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Asian Infrastructure Investment Bank (AIIB)'s sustainable safeguard mechanism on energy projects

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ABSTRACT

Asian Infrastructure Investment Bank (AIIB) was officially established by China in 2016 with one of the aims to develop energy infrastructure based on green and sustainable principles in Asia. To achieve that, AIIB has set forth safeguard policies, including the Environmental and Social Framework (ESF) applied for funded projects and the AIIB Energy Sector Strategy, to guide its energy investments. However, the effects of the safeguard policies and further safeguard operations on the energy projects remain unknown. This study reviews AIIB's safeguard mechanism on energy projects, including the safeguard policies, assessment and management plans, and implementations of AIIB's energy projects. We find that AIIB's current safeguard mechanism on energy projects, in comparison with other established multilateral development banks (MDBs), is still at its beginning stage, which does not match its goal and promise on sustainable energy development in Asia.

1. Introduction

Launched in January 2016, the Asian Infrastructure Investment Bank (AIIB) is the newest multilateral development bank (MDB) and has 83 countries as members to date [1]. With a focus on Asian infrastructure development, such as hydropower infrastructure, roads, and railways [2,3], AIIB has invested on 106 approved projects of energy, finance, transport, water, and other sectors across 27 regions with a total funding amount of $21.95 billion by November 30, 2020 [4]. The establishment of the AIIB is extremely timely as Asia has been experiencing a substantial infrastructure demand gap (with an estimated worth of $26 trillion) [5], especially in the energy sector. Taking electricity as an example, over 350 million people living in Asia still lacks access to electricity [6]. Asia also faces a faster growing demand for energy than other regions [7] due to the unprecedented population growth and increased industrialization [8]. Besides, climate change poses another major challenge for Asian countries [9], which puts forward higher requirements to develop clean energy through decarbonisation and renewable energy transition [10].

To meet the goal of the Paris Agreement and Sustainable Development Goals (SDGs) that limit the global warming within 1.5 °C and reduce the impacts of climate change to zero by mid-century [11], it is essential to achieve global CO2 emissions reduction [12]. With the leading and exemplary role in fighting climate change, MDBs, such as World Bank (WB) and Asian Development Bank (ADB), have reduced their investment on fossil fuel energy projects and prioritized renewable energy funding since 2013 [13]. Asia is confronted with the energy challenges of over-dependence on fossil fuels and rapid increasing combustion-related CO2 emissions, as well as extensive local pollution [14]. In this regard, AIIB is expected to align with the Paris Agreement and SDGs, and to prioritize affordable, reliable, modern and sustainable energy development in Asia [15].

AIIB has constantly stressed that it fully supports sustainable investments in infrastructure development with its core value of 'lean, clean and green' with regard to pursuing the highest possible efficiency, underpinning ethics and accountability, and enhancing sustainability in operations [16]. At the second annual meeting of AIIB, Xiao Jie, then Minister of Finance of AIIB, emphasized that the bank was established to accelerate socio-economic development by promoting sustainable infrastructure in the context of the 2030 Agenda for Sustainable Development [17]. In addition to public statements, AIIB proposed Environmental and Social Framework (ESF), a safeguard policy framework applied to all AIIB's projects to ensure sustainable development through environmental and social risk assessment, management and

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monitoring of the project [18]. As the investment on energy sector dominates its project portfolio (accounting for 21% of the AIIB total investment) [4], AIIB further established the AIIB Energy Sector Strategy to ensure energy security and to limit the impacts of its invested energy projects [14].

There are, however, concerns with the insufficiency of AIIB's current safeguard policies and strategies in preventing the negative socio-environmental impacts of energy infrastructure [19,20]. Lack of substantial actions in delivering its sustainable promise is one of the main causes of the growing concerns. For example, AIIB's president Jin Liqun emphasized that the bank will not finance any coal-fired power plants or any projects that are functionally related to coal at the launch of the AIIB-Amundi Climate Change Investment Framework in 2020 [21]. Nevertheless, at the time of writing, AIIB has not confirmed its commitment on coal-banning in its official documents, or introduced a systematic climate change response policy or strategy [19]. Meanwhile, the ESF has not proposed any restrictions on coal and fossil energy, and has lacked measurable goals or targets towards climate change [19]. In the meantime, the implementation of AIIB energy projects has encountered resistance and criticisms for their negative impacts on local ecology and community. For example, during the implementation of the Tarbela 5 Hydropower Extension Project in Pakistan, local communities protested against the project due to the lack of proper compensation and resettlement, and deteriorating environment [20].

MDBs' safeguards must be abided by the recipient country with MDBs' finance for project development [22]. Therefore, this paper aims to examine AIIB's safeguard mechanism with a special focus on the energy projects financed by AIIB. Here, the safeguard mechanism includes the safeguard policies, assessment and management plans, as well as the safeguard implementations of energy projects. The main objective is to examine AIIB's safeguard mechanism on energy projects by comparing to other established MDBs (mainly WB and ADB) with relatively mature and comprehensive safeguard systems. This is achieved by a critical review of AIIB's safeguard policies including the ESF and the Energy Sector Strategy, as well as all publicly available sustainable safeguard documents, including environmental and social impact assessment (ESIA) and management plan (ESMP) of AIIB's energy projects approved by the end of November of 2020.

The paper is organized as follows. The next section reviews AIIB's environmental and social safeguard policies related to energy projects, including the ESF and the AIIB Energy Sector Strategy. Following that, the third section will discuss AIIB's safeguard mechanism on energy projects, including assessment of AIIB's safeguard policies on energy projects, and the assessments of safeguard mechanism on co-financed energy projects and stand-alone projects. Section four then concludes with the findings.

2. AIIB's environmental and social safeguard policies and strategies on energy projects

This section reviews AIIB's safeguard policies for energy projects, mainly focusing on the ESF and the Energy Sector Strategy of AIIB. The ESF reflects AIIB's environmental and social goals and principles, while also provides a sustainable guidance framework for AIIB's projects, including energy projects. With its focus on sustainable energy in Asia, the Energy Sector Strategy is established to provide the framework, principles and operational modalities to guide AIIB's energy projects.

2.1. Environmental and Social Framework (ESF)

In line with the three pillars of sustainable development, AIIB integrated goals and targets on economic, social, and environmental sustainability [18], promising to support regional social development, environmental conservation, and economic growth [23]. In such context, AIIB's ESF has been approved to establish sustainable guidelines for funded projects to ensure environmental and social soundness [18].

