



Sub-Education Policy Review Report: Education for Sustainable Development (ESD)



Brunei Darussalam



Indonesia



Malaysia



Philippines



Timor-Leste

Table of Contents

Acknowledgement	iii
Executive Summary	iv
List of Abbreviations	vi
List of Tables	vii
List of Figures	vii
1.0 Introduction	1
2.0 Methodology	1
3.0 Related Policies on ESD in Five Cluster Countries	3
3.1 Brunei Darussalam	4
3.2 Indonesia	6
3.3 Malaysia	7
3.4 Philippines	8
3.5 Timor-Leste	9
4.0 ESD Components Highlighted in this Review	10
4.1 Climate Change Education	10
4.1.1 Brunei Darussalam	11
4.1.2 Indonesia	12
4.1.3 Malaysia	13
4.1.4 Philippines	13
4.1.5 Timor-Leste	14
4.2 Human Rights Education	14
4.2.1 Brunei Darussalam	15
4.2.2 Indonesia	15
4.2.3 Malaysia	16
4.2.4 Philippines	16
4.2.5 Timor-Leste	17
4.3 Gender equality	17
4.3.1 Indonesia	18
4.3.2 Malaysia	18
4.3.3 Philippines	19
4.3.4 Timor-Leste	20
4.4 Global Citizenship Education	20
4.4.1 Indonesia	21
4.4.2 Malaysia	21
4.4.3 Philippines	21

4.5	Peace and Non-violence Education	22
4.5.1	Philippines	23
4.6	Appreciation of Culture Diversity and Culture’s Contribution	23
4.6.1	Brunei Darussalam	23
4.6.2	Indonesia	23
4.6.3	Malaysia	24
4.6.4	Timor-Leste	24
5.0	Empirical Findings	24
6.0	Challenges in ESD Implementation in the Five Cluster Countries	30
7.0	Recommendations	33
8.0	Conclusion	34
9.0	References	35
	Appendix A. Survey Questionnaire	37
	Appendix B. Open-ended Responses (Raw Data)	42

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Executive Summary

Educational policy review provides essential information for policy makers and implementers towards the effectiveness of formulated educational policies. The educational policy review highlights information on weaknesses, improvements plan and new potential policies, and subsequent planning of educational interventions. Furthermore, the review provides a systematic guide for policymakers to design, analyze and execute educational policy implementation processes, to increase its cost effectiveness. This review document focuses on an education thematic area, i.e., Education for Sustainable Development (ESD), covering five cluster countries of Brunei Darussalam, Indonesia, Malaysia, Philippines, and Timor-Leste, with an overall question on how SDG4 can be accelerated by education interventions including an education response to Post COVID-19 pandemic.

The review on policies that are related to ESD was based on documents retrieved from various databases such as Education Resources Information Center (ERIC), Scopus, and Web of Science (WoS). The Systematic Literature Review (SLR) was the method used to analyse the documents of past research systematically, with aims to synthesize in detail all applicable scholarly literature. In addition to the SLR, surveys were conducted among teachers in the cluster countries using online questionnaire, and online interviews were conducted with senior education officials of Education Ministries in the cluster countries, to further validate reviews that have been undertaken.

Review of Education for Sustainable Development (ESD) related policies in cluster countries showed that the ESD related policies are aligned with the country's national education policy and planning that reflected the education 2030 Agenda. The related policies showed a diversity of educational approaches and initiatives to demonstrating progress towards achieving the objectives of ESD implementation. The framework guiding the implementation of ESD in each country focuses on distinctive themes and topics, have different coordination mechanisms, and use a diversity of learning approaches. Some frameworks focus on formal education, whilst other frameworks have broadened opportunities through integrating ESD into non-formal and informal education. As all cluster countries have integrated ESD in their existing education curriculum, the integration emphasizes on various ESD components that are of priority to respective countries. All cluster countries recognized climate change as serious global issues; hence, climate change education has been identified as one of the important ESD components that should be addressed in the educational curriculum. The curriculum content of ESD in basic education and teacher education in respective cluster countries is credible for educating environmental concepts and environmental problems of the nation and the world. It also focuses in creating and translating awareness into positive actions learned from the ESD programs and subjects.

There are challenges that need to be addressed for the success of ESD implementation. It is apparent that the current economic, social, cultural, and political backgrounds of the cluster countries can be major constraints to the success of ESD implementation. Moreover, the concept of ESD needs a fuller understanding for educators to have an effective implementation of the ESD-related projects. As such, gaining schools' supports for implementing ESD programmes in curriculum and co-curriculum activities is always a challenge at school level. Moreover, incorporating ESD subjects in an overstretched curriculum could affect teaching quality because of the increase in teachers' teaching loads, thus this would hold back the success of running the ESD programs and initiatives. During the COVID-19 pandemic, lack of internet access and electronic devices hinders the smooth of ESD teaching and learning process. Nevertheless, as ESD programs and activities are disrupted, continuity of teaching and learning ESD related subjects are conducted via online platforms and self-learning modules.

Government actions in supporting and promoting ESD is one of the significant success factors that include developing policies and legislations which lead to improving ESD-related education programmes. Further, involvement of stakeholders from relevant government agencies, private sectors and industries, are vital for the success of ESD implementation. Moreover, enhancement of teachers' understandings on ESD related concepts through discourses and engagements on issues

related to sustainability is essential to ensure educators have comprehensive understandings on ESD, which would lead to the success of ESD implementation. With regard to COVID-19 pandemic, school children should be ensured to have better access to the internet, stronger parental support and greater availability of learning materials during the COVID-19 pandemic situation, so that the disruption of ESD teaching and learning processes can be minimized. It is apparent that strong efforts on ESD implementation made by education authorities of cluster countries have contributed to enhance overall quality education of the countries' education framework.



List of Abbreviations

ALS	Alternative Learning System
ASEAN	Association of Southeast Asian Nations
ATHAM	Best Practice on Human Rights – <i>Amalan Terbaik Hak Asasi Manusia (ATHAM)</i>
DESD	Decade of Education for Sustainable Development
DRR	Disaster Risk Reduction
EFA	Education for All
ERIC	Education Resources Information Center
ESD	Education for Sustainable Development
GAD	Gender and Development
GCED	Global Citizenship Education
GFPS	Gender and Development Focal Point System
HSBC	Hongkong and Shanghai Banking Corporation
ICT	Information and Communications Technology
IPCC	Intergovernmental Panel on Climate Change
MCW	Magna Carta for Women
MEB	Malaysia Education Blueprint
NAMIs	Nation-wide Multi Stakeholders' Initiatives
NCESDI	National Coordinator for ESD Implementation
NESP	National Education Strategic Plan
NPW	National Policy on Women
OHSP	Open High School Programme
OPAPP	Office of the Presidential Adviser on the Peace Process
RPJMN	Indonesian National Medium-Term Development Plan
SDG4	Sustainable Development Goal 4
SLR	Systematic Literature Review
SPN21	National Education System for the 21 st Century
TESDA	Technical Education and Skills Development Authority
UNESCO	United Nations Organisation for Education, Science and Culture
WWF	World Wide Fund for Nature

List of Tables

Table 1	Alignment of ESD Area and Indicators with the SDG4: Quality Education
Table 2	Demographic profile of respondents from Brunei Darussalam
Table 3	Details of responses from teachers of Brunei Darussalam on items in the questionnaires survey
Table 4	Demographic profile of respondents from Indonesia
Table 5	Details of responses from teachers of Indonesia on items in the questionnaires survey
Table 6	Demographic profile of respondents from Philippines
Table 7	Details of responses from respondents of Philippines on items in the questionnaires survey

List of Figures

Figure 1	Preferred Reporting Items for Systematic Reviews and Meta-Analyses Approach
Figure 2	National constitutions via education legislation and policy frameworks that are related to ESD in Brunei Darussalam, Indonesia, Malaysia, Philippines, and Timor-Leste.

1.0 Introduction

The 2030 Agenda for Sustainable Development is a plan of action for people, planet, and prosperity that unites global development goals in one framework. It comprises integrated and indivisible 17 Sustainable Development Goals (SDGs) that balance the three dimensions of sustainable development: the economic, social, and environment. The fourth sustainable development goal (SDG4), i.e. quality education, is intended to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all, and has been appointed as the universal education goal (UNESCO, 2017b). The quality education goal (SDG4) comprises seven outcome targets and three means of implementation. This review focuses on Target 4.7 that put emphasis on the education for sustainable development (ESD). The ESD is educational process of achieving human development in an inclusive, equitable and secure manner (UNESCO, 2014c). The target of ESD is to ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non- violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development (UNESCO, 2016).

Education for sustainable development (ESD) is an appropriate educational program to educate people from an early age to reduce human dependence on natural and social environments. The ESD educates people to participate, be active, and have knowledge of nature, equality, and social justice, thereby ESD can enhance consciousness and form human behaviour. Furthermore, ESD aims to improve the capacity and commitment required to build a sustainable society, where individual and group decisions are being considered for saving natural and ecological processes, which would sustain the quality of life of both now and in the future. Suduc et al. (2014) stated that the contents of ESD implementation include various categories, namely, health education, ecology education, traffic education, sports education, hazard response education, citizenship education, democracy education, and others. These categories show that ESD does not only emphasize to the concern for the natural environment, but also social elements, namely, human beings. Looking at those various categories for ESD implementation, it is apparent that ESD is practically and conceptually complex, which involve a high degree of interdisciplinarity including ecology, economy, culture, politics, etc., but also extensively the interactions between them.

This comprehensive review on ESD is conducted through a systematic review of studies on ESD from various sources of publications, with objectives of looking at policy implications, as well as to assess major challenges with a view to make recommendations for best practices in future policy development and implementation.

2.0 Methodology

Policy review related studies were retrieved from ERIC, Scopus and WOS databases and systematically analysed. The Systematic Literature Review (SLR) used in this study is a systematic, deliberate and explicit method to identify, select, critically evaluate, collect and analyse data from relevant past research (Gillath & Karantzas 2019; Moher et al., 2009). This approach enables to synthesize in detail all applicable scholarly literature. The systematic review was conducted in line with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA; see Figure 1). The method, which includes resources (Scopus, ERIC & Web of Science) to run the systematic review, eligibility and exclusion criteria, steps of the review process (identification, screening, eligibility) and data abstraction and analysis. Electronic databases were used to conduct literature search with a variety of keywords to identify articles (Figure 1).

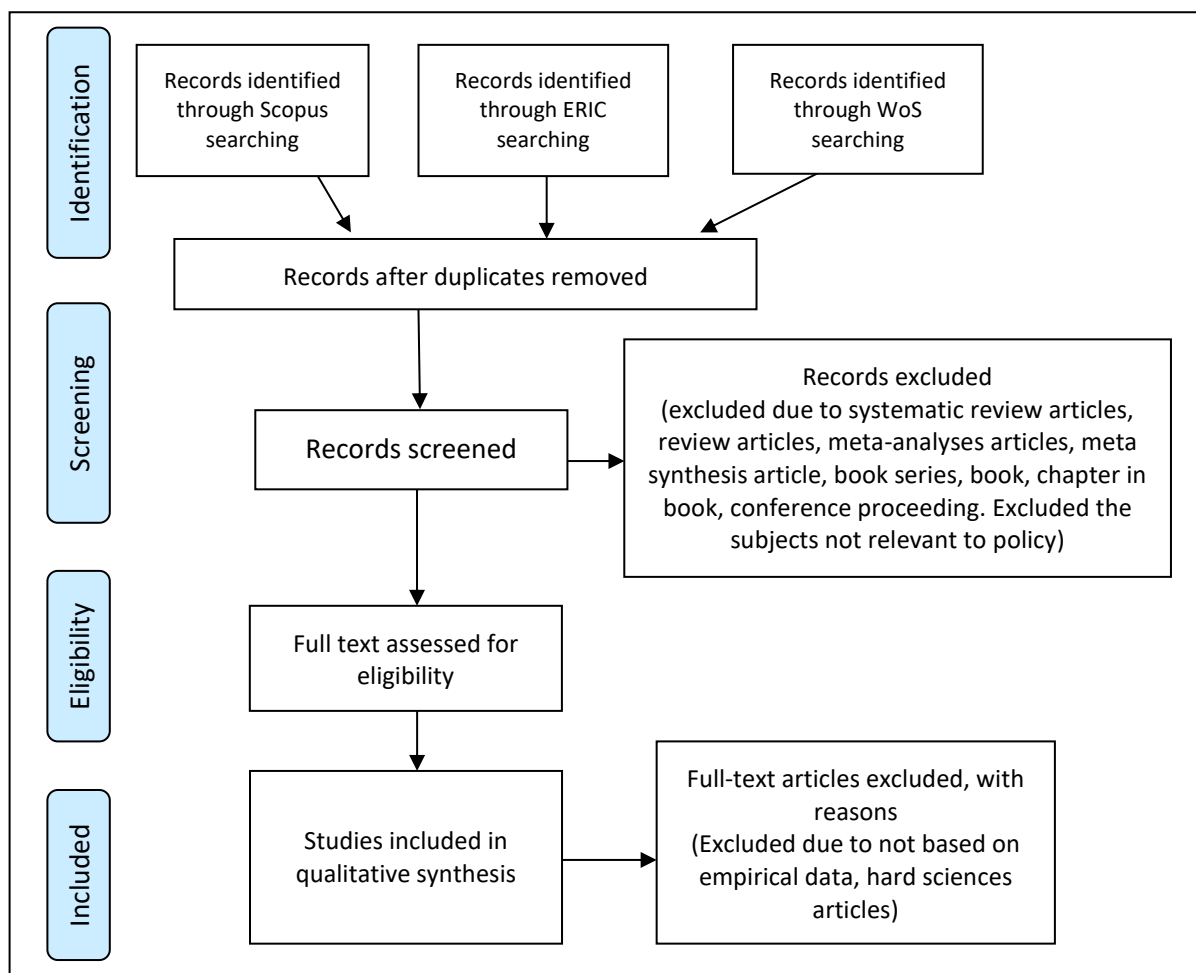


Figure 1. Preferred Reporting Items for Systematic Reviews and Meta-Analyses Approach

In analysing national educational policies on how education can accelerate Sustainable Development Goal 4 (SDG 4) that is related to ESD, indicators for ESD are described in Table 1, which were used as main keywords in the SLR. Analysis had included all five countries, namely, Brunei Darussalam, Indonesia, Malaysia, Philippines and Timur-Leste. Literature search was then conducted using databases of the UNESCO digital library, Web of Science (WoS), Scopus, and ERIC, using various research terms. A search term, i.e., ‘*Education for sustainable development policy*’ for each respective country was used; for example, “Education for sustainable development policy in Brunei Darussalam” and “Education for sustainable development policy in Indonesia.” In addition, the term “Education for sustainable development policy in Southeast Asia” was also used, as the five selected countries are geographically in the Southeast Asia. Specific terms that are related to each ESD indicator were also used in the search, i.e., “human rights education”, “gender equality in education”, “global citizenship education”, “peace education”, and “cultural diversity education” for each respective country.

