of air and water resources is also influenced by active emissions from industrial production. At the same time, about a tenth of GDP is accounted for by the extractive industry: 8-9% in Malaysia and 10-12% in Indonesia (ASEANStats, 2022), which also contributes to air pollution. In 2022 In terms of air pollution, Malaysia was in 59th place, Indonesia in 26th (the higher the position, the more polluted the environment) (IQAir, 2022).

The policy of the countries of SEA is characterized by the great importance of regional integration within the framework of ASEAN. In the early 2000s, the discussion of the problem of environmental pollution, and then climate change, was put on the agenda of the organization. In 2002, the ASEAN Agreement on Transboundary Haze Pollution was concluded, which was aimed at combating air pollution due to fires. During the same period, Southeast Asian countries began to develop national laws aimed at protecting the environment and join international initiatives. In general, during the first two decades of the 21st century, the countries of SEA increased the importance of ecology in their policies. By the end of the 2010s, Malaysia and Indonesia came to a clear understanding of the importance of developing green policies and a green economy. One of the main tasks of the immediate development plans of both countries is the fight against climate change and the implementation of the UN Sustainable Development Goals (SDGs). Although the results of such a policy cannot yet be called impressive: Indonesia and Malaysia are in 75th and 78th place, respectively, in the ranking of progress towards achieving the SDGs (United Nations, 2023), purposeful work is clearly underway in this direction.

2 APPROACH TO THE GREEN ECONOMY POLICY

2.1 Malaysia

2.1.1 Malaysian green policy

A specific feature of strategic planning in Malaysia is the preparation of medium-term (on average 5 years) development plans. Based on this, national environmental policy, including the implementation of climate control and adaptation measures and disaster management, is also being implemented in the context of medium-term plans.

Malaysia began intensive work on the development of green policy in the early 21st century (Abidin *et al.*, 2023). In 2002, the National Policy on the Environment was adopted, which was aimed at protecting nature and preserving biological diversity. In 2009, the National Green Technology Policy was published, which implied technological optimization in 6 sectors of the economy that have a significant impact on the state of the

environment. In the same year, the Government approved a National Policy on Climate Change. In 2010 the National Renewable Energy Policy and Action Plan was adopted, which implied a reduction in greenhouse gas emissions. In addition, it was accompanied by the Renewable Energy Act of 2011, which assumed an increase in the share of renewable resources in the energy sector. By 2030, Malaysia expected to increase the share of renewable energy sources to 17%, with an emphasis on the development of solar energy, biogas, biomass and hydropower (Abidin *et al.*, 2023).

In 2016, after the signing of the Paris Agreement, there was a new round in the development of environmental policy – this was reflected in the 11th Malaysia Development Plan 2016-2020. This Development Plan envisaged the coordination of green economy strategies with the aim of achieving net-zero carbon economy by 2050 – this goal was continued in the 12th Development Plan 2021-2025. As part of the Plan, the National Solid Waste and the National Policy on Biological Diversity 2016–2025 were drawn up.

By 2020, Malaysia has launched a Green Transition program (Saudi *et al.*, 2019). The Green Transition Policy consists of 3 initiatives: the Green Technology Master Plan (2021-2030), the National Biodiversity Policy (2022-2030), the Sustainable and Circular Economy Roadmap (2023-2040). The general plan involves the green modernization of 6 sectors of the economy: manufacturing, energy, transport, construction, waste management, water management. As part of the Plan by 2035 it is planned to make these sectors energy efficient and increase the share of renewable energy use in them to 40%. Biodiversity policy involves the protection of ecosystems. The latest initiative involves a significant transformation of the economy with the reduction of waste from economic activity, optimization of the use of resources and respect for nature.