MDBs often play a vital role in helping the recipient country to improve the socio-environmental planning by setting up or strengthening the environmental and social requirements [24,25]. Likewise, the ESF established by the AIIB has the opportunity to set international standards to support sustainable infrastructure development [26,27]. Informed by sustainable safeguard policies of other MDBs [28], the ESF reflects the institutional environmental and social sustainable goal, and provides a structure and framework for its stakeholders to identify and manage potential social and environmental impacts throughout the project development cycle [18]. Additionally, the ESF has set out a series of visions of sustainable development, including coping with climate change, embracing the social development and inclusion such as gender equality and equal treatment of employees, recognizing client's[1] leading role in preparation and implementation of the project, emphasizing environmental and social impact management during implementation, respecting and strengthening the country's corporate systems, and supporting green economic growth, among others [18].

The key component of AIIB's ESF is the Environmental and Social Policy (ESP). The ESP is an overreaching policy of ESF to facilitate the sustainability of infrastructure development. It sets forth "mandatory environmental and social requirements for each Project".[2] The ESP clarifies the roles and responsibilities of AIIB and the client, defines the categories[3] of the projects (A, B, C & FI) regarding their risks and impacts, introduces the environmental and social assessment scope and requirement, and regulates the information disclosure, consultation, grievance redress mechanism. The Environmental and Social Standards (ESSs), as part of ESP, on the other hand, sets out three detailed elements regarding Environmental and Social Standards for Assessment and Management (ESS1), involuntary resettlement (ESS2) and indigenous people (ESS3) [18].

According to the ESP, throughout the project cycle, AIIB's main environmental and social due diligence includes screening and categorizing the project, reviewing Environmental and Social Impact Assessment (ESIA), and Environmental and Social Management Plan (ESMP) prepared by the client, assessing applications of ESP and ESSs, monitoring and analysing the gap of project's design and implementation, along with disclosing information. Meanwhile, the client is responsible for making environmental and social assessment, assessing alternatives, preparing the risk and management plan, organizing public consultation, setting up redress mechanism, and ensure information disclosure (Table 1). Besides, AIIB's ESP also leaves a flexible space for the client to adopt the environmental and social safeguard standards, regulatory systems, and standards proposed by recipient country and co-financing organization(s) [18].

As discussed, the ESF sets forth requirements for project approval and loan disbursement, as well as responsibilities of AIIB and the client, which are applied to all projects of AIIB. Given the significance and high impacts of energy infrastructural projects, AIIB further proposes AIIB Energy Sector Strategy—Sustainable Energy for Asia [14].

2.2. AIIB Energy Sector Strategy- Sustainable Energy for Asia

"Energy is central to nearly every major challenge and opportunity the world faces today" [29]. However, the speed of the transition to less carbon-intensive resources and technology is "not fast enough to meet energy security and climate goals" [30]. In line with global sustainable energy initiatives, such as 2030 Agenda for Sustainable Development

[1] Client means the recipient of the Bank financing for a Project and any other entity responsible for implementation of the Project [18].

[2] Project means the specific set of activities for which the Bank financing is provided [18].

[3] The project will be categorized as A, B, C or FI according to its environmental and risks [18].

Table 1
Key steps and requirements of the ESP. Source: compiled by the authors based on AIIB's ESP [18].

Actor	Step	Requirement
AIIB Client	Project identification, screening, and categorization	• Screen and analyse potential environmental and social risks and impact of every proposed project; • Categorize the projects as A, B, C or FI based on the results of screening. Category A means projects may have significant adverse impacts affecting a larger area that the project sites; Category B means projects with a limited number of potentially adverse impacts within the Project area, which can be successfully managed; Category C means projects with minimal or absent adverse impacts; Category FI means project funds to or through a financial intermediary (FI)The category of project will determine the different required actions; • AIIB may conduct a site-visiting for understanding potential risks and impacts.
Client	Conduct environmental and social assessment	• Determined on the categorization result, prepare ESIA addressing potential environmental and social risks and impacts.
Client	Assessment of alternatives	• Assess alternatives under ESSs.
Client	Preparation of ESMP	• Develop an ESMP for projects under Category A and B. If the project is under ESS2 and ESS3, the involuntary resettlement plan and indigenous peoples plan should be developed additionally.
AIIB	Review ESIA and ESMP	• Review the relevant materials provided by the client.
Client Public	Public consultation & project-level Grievance Redress Mechanism (GRM)	• Conduct continuous meaningful consultation with people affected throughout lifecycle (Consultation should be involved when preparing the ESIA and ESMP); • Set up a project-level GRM aligned with implementation of the project.
AIIB Client	Project implementation, monitoring, and reporting	• Client needs to monitor the project implementation and prepare the monitoring report; • AIIB review the monitoring report.
AIIB Client	Information disclosure	• Public disclosure of sustainable safeguard documents, including ESMP; • Regularly disclose the latest environmental and social information, as well as any major changes.

and Paris Agreement, AIIB has proposed AIIB Energy Sector Strategy-Sustainable Energy for Asia [14]. The main objective of the strategy is to cope with global concerns on energy insecurity and climate change [14]. In the AIIB energy sector strategy, the bank declares that AIIB is a green bank, and furthers its commitment to achieving global goals of sustainable energy development [31].

Aligned with global sustainable energy initiatives and AIIB's 'lean, clean and green' core values, AIIB's Energy Sector Strategy tries to support the recipient countries to meet sustainable energy goals and transition towards low energy carbon-mix, while at the same time improve and develop their energy infrastructure. To achieve that, the strategy has formed six principles to guide AIIB's energy projects: 1) promote energy access and security; 2) improve energy efficiency; 3) cut back dependence on carbon-intensive energy; 4) manage energy pollution at local and regional levels; 5) catalyse private capital; 6) facilitate cooperation and connectivity at regional level [14]. Moreover, the AIIB has proposed a Results Monitoring Framework for early years of operation around the six principles to regularly measure, monitor and report the outcome of energy portfolio as a reflection of the Energy Sector Strategy [32].

The development of AIIB's sustainable safeguard policies improve AIIB's reputation as a responsible and complete MDB. That will also reduce the concerns from member countries and facilitate dialogues with other MDBs and international organizations [33]. However, comparing to the safeguard commitments and policies on energy projects established by other MDBs in alignment with SDGs and the Paris Agreement, it is noted that AIIB's ESF and the Strategy still have gaps in its safeguard mechanism.

3. Discussion-assessment of AIIB's sustainable safeguard mechanism

This section assesses AIIB's sustainable safeguard mechanism on energy investments to examine positive outcomes achieved and deficiencies remained. We first examine AIIB's safeguard policies and strategies on energy projects. Then we analyse the safeguard management and implementation of AIIB's approved co-financed energy projects and stand-alone projects to explore the achievements and gaps of AIIB's current safeguard mechanism.

3.1. Assessment of AIIB's sustainable safeguards policies on environmental projects

AIIB's sustainable safeguard policies share a lot of similarities with other MDBs, especially the environmental and social policy frameworks of WB and ADB [33,34]. Especially, ESS1 is formed drawing upon WB's ESS1 and sets forth identification and management approaches for social and environmental risks [33]. ESS2 and ESS3 also follow pre-existing policies adopted by international organizations including WB and most of the international lending institutions [35]. Additionally, AIIB allows the recipient countries to conduct their own sustainable safeguard mechanisms, which is also aligned with WB's new standards entering into force in 2018 [36]. Such similarity could be explained mainly in three regards.