Only open access references which comprises of articles and reports, that are written in English were included. Abstract only and duplicated articles were excluded. In addition, as the focus of this review is on ESD policies in Brunei Darussalam, Indonesia, Malaysia, the Philippines, and Timor-Leste, thus studies outside these five countries were also excluded. As many as 703 potentially relevant references were identified from the four databases. 358 references that were abstract only and not open access were removed. Then, from the remaining 345 references, 230 duplicated references were then excluded. A total of 115 references remained for full review, but 85 of them

were excluded as the contents were irrelevant to the goal of this review. Therefore, the final 30 references were accepted for further analysis.

Table 1: Alignment of ESD Area and Indicators with the SDG4: Quality Education

TARGET	Area	INDICATORS
TARGET 4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship, and appreciation of cultural diversity and of culture's contribution to sustainable development	Education for Sustainable Development (ESD)	All learners acquire the knowledge and skills needed through ESD and sustainable lifestyles to: <ul style="list-style-type: none"> i. promote sustainable development. ii. promote human rights iii. promote gender equality iv. promote culture of peace and non-violence v. promote global citizenship vi. promote appreciation of cultural diversity and culture's contribution Uniqueness

In addition to Systematic Literature Review (SLR), online surveys were conducted to validate reviews that have been undertaken. Online questionnaires that were constructed under the Google Form platform were sent to selected teachers of the five cluster countries, regardless of their teaching expertise, whilst open ended questions were sent to selected senior officials at Director level or above, of the education authorities in all cluster countries.

3.0 Related Policies on ESD in Five Cluster Countries

Incorporating ESD in education framework initially started when Resolution 57/254 was adopted by The United Nations General Assembly at its 57th session in December 2002, which declared the United Nations Decade of Education for Sustainable Development (DESD), and designating UNESCO as the official international lead agency. In 2005, the United Nations DESD was officially launched, with goal is to transform and reorient education and learning processes towards sustainable development. To do so, the DESD encourages governments to embed sustainable development into all education systems, plans and strategies, and supports public awareness to increase participation in ESD initiatives. Since the DESD launch, nations and regions across the world have engaged in developing ESD strategies and frameworks or reviewing existing ones. However, the first *DESD Global Monitoring and Evaluation Report* (UNESCO, 2009) highlighted that no country is close to embedding sustainable development into its structures or systems. The Bonn Declaration (UNESCO, 2009a) continues to call for the development and adjustment of ESD policies and frameworks to guide the implementation of ESD in all educational sectors. Drawing upon the recommendations from this authoritative document, the UNESCO Strategy for the Second Half of the DESD (UNESCO, 2010) calls for creating spaces to discuss a common vision towards sustainable development, and emphasizes the need to create ESD

strategic documents which are context-based and address the specific challenges that individuals, communities and nations are facing in different parts of the world.

Moving forward from the calls of Bonn Declaration, ESD has received increase recognitions from many countries of the world as an integral element of quality education and a key enabler for sustainable development. The recognitions were apparent in the Muscat Agreement adopted at the Global Education For All Meeting (GEM) in 2014, and also in the proposal for Sustainable Development Goals (SDGs) developed by the Open Working Group of the UN General Assembly on SDGs (OWG), which include ESD in the proposed targets for the post-2015 agenda. To date, ESD has been integrated into many global frameworks and conventions related to key areas of sustainable development, such as climate change (Article 6 of the United Nations Framework Convention on Climate Change), biodiversity (Article 13 of the Convention on Biological Diversity), disaster risk reduction (Hyogo Framework for Action 2005-2015), and sustainable consumption and production (Framework of Programmes on Sustainable Consumption and Production 2012-2021).

The implementation of the SDG4 at country level in the five cluster countries indicates an effort to align or adapt the country national education policy and planning that reflected the education 2030 Agenda. The literature indicates that all the five cluster countries have given prominence to the SDG4, particularly the ESD targets and priorities in their national strategic plan for education. Figure 2 provides the national constitutions or via education legislation and policy frameworks related to ESD in Brunei Darussalam, Indonesia, Malaysia, Philippines, and Timor-Leste.



Figure 2. National constitutions via education legislation and policy frameworks that are related to ESD in Brunei Darussalam, Indonesia, Malaysia, Philippines, and Timor-Leste.

3.1 Brunei Darussalam

The government of Brunei Darussalam is endeavouring to move from the extensive extraction of oil and gas resources, which have been the primary source of the country's economic growth, to a more diverse economy that focus on development of skilled workforce (UNESCO, 2014b). To realize this goal, the government created a national long-term development plans in 2007, i.e., the National Development Policy and Strategy, which is called Brunei Vision 2035, covering Brunei's economy, society, and environment. The key goal of the Brunei Vision 2035 is to create a first-class education system that provides opportunities for its every citizen and resident to fulfil the requirements of the country's changing economy, encourages life-long learning and achievement in sports and arts. Education and human resources development are the key priorities of Brunei Vision 2035. Accordingly, education strategy has been established to accomplish this vision, which is the Outline of Strategies and Policy Direction that listed eight policy directions (UNESCO, 2018a), including:

- i) Investing in early childhood education;
- ii) Adopting international best practices in teaching and learning;
- iii) Having first-class secondary and tertiary education, including vocational schools, that produce experts, professionals, and technicians required in commerce and industry;
- iv) Strengthening the competency in info-communication technology for students, teachers and educational administrators, including the integration of ICT in school curriculum;
- v) Devising programmes that promote life-long learning and widening access to higher education;
- vi) Promoting research, development and innovation both in the government-funded institutions and through public-private and international partnerships;
- vii) Adopting cost-effective methods of education through the use of technology; and
- viii) Improving the management of all educational institutions.

The country's education system has been reformed through a new education system called *Sistem Pendidikan Negara Abad ke-21*, or the National Education System for the 21st Century (SPN21). The objective of SPN21 is to promote the students' ability to meet the 21st century social and economic requirements and challenges. A number of education programmes aim at developing students' skills that suited to their capabilities, interests, inclinations, growth and development.

In Brunei Darussalam, matters that are related to the DESD had already been integrated into Brunei's school curriculum before the United Nations announced the 2005-2014 Decade of Education for Sustainable Development. The Ministry of Education (MoE) through its Brunei Darussalam National Commission for UNESCO responsible for implementing, analysing, and monitoring best practices in ESD. This holistic self-development is in line with the Ministry's vision through the SPN 21 as well as the goals of DESD. As climate change education is one of the important components under the ESD, the recent launch of Brunei National Climate Change Policy (BNCCP) in July 2020, indicated awareness and education amongst the 10 key strategies with potential areas for greenhouse gas emissions reduction, within its national circumstances. The BNCCP seeks to support and advance Brunei Darussalam's economic growth in a low-carbon manner while achieving resilience against the changing climate, by paving the necessary pathways through the 10 key strategies that focus on greenhouse gases emissions reduction include Industrial Emissions, Forest Cover, Electric Vehicles, Renewable Energy, Power Management, Carbon Pricing, Waste Management, Climate Resilience and Adaptation, Carbon Inventory, and Awareness and Education. The BNCCP further seeks to make greenhouse gas inventory reporting, mandatory and most importantly, to increase awareness and education surrounding both climate mitigation and adaptation. At the Ministry of Education level, emphasis is given on awareness and education through establishment of educational development and awareness initiatives at primary, secondary and tertiary education levels to ensure long-term societal change with involvement of stakeholders. While at school level, partnership, and collaboration with external agencies to run activities and programmes related to climate change is considered with support from Parents-Teachers Association (PTA) in running the related activities for the school

The Education Ministry of Brunei has produced various outputs that are related to ESD programmes in Brunei. Among outputs are ESD Modules in Teacher Education Programme, of which the modules are for pre-service early childhood, primary, secondary teacher education programmes that contain a mandatory sustainability education component. Subsequently, output of ESD Related Certification (Capacity Building for Teachers) is designed as an in service training programme with the objective to enable teacher-learners to take up environment and sustainable development concerns and issues in the classroom, and engages their students in practical, action-oriented activities and projects. This programme would build teacher capacity to incorporate sustainable development topics into their teaching programmes using a practical and relevant approach. Another output, i.e. ESD Related Instructional Tools (Handbooks and Case Studies), develop course materials for the delivery of sustainability content in the graduate programmes at the Teachers' Institute of Education

(Sultan Hasanah Bolkuh Institute of Education, SHBIE), of which the handbook is a guidebook for inclusion and teaching of sustainability content across national curricula. The ESD instructional tools are focused more on multimedia, interactive professional development program with materials, exercises, and links that help educators deepen their understanding of education for sustainability and its importance in addressing the economic, social, and environmental issues in Brunei. It is recommended that the instructional tools should include a basic understanding of sustainable development, help in understanding the range of social, economic, and environmental issues facing the world today, the interrelationships among these different types of issues, and the ways that education is key to the empowerment of Bruneian working for a sustainable future.

3.2 Indonesia

Sustainable development in education is a commitment for Indonesia. As underlined in The Constitution of 1945 that it is the fundamental right of all Indonesian citizen to access education. This is further elucidated in the Law on National Education of 2003, which upholds a compulsory basic education, based on equity, quality, and relevance; and the government has an obligation to provide the free of charge basic education.

Also, the policy on ESD is stated, directly and indirectly, in Indonesian national 20-year long-term development plan, which spanning from 2005 to 2025, as well as in the four 5-year medium-term plans (UNESCO, 2018b). The Rencana Pembangunan Jangka Menengah Nasional (Indonesian National Medium-Term Development Plan) 2020-2024, hereinafter referred to as RPJMN 2020-2024, is the final phase of Indonesia's long-term development plan. In particular, the RPJMN 2020-2024 highlights the development of a strong economic structure based on competitive advantages in various regions supported by quality and competitive human resources. The objectives of RPJMN IV for 2020-2024 are in line with the SDGs, through which the targets of the 17 SDGs and their indicators are accommodated in seven development agendas, including increasing the quality and competitive human resources. Realizing the humans are the main capital towards inclusive and equitable development in all regions, Indonesian government has made a very clear commitment to improve the quality and competitiveness of human resources who are smart, adaptive, innovative, skilled, and with character. To achieve this objective, human development policies are directed, among others, at increasing the distribution of quality education services, through: i) Improving the quality of teaching and learning; ii) Increasing equitable access to education services at all levels and accelerating the implementation of the 12-year compulsory education; iii) Increasing professionalism, quality, management, and equal placement of educators and education personnel; iv) Strengthening education quality assurance to improve equitable distribution of service quality between education units and between regions, and v) Improving education development governance, financing strategies, and increasing effectiveness of education budget usage. In addition, enhancing the quality of children, women and youth is another concern of Indonesian government in improving the quality and competitiveness of human resources.

The implementation of ESD in Indonesia is guided by the strategies developed by the Ministry of Education and the Ministry of Environment in 2005. In that year 2005, Indonesia launched the Decade of Education for Sustainable Development on the World Environment Day, with an initial emphasis on improving environmental protection and conservation measures within the country. Subsequently, the launch involved the signing of a memorandum of understanding (MoU) between the Ministry of National Education and the Ministry of the Environment which aims to improve environmental understanding amongst communities and to provide support in addressing environmental and conservation issues. With Indonesia being exposed to so many natural disasters, disaster reduction has been chosen as one of the themes for ESD to strengthen national policies on education for disaster management and preparedness. Four objectives of ESD implementation have been determined which include (UNESCO, 2011a):

- i) Increasing of access and opportunities for quality basic education, especially for poor and disadvantaged students;
- ii) Improving the quality of basic education service, and ensure an efficient early childhood education by facilitating community's potential;
- iii) Improving the capacity-building at local and community levels through school-based management and community participation, and
- iv) Improving the professionalism and accountability of education institutions based on knowledge, skills, experience, attitudes and values derived from national and global standards.

After the signing of the MoU between the Ministry of National Education and the Ministry of the Environment in 2005, a renewal of joint agreement was signed in 2010 between the two ministries, and the 2010 ESD policy was in operation characterized on Environmental Education (No. 03/MENLH/02/2010 and Number 01/II/KB/2010). Article 2 on Scope of the agreement includes:

- i) Development of the implementation of (ESD), including environmental education conducted in all lines, levels, and types of education as a place or a means in creating change in the mindset, attitude, and behaviour of environmentally cultured human;
- ii) Coordination and synergy in the preparation of short, medium, and long term environmental education program as part of ESD;
- iii) Revitalization of research and development in the field of environmental protection and management;
- iv) Giving awards to individuals, institutions, and community who care, serve or get achievement in the field of environmental protection and management; and
- v) Increasing participation, capacity, and commitment of community, central and local education policy makers as well as educators and education personnel to actively maintain and preserve the environmental functions.

It was agreed that the Minister of Environment as the first party responsible in the field of environmental protection and management is obliged to preserve the environmental functions and to prevent pollution and /or damage to the environment. The national education minister, as the second party, is responsible in managing the education system towards the national policy and education standards, to ensure quality education is achieved. The implementation of national sustainable development requires human resources who are conscious and able to maintain the sustainable function of the environment. Knowledge, values, attitudes, behaviours, and insights about the environment need to be taught early to all levels of society and learners in all units, path, level, and type of education. Knowledge and empowerment of community and institutions actors and environmentalists need to be improved (Joint Decree of Minister of Environment and Minister of Education, 2010). It was also followed by Minister Regulation Number 63 Year 2009 on Education Quality Assurance System which has similar contents with the Strategic Plan.

The implementation of ESD practices in Indonesia is led by the National Coordinator for ESD Implementation (NCESDI). The NCESDI ensures ESD is integrated in education programmes in formal, non-formal, and informal education. Following this, the Curriculum 2013 was introduced as the part of quality improvement policy through continues education programmes improvement. It is a competency-based curriculum that focuses on analytical skills and character building in gaining the three expected competencies, namely, attitudes, skills, and knowledge. By highlighting on the character building, the curriculum 2013 is in line with ESD missions (UNESCO, 2014c).

3.3 Malaysia

Malaysia's consistent commitment towards ESD is perceivable in the educational policies. The most recent educational blueprint established for the country's citizen is the Malaysia Education Blueprint

(MEB) 2013-2025 (Preschool to Post-Secondary Education), which provides the vision and goals for the Malaysian education system through to 2025 and the roadmap of policies and initiatives to be undertaken to achieve the goals (UNESCO, 2018c).

The MEB was introduced in 2013. It outlines an inclusive transformation programme to achieve universal enrolment from preschool to secondary level, increase the quality of the national education system to the top third of the countries globally, to decrease student achievement gaps, to foster national unity, and maximize the government's return on investment. It also evaluates the access, quality, equity, unity, and efficiency of the current education system. The vision of the MEB is to develop Malaysians with knowledge, critical thinking skills, leadership skills, language proficiency, ethics and spirituality, and national identity to succeed in the 21st century. Furthermore, in 2015, the Malaysian government introduced the Malaysia Education Blueprint 2015-2025 (Higher Education) – the MEB (HE), which outlines an inclusive transformation programme for higher education system. Like the MEB, the MEB (HE) aim is to improve the education system's access, quality, equity, unity, and efficiency. The vision of MEB (HE) is to develop holistic, entrepreneurial, and balanced graduates with the relevant knowledge and skills, and ethics and morality to meet Malaysia's growing economy needs, as well as to be internationally competitive.

