

WORKING PAPER
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Capacity gaps and needs assessment at national level

Pilot exercise: Republic of Indonesia

Summary

This paper covers capacity gaps and needs assessment on capacity-building activities for the implementation of nationally determined contribution in the context of the Paris Agreement, based on efforts being done by Republic of Indonesia to identify capacity-building related gaps and needs in relation to NDC implementation. The information was synthesized by Mahawan Karuniasa, on a voluntary basis, as a member of PCCB, in order to inform the PCCB's work on capacity-building needs and gaps. The main source of information is the capacity-building and technology needs assessment (CBTNA) Indonesia, the work undertaken by the National Focal Point, Directorate General of Climate Change Control, Ministry of Environmental and Forestry, Republic of Indonesia.

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I. Introduction

1. Capacity-building has been being part of the negotiation process at the United Nations Framework Convention on Climate Change (UNFCCC) since established in 1992. Capacity-building is an important issue to face climate change, as stated by the UNFCCC *"a country can not mitigate or adapt to climate change without first having the capacity to do so"*.

2. Since 2001, capacity-building activities in developing countries and countries with economies in transition were guided by two frameworks, namely the framework for capacity-building in developing countries (Decision 2/CP.7, Annex) and the framework for capacity-building in countries with economies in transition (Decision 3/CP.7, Annex).

3. In 2005, after the Kyoto Protocol take into force, the Conference of the Parties serving the meeting of the Parties to the Kyoto Protocol (CMP) decided that the capacity-building frameworks were also applicable to the implementation of the Kyoto Protocol. Frameworks serve as guidelines for capacity-building principles and approaches, including country driven process, involving learning by doing, and based on current or existing activities.

4. In 2009, capacity-building became part of the ad hoc negotiation process of Working Group on Long-term Cooperative Action under the Convention (AWG-LCA), and later became the beginning on the establishment of Durban Forum on Capacity-building. In the Conference of Parties 17 (COP 17) held in Durban, through Decision 2/CP.17, paragraph 144, the COP requested the Subsidiary Body of Implementation (SBI) to further enhance the monitoring and review of the effectiveness of capacity-building by organizing an annual in-session Durban Forum for in-depth discussion on capacity-building with participation of the Parties, representatives of the relevant bodies established under the Convention, and relevant experts and practitioners, with a view to sharing their experiences and exchanging ideas, best practices and lesson learned regarding the implementation of capacity-building activities.

5. Furthermore, at the COP 21 in Paris, the UNFCCC again seriously concerned to the issue on capacity gaps. Recognition on capacity issues was then included in Decision 1/CP.21, which is in paragraph 9 in the preamble of the Adoption of the Paris Agreement. The parties, through COP 21 emphasizing with serious concern the urgent need to address the significant gap between aggregate effect of Parties' mitigation pledges in term of global annual emissions of greenhouse gases by 2020 and aggregate emission pathways consistent with holding the increase in the global average temperature to well below 2⁰ C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5⁰ C above pre-industrial levels.

6. The UNFCCC in 2015 through COP 21 in Paris established the Paris Committee on Capacity-building (PCCB) under Decision 1/CP.21, paragraph 71. The PCCB is a body under the Convention, the first body under the Convention established by UNFCCC after Paris Agreement. PCCB was designed for carrying out the Conference of Parties (COP)' mandates in the context of the Paris Agreement or referred to as the Conference of Parties serving as the meeting of the Parties to the Paris Agreement (CMA) which serves to oversee the implementation of Paris Agreement and make decisions to encourage the effectiveness of its implementation. The PCCB was established to (i) address gaps and needs, both current and emerging, in implementing capacity-building in developing country Parties, and (ii) further enhancing capacity-building efforts, including with regard to coherence and coordination in capacity-building activities under the Convention.