Firstly, AIIB is expected to set forth a stronger sustainable safeguard mechanism in accordance with standards adopted by international society, which could be seen as a normative pressure for AIIB [37]. For example, Japanese Minister of Finance, Taro Aso, states that Japan may consider acceding to AIIB only if the Bank could prove itself an accountable development bank abiding by environmental and social standards generally and globally accepted [38]. Secondly, the internal structure of AIIB also plays a role since the majority of AIIB's employees were high-level professionals in other international organizations. For instance, AIIB's president Jin Liqun was ADB's vice president [34]. Lastly, the coherence in safeguard policies could also contribute to the collaboration with other MDBs and lead to a healthy relationship and cooperation [33], which helps build AIIB's reputation as a more reliable partner. However, the safeguard polices on energy investment, such as setting goals in response to the Paris goal and SDGs, still have gaps comparing to other MDBs.

Target-setting on ending support for fossil fuel projects could be an important example here. The WB has announced coal power would no longer be financed except under exceptional circumstances in 2013 to reduce carbon emission [39]. Since then, other MDBs have adopted similar policies to reduce the fossil fuel power plants financing in developing countries and prioritize investments on renewable energy to cope with climate change [13]. As seen in Table 2, the WB and European Bank for Reconstruction and Development (EBRD) have clearly exclude the coal projects in their investments, and the WB has also excluded oil and gas activities since 2019 [15]. Whilst AIIB's president again made a statement that "let me be very clear: I am not going to finance any coal-fired power plants; further, AIIB will not finance any projects that are functionally related to coal" in September 2020 [21], AIIB has not confirmed the exclusion of the coal-power plants and other fossil fuel energy projects in any of its safeguard polices to date (Table 2).

Meanwhile, while AIIB's Energy Sector Strategy claims to prioritize the investment on renewable energy, it appears that natural gas is still considered as equally relevant even that is less consistent with the low-

Table 2
Exclusion list of energy investment of eight MDBs*. Source [15]:.

Exclusion List of Investments in Energy Project	AIIB	WB	EBRD	ADB	AfDB	EIB	IDBG	NDB
Coal-fired Projects		✓	✓					
Exploration of New Oil Fields		✓	✓	✓	✓			
Exploration of New Gas Fields		✓		✓	✓			
Extraction of Oil		✓		✓				
Commercial Logging in Primary Tropical Forest	✓			✓	✓	✓	✓	

Note: *Eight MDBs–Asian Infrastructure Investment Bank (AIIB), World Bank (WB), European Bank for Reconstruction and Development (EBRD), Asian Development Bank (ADB), African Development Bank (AfDB), European Investment Bank (EIB), Inter-American Development Bank Group (IDBG), and New Development Bank (NDB).

carbon economy goal of the Paris Agreement [11,15]. As of November 30, 2020, with a total funding amount of US$4.014 billion in energy projects, fossil fuel investment still dominates AIIB's approved energy portfolio with a share of 52%, which is almost as twice as the share of renewable energy (27%) (Fig. 1). Particularly, the funding amount on renewable includes a large share on hydropower energy (42.2%). Thus, investment on renewables excluding hydropower is US$ 616.7 million, and accounts for 57.8% of AIIB's total portfolio of renewable energy (US $ 1066.7 million). Nevertheless, ADB's annual investment in clean energy in 2015 already reached US$ 2.5 billion [40]. In this regard, AIIB's investment in renewable energy is far from enough to fulfil its goal of driving Asia's green recovery and transition, comparing to ADB that is also aiming at infrastructure development in Asia.

Additionally, the target on increasing investment on sustainable renewable energy technology to promote energy access is also lacking in AIIB's current environmental and social safeguard policies, which has already been addressed by African Development Bank (AfDB). AfDB pledges a fund of US$75 million on "off-grid" connections by 2025 [11]. As illustrated in Table 3, except for Myanmar, Tajikistan with hydropower [41,42] and Nepal with biomass [43] as their main sources for electricity generation, other countries with AIIB's energy investment still highly rely on fossil fuel to generate electricity [44], and achieve a little on electricity production from renewable energy excluding hydropower plants [45]. Additionally, there are still certain amount of population in some countries are still without access to electricity in 2018, such as Myanmar and Pakistan (Table 3) [46]. Drawing on that, AIIB is expected to facilitate the energy transition from fossil fuel to renewable energy in recipient countries to become truly 'green', and to meet the Paris goal. Nevertheless, the progress is relatively slow so far.

Moreover, AIIB has no target on reducing GHG emissions. In comparison, ADB has set the goal in peaking direct GHG emissions by or before 2030 [11]. Besides, at the UN Climate Action Summit in 2019, AIIB and 8 other MDBs pledged their annual climate finance will level up to US$175 billion by 2025 [48]. However, this climate finance has not yet been confirmed by AIIB to date.

Besides the lack of specific environmental targets, social sustainability seems to be marginalized. During his visit to Washington in 2015, President Xi Jinping promised that AIIB would stand for "highest

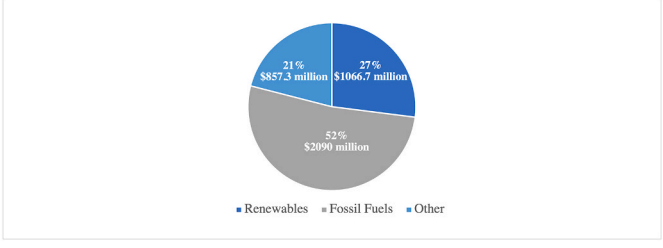

Fig. 1. AIIB's approved energy portfolio by energy type**
Source: author'
s figureNote
other in the energy type** means the projects of transmission and distribution, where the fuel source is not clearly defined.

international environmental and governance standards", and did not mention the social standards [49]. Labour rights, as an important aspect in social standards, is only briefly explained, and labour protection does not even exist in ESF [50]. The informal land rights has also not been recognized in ESS2, and gender equality is only encouraged not required in its ESF [51]. Additionally, the Grievance and Redress Mechanism (GRM) has not been clearly designed and provided [50], and the ESF lacks a time-bound information disclosure prior to consideration of approving the project [15,51]. Moreover, the ESF does not include an exit option regarding the Free, Prior and Informed Consent (FPIC) of indigenous people, which is basically a worldwide agreement regulated in the United Nations Declaration on the Rights of Indigenous People (UNDRIP) [52].

