Investment policy and environmental conservation: a systematic literature review on the form of investment policy and stakeholders role

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Abstract. This research aims to analyze the forms of investment policy that can disrupt environmental conservation and stakeholder role in maintaining environmental conservation. The research method used was a systematic literature review with the following procedures: using keywords in the database to find relevant journal articles, eliminating journals irrelevant with some criteria, and analyzing the findings of journals selected. The research results show that investment policy damaging the environmental conservation is dominated by investment in the energy sector. In addition to the energy sector, another investment policy that can disrupt environmental conservation is investing in the tourism sector; micro-, small-, and medium-scale enterprise (MSME); infrastructure; and plantation sectors. The role of stakeholders participating in environmental conservation efforts due to investment policy builds on local government, central government, and non-government organizations.

1. Introduction
Economic advance is inseparable from better economic growth in a state. Many states receive economic investments in various sectors to achieve better economic growth, leading to environmental damage [1,2]. Investment practice in Indonesia positively affected economic growth in 2018, for example, in the mining sector with an investment value of $47.5 billion. One of the attempts that can be taken to promote the prosperity of all Indonesians is, on the one hand, to promote the mining sector [3]. Indonesia has enjoyed impressive economic growth for 15 years, with the means growth rate of 6% annually in the presence of such investment. It highly affects the fulfillment of people’s needs, particularly the need for product and service [4].

On the other hand, environmental problem due to this investment is also inevitable. Long-term effect leading to the environmental sector is one of the issues needing serious attention in some states in the world today, moreover recalling the long term effect of the environmental change [5]. In Indonesia, environmental issues have arisen since the 1970s when economic development was the main goal of development in Indonesia still building on the non-oil and gas sector [6]. Some cases can be seen currently due to environmental damage from environmental destruction and pollution by PT. Newmont Minahasa Raya in 2004, mercury waste case in Aceh by PT. Exxon Mobil Oil Indonesia in 2005, to oil case in Timor Sea by PT. TEP Australia in 2009, and some other unsolved cases until today [7,8]. Meanwhile, the effects of environmental damage having occurred are, among others,
2. Methodology
This research would use a qualitative research method with a systematic literature review (SLR). This SLR method was based on international journal articles searched using the database. The databases selected were Scopus, Taylor and Francis Group, and Science Direct. These databases have credibility and have been recognized by academicians internationally [12,13]. The use of keywords in this research was intended to facilitate the search for journal articles. Those keywords were investment policy and environmental conservation. The combination of both of them and the period of journal publication was limited to 2015-2020.

In detail, the procedure of research using SLR method is as follows: Using keywords on the database to find relevant journal articles, eliminating irrelevant journals with the following criteria: non-open access journal, literature review, non-English, journal republished beyond the specified period, book review, and belonging to predatory journal using Scimago website’s list, filtering the journal articles again by selecting the journals in social studies only. Then analysis will be conducted on the findings of journals. Journals relevant to each problem statement would be calculated from individual categories existing through the authors of journals. The largest number of authors would be the answer to each question included in the current research problem statement [14,15].

Following the procedure, the data source of the article obtained is explained as follows. The search for articles from Scopus database source using keywords combination of investment policy and environmental conservation, and publication period limited to 2015-2020 found at least 17,579 journal articles and having conducted filtering process through eliminating process, 180 journal articles were found. Then, 80 journals were found focusing on social studies journals only, with 6 journals relevant to this research. Furthermore, the search for journal articles using Taylor and Francis Group database found 5,303 journal articles, and from filtering and eliminating processes, 127 journal articles were found. Then, 6 journals were relevant to the research. Lastly, 41,025 journal articles were found from Science Direct database with the specified keywords. After filtering and period limitation, 100 journal articles were found, and in the last stage, 8 journals were found relevant to the research. Thus, a total of 20 journal articles were used for this study purpose.

3. Result and discussion

3.1. Form of investment policy
The investment policy is often considered as endangering environmental conservation. Many public opinions and reports associate uncontrolled investment with environmental damage. Some articles mention the potency of investment policy in degrading environmental conservation, as presented in Table 1.
Table 1. Area and form of investment policy

| Area                     | Form                                                                 | Authors | Total |
|--------------------------|----------------------------------------------------------------------|---------|-------|
| Investment in the energy area | Investment concept in energy area using traditional system tends to damage the environment because of waste and pollution produced without previous processing. | [16-24] | 9     |
| Investment in tourism area          | Tourism utilizes natural potency by changing its natural condition and topography regardless of the customary community residing around the tourism area. | [25-30] | 6     |
| Investment in the infrastructure area | Non-environment-friendly infrastructure with a high greenhouse effect and non-user-friendly one. | [31-33] | 3     |
| Investment in MSME area | Micro-scale enterprises use basic materials taken from nature massively, thereby leading to the scarcity of basic materials. | [34]    | 1     |
| Investment in plantation area | Land destruction to open land in large-scale businesses leads to a damaged environment or deforestation. | [35]    | 1     |