7. To address gaps and needs in implementing capacity-building at national level, the National Focal Point of Republic of Indonesia, the Directorate General of Climate Change Control, Ministry of Environmental and Forestry, supported by European Union – support to Indonesia's climate change response – technical assistance component, conducted the capacity-building and technology needs assessment (CBTNA Indonesia). The objectives of the assessment were (i) to identify capacity gaps both mitigation and adaptation, and (ii) to obtain capacity-building and technology needs to address the capacity gaps. The CBTNA Indonesia document is expected to be a guidance on efforts to improve mitigation and adaptation capacity at the national and sectoral level for the implementation of NDC Indonesia, also to prepare subnational CBTNA as part of the national strategy of NDC Indonesia implementation.

II. National Development Priorities

8. The Government of Indonesia has determined the Nine Priority Agendas and further translated into the National Medium-Term Development Plan 2015-2019. Indonesia became one of the developing countries that adopted Sustainable Development Goals (SDGs) as a global development agenda for the period of 2016-2030. The SDGs issue was responded by the Government of Indonesia by issuing Presidential Regulation No. 59/2017 regarding the Implementation of Sustainable Development Goals. Previously, in 2016, after the Paris Agreement, the Government of Indonesia has ratified Paris Agreement by issuing Law No. 16/2016 regarding the Ratification of the Paris Agreement. The *Nawa Cita* (Nine Priority Agenda), Sustainable Development Goals, and Climate Change issues became national development priorities.

9. The National Medium-Term Development Plan 2015-2019 comprises of three dimensions:

(a) The dimension of human development; improving human development index and the community development index, reducing the income gap, increasing social security on community health and workers;

(b) The dimension of leading sectors; food and energy sovereignty, maritime and marine, tourism and industries;

(c) The dimension of equality and territory.

10. The target of leading development sector that needs to be considered in enhancing capacity of climate change mitigation and adaptation:

(a) Food sovereignty with the main target to increase domestic production as well as irrigation development and improvement;

(b) Energy and electricity sovereignty by encourage the achievement of targets to increased production and domestic consumption;

(c) Maritime, focused on targets to eradicate illegal fisheries, develop national connectivity as well as maritime and marine economics; and

(d) Tourism and industries through increase foreign tourists and its contribution to national economic, and to develop medium and large scale industries.

III. Overview of Indonesia

11. Indonesia is located in tropical climate zone which dominated by monsoons climate, however due to its geographical factor, climate pattern in Indonesia has its own characteristic.

12. Meteorology, Climatology and Geophysics Agency projected that most of Borneo Island, the western part of Sulawesi Island, and some parts of Java Island, especially in the northern part will increase of more than 0.8⁰C, while other areas tend to increase at lower level.

13. The Indonesia's population increased from 119.2 million in 1971 to 237.6 million in 2010, and 255.5 million in 2015. The population of Indonesia in 2035 was estimated to reach 305.6 million people, consequently, demands of the basic needs such as water, food, and energy will be higher.

14. In average, economic growth during 2006-2015 reached 5.8%. The Indonesia's economic development focus on poverty alleviation, reduce inequality, increase productivity and competitiveness.

15. Indonesia's environmental quality index was at various level among areas, excellent environment quality in West Papua Province, and at good level in most of Sulawesi, Papua, and Maluku Islands, while remaining islands were at poor level.

16. Based on the First NDC Indonesia, total emission reduction target in 2030 is 834 mega ton CO₂e (CO₂ equivalent) for unconditional measures, and 1,081 mega ton of CO₂e for conditional measures.

17. Adaptation aspect in the NDC focus to improve economic, social, livelihoods, ecosystems, and landscape with priorities on impacted sectors such as water, food and energy. Indonesia's climate change adaptation strategy was designed to reduce vulnerability to all development sectors by 2030 through strengthening local capacity, knowledge management, climate change adaptation policy, disaster risks reduction, and adoption of adaptive technologies.

IV. Progress, Challenges, Lessons Learned, and Country Driven Issues

A. Climate Change Control Policy and Strategy

18. Indonesia ratified the UNFCCC through the Law No. 6/1994 regarding Ratification of the United Nations Framework Convention on Climate Change. Hence, Indonesia has formally become a Party and committed to achieve the objectives of the Convention.