The ESF of AIIB is also found vague and unclear. The guidelines for projects under various categories have not been successfully provided. For example, guidelines for Category A projects with significant impacts have not specified industry and project types [53]. Due to the absence of a universal mandatory requirements, Category B projects with limited impacts may be approved without adequate assessment on environmental and social impacts [54]. Meanwhile, taking into account that broad discretion has been given to recipient country, the client is required to take responsibility for collecting environmental and social data, assessing impacts and mitigating the risks associated with projects [33]. AIIB's role is then to undertake effective monitoring, while it remains unknown how AIIB conducts this responsibility [36].

Currently, 99% of AIIB's approved energy investment goes to the middle and low-income economies (Fig. 2), which is in line with its goal of supporting the development of energy infrastructure in developing countries. However, these countries are usually ill-equipped with sound Environmental Impact Assessment and Social Impact Assessment (EIA and SIA) systems, such as Bangladesh, Nepal, and India [55]. Moreover, as discussed above, there are many deficiencies in AIIB's sustainable safeguards policies on energy projects. These might lead to substantial negative impacts on local affected communities and their eco-systems. Consequently, an examination is needed in terms of safeguard mechanism on energy project level.

3.2. Assessment of safeguard mechanisms on AIIB's Co-financed energy projects

In response to the requirements of AIIB's safeguard policies, the client needs to prepare Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plan (ESMP) to get the project funding. These safeguard documents approved and released by AIIB usually include the risk scanning, impact assessment, management plans, as well as safeguard measures taken, such as public consultation and information disclosure prior to the approval of the project. Thus, these safeguard documents not only provide direct guidance on the project operational process, but also research materials to study AIIB's safeguard mechanism. Based on the review of ESIA and ESMP of AIIB's energy projects approved by November 30, 2020, Table 4 is formed to provide information of the projects and their sustainable safeguards, including the safeguard policies adopted by the projects, the key stakeholders involved, and safeguard operations of

Table 3
Recipient Countries of AIIB's Approved Energy Investment. Source: compiled by the author based on energy data released by WB [44–46] and AIIB approved energy portfolio as of November 30, 2020.

Country	Number of Approved Projects	Funding Amount (US$ Million)	Income Level of Borrowing or Recipient Economy***	Access to Electricity % of population 2018 [46]	Electricity production from oil, gas and coal sources in 2015 (% of total) [44]	Electricity production from renewable sources, excluding hydroelectric in 2015 (% of total) [45]
Turkey	2	700	Upper-middle	100	67.85	6.31
Azerbaijan	1	600	Upper-middle	100	92.59	0.41
Bangladesh	5	605	Lower-middle	85.16	92.59	0.27
India	4	360	Lower-middle	95.24	81.89	5.36
Myanmar	1	20	Lower-middle	66.26	41.15	0
Nepal	2	202.3	Low-income	93.92	0	0.2
China	2	750	Upper-middle	100	72.96	4.86
Tajikistan	1	60	Low-income	99.3	1.53	0
Pakistan	1	300	Lower-middle	71.09	63.09	0.76
Egypt	1	210	Lower-middle	100	91.74	0.88
Oman	1	60	High-income	100	100	0
Kazakhstan	1	46.7	Upper-middle	100	91.13	0.17
Multi-country	1	100	NA	NA	NA	NA
Total	**23**	**4014**				

Note: the category of income level of borrowing or recipient economy*** is according to the Joint Report on MDBs' Climate Finance 2019 [47].

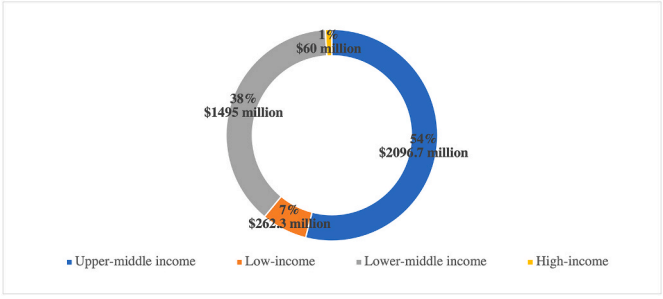

Fig. 2. AIIB's energy investment in all economies. Source: author's figure. Note: the category of economy is according to the Joint Report on MDBs' Climate Finance 2019 [47].

stakeholders. As shown, all co-financed energy projects adopt the co-financer's safeguard policy, while all stand-alone energy projects adopt AIIB's ESF. We then discuss the AIIB's safeguard mechanism on the bank's co-financed and stand-alone projects in turn.

In AIIB's initial three years (2016–2018), most of the bank's investments went to co-financed projects led by other MDBs (n1), with only three stand-alone energy projects approved (Fig. 3). Though a new trend sees more investments on stand-alone projects, more than half of approved energy projects are still co-financed by AIIB with other MDBs and finance institutions (mainly WB, ADB and IFC) as of November 31, 2020.

As indicated in the ESF, the co-funding MDB(s) of the project "will administer the Bank's loan on behalf of the Bank[4]" [18]. By doing so, the co-financer plays a key role during the project development process, including field visits, project implementation, progress, procurement, oversight, and documentation writing [78]. Additionally, co-financed projects with other MDBs provide AIIB an opportunity for meeting the goal of approving new loans of a certain amount, as well as taking on projects with high reputation and credential, and low risk of co-financer [78]. As verified in previous researches, MDBs play a crucial role in establishing and improving recipient countries' sustainable development standards by funding infrastructure development with higher requirements addressing environmental and social impacts [24,25]. Adopting relatively mature safeguard mechanisms established by co-funding MDBs, AIIB's co-financed energy projects are also contributing to the improvements of local safeguards.

One of the main contributions of the co-financed projects lies in the improvement on local social safeguards. The ESMPs of both Pakistan's Tarbela 5 Hydropower Extension Project [73] and Nepal's Upper Trishuli-1 Hydropower Project [68] include specific gender strategies to facilitate gender equality. The strategies help to meet the gap of social safeguard legislation on gender equality in Pakistan and Nepal, with an objective of mitigating the occupation inequity with regard to work opportunity and wage [68,73]. Additionally, the Upper Trishuli-1 Hydropower Project also contributes to the first FPIC process for ensuring indigenous people's rights in Nepal under the safeguard guidance from the co-financer IFC [68].

Besides that the improvement in social safeguards, evidence also shows environmental safeguards are also enhanced at both project and national levels. For example, the EIA of Tuz Golu Gas Storage Expansion Project in Turkey [57] clearly points out the most stringent environmental standards are chosen between international standards and local standards to guide the environmental implementation of the project. The POWERGRID (client of Transmission System Strengthening Project in India [63]) has launched its own Environmental and Social Policy and Procedures (ESPP). With the reference of WB's ESPP, POWERGRID's ESPP is set up to regulate and secure the environmental and social sustainability in operations at both organization and project level. Additionally, Indian laws related to environmental issues have been strengthened in the last decade due to local needs and commitments for international funding [63]. Similarly, a state-level Environment and Social Management Framework has been issued to provide environmental and social safeguard framework for the transmission projects of the Andhra Pradesh State (see Andhra Pradesh 24*7 Project in India [64]).