The Eleventh Malaysia Plan 2016-2020 highlights the rapid delivery high impact on the capital and people economies at low cost to the government (EPU, 2015). It has six strategic thrusts and six game changers that will transform the idea of 'anchoring growth on people' into reality. The one that particularly targeting education field is the third strategic thrust: '*accelerating human capital development for an advanced nation.*' More specifically, there are two focus areas that emphasizing on education. First, strengthening lifelong learning for skills enhancement. This focus area highlights the necessity to enable Malaysians in continuously reskill and upskill themselves to fulfil the labour markets continues changing. Second, improving the quality of education for better student outcomes and institutional excellence. This focus area highlights the importance of producing future generations with knowledge and skills, as well as ethics and morality. Integrated approach that involves improving the quality of teachers and academic staff, earned autonomy for schools and higher education institutions, and a more efficient use of public resources, is determined to achieve the goal.

3.4 Philippines

The Philippine Constitution Article 14 Section 2 mandates the embellishment, maintenance, and support of a complete, adequate, and integrated education system that relevant to the needs of people and society. This is supported by the Governance of Basic Education Act of 2001, which confirmed the right to access free basic education among the school-age population and young adults in order to equip them with skills, knowledge, and values; and the Enhanced Basic Education Act of 2013, which mandates the government to create a functional basic education system to enable the development of productive and responsible citizens that is equipped with the essential competencies, skills, and values for life-long learning and employment (UNESCO, 2015b). The major policies and plans for sustainable human development the Philippines has, including Philippine EFA 2015 National Plan of Action, which focus on the achievement of functional literacy; the Basic Education Sector Reform Agenda, which seeks to improve the regulatory, institutional, structural, financial, informational, cultural, and physical conditions that affect the provision of access to, and delivery of basic education, particularly in the field; and the Ten-Point Education Agenda.

In addition, the country seeks to improve its human resources capabilities through better health and nutrition, and enhancement of knowledge and skills, which is stated in the Philippine Development Plan 2011-2016. The schemes emphasizing on education, which set under social development priorities, including: i) providing complete and quality basic education, and ii) making higher education competitive and responsive to national development goals. Further, the Department of Education has determined the following strategies: i) every Filipino has access to complete quality

basic education; ii) every graduate is prepared for further education (vocational, technical, higher and lifelong learning) and the world of work (employment and entrepreneurship); and iii) delivery of basic education services to learners is effective, efficient and collaborative.

3.5 Timor-Leste

Timor-Leste's government has established a long-term Strategic Development Plan 2011-2030 which seeks to transform the country into a medium-high income country by 2030. It highlights a healthy, educated, and safe population that is prosperous and self-sufficient (UNESCO, 2018d). One of the four pillars determined to improve quality of life, health, and education standards, is the social capital that encompasses health, education, and social protection. Timor-Leste's vision on education is stated in the National Education Strategic Plan 2011-2030, that: 'by 2025 the population of Timor-Leste will be educated, knowledgeable, and qualified to live a long and productive life, respectful of peace, family and positive traditional values.' This vision gives the insight that the country guarantees that every citizen will have the same opportunities to access quality education, and accordingly the opportunities to participate in the economic, social, and political development process. In addition to the National Education Strategic Plan 2011-2030, the Inclusive Education Policy was launched in 2017 to ensure equal access to education for all, including persons with special needs, linguistic minorities, and teenage mothers.

The educational policies in Timor-Leste fit with Education for All (EFA) goals, whereby it is the government's interest in carrying out curricular reform in view of current global changes (2011b). There is a need for Timor-Leste to restructure its school curricula to improve the quality of education (Republica Democratica de Timor-Leste (RDTL), 2011), which includes to improve quality and equity in subjects such as science, mathematics, languages, communication and creativity; quality and relevance of the curriculum to community needs; and quality and equitable governance" (UNESCO, 2005a). The restructuring of the curriculum is crucial for delivering the changes required to promote sustainable development, which is the main agenda in the ESD. The Timor-Leste government is aware of the necessity of promoting and developing ESD initiatives, although several existing problems such as poverty, unemployment, etc., essentially affect the effectiveness of promoting the ESD (Shah, 2012). The existence of the problems is recognised in national documents, namely, "Timor-Leste Demographic and Health Survey 2009-10" (National Statistics Directorate Timor-Leste, Ministry of Finance Timor-Leste & International Finance Corporation Macro, 2010). Thus, ESD is anticipated to have important role in minimizing these problems, because ESD could provide students with the skills they need for facing the problems and challenges of the 21st century.

The ESD strengths in Timor-Leste are focused on "literacy and sustainable development" and "climate change and biodiversity policy" (UNESCO, 2011b), whereby many programmes exist in line with these strengths. For instance, the Ministry of Education and Culture led to develop a national biodiversity education strategy with inputs from national ministries involved in biodiversity conservation and environmental management, which led the development of modules on environment and biodiversity conservation (coastal ecosystems and their management, focusing on habitat building species such as mangroves, coral reefs, and seagrasses) to be integrated in the school curriculum. It is interesting to highlight that educational practices with a focus on sustainable development at the level of formal education had been introduced as early as 2003, when the Timor-Leste government introduced a Civic Education Programme for sustainable development promotion aligned with the following themes, namely, reconciliation, non-violence, mutual respect, and peace and unity. The programme involved a significant number of educational initiatives; among them, the initiatives developed with the cooperation of Republic of Cuba that are relevant, because they promote training in higher education according to a sustainable development perspective (Anderson, 2008). Timor-Leste has also established School Farming called Horta Eskolar as one of the ESD programs that are focusing on environmental education and sustainable agriculture.

4.0 ESD Components Highlighted in This Review

The ESD values are summarized in various education components of ESD, which include climate change education, health education, peace education, environmental education, human rights education, global citizenship education, HIV/AIDS education, multicultural education, gender equality, and other education values (UNESCO, 2011c). In reviewing the documents that are related to ESD policy implementation in the five selected countries, this report focuses on the following components: climate change education (CCE), human rights, gender equality, culture of peace and non-violence education, and global citizenship education. Some countries do not clearly have related policy documents of each key component; hence the review only highlights cluster countries that have those documented policies.

4.1 Climate Change Education

Climate change was proclaimed by the former UN Secretary-General, Ban Ki Moon, to be the defining challenge of our time (UNESCO 2010). Prior to this, the 2007 IPCC report highlighted the emerging global consensus amongst scientists that climate change is predominantly human induced (IPCC, 2007). This has signalled the need for urgent and transformative action, local through global, to address the threat of potentially runaway climate change. Understanding of the threat has become much clearer with data and observations are made available by scientists, nevertheless, actions at community level are of priority so that impacts of climate change can be properly addressed by the communities. To achieve this objective, climate change education (CCE) has a crucial part to play in building social and individual capacities and attitudes for climate change mitigation to pre-empt worst case climate change scenarios in the future. The CCE has the task of developing the skills, capacities, and attitudes for adaptation in the face of already evident and looming climate impacts. Furthermore, it has an on-going role to play in stimulating and reinforcing understanding of and attentiveness to the realities of climate change.

Climate change education (CCE) emphasizes on self-transformation because 'business as usual' approach and scientific and technological solutions will not help global society to avoid the worst effects of global warming. The self-transformation that is emphasized in the CCE concerns about personal change that would lead to overall societal transformation towards new ways of seeing the world, finding or rediscovering a sense of what we value, reshaping and reorienting aspirations and purposes, and envisioning markedly different futures. It is holistic education as a precursor to a new world view, and a securer and more sustainable future (Kagawa & Selby, 2010). Knowing that climate change has various root causes (industrialization, urbanization, consumption, and lifestyle patterns, etc.), various actual and anticipated effects, and various means of mitigation and adaptation, thus CCE is appropriately to be promoted under the framework of ESD because of the variation on issues related to climate change that need to be taught to the students. Promoting CCE through the ESD framework enables the dynamic connections between environmental, economic, social, and cultural factors be examined for a fuller understanding on climate issues.

Climate change education has a crucial part to play in building capacities and attitudes for climate change mitigation, the mitigation dimension of climate change education is about identifying the causes of climate change and developing the knowledge, skills and dispositions required for individual and societal change to rectify those causes. Taken at its most basic level, the root cause of climate change is greenhouse gas emissions. At this level, education for climate change mitigation covers the various levels and types of energy consumption, the shift to non-polluting, renewable energy sources, energy conservation, environmental conservation, reforestation, and afforestation. Going deeper, mitigation education involves examining economic systems, social structures, cultural patterns, lifestyle expectations, consumerism, wealth distribution, aspirations and value systems and

their causal relationships with greenhouse gas emissions. Subsequently, the adaptation dimension of climate change education relates to building resilience and reducing vulnerability in the face of climate change impacts that are already happening or are soon to happen. The learning may be of a technical nature, such as learning about drought resistant farming practices or flood management behaviours. It may go beyond the technical aspects to a profound re-thinking of cultural practices and traditions. The adaptation dimension aligns climate change education with disaster risk reduction education (education to build a culture of safety and resilience in the face of potential cataclysm). Moreover, another aspect that is of important in the CCE is to focus on understanding and attentiveness whereby this element is about understanding what is happening to the climate, understanding the driving forces behind climate change, and creating a mind-set of alertness and mindfulness to changes that are already occurring. There are also widespread misconceptions about climate change circulating continually and, especially amongst populations of affluent societies, manifestations of ‘eyes wide shut’ denial and avoidance that need to be challenged (Hillman, Fawcett & Rajan, 2007).

General tendency found in the national reports is that CCE has not emerged as an independent field, but rather as an integral part of Environmental Education and ESD. In fact, it is a recurring theme across countries that CCE has only gradually begun to develop its own identity and is therefore still very much in its infancy. In some countries, this development is driven by government initiatives concerning climate change. Knowledge about climate change will be included in basic education, higher education, and adult education with focus on awareness and participation in relevant activities. At present, CCE is still a peripheral topic in both educational research and practice. In literature, CCE has been addressed almost exclusively as a domain of science education. Within the realm of practice, climate change is situated within Environmental Education and ESD, a minor theme of a peripheral area of the curriculum. Given the intense and growing interest in CCE, however, it is important to anticipate the possible scenarios under which this minor educational theme could develop into a central focus of education and become established as an independent concept and focus area, whether it is labelled as ‘climate education’ or ‘climate change education’ (CCE).

4.1.1 Brunei Darussalam

Brunei Darussalam has taken serious efforts to address climate change issues and threats because the country has experienced various natural disasters such as haze, flooding, storms, landslides, and forest fires. The country has adopted the United Nations International Strategy for Disaster Reduction – Hyogo Framework for Actions 2005-2015 (UNESCO 2011a), leading to drafting of the Disaster Management Order in 2006, and the establishment of the National Disaster Council and National Disaster Management Centre to manage the impact of natural disasters. The education system has integrated issues on environment and climate change into science and geography subjects as part of the ESD focus. Several related topics such as natural resources, global warming, pollution, deforestation, water conservation, etc. are taught to the students. Furthermore, a value-based approach in teaching and learning is implemented with aims to create awareness, raise concern, and promote caring for the environment in addressing climate change related issues.

In achieving the integration of climate change education in school curriculum, existing curricula and materials are re-oriented into existing courses taught at the Institute of Education that trains teachers. Topics that are related to climate change are introduced in different disciplines such as Science, Social Studies and Geography. Based on the issues and concerns of the National Development Policy and Strategy, topics such as below are integrated in the curriculum:

- Conservation of unique biodiversity, rain forests and natural habitats.
- Implementing high environmental standards for existing and new industries.
- Establishing clear guidelines for the preservation of buildings and landmarks of cultural and historical values.
- Regulations for maintenance of the environment.

- Supporting global and regional efforts to address trans-border and regional environmental concerns.
- Disaster Risk Reduction and Climate Change

4.1.2 Indonesia

Issues on climate change have become something important to be understood by every teacher to be implemented in learning. Teachers must have knowledge and action on mitigation and adaptation to climate change and these skills are to be acquired during the pre-service and in-service training programs. Climate change education should be performed through curricular and co-curricular activities, which can be delivered by integration and/or monolithic approach. Learning can be implemented in the classrooms or outside the classroom or in the community. Thus, teachers must have the ability or competence regarding content standards and competencies to integrate climate change in the learning process to achieve the demands of the learning curriculum competencies and values of ESD.

Adiwiyata Green Schools (AGS) programme are amongst well-known CCE and ESD-related programmes conducted in Indonesia, whereby the programme facilitates the integration of ESD in the school curriculum. The AGS programme was established since 2006, conducted by the cooperation between the Ministry of Education and the Ministry of Environment in collaboration with the UNESCO Associated Schools. This programme aims to promote sustainable development issues in schools and encourage responsibility in terms of the protection of the natural environment through participatory approaches and community involvement. It creates an eco-friendly atmosphere at school by introducing reduce-reuse-recycle programs and other environmental awareness activities. Schools are selected by the Ministry of Environment and supported by various local stakeholders (local governments, local district education agencies and NGOs). The school community involves in the planning, implementation, and evaluation of the programme. The national Adiwiyata team consists of officials from the Ministry of Environment, the Ministry of Education, environmental NGOs, the Environmental Education Network, and representatives from tertiary institutions. A school under the AGS program is designed as a place to obtain substantial science, norms and ethics that can be the basis for the creations of human well-being and the models of sustainable development. Every year, Indonesian government awards the National AGS certificate; in the last year 2019, 434 schools were awarded the National AGS certificate, reaching more than 5,000 schools in total since the program initiated. Unfortunately, in the year 2020, the award of the National AGS certificate did not happen due to the COVID-19 pandemic that affects the running of the program.

In Indonesia, the UNESCO Associated Schools or the ASPnet programme which comprises a network of 200 schools, had introduced various steps to achieve the success of ESD implementation. The first step of the programme involves an assessment of teacher knowledge and an understanding of ESD, whilst the second step of the programme is a student competition which aims to encourage students to write critical essays on sustainable development. These essays suggest ways and means to integrate ESD at the school level. Through the ASPnet, schools, teachers and students are involved in ESD through the promotion of various community services. In addition to Adiwiyata and ASPnet schools, Nature Schools have also begun their own initiatives to improve on sustainability and creating awareness on the environment to the schoolchildren. Moreover, ESD is also introduced in vocational secondary schools, among which the Vocational School of Forestry as an example of the successful integration of ESD. It is concluded that the success of education for sustainable development requires a commitment from the government, schools, families, and communities, which each of them has different participation elements.

4.1.3 Malaysia

Climate change is one of new priorities that the Ministry of Education is preparing to address through ESD. The Ministry of Education has taken steps to prepare school personnel and students to cope with natural disasters such as flooding, landslides, haze, and droughts. A manual on school preparations and readiness to cope with natural disaster was released in order to instill awareness and provide knowledge concerning natural disasters, which helps schools to plan and implement programmes to face natural disasters.