19. Indonesia signed the Paris Agreement at High Level Signature Ceremony of Paris Agreement, New York, April 22, 2016.

20. In October 24, 2016, Indonesia ratified the Paris Agreement through Law No. 16/2016 regarding the Ratification of Paris Agreement to the United Nations Framework Convention on Climate Change.

B. National Commitment Pre-2020

21. In order to realize Indonesia's commitment in reducing greenhouse gases emission for 2010-2020 by 26% for unconditional measure and 41% conditional measure, climate change policies had been integrated into the National Medium Term Development Plan 2010-2014.. This policy was further translated into the National Action Plan for Greenhouse Gases Emission Reduction, through Presidential Regulation No. 61/2011.

22. The National Action Plan for Greenhouse Gases Emission Reduction contains emission reduction targets that divided into 5 sectors; Forestry and Peatland, Agriculture, Energy and Transportation, Industry, and Waste Management. The largest target was on the Forestry and Peatland Sector with emissions reduction target at 672 mega ton of CO₂e for unconditional measure and 1,039 mega ton CO₂e for conditional measure by 2020.

23. In 2014, complementing efforts to address climate change, the Ministry of National Development Plan issued the National Action Plan on Climate Change Adaptation. The action plan aims to collect adaptation steps that need to be done to cope with the impacts of climate change especially on farmers, fishermen, and coastal communities that are considered most vulnerable. In general, the National Action Plan on Climate Change Adaptation was directed to build economic and social resiliency, sustainability of environmental services, strengthening resiliency for urban, coastal areas and small islands, also build information systems, as well as research and development.

C. The First NDC Indonesia

24. Indonesia delivered the Intended Nationally Determined Contribution (INDC) to response Decision 1/CP 19 regarding INDC at the 19th Conference of Parties (COP) in Warsaw. The Indonesian context in the INDC document contained the alignment of INDC with poverty reduction and sustainable development, in accordance with the Nine Priority Agenda, the archipelagic insight and characteristics.

25. In 2016, Republic of Indonesia submitted the First NDC Indonesia, with commitment to reduce emission at 29% (834 mega ton CO₂e) for unconditional measure and 38% up to 41% (1,081 mega ton CO₂e) for conditional measure by 2030.

26. Based on the principle of "common but differentiated responsibilities and respective capabilities", the First NDC Indonesia contextualized the global efforts into the national circumstances.

D. Climate Change Control Institutions

27. Based on Presidential Regulation No. 16/2015 regarding the Ministry of Environmental and Forestry (MoEF), decided that one of the functions of MoEF is to address climate change. This function was then complemented by the establishment of the Directorate General of Climate Change Control with the main task is to organize the formulation and implementation of policies in the field of climate change control. The tasks of climate change control cover the areas of (i) mitigation, (ii) adaptation, (iii) resource mobilization, (iv) greenhouse gases inventory, including monitoring, reporting and verification of climate change control, and (v) land and forest fire control.

28. Based on MoEF Regulation No. P.13/Mnlhk/Setjen/OTL.0/1/2016 regarding the Organization and Working Procedures of the Climate Change and Forest Fire and Land Management Control Center, the MoEF established the Climate Change and Forest Fire and Climate Control Centers as technical implementation units in the field for climate change and land and forest fires. The tasks of the Climate Control and Land and Forest Fires Control Center is to facilitate (i) the enhancement of regional capacity for adaptation and mitigation of climate change, (ii) prevention of land and forest fires, (iii) greenhouse gases inventory in the regions, and (iv) evaluation and reporting of local action plans on reducing greenhouse gases emission. The functions covered by the Climate Change and Forest Fire and Climate Control Center comprises of (i) planning, (ii) implementation of evaluation, (iii) enhancement of regional capacity, (iv) implementation of socialization and technical guidance, and (v) facilitation and implementation of governance affairs of climate control and land and forest fires in the regions.