As discussed, direct adoption of the best safeguard practices and prior ESF experiences from other co-funding MDBs could bring benefits to AIIB, such as a more efficient project process with good reputation [33]. However, such an approach may weaken the role of AIIB as the bank's due diligence is only to review project information and the ESMP, and to undertake other less important work (see Upper Trishuli-1 Hydropower Project [68]). In this regard, the effect of AIIB's safeguard mechanism on energy project level still remains unknown. Thus, we will turn to AIIB's stand-alone energy projects with AIIB's ESF as guiding safeguard policy.

[4] The Bank refers to the AIIB.

Table 4
Information about AIIB's energy projects and sustainable safeguards. Source: compiled by the author based on safeguard documents of approved energy projects by November 30, 2020.

Project/Category/Country/ Approval Year	Co-financing Partner (if any)/Safeguard Policy Adopted	Stakeholder & Measures for Environmental and Social Safeguards			
		Government	AIIB	Co-financer	Client & Others
Efeler 97.6 MW Geothermal Power Plant Expansion Project [56]/Category A/Turkey/2019	**EBRD**/EBRD E&S Policy & EBRD Performance Requirements (EBRD PRs)	**National Ministry of Environment & Urbanization (MoEU)** Conducted National Environmental Impact Assessment (EIA) and granted permits of the project Addressing civil society organizations' concerns, MoEU proposes Cumulative Impact Assessment of Turkey's geothermal resources exploration and development with EBRD	Due diligence: review if policies proposed by EBRD is in line with AIIB's ESP, ESSs, etc.	**EBRD** Due diligence: review the documents prepared by client; and confirm the company's track record in implementing an Environmental, Health, Safety and Social Management System	**Client: Gürmat Elektrik Uretim A.S** Prepare environmental and social assessment; Stakeholder Engagement Plan (SEP); and Environmental and Social Action Plan (ESAP)
Tuz Golu Gas Storage Expansion Project [57]/ Category A/Turkey/2018	**WB & Islamic Development Bank**/ WB's Environmental and Social Safeguard Policies (ESSP)	**National MoEU** Provide environmental laws and policies to regulate the EIA	Due diligence: besides review the WB's policies, AIIB ensures implementation in dealing with environmental and social impacts	**WB** Due diligence: scan and identify the category of the project, review the documents prepared by the client, and monitor the implementation	**Client: BOTAS** Prepare the ESIA, Resettlement Action Plans (RAP), and Resettlement Policy Framework The ESIA is prepared with the guidance of national laws and regulation, as well as WB's ESSP and WB′ Environmental, Health, and Safety Guidelines (EHS guidelines), and the ESIA chooses the most stringent standards between international and local standards
Trans Anatolian Natural Gas Pipeline Project (TANAP) [58]/ Category A/Azerbaijan and Turkey (host country)/2016	**WB, ADB, EBRD and EIB**/WB's ESSP and other references, such as IFC General Environmental, Health and Safety (EHS) Guidelines, and relevant European Directives on ESIA.	**Government of the Republic of Turkey and the Government of the Republic of Azerbaijan** Sign up the Intergovernmental Agreement and Host Governmental Agreement (Turkey); set up the legal framework **MoEU of Turkey** Provide environmental protection framework, legally approve for the ESIA report of TANAP and monitor	Due diligence: besides review and visit the sites, AIIB will join forces with WB in the project supervision given the importance of the project	**WB** Due diligence: prepare and sign up Project Co-Lenders' Agreement, visit the project sites, and review the safeguard documents of TANAP	**Client: Southern Gas Corridor Joint Stock Company** Prepare ESIA that contains Biodiversity Action Plan, Cultural Heritage Assessment, Guide to Land Acquisition and Compensation, RAP and SEP; and prepare Social and Environment Investment Program for TANAP All assessments and plans are based on international good practices and standards.
Bhola IPP [59]/ Category B/Bangladesh/2018	**Stand-alone project**/ AIIB's ESF	**Department of Environment (DoE)** Ensure the application of environmental laws and grant environmental clearance	Due diligence: scan, conduct field visits, identify, review and monitor the project		**Client: Nutan Bidyut (Bangladesh) Limited** Prepare ESIA, ESMP, Resettlement Planning Framework (RPF), Gender Action Plan, SEP, and Labour and Influx Management Plan; and provide monitoring indicators, responsibilities, budgets and schedules of these plans
Power System Upgrade and Expansion Project [60]/ Category B/Bangladesh/2019	**Stand-alone project**/ AIIB's ESF	**DoE** Ensure the application of environmental laws and grant environmental clearance	Due diligence: scan, conduct field visits, identify, review and monitor the project		**Client: Power Grid Corporation of Bangladesh** Prepare ESIA, ESMP (as part of ESIA), and RPF. Specifically, the ESIA is in response to national and AIIB's requirements, while it adopts WB's EHS guidelines to address sustainability such as the

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Table 4 (*continued*)