The tasks of implementing plans to combat climate change and protect the environment in Malaysia are primarily the responsibility of local authorities. They are legally responsible for creating the necessary conditions for a comfortable life for citizens. One of the most pressing issues for local authorities in the framework of the National Low Carbon Cities Masterplan, adopted in 2021, is the reduction of greenhouse gas emissions. The Masterplan is part of the Low Carbon Cities Framework, launched back in 2011 along with initiatives to promote alternative energy. Local authorities are trying to achieve this goal by increasing the share of renewable energy use, encouraging energy-

efficient construction and transport technologies, and switching to sustainable farming methods, which they are helped by the tools of smart city technology. The Government sponsors municipalities that take active measures to combat climate change. In the summer of 2023, the Government has approved an Energy Transition Roadmap (NETR), which is also aimed at reducing greenhouse gas emissions and creating energy-efficient industries.

International cooperation is of great importance for Malaysia in implementing green policy. Malaysia joined the United Nations Framework Convention on Climate Change (UNFCCC) in 1993, signed the Kyoto Protocol in 1997, signed and ratified the Paris Agreement in 2015. Regional cooperation within ASEAN is of great importance for Southeast Asian countries. Currently, the ASEAN agenda in the context of green policy includes the management of peatlands (their burning forms the haze), the creation of sustainable cities, parks of the environment and public education about the environment. Sustainable policy relations are also developing within the Asian region: China, Australia, and Japan. Southeast Asian countries receive funding for their environmental programs from the United States, Canada, Australia, New Zealand, Germany, Japan, etc.

At the same time, cooperation with the United Kingdom on green policy issues is of particular importance for Malaysia. The UK PACT program allocated 1.4 million pounds in 2021 to finance environmental projects in Malaysia (Gov.UK, 2021). These projects will promote low-carbon technology and conservation initiatives in Malaysia, while supporting the improvement of the living conditions of marginalized communities. The Strategic Partnership between Malaysia and the United Kingdom, drawn up in 2021, contained a large section on cooperation in the field of sustainable development. This agreement was strengthened by the 2022 Memorandum on Climate Partnership. After the Climate Act was passed in the UK in 2008, Malaysia began to make its own attempts to develop a similar law. Discussions on this law have been difficult in the country, but the Government currently promises to finalize it by 2024.

2.1.2 Malaysian green economic activity

In the early 2010s, Malaysia moved to create an infrastructure for green finance. By 2040, it is planned to accumulate \$460 billion of green investments in the country.

Attention to the accumulation of funds in accordance with the rules of environmental protection was reflected in the 11th Development Plan and implied work not only with the classical financial system, but also with Islamic banking. Malaysia is now one of the largest issuers of sukuk (the Islamic equivalent of bonds) (Davidson *et al.*, 2021). In general, SRI Sukuk and the Bond Grant Scheme were among the first structures in the world to issue green securities. The country believes that the development of green finance in the country is of great importance for the transition to a low-carbon economy. Currently, a stable flow of green finance is observed in the transport, energy, municipal and water infrastructure sectors. The sphere of public transport and solar energy is gaining momentum. At the COP28 conference, the head of the Bank Negara Malaysia's stated that the country plans to attract a large number of green investments to implement 10 flagship projects within the framework of the NETR (Malaymail, 2023).

Banks, in general, are an important element of the green economy and sustainable development of society in Malaysia. Stress tests of financial institutions are regularly conducted in the country to ensure that they conduct their activities in accordance with environmental policy and safely serve society (Davidson *et al.*, 2021).

11th and 12th Development plans also emphasized that taxation can also become an important element of building a green economy – a green tax or a carbon tax. However, these strategies did not provide details or propose a specific action plan, although the need for such measures was recognized. The carbon tax enjoys great attention in the development of green policies in the country. Malaysia actively uses the Clean Development Mechanism provided for in the framework of the Kyoto Protocol. This mechanism allows one to receive subsidies from other countries for success in reducing greenhouse gas emissions. In this regard, the country is interested in further reducing such emissions, which provokes increased attention to the introduction of carbon taxation. However, such initiatives have not been implemented so far.