The implementation of sustainable school in Malaysia is a planned and structured programme designed to promote sustainability among students. The programme, so called Sustainable School Environment Award (SLAAS), has been implemented since 2005 and is open to primary, as well as secondary schools (not made compulsory by the Ministry of Education). Three parties who monitor the implementation of this programme are: i) the Curriculum Division, Ministry of Education; ii) the Department of Environment, Ministry of Natural Resources and Environment, and iii) the Institute of Environment and Development (LESTARI), Universiti Kebangsaan Malaysia. The monitoring is based on the measurable indicators that are established in the early stages.

The purpose of SLAAS is to create a school environment that fosters the conservation and preservation of the environment in the aspects of management, curriculum, co-curriculum, and continuous green activities to establish a life practice in line with the concept of sustainable development. Environmental approach is chosen because through this approach, we can learn to understand human interaction with the environment and how the environment is managed wisely and responsibly towards the sustainability of life on earth. The basic idea of sustainable school as discussed by Huckle (2010) is to integrate sustainability in every aspect of life in the school setting, which involves the administration, learning process, building management, transport mode to school, and the school's relationship with the community through the implementation of SLAAS, have been implemented in Malaysia.

4.1.4 Philippines

Climate change education programmes and activities were adopted by the national and local authorities to bring about crucial changes in knowledge, values, behaviours, and lifestyles towards preventing and reducing the adverse impacts of climate change. The Department of Education established the School Inside a Garden Program (SIGA) to nurture students in a school environment which provides them the opportunity to care for the environment. Public schools were directed to set aside adequate land space for the cultivation of a school garden, and the SIGA Program incorporated lessons in solid waste management in science classes.

Responding to the Hyogo Framework for Action's that are related to Disaster Risk Reduction (DRR) efforts, the Department of Education mandated the "Mainstreaming of Disaster Risk Reduction Management in the School System" to build schools, nations and communities that are resilient to disaster. This Program undertook the preparation of the Disaster Risk Reduction Resource Manual which will serve as a source of information for school administrators, principals, supervisors, and teachers. The Program also consisted of other components, i.e., mainstreaming DRR concepts in the elementary and secondary schools' curricula, school mapping exercise, school water and electrical facilities assessment, conduct of earthquake and fire drills, as well as dissemination campaign for energy and water conservation.

Department of Education Philippines partnered with the Hongkong and Shanghai Banking Corporation (HSBC) and the World Wide Fund for Nature (WWF) Philippines, launched Project Eco-Kids to educate public elementary school students about climate change and practical solutions they can adopt in their daily lives to help address it. The Program consisted of four modules, namely, Climate Change, Energy Conservation and Renewable Energy, Waste Management, and Lessons

Learned as the culmination of the first three modules. The Program was implemented in fifteen public schools in urban Manila with involvement of 10,000 students. Subsequently, the Philippine Disaster Risk Reduction and Management Act 2010 was passed into law, whereby three education agencies, namely, Department of Education, Commission on Higher Education (CHED) and the Technical Education and Skills Development Authority (TESDA) and other relevant agencies were mandated to integrate disaster risk reduction and management education in the school curricula of secondary and tertiary level of education, including the National Service Training Program, whether private or public, including formal and non-formal, technical-vocational, indigenous learning and out-of-school youth courses and programs.

Moreover, the Department of Education had proposed a project for the second phase of the Climate Change Adaptation Program and Disaster Risk Reduction Initiative in the School System which aims to print additional copies of the lesson exemplars, module, and resource manuals for distribution to 18,000 secondary schools nationwide. The project further plans to train and orient focal persons from the 17 regions and 199 school divisions on the use of the materials as well as on monitoring and evaluating the implementation on the ground. In 2011, the National Search for Sustainable and Eco-friendly School with theme of “Sustainable and Eco-friendly Initiatives”, was open to all elementary, high school and tertiary school levels, both public and private. The activity aimed to encourage schools and academic institutions to become more actively involved in environmental issues at a practical and local level, and to develop skills and understanding among students, faculty, and school administrators to initiate active responses and increase community awareness and involvement on environmental concerns.

4.1.5 Timor-Leste

Based on the National Sustainable Development Priorities in Timor-Leste, the Government of Timor-Leste had put priorities encompass of improvement school quality, promoting a nice and friendly environment campaign, reviewing the curriculum, and establishing of National ESD Implementation Commission. The ESD programme activities that are related to climate change education include school farming within the school compound, with a training on preparation of organic garden and organic fertilizer. The school farming activity is established by the Education Ministry of Timor-Leste, and the programme is called *Horta Eskolar*, which focuses on environmental education and sustainable agriculture. Other activities such as permaculture activity involves in preparing the organic garden and organic fertilizer and planting vegetables. Some creativities of reusing the trash by the school students are also practised to support ESD implementation in Timor-Leste.

4.2 Human Rights Education

The SDG4 puts international human rights at its core wherein the quality education is expected to be achieved through a right-based approach. Human rights education is the education and training that nurtures the skills required to promote, defend and apply a universal culture of human rights in daily life. It highlights the values such as non-discrimination, equality, justice, non-violence, tolerance and respect for human dignity (UNESCO, 2013b). Human rights education not only targeting childhood education age, but also adults. Human rights education is for people of all ages, regardless of gender, nationality, ethnicity, religion, language, or other form of identity.

International efforts to succeed the human rights education have been conducted in various programmes involving UNESCO. UNESCO works on human rights education contributes to creating a free gender-based violence learning environment, for example the UNESCO’s Associated Schools Network. In addition, through the World Programme for Human Rights Education (2005-ongoing),

established by the General Assembly of the United Nations, the implementation of human rights education in all sector is strengthened.

4.2.1 Brunei Darussalam

In Brunei Darussalam, human rights education is implicitly addressed in two subjects that have been taught in school for a long time, namely Civics and Islamic Religious Knowledge. Civics was intended for primary education level. Following the implementation of the new education system SPN21, the subject is now integrated into a new subject called *Melayu Islam Beraja* (Malay Islamic Monarchy), which regarded as compulsory subject for all education levels. In the similar way, the Islamic Religious Knowledge subject, which previously taught as an optional subject in primary and lower secondary education, after SPN21, is now a compulsory one for primary to secondary education students. The human rights education is not explicitly mentioned in the higher education curriculum, as the subject is seen as of little importance to contribute to the country's socio-economic development. However, the *Melayu Islam Beraja* subject is also compulsory in this education level (Institute of Human Rights and Peace Studies, Mahidol University, & ASEAN University Network, 2013).

In addition, in 2012, Brunei's Institute of Asian Studies had organized the ASEAN Inter-University Conference on Social Development which raised the issue of human insecurities in Southeast Asia. This event is seen as paving the way to further consideration on developing policies related to human rights education, such as promotion and protection of children, persons with disabilities, and elderly rights.

4.2.2 Indonesia

In Indonesia, human rights education is integrated into its national curriculum and educational standards. A specific subject called Civic Education is compulsory for the students to take, from grade 1 to 12 in the Indonesian educational curriculum. It covers the topic concerning Pancasila (the five basic Principles of the Republic of Indonesia), 1945 Constitutional Laws, human rights, unification in diversity, and unified of Indonesia (Wahyudin & Suwirta, 2017). In addition, with regard to human rights education as an integral part of the right to education (UNESCO, 2013b), Indonesian citizen's right to education has constitutionally been ensured by the 1945 Constitution of the Republic of Indonesia, Article 31(1) which stated that 'every citizen has the right to education.' Further, the the 1945 Constitution's Fourth Amendment of 2002 Article 31(2) states that 'every citizen has the obligation to undertake basic education, and the government has the obligation to fund this'. The Fourth Amendment of 2002 shows Indonesian government's commitment in providing education for all citizen of the country in terms of education funding. As stated in Article 31(3), 'The state shall prioritise the budget for education to a minimum of 20% of the State Budget and of the Regional Budgets to fulfil the needs of implementation of national education.'

Accordingly, Indonesian government launched the Nine-year Compulsory Basic Education Program for its citizen aged 7-15 years, which accomplished in 2008. Following the success of this program, Twelve-years Universal Education Program was introduced as the response to growing population of productive age in the country. The program is believed to contribute in increasing the gross enrolment ratio in upper secondary schools (Manan, 2015). Also, to deal with the problem of education cost, in 2005, the government introduced the School Operational Assistance programme, which provided grant for both public and private schools. In public schools, the programme aimed at covering the students' school tuition, whereas in private schools it intends to lighten the school operational expenses.

At higher education level, human rights education are used as tool to increase the students' knowledge and awareness on his/her rights and freedom, and to strengthen their commitments to these principles (Institute of Human Rights and Peace Studies et al., 2013).

4.2.3 Malaysia

Human rights education content is integrated into the curriculum in Malaysian schools, through three subjects, namely Moral Education, Islamic Education, and Civics and Citizenship Education. The first two subjects highlight the values related to, including human rights and peace education, whereas the Civics and Citizenship Education's core is to educate the students on their rights with responsibilities, multiculturalism, and harmonious living in the country plural society. Also, Malaysian schools provide the co-curricular activities for the upper primary and secondary students to develop talent, interest, and aptitude outside the classroom. The schools also promote the practises of human rights education, by accommodating the students' right to choose the groups they would like to join (Chang et al., 2013).

In addition, programme related to human rights education has been conducted through the collaboration between Human Rights Commission of Malaysia and the Ministry of Education. In 2009, the Best Practice on Human Rights – *Amalan Terbaik Hak Asasi Manusia (ATHAM)* programme was introduced, with the aim to teach the awareness and practice of human rights among teachers and students. Through this programme the following objectives are expected from the school society: i) encourage students and teachers to be aware and take steps to adopt human and children's rights; ii) Cultivate and attitude of respect and responsibility regarding human and children's rights and practicing it in everyday life; iii) Increase the understanding and practice of human and children's rights for their well-being; iv) Encourage students and teachers to be aware to the aspects of human and children's rights in planning and implementing school activities; v) Share experiences on human and children's rights practices in school and local community; and vi) Strengthen communication and interaction among students regardless of race, religion, and gender (Chang et al., 2013; Human Rights Commision of Malaysia, 2013).

4.2.4 Philippines

Human rights education has been recognized by the Philippines as an integral part of an individual well-being development as well as the sustainability of social, political, and economic stability. Constitutionally, the application of human rights principles in all education levels has been mandated by The Philippines 1987 Constitution, which specified that 'the State shall protect and promote the right of all citizens to quality education at all levels and shall take appropriate steps to make such education accessible to all.' Specific law has also been issued with regard to the inclusion of the human rights concepts in the curricula in all education levels as well as training school in the country, which is the Executive Order No. 27 (Education to Maximize Respect for Human Rights). In Philippines, subjects on human rights are offered to junior and senior students, either as an elective or as a required part of the curriculum. History, civic education, social sciences, sociology, philosophy, religious studies are among the subjects that take human rights education into consideration (Institute of Human Rights and Peace Studies et al., 2013).

Furthermore, regarding the right to education, the Philippines government launched the Open High School Programme (OHSP) in 1998, to provide alternative learning opportunities for the out-of-school youth and adults. The programme involves all secondary schools in the country to participate as partner school. OHSP has proved to be effective in reaching marginalized learners by increasing their accessibility to secondary education (UNESCO, 2017a).

4.2.5 Timor-Leste

The commitment of the government of Timor-Leste to encourage human rights education is clear despite its lack in specific standard curricula. As stated in The National Education Act's education objective, which related to human rights education, including: *'ensure the cultural, ethical, civic, and professional education of children and youth, enabling them to reflect critically as responsible citizens as well as to use their free time in a fruitful manner.'* This objective is expected to be accomplished since early childhood and basic education, as it specifically state in Pre-School Education goal: to develop moral and civic understanding and awareness of the rights and responsibilities of the citizen and the concept of freedom and accountability; and Basic Education goals: i) ensure that children with special educational needs, both physical and intellectual, are provided with proper opportunities to develop and use their full potential, and ii) enable, with freedom of choice, civic, moral and religious education (Timor-Leste Ministry of Education, 2011).

Furthermore, to ensure the right to education to all its citizens, in 2006 Timor-Leste's government launched the National Equivalency Education Programme. This is a type of non-formal education approach, intended to address the problems of large number of the country's citizens who have not completed their formal nine-years basic education. The programme comprises two levels which correspond to primary and pre-secondary education. Community learning centres are established to support the implementation of National Equivalency Education Programme, under supervision of the Ministry of Education (UNESCO, 2017a).

4.3 Gender equality

Since gender equality and education are absolute human rights, both are critical concerns of SDG4 (UNESCO, 2016). Some initiatives have been conducted by UNESCO, to promotes gender equality to, in and through education. On the other hand, gender inequality is a long-standing issue that are manifested in all aspects of education process, including access, retention, completion, treatment, learning outcomes, and career choice (UNESCO, 2013a). For example, in Indonesia gender disparities in education still exist. The average length of girls stay in school is lower than boys, viz. 7.65 years and 8.56 years, respectively. The percentage of women who do not have a diploma is higher than men, i.e. 25.62% and 24.04%, respectively (Bappenas, 2019). In 2017, more girls are out of school than boys at primary level; 72% of out-of-school primary age children were girls (UNESCO, 2019). Moreover, girls who drop out of school are vulnerable to child marriage which results in the unfulfillment of children's rights.

Gender inequality, which disproportionately affecting girls and woman, is both a cause and a result of systematic discrimination and gender stereotyping (UNESCO, 2013a). To resolve the issue of gender inequality, and subsequently achieve gender equality, all types of discrimination should be eliminated. Also, both girls and boys, women and men should be provided with equal conditions, treatment and opportunities in all spheres of life, including education. The UNESCO defines gender equality in education as the condition when both female and male learners have equal access to learning opportunities, are equally treated and benefited from education throughout their lives (UNESCO, 2013a, 2019). To achieve a gender equality in education, the entire education system must be gender sensitive, responsive, and transformative. The education system, including laws and policies, teaching and learning approaches and assessment, curriculum, and learning environment; should ensure equal access to education (provide equal learning opportunities), within education (gender-sensitive, non-discriminatory and transformative learning environments, educational contents, and pedagogies), and through education (equality of outcome, life and work opportunities) (UNESCO, 2013a).