Project/Category/Country/ Approval Year	Co-financing Partner (if any)/Safeguard Policy Adopted	Stakeholder & Measures for Environmental and Social Safeguards			
		Government	AIIB	Co-financer	Client & Others
					air quality and the labour influx.
Natural Gas Infrastructure and Efficiency Improvement Project [61]/Category A/Bangladesh/2017	**ADB**/ADB's SPS	**DoE** Review and issue the required domestic environmental permits for the project. Once concerns are raised by the DoE, the Initial Environmental Examinations (IEEs) and the Environmental Management Plans (EMPs) should be modified accordingly.	Due diligence: review the related documents, conduct field visits for the special issue (infringements with rural structures and settlements), and monitor the project	**ADB** Due diligence: in addition to fundamental responsibility, updated IEEs and revised EMPs will need to be cleared by ADB	**Client: Bangladesh Gas Fields Company Limited and Gas Transmission Company Limited** Prepare IEEs, EMPs (included in the IEEs) and Resettlement Plan
Distribution System Upgrade and Expansion Project [62]/ Category B/Bangladesh/2016	**Stand-alone Project**/ AIIB's ESF	**Government of Bangladesh and DoE** The Government of Bangladesh requires the client to prepare IEE, and DoE issues the environmental clearance	Due diligence: scan, conduct field visits, identify, review and monitor the project		**Client: Dhaka Electric Supply Company Limited** Prepare ESMP, IEE, and Environmental and Social Review
Dhaka and West Zone Transmission Grid Expansion Project/ Category A/Bangladesh/ 2019	**ADB**/ADB's SPS	**DoE, Ministry of Power, Energy and Mineral Resources, Government of Bangladesh for the ADB** DoE is in charge of ensuring the application of environmental laws and grant environmental clearance; Ministry of Power, Energy and Mineral Resources and the Government of Bangladesh for the ADB help to prepare the IEE with the client	Due diligence: review related files, conduct field visit, and monitor the project	**ADB** Due diligence: scan, conduct field visits, identify, review and monitor the project	**Client: Power Grid Company of Bangladesh (PGCB)** Prepare the IEE, EMP and Resettlement Plan (RP); conduct public consultations and disclose the information; and set up GRMs
Transmission System Strengthening Project (Tamil Nadu) [63]/ Category B/India/2017	**ADB**/ADB's SPS	**Ministry of Environment and Forests (MoEF)** Provide national environmental laws and regulations, as well as Constitutions Provisions for social safeguards; and grant environmental clearance	Due diligence: review related files, conduct field visit, and monitor the project	**ADB** Due diligence: scan, conduct field visits, identify, review and monitor the project	**Client: India POWERGRID** Develop POWERGRID's own Environmental and Social Policy and Procedures and prepare IEE, including EMP, and Compensation Plan for Temporary Damages based on that.
Andhra Pradesh 24*7- Power for All [64]/ Category B/India/2017	**WB**/WB's ESSP	**MoEF:** power transmission and distribution projects do not require an EIA/ Environmental Clearance **Government of Andhra Pradesh**: establish Andhra Pradesh Right to Fair Compensation and Transparency, that is the structure of the Social Impact Assessment (SIA); and prepare Environment and Social Management Framework – a general framework that is adopted for all transmission and distribution projects in the State	Due diligence: review related files, conduct field visit, and monitor the project	**WB** Due Diligence: require an environmental assessment, scan and identify the category, and review ESMP	**Client: Andhra Pradesh Transmission and Distribution companies** Prepare SIA, Social Management Plan, EIA, Compensation Plan for Temporary Damages, Environment, and Social Management Framework, Tribal People Planning Framework, Resettlement Policy Framework, and Implementation Arrangements
Ayana Anantapuramu NTPC Solar Project [65]/Category B/India/2020	**Stand-alone Project**/ AIIB's ESF	**MoEF:** solar energy projects and renewable energy projects in India do not require an EIA/ Environmental Clearance **Government of Andhra Pradesh:** release a new solar power policy and set up a Renewable Energy Certificate (REC)	Due diligence: scan, conduct field visits, identify, review and monitor the project		**Client: Ayana Ananthapuramu Solar Private Limited (AASPL) & Ayana Renewable Power Pvt. Ltd (ARPPL)** AASPL need to prepare the ESIA report and ESMP per AIIB's ESP, IFC's PSs and WB's EHS guidelines; and set up project-level and

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Table 4 (*continued*)

Project/Category/Country/ Approval Year	Co-financing Partner (if any)/Safeguard Policy Adopted	Stakeholder & Measures for Environmental and Social Safeguards			
		Government	AIIB	Co-financer	Client & Others
		mechanism to encourage new PV projects and investments **Regulatory authorities of central, state and district levels such as Renewable Energy Development Corporation of Andhra Pradesh and others:** grant permits and approvals; and monitor the projects			worker GRMs ARPPL should majorly supervise and report the project performance and it has set up an Integrated Management System (IMS) at the company level to manage the activities and operations regarding the quality, health & safety and environment
Rajasthan 250 MW Solar Project–Hero Future Energies (HFE) [66]/Category B/India/2019	**IFC**/IFC's Environmental and Social Sustainability Policy (IFC ESSP) and Performance Standards (IFC PSs)	**MoEF** Solar energy projects and renewable energy projects in India do not require an EIA/Environmental Clearance	Due diligence: review related files, conduct field visit, and monitor the project	**IFC** Due diligence: conduct site visits, prepare Environmental and Social Review Summary and monitor the project	**Client:: Clean Solar Power (Jodhpur) Private Ltd. (CSPJPL)** Prepare the ESIA; conduct the consultation and disclose information; set up the project-level and worker GRMS; and develop a ESMS consistent with IFC's PSs
Myingyan Power Plant Project [67]/ Category A/Myanmar/2016	**IFC, ADB and commercial lenders**/ IFC's Policy on Environmental and Social Sustainability (IFC Policy) and IFC PSs	The information of government involved is not given in the environmental & social review summary released.	Due diligence: review related files, conduct field visit, and monitor the project	**IFC** Due diligence: conduct site visits, prepare Environmental and Social Review Summary and monitor the project	**Client: Sembcorp Utilities Pte Ltd** Prepare ESIA, Environment, Health, and Safety Management Plans of the project and the ESAP including Assessment and Management of Environmental and Social Risks and Impacts, Land Acquisition and Involuntary Resettlement, Labour, and Working Conditions, Communal Health, Safety and Security, Resource Efficiency and Pollution Prevention. The ESAP addresses community consultations and disclosure
Upper Trishuli-1 Hydropower Project (UT-1) [68]/Category A/Nepal/2019	**IFC, ADB, and other development financial institutions**/IFC Policy and IFC PSs	**Ministry of Energy, Water Resources, and Irrigation (MoEWRI)** Establish the Project Development Agreement	Due diligence: review related files, conduct field visit, and monitor the project	**IFC** Conduct site visits, provide specialized consultants and resources for the cumulative impact studies and Nepal's first FPIC process for Indigenous People	**Client: Nepal Water and Energy Development Company Private Limit** Prepare ESAP, non-technical environmental & social impact assessment summary report, Land Acquisition and Livelihood Restoration Plan UT-1, a specific Gender Action Plan, Nepal Employment and Skill Training Plan, Industrial Benefit Plan, Local Benefit Sharing Plan, Disaster Management Plan, and Resettlement & Rehabilitation Plan **Others: Independent environmental and social consulting to act on behalf of the Lenders' group** Review planning documentation prepared for local approvals/ permits, primarily consisting an ESIA; and scope site visit performed in early 2013 to assess the necessary complementary ESIA studies and define the gaps

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Table 4 (*continued*)