Special attention is paid to supporting small and medium-sized enterprises (SMEs) in their attempt to develop in accordance with the goals of sustainable development and the green economy. As known, SMEs are an important element in building a green economy, so subsidizing them should be on the agenda in a country striving to build such an economy. The Malaysian Global Innovation and Creativity Center has launched a Social Enterprise Accelerator, within which it provides various

assistance to entrepreneurs seeking to build their businesses according to the rules of sustainable development. As part of the 12th Development Plan, the Ministry of Investment, Trade and Industry launched the National Industry ESG structure (i-ESG Framework), which is aimed primarily at small and medium-sized businesses. The program provides financial and informational support for the development of SMEs in a sustainable manner in four areas: standards, financing, capacity building, and market mechanism. For Malaysia, this is a particularly important measure, since medium and small businesses here account, according to some data, for up to 97% of all economic enterprises in the country (OECD, 2022), and their contribution to GDP is estimated at 40-50% (Gunto & Alias, 2013).

In addition, Malaysia is a major industrial producer – about 22-23% of GDP here is in the manufacturing sector (ASEANStats, 2022). Modern trends in the development of production processes in the country are also focused on environmental friendliness and sustainability. Malaysian manufacturers are making the greatest progress in the environmentally friendly disposal of industrial waste (Ahmad *et al.*, 2019). Now, the introduction of solar panels for the production of energy for industrial purposes has also been developed. Malaysia is also now becoming one of the regional centers for the production of environmentally friendly technologies – of particular importance is the production of batteries and semiconductors for electric vehicles, which is currently one of the fastest growing sectors attracting foreign investment to the country (The ASEAN Secretariat & United Nations Conference on Trade and Development (UNCTAD), 2022). Automobile companies from Japan and the Republic of Korea began to actively invest in this industry. Malaysia is also making progress in the global photovoltaics market.

2.2 Indonesia

2.2.1 Indonesian green policy

Indonesia began to take action to build a green economy a little later than Malaysia – closer to the mid-2000s. In Indonesia, as in Malaysia, the implementation of green policies is embedded in medium-term development plans. One of the first leaders of the country to include the issue of green politics in his political program was President Susilo

Bambang Yudhoyono, who was elected in 2004. This happened, among other things, under the influence of the global political agenda.

In 2005, the country adopted a National Long-Term Development Plan (RPJPN), which was designed for the period up to 2025, internally it was divided into four medium-term plans for a period of 5 years. Within the framework of the RPJPN, great importance was attached to responsible spending of resources, environmental protection, and sustainable development. These principles were called the basis for building a prosperous future for the country. At the same time, in the Medium-Term Development Plan 2015-2019, it was indicated that it was the green economy that should become the basis for Indonesia's development. During his tenure as President, Susilo Bambang Yudhoyono also founded the National Council on Climate Change, which issued a Strategy to reduce CO² emissions. However, Joko Widodo, who came to power in 2014, dissolved this Council.

The Medium-Term Development Plan 2020-2024 also included The Low Carbon Development Initiative (PRK), which implied the struggle to reduce greenhouse gas emissions and move towards carbon neutrality. Reducing emissions is an extremely important task for Indonesia in the context of green policy. Despite the fact that Joko Widodo dissolved the National Council on Climate Change, he abolished subsidies for gasoline, which is very important for reducing emissions. The task is reflected in the Nationally Determined Contribution (NDC), a program adopted under the influence of the UNFCCC and aimed at reducing greenhouse gas emissions and combating climate change. The program establishes that Indonesia plans to increase the share of renewable energy in the energy structure to 23% by 2023 and to 25% by 2030. The Indonesian energy transformation plan 25/25 assumes an 18% reduction in energy consumption by 2025 compared to 2010 (IESR, 2022). It also plans to reduce emissions by 29% (from 2020 to almost 32%) (Dianjaya & Epira, 2020), and by 2060 achieve carbon neutrality (Tirta *et al.*, 2023). Indonesia has also committed to reducing plastic emissions at sea by 70% by 2025 (Rogozhina, 2022).