4.3.1 Indonesia

Gender mainstreaming has been a concern of Indonesian government, particularly in empowering women by improving the role and quality of life of girls and women within family, communities and state (UNESCO, 2017a). The government has developed laws and regulations to support gender mainstreaming. Gender mainstreaming for education field is regulated through the 1945 Constitution of the Republic of Indonesia, Article 31(1): ‘every citizen has the right to education,’ which imply every Indonesian citizen’s, women and men, has the same right to education. Also, rules include Laws No. 7 of 1984 about convention on the elimination of all forms of discrimination against women, Laws No. 20 of 2003 on the National Education Systems support the 1945 Constitution of the Republic of Indonesia, Article 31; that education can be reached through formal or non-formal schools (Handayani & Widodo, 2016). The Laws No. 20 of 2003 Article 5 (1), states “every citizen has equal rights to receive a good quality education”. Article 6 (1) of the Act on National Educational System 2003 stipulates that every citizen of aged 7–15 years is obliged to undertake basic education. Further, Article 7 stipulates that every child is entitled to free primary education (UNESCO, 2019). In addition, The Regulation of the Minister of Education No. 84 of 2008, emphasizes the encouragement to the realization of equitable and equal education by considering women and men’s differences in needs and aspirations (Nurhaeni & Kurniawan, 2018). Beside the aforementioned laws related to education, the government has also issued Laws No. 25 of 2000 about National Development Program, specifically the Life Improvement Program, which aimed to improve the quality of women and the role of women in various fields. The General Guidelines to implement the Gender Mainstreaming program in Regional Development is regulated by the Ministry of Internal Affairs Regulation No. 132 of 2003 and government Regulation No. 84 of 2000 about Guidelines for the regional organization, the Provincial Government and District/City to establish organizational unit in charge of women's empowerment activities at regional level (Handayani & Widodo, 2016).

As reported by UNESCO (2017a), to implement the policies, the government has as well developed various programmes, particularly through non-formal education, such as the Women Empowering Programme which delivered five education programmes including women’s illiteracy eradication, family education, women’s leadership training, women’s empowerment course and soft-skills courses. Additionally, a National Working Group of Gender Mainstreaming was established to promote gender equality at national level, in cooperation with Center for Women’s Studies, women’s organization, and non-government organizations. At regional level, local working groups were established to facilitate and monitor the action plans for gender mainstreaming. It is also reported that the Ministry of Education and Culture, has published handbooks in 2012, on gender issues in education. A more recent programme was launched in 2016, the Movement on Education for Marginalized Women’s Empowerment, which aims to strengthen local governments’ and stakeholders’ commitment to improving quality of life for women, especially mothers and marginalized women, and to build women’s capacity (UNESCO, 2017a).

4.3.2 Malaysia

Malaysia has consistently shown its commitment to achieve gender equality, specifically to promote women and girls’ rights. Among the major legislation related to women’s development are: Women and Girls Protection Act 1973 (Amended 1987), Employment Act 1955 (Amended in 1998 to encourage greater labour force participation among women), Domestic Violent Act 1994, Code of Ethics for Sexual Harassment Prevention (1999), and Guardianship of Infants Act 1961 (Amended 1999). Under the Federal Constitution, Article 8(2) was amended in 2001 to prohibit gender discrimination. Further, the National Policy on Women (NPW) was adopted in 1989. A visible impact of the NPW was its inclusion of a chapter on Women in Development in the Sixth Malaysia Plan (1991–1995). The primary

objectives of the NPW are: i) To ensure equitable sharing in the acquisition of resources and information, opportunities, and benefits of development for men and women. The objectives of equality and justice must be made the essence of development policies which must be people-oriented so that women, who constitute half of the nation's population, can contribute and realize their potential to the optimum; and ii) To integrate women in all sectors of national development in accordance with their capabilities and needs in order to enhance the quality of life, eradicate poverty, ignorance and illiteracy, and ensure a peaceful, harmonious, and prosperous nation.

Following the NPW, in 1992, an Action Plan for the Advancement of Women (APAW) was formulated to operationalize the NPW. Under the APAW, various strategies and programmes were identified, which outlined critical areas of concern and proposed the following:

- i) Strengthen the national machinery for the advancement of women;
- ii) Raise public awareness and sensitize the government bureaucracy towards issues related to women;
- iii) Re-orientate the institutional process for planning, implementation, and monitoring of government policies and programmes to accommodate women's concern;
- iv) Activate the NGOs to increase the efficiency and effectiveness of socio-economic programmes; and
- v) Redress problems of discrimination and promote affirmative action for the advancement of women in various fields.

The action plan is regularly reviewed to ensure that women are provided with the necessary skills and knowledge to enhance their participation in and contribution to the social and economic development of the nation. The Plan of Action for the Advancement of Women 2010-2015 has resulted in more coherent and focused programmes to integrate women in development and elevate their status in society. Based on the outcomes, Malaysia thus has made significant progress in terms of gender equality. In particular to education field, gender parity has been achieved in education since early 1990s. In 2015, female student enrolment in public higher education reached 62 per cent, and has exceeded 60 per cent since 2003 (EPU, 2017).

4.3.3 Philippines

As stated in the Philippine Development Plan 2011-2016, the country's vision of inclusive growth and development entails investment in human capital through education. One of the objective determined is achieving gender parity and equality (UNESCO, 2015b). Educational policies have been developed to attain the objective. The Philippine Magna Carta of Women (MCW), legislated in 2009 through RA 9710, mandates a non-discriminatory and pro-gender equality and equity measure to enable women's participation in the formulation, implementation, and evaluation of policies, plans, and programs for national, regional, and local development. Pursuant to RA 9710 or the MCW, the Philippine Commission on Women, Department of the Interior and Local Government, Department of Budget and Management, National Economic and Development Authority's Joint Memorandum Circular 2013-01 was then issued to prescribe policies and procedures in mainstreaming gender perspectives in local planning, programming and budgeting. An initiative called Gender and Development (GAD) was founded, which subsequently institutionalized by the Department of Education through DO No. 27 s. 2013 which mandates the establishment of the GAD Focal Point System, an institutional mechanism to ensure gender mainstreaming. Moreover, the DepEd Order issued guidelines and procedures on the establishment of Gender and Development Focal Point System (GFPS) at the regional, division and school levels. A more recent policies related to gender mainstreaming in education issued by the government is the Science and Technology Scholarship Act (1997), which expand and upgrade educational opportunities for women to pursue careers in science and technology.

4.3.4 Timor-Leste

One of Timor-Leste National Development Plan's goal is to guide the country's literacy acceleration programmes by promoting gender equity and empower women. Furthermore, the country's National Education Strategic Plan 2011-2030 has clearly stated that 'The NESP target set is to ensure that, by 2015, girls will have the same opportunities of access to all levels of education. There are two additional targets, a) to substantially increase the number of female teachers; and b) to increase women's participation in managerial positions at the Ministry' (Timor-Leste Ministry of Education, 2011).

In 2010, a Gender Unit was established to execute the country's comprehensive plan for gender equity in education. The aim is to increase female participation in secondary and higher education, including post-graduate studies abroad; and increase the number of female teachers.

4.4 Global Citizenship Education

Global citizenship education (GCED) is now arising as a new discussion in education that resulting from the growing interest in global citizenship. Global citizenship refers to a sense of belonging to a broader community and common humanity that highlights the interdependency and interconnectedness of political, economic, social and cultural between the local, the national and the global (UNESCO, 2015a). It is a quality required to be citizens of the global world, and GCE deals with how to educate the qualifications, qualities, rights, and responsibilities of global citizens (Wahyudin & Suwirta, 2017).

Furthermore, as cited from UNESCO (2015a), GCED involves three interrelated core conceptual dimensions: cognitive, socio-emotional, and behavioural. Cognitive dimension deals with knowledge and thinking skills necessary to better understand the world and its complexities. Socio-economic dimension deals values, attitudes, and social skills that enable learners to develop the ability to actively, psychosocially, physically live together with others, with differences and diversity, respectfully and peacefully. Behavioural refers to conduct, practical application and engagement of an effective and responsible act at local, national, and global levels for a more peaceful and sustainable world. The aim of GCED is to be transformative, building the knowledge, skills, values, and attitudes that learners need to be able to contribute to:

- i. Develop an understanding of global governance structure, rights, and responsibilities, global issues and connections between global, national, and local systems and process.
- ii. Recognise and appreciate difference and multiple identities, including culture, language, religion, gender, and common humanity; and develop skills for living in an increasingly diverse world.
- iii. Develop and apply critical skills for civic literacy (critical inquiry, information technology, media literacy, critical thinking, decision-making, problem solving, negotiation, peace building, as well as personal and social responsibility.
- iv. Recognise and examine beliefs and values and how they influence political and social decision-making, perceptions about social justice and civic engagement.
- v. Develop attitudes of care and empathy for others and the environment and respect for diversity.
- vi. Develop values of fairness and social justice, and skills to critically analyse inequalities based on gender, socio-economic status, culture, religion, age, and other issues.
- vii. Participate in, and contribute to, contemporary global issues at local, national, and global levels as informed, engaged, responsible, and responsive global citizens (UNESCO, 2015a).

4.4.1 Indonesia

One of the factors that contribute to successful implementation of GCED is by implementing it in the education system itself. The Strategic Five-Year Plan of the Ministry of National Education provides the official ‘Vision for 2025’, which aims to see Indonesian citizens develop the following four types of intelligence: i) Spiritual Intelligence, ii) Emotional and Social Intelligence, iii) Intellectual Intelligence, and iv) Kinesthetic Intelligence (UNESCO, 2014a). Indonesian school curriculum contains the core competencies related to global citizenship education. There are three core competencies in the 2013 curriculum: one of them is the social attitudes which denotes honest behaviour, responsibility, tolerance and mutual understanding (UNESCO, 2015a). Indonesia emphasizes on the role of religion, democratic competencies, cross-cultural skills, and civic literacy in promoting GCED. At the implementation level, the 2013 curriculum contains citizenship education subject ‘Pancasila and Citizenship Education’ which is organized into four domains: (a) Pancasila, (b) 1945 Constitution, (c) Unitary Republic of Indonesia, and (d) Unity in Diversity. This subject aimed at creating Indonesian “good citizens” who believe in God, have good characters, internalize democratic values, and become responsible citizens as individuals and as members of the national and global communities (Neoh & Saifulloh, 2020).

4.4.2 Malaysia

Malaysia’s commitment to promote GCED is reflected in the country’s educational policies and frameworks. In the Malaysian Education policy and the 1961 Education Act, the purpose of education is defined through three goals: i) Promote national unity; ii) Produce the human resources required for national development; and iii) Develop a progressive and disciplined Malaysian society. This was then replaced by the 1996 Education Act, which states that “there shall be no discrimination against any citizen in the education system and every religious group has the right to establish and maintain institutions for education in its own religion”. Also, the Malaysia Education Blueprint 2013–2025 provides a framework for GCED, which aims to promote: i) Thinking skills, ii) Broad knowledge, iii) Ability to converse in two languages, iv) Good ethical and spiritual values and, v) Appreciation of national identity.

4.4.3 Philippines

The Philippines’ national education goal is defined in the 1987 Philippine Constitution. In particular, the role of educational institution is defined: to inculcate patriotism and nationalism, foster love of humanity, respect for human rights, appreciation of the role of national heroes in the historical development of the country, teach the rights and duties of citizenship, strengthen ethical and spiritual values, develop moral character and personal discipline, encourage critical and creative thinking, broaden scientific and technological knowledge, and promote vocational efficiency. In the Basic Education Act the goal of education is stated, which is to provide students with the skills, knowledge, and values they need to become caring, self-reliant, productive, and patriotic citizens. Further, in the Enhanced Basic Education Act (2013) the global awareness and creative thinking skills are emphasized: ‘It is hereby declared the policy of the State that every graduate of basic education shall be an empowered individual who has learned, through a program that is rooted on sound educational principles and geared towards excellence, the foundations for learning throughout life, the competence to engage in work and be productive, the ability to coexist in fruitful harmony with local and global communities, the capability to engage in autonomous, creative, and critical thinking, and the capacity and willingness to transform others and one’s self’ (UNESCO, 2014a).

In Philippines, through the ‘Learning on Live Together’ program, GCED is integrated into the K-12 curriculum. It highlights the effective communication skills, media and information literacy, as well as values education which promote self-worth, harmony with other people, love of country and global solidarity (UNESCO, 2015a). Further, the curriculum was designed to address the demands of a knowledge-based economy to foster local, national and global development, by emphasizing the following skills: i) information, media and technology skills, ii) learning and innovation skills, iii) effective communication skills, and iv) life and career skills (UNESCO, 2014a). Education policies and programmes have been developed to promote the ‘Learning on Live Together’ program in three areas: education for peace, citizenship education, and life skills education. In particular to the citizenship education, the following national policies were developed: Executive Order No. 27 or Education to Maximize Respect for Human Rights (1986); Republic Act 9201 or An Act Declaring December 4 to 10 as National Human Rights Consciousness Week (2003); DECS Order No. 61; s.1987 or Inclusion of the Study of Human Rights and Accompanying Responsibilities in the School Curricula; DepEd Order No. 53; s.2001 or Strengthening the Protection of Religious Rights of Students; DepEd Order No. 101; s.2010 or The Alternative Learning System (ALS) Curriculum for Indigenous Peoples (IPs) Education; DepEd Order No. 62; s.2011 or Adopting the National Indigenous Peoples (IP) Education Policy Framework; Republic Act No. 9512 or An Act to Promote Environmental Awareness through Environmental Education and for other Purposes (2008); DepEd Order No. 55; s.2007 or Prioritizing the Mainstreaming of Disaster Risk Reduction Management in the School System and Implementation of Programs and Projects Relative; Republic Act 9710 or An Act Providing for the Magna Carta of Women (2009); and Executive Order 273 (1995) or Approval and Adoption of Philippine Development Plan for Gender-Responsive Development (PPGD) 1995-2025.

4.5 Peace and Non-violence Education

Peace-related issue is also considered in global citizenship education, specifically through the behavioural domain of learning of GCED. One of the key learning outcomes of GCED is ‘learners act effectively and responsibly at local, national, and global levels for a more peaceful and sustainable world.’ Hence, an individual is expected to demonstrate personal and social responsibility for a peaceful and sustainable world as one of the key learner attributes of behavioural GCED (UNESCO, 2015a).

Promoting peace through education is UNESCO’s mission. Education for peace and non-violence includes training, skills and information directed towards cultivating a culture of peace based on human rights principles. The goal is to develop comprehensive education systems that embrace the values of human rights, intercultural understanding and tolerance, as well as promote the knowledge, skills, attitudes and behaviours that reflect and inspire such values. There are two fundamental concepts of peace education, namely respect (for self and for others) and skills (communication, cooperation, and behavioural skill used in conflict situations) (UNESCO, 2008). According to Wahyudin (2018), peace education can be implemented in three ways. First, the knowledge-based approach, which view peace education as a multi-disciplinary academic and oral study aimed at solving problems of war and injustice through institutional development and movement. Second, the skills and attitudes approach, which foster peace education through the efforts that strengthening learners’ attitude, tolerance, and ability to work with others, avoid and solving conflict, and strengthen the motivation to live in peace with others. Third, the hybrid of the two approaches that highlights the realization of peace education through a combination of knowledge, skills, and attitudes. In this view, peace education is defined as the process of acquiring knowledge, skills, attitudes, and values required for the behaviour of learner, including children and adults, to constantly avoid conflict and violence the in environment, and create personal, inter-personal, and inter-group conducive peace at the national or international level (Wahyudin, 2018).