The forms of investment policy damaging the environment are still dominated by energy areas, in which non-environment-friendly energy and traditional resource management trigger pollution, and the non-well-processed waste product are produced by the activities in this area. Thus, it can result in environmental pollution, including water, air, and soil, indirectly leading to some disadvantages to human beings and other living creatures. On the other hand, investment in the energy area is very profitable. It creates new job opportunities, gives income to the state, and provides the community (people) with better economic life [36,37]. The forms of investment in this energy area are mining, including coal, petroleum, electric steam power plants, nuclear energy with radiation hazards [16–18]. Some states, particularly Middle Eastern, are still highly dependent on investment in this energy sector currently, particularly oil and gas sources, in which as known nearly 1/3 (a third) of the world’s oil need is supplied by the Middle Eastern states like Saudi Arabia, Qatar, Oman, Bahrain, UEA, Iran, Iraq, and other countries [38,39].

On the other hand, the environmental effect of investment in the energy area is reconsidered. Saudi Arabia facing CO$_2$ pollution due to very high fuel consumption, the 6th (sixth) position in the world today, rapid population growth, and cheap fuel price because it is the state with second largest oil production in the world, so that its population mobility is very high [41]. Similarly, in Qatar, the environmental impact has shown such signs as increased outdoor temperature by 40%, gas pollution, sand storms occurring more frequently, and pollutions in some harbor locations adjacent to the oil and gas company location [40]. Considering the explanation above, investment can improve a state’s economic condition and bring prosperity to its society, but on the other hand, some improvement and solution to the effect of investment. For that reason, the following section will discuss those involved in conserving the environment in this presence of investment.

3.2. The role of stakeholders in investment policy

Environment conservation needs the participation of stakeholders related to a state’s investment policy. The attempts taken by those involved in managing investment to keep conserving the environment are presented in Table 2.

From Table 2, a conclusion can be drawn concerning the attempt taken by those involved in conserving the environment as the effect of investment policy building on local government. Local governments should have full and strong political power in their regions. They should commit to transforming renewable energy and leaving fossil energy to tend to be environment-friendly [17–20]. Although renewable energy takes time or cost in its development, it can be developed in the future. Recalling the resource reserve using fossil energy decreases, and nearly all states attempt to find alternative energy sources in their region [22,23].
Table 2. Attempts taken by stakeholders of investment policy

| Area                  | Form                                                                 | Authors               | Total |
|-----------------------|---------------------------------------------------------------------|-----------------------|-------|
| Non Government        | Taking some action to campaign for renewable energy and declining   | [16]                  | 1     |
| Organization          | investment in non-renewable and non-environment-friendly fossil     |                       |       |
| Local Government      | Being committed to investing in renewable energy due to local       | [17-24], [32-33]     | 10    |
|                       | government with full authority over the transformation of renewable energy |                       |       |
| Central Government    | Taking some attempts to revise investment policy                     | [25-31], [34-35]     | 9     |
|                       | corresponding to national objective and interest, and putting the people’s interest on others’ interest |                       |       |

Local government is required to be committed to developing renewable energy to achieve independence in the renewable energy area, particularly because local government has authority over management in any areas for the sake of its people prosperity, and the central government gives financial support to the local government authorized to implement the commitment [42,43]. The local government is considered one of big power elements in managing renewable resources to achieve environment-friendly energy. In Malaysia, natural wealth existing should be conserved by mapping the condition of the environment in the corresponding region, particularly in Serawak and Sabah Federation State area. It should be reported to the central government and supported with solid regulation and law enforcement [44].

Similarly, Chungcheongnam-do Province, South Korea state also developed a road map related to environmental health policy implemented since 2017 through 2020 involving some elements: mass organizations, academicians, employers, and research centers helping develop this road map successfully. The local government of Chugnam province is also known to divide its region into some categories: industrial area, population settlement, education area, government center, all of which need cooperation among those involved, participation, and good communication among them [45]. Local governments can take many attempts to realize their commitment to maintaining this conservation. From some examples aforementioned, it can be seen that environment conservation should be the main priority, particularly related to good investment activity in the energy sector and other sectors tending to harm the environment. Prudence is required in which investment can generate an economic change on the one hand, for example, in Middle Eastern countries, but can also cause disaster in the form of adverse environmental damage on the other hand.

4. Conclusion
There are some forms of investment policies that can damage the environment indirectly. Investment policy in the energy area most frequently leads to environmental damage. Investment policy in the energy area still using traditional technology results in pollution and produces non-well-processed waste due to limited equipment and technology. Those involved in the attempt to conserve the environment are emphasized more on local governments that play a vital role and have strong authority and political power because they master region, thereby requiring a strong commitment to supporting the transformation of renewable energy. In addition, some attempts can be taken to realize the commitment: developing a road map of a region to facilitate supervision, supported with regulation and law enforcement, to achieve the environment conservation contributing indirectly to the life sustainability of human beings and other living creatures residing within.

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