E. Challenges on Greenhouse Gases Mitigation

29. The biggest challenge on mitigation efforts will be in the Forestry sector, which has an emission reduction target of 497 mega tonnes CO₂e (unconditional measure) and 650 mega ton CO₂e (conditional measure) or 70-91% reduction from business as usual level (714 mega ton CO₂e) by 2030. Emerging emissions fluctuations in the forestry sector caused by land and forest fires. The capacity of forest fire control is an important factor, besides the capacity on reducing deforestation, improving sustainable forest management, strengthening degraded land rehabilitation and peat restoration.

30. The second major challenge will be in the energy sector, with emission reduction target of 314 mega tonnes CO₂e (unconditional measure) and 398 mega ton CO₂e (conditional measure) or 19-24% reduction from business as usual level (1,669 mega ton CO₂e) by 2030. In the energy sector, the capacity of ministries/technical institutions related to energy, and participation of the stakeholders on increasing the efficiency of energy use and renewable energy development, become the main factor to achieve NDC target by 2030.

31. Besides the two main NDC sectors, the challenges also remain on waste, IPPU (industrial process & product uses), and agriculture. Institutions coordination become main issue particularly on IPPU and agriculture sectors, because those sectors are organized outside the MoEF.

F. Challenges on Climate Change Adaptation

32. Adaptation to climate change has been at earlier stages, when compared with mitigation activities. The complexity of adaptation particularly related to various potential impacts of climate change and various exposure domains are main challenges.

33. MoEF developed a Vulnerability Index Information System, which was designed to provide information on vulnerability levels of villages throughout Indonesia.

34. MoEF has also developed Village Climate Program, a national movement of adaptation and climate change mitigation at the community level. Village Climate Program is also one of the instruments for data collection and information of implementation progress at the community level. The objective of the Village Climate Program is to generate awareness and increase understanding on climate change issues and its impacts and to encourage the active participation of all stakeholders to implement climate change adaptation and mitigation activities. It is also expected to increase community resilience to the impacts of climate change. In 2012-2017, total villages were proposed to join the Village Climate Program reached 1,337 units.

G. Lessons Learned and Country Driven Issues

35. The fundamental aspect to identify capacity gaps on mitigation is greenhouse gases emissions data recording, emission modelling, business as usual projection, and expected trendline to the target. One data policy is one of key lesson learned to develop emission database. Nonetheless, annual emission at business as usual projection are still an important issue to be agreed upon. National emission at business as usual projection becomes the basis for capacity gaps assessment on mitigation aspect. Mitigation capacity gap can be identified based on existing national or sectoral emissions level and compare with expected national or sectoral emissions.

36. In accordance with the various hydrometeorological impacts of climate change (including its derivative impacts), the adaptation gap assessment remains significant challenges, especially on measuring composite index of resiliency which be able to indicate total sum of resiliencies of all domains, and both for national and subnational level.

37. An important lesson on climate control was the limited ownership and commitment of stakeholders, from central and local governments, private sectors and communities. The efforts to cope with climate change were often regarded as additional activities, even burdens, not yet fully regarded as common problems.

38. Mitigation and adaptation capacity enhancement should be developed based on country driven issues. In the mitigation aspect, energy and forestry become the main issues, while in the adaptation aspect focused on water, food and energy resiliency.

V. The Gaps and Needs

39. The capacity gaps and capacity-building needs were analyzed in two levels, capacity of systems and capacity of institutions, and based on two pillars of NDC Indonesia, (i) implementation strategy of NDC Indonesia, and (ii) the key components of the NDC implementation concept.

40. Implementation strategy of NDC Indonesia consists of nine strategic programs to achieve mitigation target by 2030:

- (a) Development of ownership and commitment;
- (b) Capacity-building;
- (c) Enabling environment;
- (d) Framework and communication network;
- (e) One data policy;

- (f) Intervention policies, plans and programs;
- (g) NDC implementation guidelines;
- (h) NDC implementation; and
- (i) NDC monitoring and review.