4.5.1 Philippines

Among the relevant policies on peace education, the 2006 Executive Order on Institutionalizing Peace Education in Basic Education and Teacher Education mandated the Department of Education to “mainstream peace education in the basic formal and non-formal education curriculum” as well as enhancing the knowledge of education personnel in peace education. In addition, DepEd Memorandum No. 134, s.2003 or Agreements between the Department of Education (DepEd) and the Office of the Presidential Adviser on the Peace Process (OPAPP) on Peace Education Program and DepEd Memorandum No. 14, s.2013 or the DepEd Peace Movement in Mindanao, were developed to support education for peace in the Philippines.

4.6 Appreciation of Culture Diversity and Culture’s Contribution

4.6.1 Brunei Darussalam

In Brunei Darussalam, UNESCO involved in implementation of a programme entitled “Strengthening national capacities for the safeguarding of intangible cultural heritage and the implementation of the 2003 Convention in Brunei Darussalam” to support the capacity of Brunei to safeguard its intangible cultural heritage through effective implementation of the 2003 Convention. The programme aims to build up a critical mass of national capacity, both in government institutions and in civil society, so that Brunei would have a sustainable framework for safeguarding intangible heritage and implementing the Convention on a long-term basis. To this end, the project will implement an integrated capacity building strategy, composed of well-drafted workshops and activities, and the creation of pilot tested community-based inventorying in selected villages. These will all be tailored to respond to the country’s identified needs. Several activities under this programme are listed below:

- Building Skills for Youth Empowerment and Civic Engagement in Brunei Darussalam
- Supporting Youth Networks in Brunei Darussalam and ASEAN
- Supporting social inclusion of persons with disabilities

Besides this, the second programme named World Heritage programme. A potential cooperation can be launched to prepare a national Tentative List of both cultural and natural heritage sites for possible World Heritage listing with the assistance of UNESCO World Heritage Centre and UNESCO Jakarta. One of the proposed activities was World Heritage Education for Young People in the Brunei Darussalam (UNESCO, 2018a).

4.6.2 Indonesia

In Indonesia, the appreciation of cultural diversity is reflected in national policy framework. It is included in the country’s national philosophy of Pancasila (Five Principles), particularly the third principle ‘The unity of Indonesia.’ Also, another relevant philosophical concept, the national motto of Indonesia ‘Bhinneka Tunggal Ika’ or *Unity in Diversity*, underlies the country’s commitments to uphold cultural diversity. These two has become the reference to Laws No. 20 of 2003 on the National Education Systems.

4.6.3 Malaysia

The *Malaysia Education Blueprint 2013–2025* (MoE Malaysia, 2013) provides a framework for how LTLT’s illustrative competencies form part of the national vision for education in the country. This framework aims to promote the following skills and competencies: i) Thinking skills, ii) Broad knowledge, iii) Ability to converse in two languages, iv) Good ethical and spiritual values and, v) Appreciation of national identity. In particular, the Blueprint’s vision aims for “an education system that gives children shared values and experiences by embracing diversity”, by encompassing trust, religious tolerance and social interaction between students of different ethnic groups.

4.6.4 Timor-Leste

Ministry of Timor-Leste considers the involvement of local partners to be both desirable and indispensable. These partners include the churches, and in particular the Catholic Church, foundations, NGOs and other stakeholders. These organizations have been playing an important role in the education of Timorese citizens for many years and perform a valued mission of public service. As for cultural, The National Education Act also establishes the following education objectives:

- i) Contribute towards the personal and social improvement of individuals, through the full development of their personality and the shaping of their character, enabling them to reflect conscientiously on ethical, civic, spiritual and aesthetical values in the context of providing balanced mental and physical development.
- ii) Ensure the cultural, ethical, civic, and professional education of children and youth, enabling them to reflect critically as responsible citizens as well as to use their free time in a fruitful manner.

5.0 Empirical Findings

The questionnaires survey and open-ended questions were sent to 100 teachers of each cluster country, nevertheless, feedbacks on ESD were only received from Brunei Darussalam (n=77), Indonesia (n=6), and Philippines (n=6).

i. Brunei Darussalam

Table 2 indicates the demographic profile of respondents from Brunei Darussalam with 68.8% and 31.2% are male and female teachers, respectively. Majority of the respondents are graduate teachers with 46.8% are having Master’s degree, 37.7% with Bachelor’s degree, and there are teachers with doctorate degree (3.9%), while others are having diploma or other certificates. Most teachers are having teaching experience of more than 10 years (64.9%) with various teaching expertises, and 3.9% of the teachers are experts of ESD.

Table 2. Demographic profile of respondents from Brunei Darussalam

No.	Profile	No. of respondents	%
1.	Gender		
	Male	53	68.8
	Female	24	31.2

2. Education Level		
Bachelor's Degree	29	37.7
Diploma	7	9.1
Others	1	1.3
Master's Degree	36	46.8
Ph.D	3	3.9
Post graduate Diploma	1	1.3
3. Years of Experience		
Less than 5 years	9	11.7
6-10 years	18	23.4
More than 10 years	50	64.9
4. Expertise		
Early Childhood Education	2	2.6
Education for Sustainable Development (ESD)	3	3.9
Others	6	7.8
Primary Education	14	18.2
Secondary Education	28	36.4

Based on the survey results, majority of teachers (49.4%) in Brunei Darussalam are unsure whether there are aspects of communities' interaction being integrated in the curriculum; however 32% agreed that there is such aspect being emphasized, whereby they agreed that issues affecting interaction of communities at local, national, and global levels, are integrated in the school curriculum (Table 3). Furthermore, aspect of demonstration of respects in the school curriculum also received high agreement (more than 60%) from the respondents of Brunei Darussalam. Demonstrations of respect that are agreed being inculcated in the curriculum include:

- Respect for difference in diversity towards other individuals and social groups.
- Respect for difference in cultivating empathy towards other individuals and social groups.
- Respect for difference in solidarity towards other individuals and social groups.
- Respecting all human and living things.
- Respecting the environments

Subsequently, as for aspect of values in the curriculum, majority of the teachers (more than 70%) agree that the school curriculum in Brunei emphasizes on this aspect. Values such as respect, tolerance and understanding, solidarity, empathy, caring, equality, inclusion, and human dignity are portrayed in the existing curriculum. The final aspect on whether sustainable consumption habits are adopted in the school curriculum, it is apparent that more than 70% of the respondents agreed that this aspect is adopted.

Table 3. Details of responses from teachers of Brunei Darussalam on items in the questionnaires survey

Items	Percentage (%)				
	Strongly Disagree	Disagree	Agree	Strongly Agree	Undecided / Unsure
Issues affecting interaction of communities at local level, are discussed in the curriculum	1.3	15.6	29.9	3.9	49.4
Issues affecting interaction of communities at national level, are discussed in the curriculum	0.0	13.0	31.2	6.5	49.4
Issues affecting interaction of communities at global level, are discussed in the curriculum	0.0	13.0	32.5	5.2	49.4
Demonstration of appreciation and respect for difference in diversity towards other individuals and social groups inculcated in the curriculum.	1.3	10.4	42.9	19.5	26.0
Demonstration of appreciation and respect for difference in cultivating empathy towards other individuals and social groups inculcated in the curriculum.	1.30	11.69	44.16	18.18	24.68
Demonstration of appreciation and respect for difference in solidarity towards other individuals and social groups inculcated in the curriculum.	1.3	11.7	44.2	16.9	26.0
Curriculum emphasis on valuing and respecting all human and living things.	0.0	9.1	54.5	26.0	10.4
Curriculum emphasis on valuing and respecting the environments.	0.0	5.2	58.4	27.3	9.1
Value of respect is portrayed in the curriculum.	0.0	2.6	61.0	28.6	7.8
Values of tolerance and understanding are portrayed in the curriculum.	0.0	6.5	54.5	27.3	11.7
Value of solidarity is portrayed in the curriculum.	0.0	7.8	55.8	19.5	16.9
Value of empathy is portrayed in the curriculum.	0.0	7.8	51.9	23.4	16.9
Value of caring is portrayed in the curriculum.	0.0	2.6	57.1	24.7	15.6
Value of equality is portrayed in the curriculum.	0.0	9.1	50.6	23.4	16.9
Value of inclusion is portrayed in the curriculum.	0.0	5.2	51.9	22.1	20.8
Value of human dignity is portrayed in the curriculum.	0.00	9.09	42.86	25.97	22.08
Sustainable consumption habits are adopted in the curriculum (e.g. recycling, reuse, etc).	1.3	13.0	46.8	28.6	10.4

ii. Indonesia

Respondents' demographic profile of Indonesia (Table 4) indicates only six respondents (3 males, 3 females) answered questionnaires that are related to ESD. All the six respondents have Bachelor's degree, with three teachers (50%) are having teaching experience of more than 10 years. Five respondents indicate their teaching expertise on ESD.

Table 4. Demographic profile of respondents from Indonesia

No.	Profile	No. of respondents	%
1.	Gender		
	Male	3	50.0
	Female	3	50.0
2.	Education Level		
	Bachelor's Degree	6	100.0
3.	Years of Experience		
	Less than 5 years	2	33.3
	6-10 years	1	16.7
	More than 10 years	3	50.0
4.	Expertise		
	Education for Sustainable Development (ESD)	5	83.3
	Technical, Vocational and Education Training (TVET)	1	16.7

All respondents from Indonesia (100%) agreed that the aspect of communities' interaction at local, national and global levels, are discussed in the curriculum; so as the aspect of demonstration of respects in the school curriculum also received high agreement of more than 80% (Table 5). With regard to the aspect of values (respect, tolerance and understanding, solidarity, empathy, caring, equality, inclusion, and human dignity) in the curriculum, all the respondents (100%) agreed that the school curriculum in Indonesia emphasizes on this aspect, and the values are shown in the existing curriculum. On the aspect of sustainable consumption habits, all respondents are also agreed that this aspect is adopted in the school curriculum.

Table 5. Details of responses from teachers of Indonesia on items in the questionnaires survey

Items	Percentage (%)				
	Strongly Disagree	Disagree	Agree	Strongly Agree	Undecided / Unsure
Issues affecting interaction of communities at local level, are discussed in the curriculum	0.0	0.0	83.3	16.7	0.0
Issues affecting interaction of communities at national level, are discussed in the curriculum	0.0	0.0	83.3	16.7	0.0

Issues affecting interaction of communities at global level, are discussed in the curriculum	0.0	0.0	83.3	16.7	0.0
Demonstration of appreciation and respect for difference in diversity towards other individuals and social groups inculcated in the curriculum.	16.7	0.0	83.3	0.0	0.0
Demonstration of appreciation and respect for difference in cultivating empathy towards other individuals and social groups inculcated in the curriculum.	16.7	0.0	83.3	0.0	0.0
Demonstration of appreciation and respect for difference in solidarity towards other individuals and social groups inculcated in the curriculum.	16.7	0.0	83.3	0.0	0.0
Curriculum emphasis on valuing and respecting all human and living things.	0.0	0.0	83.3	16.7	0.0
Curriculum emphasis on valuing and respecting the environments.	0.0	0.0	83.3	16.7	0.0
Value of respect is portrayed in the curriculum.	0.0	0.0	83.3	16.7	0.0
Values of tolerance and understanding are portrayed in the curriculum.	0.0	0.0	83.3	16.7	0.0
Value of solidarity is portrayed in the curriculum.	0.0	0.0	83.3	16.7	0.0
Value of empathy is portrayed in the curriculum.	0.0	0.0	83.3	16.7	0.0
Value of caring is portrayed in the curriculum.	0.0	0.0	83.3	16.7	0.0
Value of equality is portrayed in the curriculum.	0.0	0.0	83.3	16.7	0.0
Value of inclusion is portrayed in the curriculum.	0.0	0.0	83.3	16.7	0.0
Value of human dignity is portrayed in the curriculum.	0.0	0.0	83.3	16.7	0.0
Sustainable consumption habits are adopted in the curriculum (e.g. recycling, reuse, etc).	0.0	0.0	66.7	33.3	0.0

iii. Philippines

There are six respondents from the Philippines which comprised of two male and four female teachers (Table 6). Five respondents graduated at Master's level, whilst one respondent has a doctorate degree in Education. Majority of the respondents (83.3%) have more than 10 years of teaching experience, and only one respondent involves in ESD teaching and learning.

Table 6. Profile of respondents from Philippines

No.	Profile	No. of respondents	%
1.	Gender		
	Male	2	33.3
	Female	4	66.7
2.	Education Level		
	Master's Degree	5	83.3
	Ph.D	1	16.7
3.	Years of Experience		
	6-10 years	1	16.7
	More than 10 years	5	83.3
4.	Expertise		
	Education for Sustainable Development (ESD)	1	16.7
	Primary Education	1	16.7
	Secondary Education	4	66.7

The survey result from the respondents of the Philippines (Table 7) indicates more than 80% of the respondents agreed on the aspect of integration of communities' interaction in the curriculum, whereby the respondents are in agreement that issues affecting interaction of communities at local, national, and global levels, have been integrated in the school curriculum. Moreover, demonstration of respects is acknowledged being portrayed in the school curriculum, which received high agreement of more than 80% from the respondents. As for the aspect of values in the curriculum, more than 80% of the respondents agreed that the school curriculum in Philippines contains such values of respect, tolerance and understanding, solidarity, empathy, caring, equality, inclusion, and human dignity in the existing curriculum. Sustainable consumption habits also received high agreement with more than 80% of the respondents agreed this aspect has been adopted in the school curriculum.

Table 7. Details of responses from respondents of Philippines on items in the questionnaires survey

Items	Percentage (%)				
	Strongly Disagree	Disagree	Agree	Strongly Agree	Undecided / Unsure
Issues affecting interaction of communities at local level, are discussed in the curriculum	0.0	16.7	50.0	33.3	0.0
Issues affecting interaction of communities at national level, are discussed in the curriculum	0.0	16.7	33.3	50.0	0.0
Issues affecting interaction of communities at global level, are discussed in the curriculum	0.0	16.7	33.3	50.0	0.0

Demonstration of appreciation and respect for difference in diversity towards other individuals and social groups inculcated in the curriculum.	0.0	16.7	33.3	50.0	0.0
Demonstration of appreciation and respect for difference in cultivating empathy towards other individuals and social groups inculcated in the curriculum.	0.0	16.7	16.7	66.7	0
Demonstration of appreciation and respect for difference in solidarity towards other individuals and social groups inculcated in the curriculum.	0.0	16.7	16.7	66.7	0.0
Curriculum emphasis on valuing and respecting all human and living things.	0.0	16.7	16.7	66.7	0.0
Curriculum emphasis on valuing and respecting the environments.	0.0	16.7	16.7	66.7	0.0
Value of respect is portrayed in the curriculum.	0.0	16.7	16.7	66.7	0.0
Values of tolerance and understanding are portrayed in the curriculum.	0.0	16.7	16.7	66.7	0.0
Value of solidarity is portrayed in the curriculum.	0	16.7	16.7	66.7	0.0
Value of empathy is portrayed in the curriculum.	0.0	16.7	16.7	66.7	0.0
Value of caring is portrayed in the curriculum.	0.0	16.7	16.7	66.7	0.0
Value of equality is portrayed in the curriculum.	0.0	16.7	16.7	66.7	0.0
Value of inclusion is portrayed in the curriculum.	0.0	16.7	33.3	50.0	0.0
Value of human dignity is portrayed in the curriculum.	0.0	16.7	16.7	66.7	0.0
Sustainable consumption habits are adopted in the curriculum (e.g. recycling, reuse, etc).	0.0	16.7	16.7	66.7	0.0

6.0 Challenges in ESD Implementation in the Five Cluster Countries

Implementation of ESD in the Five Cluster Countries faced various challenges that requires comprehensive, systematic, and holistic planning. The challenges described in this section are integrated from the literature and responses from the open-ended survey given to the teachers and senior education officials. Among the challenges are:

- i. The literature review has highlighted that current economic, social, cultural, and political backgrounds of the respective countries can be major constraints to the success of ESD implementation. It is apparent that there are different levels of development and economic status among the five countries, whereby Brunei Darussalam and Malaysia had achieved higher levels of development, whilst poverty remains a persistent challenge for Indonesia, Philippines and Timor-Leste. The open-ended survey conducted in this study revealed several opinions that are in line with the statement which highlighted how economic status of respective countries influenced the implementation of ESD. For instance, respondents from Brunei Darussalam

responded that financial instability due to the unpredictable oil prices, climate change and to some extent poverty in Brunei, has become a challenge to successfully conduct ESD in schools.