In accordance with the goal of NDC, a Green Growth Program has been developed in the country (Indonesia Green Growth Program, 2022). The roadmap for it was created by the Ministry of National Development Planning (BAPPENAS). The program is comprehensive and includes sustainable development in 3 areas: environmental aspects,

economic aspects and social aspects. One of the most important objectives of the program is to achieve net-zero carbon emissions. To achieve this goal, the Government has prioritized low-carbon development in four main sectors: energy, land, waste and fiscal.

The leading government agencies dealing with environmental issues in Indonesia include the Ministry of Environment and Forestry, the Ministry of the Home Affairs, as well as the National Development Planning Agency (Fourry *et al.*, 2018; Zolotukhin *et al.*, 2019). The first one collects statistical data, develops environmental standards, and draws up an action program, and is also responsible for the conservation and rational use of forest resources. The Ministry of the Home Affairs monitors violations in the field of environmental legislation, and the agency develops long-term projects in the field of ecology, including coordinating the activities of all institutions and organizations dealing with environmental degradation issues. The country has established an extensive system to combat climate change, covering more than 322 districts and municipal centers.

International cooperation is key to the development of green politics in Indonesia. In many ways, the incentive for the development of the country's green economy comes from outside, not from within, although the local population, especially minor indigenous peoples, actively defend the right to an environmentally safe future. Like Malaysia, Indonesia is an active participant in international and regional cooperation on environmental protection issues. The agreement between REDD and REDD+ aimed at reducing deforestation and emissions is of great importance for Indonesia. Norway is an important partner in this area, as well as in a number of others, for Indonesia. In 2010 Indonesia and Norway signed a letter of intent on REDD+, according to which the Indonesian side pledged to reduce carbon dioxide emissions by 26% by 2020 and by 41% by 2030 with international support. The Norwegian side has pledged to pay Indonesia \$1 billion at the same time (Zolotukhin *et al.*, 2019). Norway also supports the Green Growth Program financially (Indonesia Green Growth Program, 2022). And the Program itself was developed with the participation of the Global Green Growth Institute from the Republic of Korea (Indonesia Green Growth Program, 2022). Indonesia has also repeatedly received funding for green programs from the United Nations (Kostyunina, 2019). In addition, coal is of great importance for Indonesia's energy structure, which pollutes the environment quite heavily. Despite the desire to reduce emissions, it is difficult for the country to transform its energy sector and abandon coal. In this regard,

countries around the world are subsidizing Indonesia to help it switch to cleaner energy sources. Among such countries are the USA and Japan (Kostyunina, 2019; Pambudi *et al.*, 2023).

2.2.2 Indonesian green economic activity

Indonesia's Financial Services Authority (OJK) published rules for green investments in 2017. By 2019, the country has become the leader in ASEAN in terms of the volume of green bonds issued – it accounts for 39% (Indonesia's green taxonomy, 2023). Moreover, Indonesia is on the 5th place in the world in terms of green sukuk output (Malaysia is on the 1st place – it accounts for almost half of the world's emissions). By 2025, the country plans to accumulate \$400 billion worth of green investments. The Green Investment Development Program is part of the Sustainable Finance Roadmap, which is divided into 2 phases (2015-2019 and 2021-2025) and contains 8 principles for creating a sustainable financial system. One of the most important elements of the initiative is reporting for companies issuing green bonds. At the same time, banks in Indonesia, as in Malaysia, are also regularly subjected to stress tests.

For Indonesia, SMEs are also extremely important, but here such enterprises often face infrastructure problems – first of all, there is difficulty in accessing banking services, which prevents investments in environmentally friendly businesses. Despite the fact that there is not yet a unified strategy to support SMEs striving to achieve the SDGs, the government is aware of the current difficulties and strives to overcome them. The government has launched a special platform for financing sustainable business (Primandaru *et al.*, 2023). The Indonesian Business Council for Sustainable Development, UN Global Compact Indonesia and the Indonesian Philanthropy Association have privately launched the Forum Philanthropy and Business to enable businesses to share experiences on sustainable development and attract investments on their own (Setyaningsih, 2019). BAPPENAS, in turn, works on the sustainability of business in agriculture, which accounts for about 12-13% of the country's GDP (ASEANStats, 2022).