Project/Category/Country/ Approval Year	Co-financing Partner (if any)/Safeguard Policy Adopted	Stakeholder & Measures for Environmental and Social Safeguards			
		Government	AIIB	Co-financer	Client & Others
Power Distribution System Upgrade and Expansion Project (DSUEP) [69]/Category B/Nepal/2019	**Stand-alone Project**/ AIIB's ESF	**Government: Government of Nepal (GoN) and MoEWRI** Establish a legal framework for environmental assessment of development projects	Due diligence: Review, support and advice NEA, Provide clearance for E&S related instruments, Conduct the supervision. AIIB also fills the gap of the policy gaps of GoN in compensation and entitlements for landless people and also involve local representatives into the compensation process		**Client: Nepal Electicity Authority (NEA)** Be in charge of implementation and reviewing the initial E & S information and ES reports prepared by the experts and consulting firm. Provide the clearance of E&S and ensure the adequate legal covenants are included
Beijing Air Quality Improvement and Coal Replacement Project [70]/ Category B/China/2017	**Stand-alone Project**/ AIIB's ESF	**National Government and Beijing Municipality** Issue national and local regulations and laws to guide the EIA and project implementation.	Due diligence: scan, conduct field visits, identify, review and monitor the project		**Client: Beijing Gas Group Company Limited (Beijing Gas)** Prepare ESMP (including institution-based ESIA), and the GRM
Beijing-Tianjin-Hebei Low Carbon Energy Transition and Air Quality Improvement Project [71]/Category A/China/2019	**Stand-alone Project**/ AIIB's ESF	**National Government and Beijing Municipality** Issue national and local regulations and laws to guide the EIA and project implementation.	Due diligence: scan, conduct field visits, identify, review and monitor the project		**Client: Beijing Municipality and Beijing Gas** Prepare EIA (including EMP) and SIA (including RAP) in line with ESP, which address health and safety requirements and standards, labour and worker rights, and community relations in line with WB's EHS Guidelines; conduct public consultation and disclose information; and set up GRMs
Nurek Hydropower Rehabilitation Project Phase1 [72]/ Category B/Tajikistan/2017	**WB and Eurasian Development Bank**/ WB's ESSP	**State government** Publish Procedure of EIA (2006), which guides the EIA procedure	Due diligence: conduct field visit, have discussions with WB staff members, and confirm WB's due diligence	**WB** Due diligence: scan, conduct field visits, identify, review and monitor the project	**Client: Barqi Tojik (state-owned enterprise)** Prepare ESIA including Rapid Cumulative Impacts Assessment, while the SIA is not included; and prepare SEP, Stakeholders Consultation Plan and ESMP
Tarbela 5 Hydropower Extension Project [73]/Category A/Pakistan/2016	**WB**/WB's ESSP and WB's EHS Guideline	**Government of Pakistan:** provide both Environmental and Social Legislation and Guidelines **Pakistan EPA:** provide Review of IEE and EIA Regulations (national framework for preparing, submitting, and reviewing the IEE and EIA); set up EIA guidelines for power projects; and issue environmental clearance of the projects with assessment reports Provincial EPAs: review EIA documentation for compliance with provincial EIA requirements and procedures, and monitor the implementation of EMPs	Due diligence: review related files, conduct field visit, and monitor the project	**WB** Due diligence: scan, conduct field visits, identify, review and monitor the project; supervise the project and administer the Bank's loan on behalf of AIIB; and prepare Project Co-lenders' Agreement	**Client: Water and Power Development Authority and National Transmission and Dispatch Company** Prepare environmental and social assessment, ESMP and Social Action Plan (including a gender strategy), and Land Acquisition and Resettlement Framework which includes RAPs
Egypt Round 2 Solar PV Feed-in Tariffs Program [74]/ Category B/Egypt/2017	**IFC and other development financial institutions**/IFC's policy on environmental and social sustainability including IFC's PSs	**Egyptian New and Renewable Energy Agency:** With the support of the EBRD, initiate the Strategic Environmental and Social Assessment with international lenders **Egyptian Environmental**	Due diligence: review related files, and monitor the project	**IFC** Due diligence: scan, conduct field visits, identify, review and monitor the project	**Client: multiple energy companies in Egypt** Prepare ESIA and ESAP

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Table 4 (*continued*)

Project/Category/Country/ Approval Year	Co-financing Partner (if any)/Safeguard Policy Adopted	Stakeholder & Measures for Environmental and Social Safeguards			
		Government	AIIB	Co-financer	Client & Others
		Affairs Agency: Require EIA and approve Strategic Environmental and Social Assessment			
ADM Capital [Elkhorn] Emerging Asia Renewable Energy Fund/Category FI [75]/Multi-country/2020	**Stand-alone Project**/ AIIB's ESF		Provide funds through a Financial Intermediary; ensure the agreement is reached with the fund manager that the funds used in subprojects meet the conditions in the project's E&S documentation in the form of eligibility criteria and investment guidelines; ensure an Environmental, Social and Governance System (ESGS) is applied as the project's Environmental and Social Management System (ESMS); review the ESGS and the subprojects with significant E&S risks (all Category A&B projects; and regularly monitor the activities (e.g. field visits of selected subprojects)		**Financial Intermediary:** Be in charge of decision-making on the use of funds and apply the ESGS including screening, categorizing, appraisal, contracting and monitoring the funds provided by AIIB in the alignment with the ESP and other E&S policies and documentations; and disclose the information of the subprojects timely and periodically
Ibri II 500 MW Solar PV Independent Power Plant Project [76]/Category B/Oman/2020	**Stand-alone Project**/ AIIB's ESF	**Ministry of Environment and Climate Change (MECA)** Review the ESIA prepared by client and grant permits and approvals	Due diligence: scan, conduct field visits, identify, review and monitor the project; and set up a Project-Affected People's Mechanism (PPM) to provide an opportunity for project-affected people to address their concerns when they believe project-level GRMs failure to do so		**Client: ACWA Power and Shams Ad-Dhahira Generating Company SAOC** ASWA Power has established Health, Safety, Security and Environment (HSSE) and CSR Policy to guide the project company; SAOC need to prepare the ESIA including the framework Environmental & Social Management and Monitoring Plan (ESMMP) as well as the ESMP of construction and operational phases, RAP and the Stakeholder Engagement Plan (SEP) including detailed GRM; disclose the information timely, and monitoring process will be conducted independently
Zhanatas 100 MW Wind Power Plant [77]/Category B/Kazakhstan/2019	**Stand-alone Project**/ AIIB's ESF	**Natural Resource Management Department of the Regional Council, Ministry of Labour and Social Security and other related government sectors** Provide Environmental and Social Legislation and Guidelines	Due diligence: scan, conduct field visits, identify, review and monitor the project. AIIB will conduct an annual E & S supervision		**Client: Zhanatas Wind-Power Station LLP** Prepare ESAP, ESMP, SEP and Land Acquisition Audit; conduct stakeholder consultation The Engineering Procurement Construction (EPC) contractor will conduct supervising implementation, monitor the construction and report to AIIB the implementation of ESMP and its E & S performance

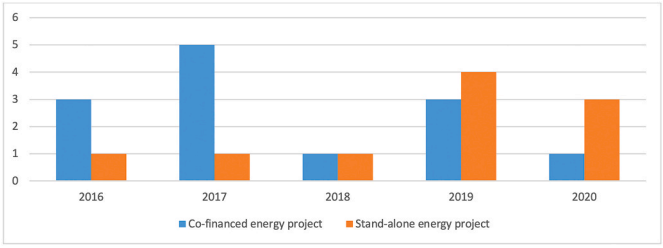

Fig. 3. AIIB's energy investment by finance type. Source: author's figure.