- ii. Implementation of ESD at country's level depends on the education priority of the respective countries. For instance, in Indonesia, most ESD programmes are implemented in formal education settings, nevertheless, there is little government engagement and funding for ESD-awareness raising programmes and initiatives for non-formal and informal education. The little government engagement illustrates some weaknesses of the government ownership on Sustainable Development Goals, especially the SDG4, thus government commitments should be enhanced for enabling ESD implementation into "a whole approach" concept. Related to this, respondents from the survey indicated that the challenge in implementing ESD is to ensure that the ESD programmes and initiatives fit with the local context.
- iii. Narrowing the challenge of ESD implementation at school level, it is always a challenge to gain schools' supports for implementing ESD programmes in curriculum and co-curriculum activities. The challenge to have a spirit in schools that openly and enthusiastically supports the implementation of ESD is vital, which could be displayed through the interests and efforts shown by the educators in promoting integration and whole school engagement on the ESD programmes, with teacher training is a critical element. This challenge is also echoed by the respondents in Brunei Darussalam whereby they mentioned that not all schools encourage or introduce ESD programmes in their school campuses.
- iv. Building a sustainability curriculum is also down to the expectations that are put upon schools by education authorities. With trained and motivated teachers, it is far easier to inspire and motivate students. Teachers can often use the environment as a vehicle for teaching certain concepts in their own specific subject and once teachers have decided that this is worthwhile, they will increasingly find ways to use ESD ideas in their work. From the open-ended survey, some teachers highlighted about the challenge to build the sustainability curriculum. They mentioned about the school curriculum that is lacking on application of sustainability concepts, with rigid syllabus that too focus on summative and public exams. This would result less emphasis to inculcate values, enhancing positive attitudes, discipline, ethics, etc. In Timor-Leste, response from the Director of National Curriculum indicates the challenge to change children's mindset towards a sustainable future is very important, thus it is the Ministry's challenge to roll out a new preschool and primary level curriculum which, amongst other objectives, sought to empower children to begin changing the way they think and to work towards a sustainable future.
- v. Actual curriculum in certain cluster countries is positive towards sustainable development, nevertheless the actual practice is a continuing challenge. Response from senior education official in a cluster country highlighted that although prescriptive lesson plans accompany the curriculum, which mandate active and participatory learning and a child-centered pedagogy, often these are ignored, or at best not implemented correctly and effectively. Better and more concentrated teacher support and training, along with provision of books and other necessary materials is crucial, and has been a major challenge for the Education Ministry. Part of this goes back to the monumental task of trying to change teacher and school leader attitudes. All educators were raised in a culture of teacher-centered pedagogy, where 'talk and chalk' was the dominant methodology.
- vi. The challenge faced in implementing ESD is being able to bridge the gap between what happens at home and what is taught in schools. For example, if a child is learning about recycling at school, but parents are not open to supporting their learning by adopting recycling practices at home then the child, especially at a young age, receives very conflicting messages. Moreover, schools

are busy places and there are increasing pressures on teachers within the workplace. These can create additional challenges such as gaps between awareness and understanding, motivation to and knowledge of how to become more sustainable. The process requires a movement from individual to collective empowerment, finding time, overcoming budget restraints, linking infrastructure change to mindset change and whole community engagement. Related to this challenge, respondents from the open-ended survey stated that lack of exposure to the sustainability activity for small children would contribute a challenge for adopting sustainability practices at home and at school.

- vii. Most five cluster countries are adopting ESD in their curriculum in various ways, of which efforts are focused in creating and translating awareness into positive actions that learned from the ESD programmes and subjects. Nevertheless, limited involvement of stakeholders from relevant government agencies, private sectors, and industries, always become crucial issues to the success of ESD implementation. Understanding the narratives of various subjects that are related to ESD by the educators are of importance, however, incorporating ESD subjects in an overstretched curriculum could affect the teaching quality because of the increase of teaching loads for the teachers. Responses from teachers in the open-ended survey in agreement with what have been stated from the review.
- viii. Financial resources and expertise are among significant limiting factors towards achieving the goals of ESD implementation in the school curriculum. Limited financial resources lead to lack of infrastructure to support ESD skills in teaching and learning. In one cluster country, the open-ended survey mentioned that the lack of budget and human expertise resulting a current curriculum revision and reform processes at the pre-secondary and secondary levels are being stalled.
- ix. It is also a challenge for the education ministries to provide conducive learning environments so that ESD teaching and learning processes can effectively be implemented. Schools need to become more environmentally friendly in line with the ESD concepts.
- x. With recent global issue on pandemic COVID-19, there are several impacts on education that have given the Ministry of Education the opportunity to address issues pertaining to the climate and environment. For example, although schools are closed due to the pandemic, nevertheless the remote classroom had been in place so that the teaching and learning processes were not interrupted; as the syllabus contents that are related to climate change and environment are already incorporated in the curriculum and remote classrooms had taken place, thus only a minimum impact on the CCE teaching and learning process occurred during this pandemic situation. Furthermore, one may ask whether the COVID-19 has created more awareness on issues related to the environment, climate, and sustainability. It is apparent that the pandemic situation had brought many positive collaborations and interactions among communities where a lot of bondings occurred when people work together and help each other in facing the current crisis. The interactions among communities could be used as a platform to enhance community awareness on climate change and environmental related issues, thus strengthening the implementation of CCE in ESD.

7.0 Recommendations

In promoting and implementing ESD, there is a need to re-align existing educational programmes with ESD purpose. This includes promoting public awareness and develop public understanding about sustainability and provide practical trainings that are related to ESD components. The re-aligning of the existing educational programmes need supports from government, because these supports are very important for sustaining the ESD activities and programmes. Hence, commitments from respective governments are needed to improve ESD through formal, informal, and non-formal education. Furthermore, the education policy makers within the Education Ministries need to understand the substance and the importance of ESD as well as its implementation, so that the development and implementation of ESD is in accordance with the national character and local community to anticipate various national issues.

At school levels, local schools and their constituents, namely, teachers, principals, and community members, are more likely to develop and sustain ESD initiatives, subsequently build and sustain community partnerships that promote ESD. Moreover, schools that are selected for the green school programs are encouraged to build networking with other green schools both within and between countries, to share experiences and practices in ESD with different cultural background. It should be noted that climate change, global warming, disaster response, and maintenance of our environment are all key issues to not just be learned, but practiced, in this curriculum. Moreover, there is a need to create more platforms/avenues for more discourse and engagements on issues related to sustainability so that teachers' understandings on ESD related concepts could be enhanced, which leads to improvement in ESD teaching and learning. The knowledge and support from these avenues and discourses to teachers, students, and parents could improve their preparedness and readiness in facing disasters. Hence, the whole institution/school approach is important to address education for climate change and sustainable development.

In relation to capacity-building efforts, professional trainings or development programs to enhance teachers' skills and competencies on ESD teaching and learning need to be provided. During the COVID-19 pandemic, trainings for teachers should emphasize on enhancing the teaching and learning delivery through online platforms and remote classrooms so that ESD initiatives and programs can be conducted with minimum interruptions. Furthermore, the quality of teaching and learning materials can be improved by providing sufficient electronic devices and efficient internet access. The continuous supports on internet and devices subsidies are needed for students and teachers for their online classes.

As for conducive learning environments that are eco-friendly, it is recommended that an eco-friendlier school design and construction needs to be adopted, that allows school buildings to be pleasant, secure and comfortable spaces in their respective climates, with minimum energy spent. This includes eco-friendlier construction materials and designs, the provision of alternative energy sources such as solar and wind power, and better and more sustainable ways of ensuring water, depending on each school's situation.

With regard to public-private partnership in developing ESD, there is also a need to initiate the public-private partnership in education, because this partnership can increase program efficiency and transparency, improve the quality and relevance of education services, especially to underserved populations, permit quicker responses and overcome public sector restrictions. To achieve this, several practical instruments need to be established, such as tax incentives, that attracts the private sectors to engage in ESD programmes. In addition, the Education Ministries, or Education Departments, should collaborate with Higher Learning Institutes so that research to improve ESD in school curriculum can be carried out based on interdisciplinary approach. Furthermore, cooperation between institutions and stakeholders in the community must be strengthened as well as nation-wide multi stakeholders' initiatives (NAMIs) need to be enhanced. It is suggested to initiate a regional platform for sharing best practices in relation to ESD and environmental education programs.

Effectiveness of the ESD implementation is recommended to be monitored and evaluated, because monitoring and evaluation are important steps in promoting teaching, learning, and reflection in ESD. Establishment of National ESD monitoring system is perhaps essential so that the monitoring of the ESD implementation can be done in a systematic manner. There are several issues that are of monitoring and evaluation concern, which include i) to what extent the ESD programs meet its goals; ii) what are the learning outcomes; iii) are the results worth the project's costs; iv) what components of the program are reproducible in other locations; v) in what ways do participants benefit from the programs; vi) to what extent is the product viable; vii) to what extent has the process improved productivity. It is important that the monitoring and evaluation frameworks should be able to examine ESD-related realities in both formal and non-formal educational frameworks.

8.0 Conclusion

The literature study on the policies regarding Education for Sustainable Development (ESD) seemed to support the goals and methodology of the UNESCO's SDG4. 'Implementing' SDG4 at country level implies an effort to align/adapt national education policy and planning to global targets and policy priorities reflected in the 2030 agenda. The degree of alignment of national policies and plans to SDG4 will depend on countries' policy priorities, political commitment, planning cycles, institutional arrangements, as well as human, technical, and financial capacity. Thus, ESD policy priorities should be part of existing national education policies, plans and processes which should be strengthened to ensure better alignment with global commitments.

Moreover, it is apparent that the effectiveness of ESD programs is related to the level of public sustainable behaviour, because such programs cannot succeed if the public are unaware of the importance of those areas or indicators that are categorized under the ESD. Through the curriculum content of ESD in basic education, the standard of ESD in the cluster countries is convincing and reliable for educating environmental and humanity concepts and problems of the nations of the world. The concept of ESD needs a fuller understanding for educators to have an effective implementation of the ESD-related project. Furthermore, the government action in supporting and promoting ESD is one of the significant success factors, which include developing policies and legislations that lead to improving ESD-related education programmes.

Overall, ESD is being implemented to different levels in each cluster country, with strong efforts have been made in both Indonesia and Malaysia to incorporate ESD into the national curriculum. In Brunei Darussalam and Timor-Leste, ESD is recognized as an opportunity for enhancing the overall quality education. All five countries recognized that climate change presents serious challenges, hence, climate change education has been identified as one of the important ESD components, that should be addressed in the educational curriculum of these countries. Furthermore, most countries highlighted the lacking skills of the educators in teaching ESD related programmes, thus there are needs for further teaching training on ESD subjects and teaching material development, so that this could strengthen the ESD implementation leading to the success of ESD in school curriculum.

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Appendix A. Survey Questionnaire



PURPOSE AND MAIN DEFINITIONS

The purpose of this questionnaire is to gather information about countries' existing and ongoing policies and its alignment with United Nations' Sustainable Development Goal (SDG) 4. The information collected in this questionnaire will be used to develop a policy reviews on 5 cluster countries to observe commonalities and uniqueness between countries and recommendations for nations to keep track and learn from each other.

UNESCO, Jakarta office as the Cluster Office to Brunei Darussalam, Indonesia, Malaysia, the Philippines and Timor-Leste has been supporting the Member States to achieve Sustainable Development Goal 4 to promote Quality Education through 2020-2021 Regular Programs in five education areas;

- i) Sector-wide Policies and Plan;
- ii) Technical Vocational and Education Training (TVET);
- iii) Teacher Policy and Plan;
- iv) Education for Sustainable Development (ESD);
- v) Inclusive Education.

Sustainable Development Goal 4

TARGET 4.1: By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.

TARGET 4.2: By 2030, ensure that all girls and boys have access to quality early childhood development, care and preprimary education so that they are ready for primary education.

TARGET 4.3: By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university.

TARGET 4.4: By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.

TARGET 4.5: By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations.

TARGET 4.6: By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy.

TARGET 4.7: By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-

violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development.

TARGET 4a: Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all.

TARGET 4b: By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small islands developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programs, in developed countries and other developing countries.

TARGET 4c: By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small islands developing States.

INSTRUCTIONS FOR COMPLETING THE QUESTIONNAIRE

Please read these instructions carefully. If there's any uncertain definitions of key terms, participant may refer to the glossary and description of the five areas. Please provide information about the participant that completed this questionnaire. Please answer ALL questions that apply and provide comprehensive comments for each open ended question as required. If you have any queries on how to answer this questionnaire, please contact UNESCO, Jakarta Office.

CONTACT INFORMATION

UNESCO Jakarta Office

GENERAL INFORMATION

Please provide information on the authoritative person to complete this questionnaire.

The person completing this questionnaire should be an official representative of the Ministry of Education or corresponding institution in the country. The person should be well-informed of the country's participation at least in ONE of the five areas.