Indonesia is also seeking to develop an Emissions Trading Scheme (ETS) similar to the European Union (EU) for the industrial and energy sectors. Since 2021, some

energy companies have voluntarily adhered to this procedure, but by 2024 it will become mandatory. The government also expects to establish a responsible authority to oversee emissions trading.

At the same time, in the context of green taxation, Indonesia has moved further than Malaysia. Green taxation was a part of the Sustainable Finance Roadmap – Indonesia was the first country in ASEAN to formalize such measures. But it was only in 2022 that the process was launched in full force. Indonesian President Joko Widodo explained the increased importance of green taxation by the need for a clear classification of eco-logical and non-ecological businesses, as well as the prevention of greenwashing (Indonesia's green taxonomy, 2023). Such a classification should enable SMEs to rely on more financing in line with sustainable development. However, unlike similar programs in the EU or China, Indonesia's green taxation is still voluntary and does not rely on specific environmental goals, nor does it have clear and unambiguous criteria for business sustainability. Nevertheless, Indonesian government's course of action is quite progressive.

As for green manufacturing, the focus here is on supporting SMEs. An integrated green production platform has been created for SMEs in Indonesia (Primandaru *et al.*, 2023). SMEs that implement green production processes receive financial, informational, and organizational support from the government. In 2023, the construction of a green industrial park began in Kalimantan (Simon, 2023), which should operate entirely on renewable energy sources and become the hub of the country's green production. Indonesia, like Malaysia, is now also an important link in the electric vehicle production chain, not only in the production of batteries, but also in the extraction and alloy of nickel (The ASEAN Secretariat & UNCTAD, 2022). Companies from the Republic of Korea, China, Australia, France, Brazil, and Switzerland invest in this industry.

3 RESULTS

3.1 Similarities

Based on the similar conditions for the formation of the political and economic system in both countries, as well as similar approaches to public administration and social

development, the building of the green economy in Malaysia and Indonesia has a number of similar features. The first here is an approach to the elaboration of green development policy. Both countries include the green economy in the indicators of medium-term development plans. At the same time, various tasks aimed at achieving the goals of green development are part of other official political and economic programs and projects. As a result, each country has an extensive network of official strategies that support the development of the green economy – they can overlap with each other, and achieving these goals is the responsibility of various authorities. This fact is also overlaid by the distribution of tasks for the development of the green economy between the government and local authorities, which is also observed in both countries. This feature slows down the achievement of the set goals, since it is difficult to provide proper control over such an extended execution system.

The second important common feature is the complexity of green development plans. When developing green economy strategies, the governments of both countries do not focus on specific industries but strive to build a common system. The programs for the development of the green economy of both countries include support for green production, development of SMEs, reduction of emissions, promotion of green investment, transition to renewable energy sources, waste management, protection of biodiversity, etc. This partly explains why official strategies in this area are so multilevel. However, Malaysia and Indonesia have not had the historical opportunity to develop their approach to the green economy for many decades. Both countries reached the appropriate level of economic, political, and social development when the international community had already made the green transition its benchmark, which required other countries to take accelerated measures.

It is also common that one of the key tasks in building the green economy for both countries is to reduce emissions. This is due to the similar structure of the economy, a large share of the energy sector in GDP. In addition, reducing emissions is one of the most important tasks in the context of a global approach to a green economy, which allows countries such as Malaysia and Indonesia (developing) to receive financial and other assistance from developed countries.

Finally, an important common feature is that the green transition is one of the pillars of the broader plans of both governments to modernize their countries. The general

background of political activity and the orientation of official strategies indicate that Malaysia and Indonesia are pursuing global goals for economic and social development based on modern principles. That is why both countries attach great importance to green investments – this is another way to attract capital and support the economic growth of the state. In addition, digital and other high technologies play an important role in the green transition for both states. They are not only more environmentally friendly, but also make it possible to increase the efficiency of economic operations while reducing costs. As a result, this approach to state development should transform Malaysia and Indonesia into prosperous societies in the medium-term perspective.