3.3. Assessment of safeguards mechanisms on AIIB's stand-alone energy projects

In view of the influence of AIIB and its energy projects on local energy development, AIIB is expected to be an international standard setter rather than a follower [26]. However, we find that the stand-alone energy projects of AIIB are still referring to the safeguard systems from other established MDBs or finance institutions to prepare the ESIA and ESMP, such as WB's Environmental, Health and Safety Guidelines (EHS Guidelines) and IFC's Performance Standards (PSs).

The ESIA of the Power System Upgrade and Expansion Project in Bangladesh [60], adopts WB's EHS Guidelines to address environmental and social sustainability due to WB's EHS Guidelines have more clear, complete and stringent standards and requirements, such as air quality and the labour influx. Similarly, the Beijing-Tianjin-Hebei Low Carbon Energy Transition and Air Quality Improvement Project in China [71] prepares the Environmental Impact Assessment (EIA) including the Environmental Management Plan (EMP), and Social Impact Assessment (SIA) including the Resettlement Action Plan (RAP) in line with WB's EHS Guidelines to address health and safety requirements and standards, labour and worker rights, and community relations. The Ayana Anantapuramu NTPC Solar Project in India [65] also refers to IFC's PSs and WB's EHS Guidelines to meet the gaps of AIIB's ESF on lacking requirements on resource efficiency and pollution prevention, as well as community health, safety and security. Moreover, AIIB's Energy Sector Strategy proposed for guiding energy investment, is seldom talked about in the safeguard documents of these energy projects.

However, with the increase of stand-alone energy portfolio since 2019, the improvement of the safeguard assessment and management plans of stand-alone energy projects could be observed. The ESIAs of Ibri II 500 MW Solar PV Independent Power Plant Project in Oman [76] and Zhanatas 100 MW Wind Power Plant in Kazakhstan [77] have begun to identify the gaps between recipient country's national and local legislation, and requirements of MDBs. Moreover, the Zhanatas Project in Kazakhstan further proposes the mitigation plan to improve the local farmers' interests in terms of land acquisition and compensation [77]. Besides, the implementation of safeguard requirements is another important part of the safeguard mechanism. However, the implementation of AIIB's safeguard mechanism on energy projects has led to criticism regarding information disclosure, public consultation, land acquisition, resettlement and Grievance Redress Mechanism (GRM) in Beijing Air Quality Improvement and Coal Replacement Project, and the Bhola IPP Project in Bangladesh [15,79].

As for the implementation of Beijing Air Quality Improvement and Coal Replacement Project, it remains questionable whether the public consultation with affected communities took place. The local villagers indicate that the queries on timelines and safety concerns did not get responses once the project is implemented. Moreover, due to the lack of exact locational information of the project, the local NGOs could not conduct monitoring or evaluation whether the benefits proposed by the project are enjoyed by affected communities [15]. Additionally, considerable gaps in the implementation of safeguard mechanism on AIIB's Bhola IPP project in Bangladesh have been identified. The main gaps include lacking prior adequate consultation with affected people who have endangered their livelihoods due to climate pressure, forced acquisition of land, and insufficient compensation to affected landowners. Moreover, though the ESIA of the project has confirmed 15 consultation meetings are held with various stakeholders and affected communities, the villagers interviewed could not recall any such consultations [79].

Additionally, there is a contradiction in information disclosed by the AIIB's Power Distribution System Upgrade and Expansion Project in Nepal. According to the project summary released by AIIB, this energy project is a stand-alone project with additional value as the first project in which AIIB is supporting the project's preparation and implementation with high standards from the very early stage [69]. However, the ESMP document, also released by AIIB, indicates the project is co-financed by AIIB and European Investment Bank (EIB) [69].

The assessment indicates that AIIB's environmental and social safeguard mechanism is still at its beginning stage. Moreover, if AIIB aims to enhance its capacity to leverage international and local sustainable development, further requirements are placed on AIIB in terms of reviewing and improving its safeguard mechanism on energy projects.

4. Conclusion

To address the sustainable energy development in Asia, AIIB has developed environmental and social safeguard policies including ESF and AIIB Energy Sector Strategy. By determining which type of funding they prioritize, it signals to borrowers that the bank is committed to green financing. The key to AIIB's success of being a MDB recognized by international society would lie in its ability to provide a sound sustainable safeguard system for the project development [80].

Through a comprehensive review of AIIB's 23 energy projects by November 30, 2020, this study however indicates that AIIB falls short on expectations regarding providing a comprehensive, clear and reliable environmental and social safeguard mechanism on energy projects. In terms of safeguard policy on energy projects, it is found that there lacks a robust set of environmental and social guidelines with a clear commitment of excluding coal-power plants and coal-related projects, and restriction of fossil fuels. Moreover, requirements addressing social and environmental impacts, such as gender equality, rights of indigenous people and GRM, should be reinforced in the future. These gaps are also weakening the role of AIIB's safeguard policy on the energy project level. By comparing the safeguard mechanism of co-financed and stand-alone energy projects, it is noted that the stand-alone energy projects are still referring to the safeguard guidelines from other MDBs and finance institutions to prepare the ESIA, ESMP and other sustainable safeguard documents. The main reason for that is the ESF and AIIB Energy Sector Strategy are not able to provide sufficient requirements and guidelines for the projects. Moreover, the implementation of safeguard mechanism of AIIB's stand-alone projects has also led to criticism in terms of public consultation, land acquisition and compensation, resettlement, GRM and information disclosure.

To bridge these gaps on AIIB's safeguard mechanism on energy projects, it is recommended AIIB review and revise the ESF and Energy Sector Strategy in alignment with the Paris goal and the good practices from other MDBs, for example the exclusion list of energy investments of WB. AIIB launched the review process of the ESF in early 2020, which is viewed as an opportunity for AIIB to reinforce sustainable safeguards more aligned with the Paris goal. Currently, the ESF is under the second-phase review process, and the first-round of review draft of the ESF has already been released to the public in September 2020 [81]. Nevertheless, the draft ESF still lacks key improvements in response to climate change, especially the exclusion of coal plants and coal-related projects.

Asia is one of the fastest-growing global regions, with a huge demand for infrastructural amenities. That is an opportunity for the AIIB, as Humphrey et al. [22] have noted: "the AIIB could carve a very relevant niche for itself by specializing in accumulating and sharing experience on complex infrastructural projects - a set of skills sorely needed in

developing countries". However, with such a huge demand and fast development of infrastructural investment, a sound environmental and social safeguard mechanism is vital to reinforce and assure the positive socio-environmental impacts. In this regard, AIIB is expected to improve its sustainable safeguard mechanism to ensure the long-term sustainability of its investments.

Credit author statement

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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