1. Country
Brunei Darussalam []
Indonesia []
Malaysia []
Philippines []
Timor-Leste []

2. Gender
Male []
Female []

3. Age :(years)

4. Education Level
Diploma []
Bachelor's Degree []
Master's Degree []
Ph.D []

5. Ministry / Department / Division / Institution / Schools:
.....

6. Year of experience in education field
Less than 5 years []
6 to 10 years []
More the 10 years []

7. Expertise
Technical, Vocational and Education Training (TVET) []
Teacher Policy and Plan []
Education for Sustainable Development (ESD) []
Inclusive Education []
Early Childhood Education []
Primary Education []
Secondary Education []
Others: Please specify: _____

7. Email:
.....

Instructions for completing the survey

This questionnaire covers the Sustainable Development Goal 4 Targets regarding the area of **Education for Sustainable Development (ESD)** (e.g. **Climate Change Education, Environmental Education, Human Right Education, etc.**), and its relation to your country. Please tick (✓) based on **your professional opinion** upon each statement referring to the level of the agreement indicates as below:

- 1 : Strongly Disagree
 2 : Disagree
 3 : Agree
 4 : Strongly Agree
 0 : Undecided / Unsure

In my opinion:

No.	Statement	Level of Agreement				
		1	2	3	4	0
1	Issues affecting interaction of communities at local level, discussed in curriculum.					
2	Issues affecting interaction of communities at national level, discussed in curriculum.					
3	Issues affecting interaction of communities at global level, discussed in curriculum.					
4	Demonstration of appreciation and respect for difference in diversity towards other individuals and social groups inculcated in curriculum.					
5	Demonstration of appreciation and respect for difference in cultivating empathy towards other individuals and social groups inculcated in curriculum.					
6	Demonstration of appreciation and respect for difference in solidarity towards other individuals and social groups inculcated in curriculum.					
7	Curriculum emphasis on valuing and respecting all human and living things.					
8	Curriculum emphasis on valuing and respecting the environments					
9	Value of respect portrayed in curriculum.					
10	Value of tolerance and understanding portrayed in curriculum.					
11	Value of solidarity portrayed in curriculum.					
12	Value of empathy portrayed in curriculum.					
13	Value of caring portrayed in curriculum.					
14	Value of equality portrayed in curriculum.					
15	Value of inclusion portrayed in curriculum.					
16	Value of human dignity portrayed in curriculum.					
17	Sustainable consumption habits adopted in curriculum (e.g. recycling, reuse, etc).					

In addition to the above survey items, we also welcome other views regarding **Education for Sustainable Development (ESD)** programs in your country. Please write down your views and suggestions to the following open-ended questions:

1. What are the challenges faced in **Education for Sustainable Development (ESD)** in your country?

2. What are your recommendations and suggestions towards the improvement of **Education for Sustainable Development (ESD)** in your country?

3. How does your country respond to the impact of COVID-19 pandemic on **Education for Sustainable Development (ESD)** (e.g. enrollment, curriculum delivery, modification of curriculum, online resources, educator competencies in online platform, assessment, accreditation)?

🌸🌸🌸🌸🌸 **THANK YOU VERY MUCH FOR YOUR COOPERATION** 🌸🌸🌸🌸🌸

Appendix B. Open-ended Responses (Raw Data)

I. Responses from Brunei Darussalam

1. What are the challenges faced in Education for Sustainable Development (ESD) in your country?	2. What are your recommendations and suggestions towards the improvement of Education for Sustainable Development (ESD) in your country?	3. How does your country respond to the impact of COVID-19 pandemic on Education for Sustainable Development (ESD) (e.g., enrolment, curriculum delivery, modification of curriculum, online resources, educator competencies in online platform, assessment, accreditation)?
Implementation, such as ensuring programmes fit the local context.	Educate myself and co-workers the importance of ESD	Providing students with holistic support. Schools provide children with vital information on online resources etc
unsure	unsure	online resources, curriculum adjustment, adjustment to online learning
Some student didnt implement such as love for nature	Give practical education to respect nature	Modification of curriculum
limitation of acceptance of academic and skill knowledge by minor group of under privilege, limitation of acceptance by management in education on the improvement through ICT, academic and technical knowledge on life development and growth, teacher's protection against violence brought by work, members of the teacher's family at risk of being left out as teachers need to invest more time at work then at home; nurturing the society but not the family members	using more ICT in education, academic and technical knowledge on life development and growth, promote teacher's protection by the country's law and regulations, do not burden the teachers with unnecessary tasks which made them spend more time at work then at home (nope; we are not talking about time-management)	satisfactorily, support the teachers by creating a supporting environment where the parents and society help each other in nurturing the students
unsure	unsure	Home base learning, support for the internet connection
Minimal practice at home	More awareness program should be given to the parents in helping the students to practice at home.	Curriculum has been modified, teaching & learning has been carried out either via online or learning pack with a modification in the assessment.

Not all schools encourage or introduce sustainable development of their campus	Maybe they can start by implementing the recycle and reuse concept in each schools	Not aware
Not sure	None	Our country (teachers) immediately change their methods of delivering curriculum via online.
Lack of awariness	Provide awariness	Good
We are teaching students to pass exams, tests and assessment. Less emphases on inculcating values, enhancing positive attitudes, dsicipline, ethics, etc	Instil and emphasize the teaching of bruneian values into our curriculum	Online assessments, tests,teaching, resources
A wide range of study on EDS at school - teachers at primary school are mostly specialized in other subject areas. The knowledge on EDS is usually exposed at a later level. most students at lower level are focused on the contents of the specified content in the curriculum not the skills itself.	provide information on how the ESD should be carried out in school, outside school, everywhere. provide friendly-environment so that the ESD can be carried out efficiently. equip the future generations to meet today's situation.	N/A
Unsure	Refer to other countries that have implemented Education for Sustainable Development successfully.	Modification of curriculum, trained teachers to achieve MIE (Microsoft Innovative Educator) status.
Schools curriculum is lacking of emphasise on application side; Bound to syllabus and very rigid; Too focus on summative and public exams	Equip students with relevant and sustainable skills by providing value-added programs since our syllabus is very rigid; to have supporting Centre to help develop skills and encourage life-long learning (reskilling/upskilling); recognising participation from students in value-added programs/CCA	Online learning transformation; Improved connectivity (special data plan for students Edupack); Public support (open donation for smart devices for students); EduTech to have online resources for students and teacher to tap; Establishment of students and teachers lounges to get updates and other instructional resources
Financial instability due to the unpredictable oil prices, climate change and to some extent poverty in Brunei prove to be a challenge to conduct Education for Sustainable Development.	Teaching the younger generation of leaders and youth on the importance of ESD and incorporating that into the curriculum would be an important and correct step towards	awareness of COVID19 infection and contamination has been raised throughout the country where the students were taught on how to sanitise and maintain proper hygiene.

	improving ESD in our country.	
I believe this is not stressed enough in the curriculum.	I think the curriculum needs to strongly align to the Education for Sustainable Development, especially in primary and secondary education.	Not sure
less awareness of it. the curriculum is more academic orientated. However im not from curriculum background.	more character building curriculum should be there.	students are taught to have cleanliness and more aware of surroundings and others
The lack of knowledge on what sustainable development is and what is it all about needs to be addressed to the communities and the school.	Education, roadshow, workshops to the public. Documentaries to show what sustainable development is.	There is a movement towards online learning, workshops and seminars are often held online as well
Lack of informations	More roadshow	Online teaching
Not enough information brunei sustainable related topic	More roadshow in ESD	The impact is minimum
Unsure	Unsure	-
There are not much problem when it come to ESD	It is not clear because Secondary teachers is not directly involve in ESD.	Not much can be done because the main role is to ensure that the curriculum is done as much as possible.
Uncertain	To realise the nations' learners to be a globally responsible citizen.	uncertain
Curriculum in my country is not geared towards ESD. It is still at its infancy stage	To start off perhaps with a club and slowly moving towards to include more	more discussion on covid-19 has been done in school as presentation to further enhance knowledge on cover 19
Not everyone knows about sustainable development.	Need to educate people about sustainable development	Make sure all students are able to join or continue with their learning online making sure all students have a gadget or means to carry on with learning. Not left out.
To inculcate awareness and model positive behavior in school.	Promote more program and activity that helps to be more involved between School and community.	Schools and health agencies promotes more social distancing and mask wearing in schools as well to remind hygiene in schools.
Implementing the awareness for individuals	By celebrating the special days in the school with related activities	-
Lack of exposure to the sustainability activity for small children	Provide more exposure with sustainability	Exposures through social media n electronic devices

	activities in school or outside schools	
Not applicable	Not applicable	Most of the practical assessment change to online assessment ..but to assess their competency is abit difficult
-	-	-
Mindset	Need to be more open and accepting to changes and ways to improve any weaknesses.	Online learning and using media update
Activities to open up students' minds on Brunei's goals towards Sustainable Development are still not at maximum level	To keep distributing information regarding Sustainable Development in Brunei	Communities are encouraged to have empathy on others during this difficult time. Communities are found to be very generous
Unable to do proper assessments / examinations during the pandemic	Doing summative assessment when the students came back from quarantine session by quick recap and assessing the students in class. This not only helps the students to keep on track with the syllabus but reassuring the students that education is still on the normal even during the pandemic	The ministry was very cooperative and understanding to the limitations of resources during and after the quarantine session, fulfilling the needs of both the teachers and students.
to build students characters, knowledge, and skills in line with 21st century	Curriculum of the education should be reviewed every four years, updating with nation and global needs.	Curriculum / syllabus are being modified, as not all syllabus are able to be covered by teachers during this pandemic.
Unsure	Unsure	Assessment is taken into account based on the performance throughout the year (formative), and not just focus on examination (summative).
Online facilities and equipments available at home are insufficient among kids in big family	low cost and unlimited internet access	The relevant authorities collaborate together to make the online lesson feasible for the students and parents and teachers.
To ensure the topics taught in the classroom is implemented & cultured in the daily life	Curriculum need to be reviewed	Keep on updating the curriculum content
Probably in terms of teaching the students themselves the necessary values.	Perhaps encourage students to be more aware of what is currently happening around the world	Very well.

Students facilities are limited at home. Lack of credits/ wifi	Low cost and unlimited internet access	All relevant authorities work together to make education online success
ESD is less exposure and lack implementation	integrate ESD across curriculum including preschool level	online learning, integrate in projects
Not sure	None	Immediate meetings discussed what have been done and what need to be improved.
1. Although there is an emphasis on inclusivity, there is still lacking of it in the secondary school curriculum. This can be seen as there is a lack of teachers who are expert in special education and there are lack of facilities in the school that can help the special needs students. 2. Common courtesy often seems and sounds foreign to some students. Especially the troubled ones.	1. Special needs students are often separated from the 'normal' students because they are being assigned to 'Pre-Voc' class. I think it is best if secondary school students also have Personal Study time in their own classroom with supervised teacher. At that time, special needs students can come in to the class and try to socialise with new students. 2. To emphasise the importance of empathy and caring, an activity that promotes these qualities should be held. This can be as simple as story-writing competition within the school or a short play that the students can participate in.	1. The parents of our students indeed play an important role during the COVID-19 pandemic as most of them monitored what their children's activities and lessons online. 2. Students are also warned not to use any vulgar language or anything explicit and inappropriate during the online lesson via Whatsapp.
1. Students are lacking in applying what they've learn in class in their lives	1. Teachers should be able to let students explore and what they're learning, what are they learning for, why do they have to learn this, in order to apply what they've learn 2. Include 'green' CCA in primary curriculum e.g. growing vegetables, gardening	1. Real-life learning should be emphasise in classroom
Students don't know to apply what they have learnt in class in their lives.	Unsure.	Unsure.

Experienced Parental support	Free Free resources materials	wifi n	PD N WORKSHOPS ONLINE PD N WORKSHOPS
Increase awareness	more dialogues at the national level		Not sure
Sukatan pelajaran hendaklah dikemaskini setiap 5 tahun penggunaannya.	Hendaklah selari dengan SPN21 dan IR 4.0		Pengubahsuaian sukatan pelajaran untuk menyesuaikan pengajaran dan pembelajaran semasa pandemik.
Unsure	Unsure		We made sure that the educators delivers the lesson to the learners in any way possible.
The lack of structure within society to discuss these issues as they are seemed to be taboo topic. The perception that disabilities and difference lead to unsuitable for certain professions	Having a proper discussion and national agenda on this matter		Providing support to relevant students dealing with such problem. Despite this, help often comes abit late. But this is still better than no help
Unsure	Unsure		Modification of services given by educators, more towards online services / educations, which generally follows MOH guidelines.
We are teaching students to pass exams, tests and assessment. Less emphases on inculcating values, enhancing positive attitudes, dsicipline, ethics, etc	Instil and emphasize the teaching of bruneian values into our curriculum		Online assessments, tests,teaching, resources
None	None		None
the issue of not practicing them and very little thought or consideration about sustainability in the curriculum.	to develop programmes and modules that inculcate education for sustainable		unsure
unsure	unsure		unsure
Sustaining the project in school with less teacher involvement	Increase number of teachers to be involved in ESD		Modified curriculum and assessment, Online
Unsure.	Unsure.		Unsure.
less activities towards sustainability lately	hopefully more exposure for sustainability		participation from agencies to help with online teaching and learning such as lower rate for internet charges, free laptops lower income students
unsure	unsure		online resources, curriculum adjustment, adjustment to online learning

II. Responses from Indonesia

1. What are the challenges faced in Education for Sustainable Development (ESD) in your country?	2. What are your recommendations and suggestions towards the improvement of Education for Sustainable Development (ESD) in your country?	3. How does your country respond to the impact of COVID-19 pandemic on Education for Sustainable Development (ESD) (e.g. enrollment, curriculum delivery, modification of curriculum, online resources, educator competencies in online platform, assessment, accreditation)?
Habit	Change the habit	Resurces to learn such as internet
Indonesia is a big country with a large population and abundant natural resources. There is need curriculum of character building for the nation's children to pay more attention to maintaining, caring for and managing Indonesia's beautiful natural environment.	training and education on organic and inorganic waste management, cultivation of medicinal plants, fruit, vegetables and ornamental plants for teachers and students in schools. there is the development of product units, especially in vocational schools as well as a forum for students to do online marketing of their products.	I think the curriculum created during the pandemic still does not meet the competencies that students must have. online learning has not been effective yet can be followed by all students. there are still many of our students who do not have adequate gadgets and networks
There is no student motivation for study	We have to make more training for teachers and students	We do online study via mobile application...
Mindset	Education for sustainable from primary school	Free WiFi for education
less support of infrastructure to support our skill learning.	Government support our infrastructure	Students attend school partially to perform practical learning
budget too expensive and less student's understanding about it	stressing the understanding about ESD goals	by re-arrange the education system easier

III. Responses from Philippines

1. What are the challenges faced in Education for Sustainable Development (ESD) in your country?	2. What are your recommendations and suggestions towards the improvement of Education for Sustainable Development (ESD) in your country?	3. How does your country respond to the impact of COVID-19 pandemic on Education for Sustainable Development (ESD) (e.g. enrollment, curriculum delivery, modification of curriculum, online resources, educator competencies in online platform, assessment, accreditation)?
Many students dont value much education	build.a.string foundation on students values	fair
Too much corruption.	Appoint members who are expert and dedicated on that area.	Spending too much on non-essential things.
lack of immersion activities for students applying the skills for ESD	Need to add performance tasks in the curriculum to apply the skills that they have learned in ESD.	Different modalities and strategies have implemented by DepEd in ensuring the continuity of education despite the odds. (lack of gadgets, far-flung/hard to reach residential areas, lack of internet connection, etc)
Computer Literacy has always been an issue in this Covid 19 pandemic.	There should always strong partnership of Stakeholders and the DepEd.	Educators are always open minded toward this mode of modality and very aggressive to the progress of the students including the remote areas. Available mechanisms have been awared.
information	openness	online
Topics overloaded the Curriculum	Integrate GCED in the curriculum	Low integration of ESD in the curriculum



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