3.2 Differences

As for the differences, there are also enough of them in the approach to the green economy of both countries. Analyzing the evolution of the development of green policies in both countries, the difference in incentives in the two countries immediately catches the eye. Although Malaysia was undoubtedly influenced by the global conjuncture in the development of green policy, it is noticeable that very quickly the green transition became an integral part of the country's development, its internal necessity. Indonesia has shown itself to be a less stable follower of the principles of green development. The main efforts here were made under the external influence of the international community and could not always meet the internal needs of the country. Indonesia is a more populous and dissimilar developed country than Malaysia. Here, the introduction of green principles can lead to changes in specific industries, what can be critical for society and the state. Mining of coal and other minerals, production of palm oil, metal processing, etc. are of particular importance for the Indonesian economy. All these industries cause significant damage to the environment, but their reform can put thousands of people out of work, whose qualifications and financial condition leave much to be desired. That is, it is problematic for them to find a new job, which forces the government to be careful in implementing environmental protection measures. However, Indonesia is very actively using the financial instruments of the green economy to increase the flow of funds to the budget. That is why the Indonesian authorities involved in the implementation of green policy are mainly economic.

The second important difference lies in the implementation of green economy measures. In Malaysia, the state apparatus is more influential – most of the changes take place on its initiative and under its control. This is also important for the development of a green economy. In Malaysia, new regulations are developed by the government, then descended to the level of responsible ministries and local authorities. Ministries monitor the achievement made by local authorities. The government and the Central Bank are developing a concept of action for SMEs to create a sustainable economy. Thus, the decision-making structure here is vertical. In Indonesia, the government is not so centralized, including due to the geographical features of the country. In Indonesia, the authorities prefer to set a framework for action and provide some support, but rarely fully undertake the work of implementing the process.

Finally, the approach to international cooperation on green economy issues is also different. There is limited cooperation within ASEAN in the region, since most of the organization's members are emerging markets where the role of industry and resource extraction is important, hence, there are few appropriate opportunities for the development and implementation of green economy measures. Nevertheless, the developed countries of the Asia-Pacific region and the developed world are helping Southeast Asia to develop a green economy. In this context, Malaysia is distinguished by its commitment to sustainable and long-term relationships with certain partners. Such cooperation is based on strategic agreements and long-term planning. Indonesia also has some long-term partners (Norway), but, in general, relies on situational assistance depending on its own needs and initiatives of the international community. At the same time, Indonesia is actively resorting to a strategy of attracting foreign aid for specific projects, while Malaysia uses a strategy of comprehensive cooperation.

4 CONCLUSION

In this paper, a full-fledged comparative analysis of approaches to building a green economy in Malaysia and Indonesia was carried out. The concept of green economy and its instruments, as well as the history of its origin and development were studied here. Further, the authors compared the economic and natural background of Malaysia and Indonesia, noting that these countries have a set of similar characteristics. After that, the

authors moved on to study the development of green policies in these countries, as well as how this affected economic activity. Completing the study, the authors, based on the information received, conducted a comparative analysis of approaches to the green economy in both countries. It turned out that such characteristics as the approach to the development of official green strategies, the complexity of such green strategies, great attention to reducing emissions and positioning green development as one of the elements of the future development of these countries are common. However, the incentive to build the green economy, the degree of influence of government agencies on green policy and the approach to international cooperation are differences for Malaysia and Indonesia.

In conclusion, it is important to emphasize that building the green economy is an extremely important current goal. Malaysia and Indonesia are already firmly embedded in the efforts to achieve the Sustainable Development Goals and are taking appropriate measures to do so. It is obvious that attention to the environmental agenda will only increase further. Making a small forecast, it can be assumed that further trends in the development of the green economy in ASEAN will be strengthening regional cooperation, increasing the role of digital technologies, and implementing the measures announced in the official green strategies in regular legislation.

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Authors' Contribution

All authors contributed equally to the development of this article.

Data availability

All datasets relevant to this study's findings are fully available within the article.

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