41. The five key components of the concept of NDC Implementation consist of:

- (a) Mitigation;
- (b) Adaptation and loss and damage;
- (c) Means of implementation (finance, technology, capacity-building);
- (d) Measurement-Reporting-Verification;
- (e) Transparency framework

42. The identified gaps on the development of ownership and commitment program showed that, in general, mainstreaming climate change issues into the system was still limited at planning phase and dominantly focus on institutions under MoEF. Limited ownership and commitment issues in the institutions outside MoEF caused weak connectivity and coordination for comprehensive measures to address climate change. The development of ownership and commitment program for NDC implementation needs political will from executive and legislative leaders to mainstream and improve realization of climate change actions on ground. The roles of coordinating ministries are also needed to enhance connectivity and strengthen coordination among ministries level.

43. The capacity-building and technology needs assessment was conducted and will be used for capacity-building program. The gaps and needs assessment should be continued with further study to elaborate operational aspects. The gaps on the capacity-building program mainly related to national capacity-building system which has not been built. Besides, strengthening stakeholders engagement also need to be addressed. The capacity-building program needs to create capacity-building hub to build connectivity and network among actors, forums, experts, capacity-building centers, and supporting entities. Improvement also should be addressed on the remaining phases of capacity-building that comprise of (i) actions formulation for improvement, (ii) implementation of capacity-building, and (iii) monitoring and evaluation of capacity-building implementation.

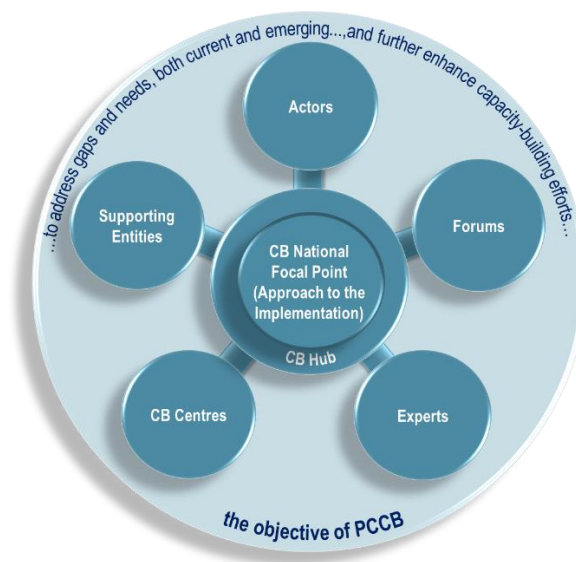


Figure 1. The National Capacity-building System

44. As developing country Party where the role of government is still dominant, the enabling environment program mainly related to regulations, policies, plans, and programs for national and subnational development. The gaps on the enabling environment program were mainly related to which regulations, policies, plans, and programs had not fully

supported low carbon and resilience spatial planning and/or low carbon and resilience development plan. The enabling environment program needs to organize and prioritize on regulations, policies, plans, and programs particularly for spatial planning and/or development plan that enabling NDC implementation. Besides, the effectiveness of implementation and compliance of parties to the laws and regulations related to climate change control also need to be improved.

45. Framework and communication network program was designed to provide frameworks for NDC implementation at national and subnational level, also to build communication networks among national and subnational institutions. In general, frameworks were well prepared and developed for NDC implementation, but the gaps found on this program were subnational focal points which had not been consistently designated or formed to initiate or engage on the communication networks. The subnational focal points should be established to enable communication among them.

46. One data policy program is a fundamental issue to support NDC implementation, and the progress of this program has been on the track. However, climate change as a cross sectoral issue remains gaps on organizing and realizing one data policy in operational level, particularly at subnational level and institutions outside the MoEF. One data policy program needs to be maintained and operationalized in cross sectoral area and also at subnational level. One data policy also needs acceleration for implementation, since it was still in the development stages.

47. Program of intervention policies, plans and program is a key step for NDC implementation to shift from business as usual trend into expected pathways toward targets by 2030. Two main gaps found on this program were feedback or corrective actions and implementation of corrective actions. Corrective actions and its implementation for climate change often demand changes at all parts of the system or at all levels on the institutions. A rigid governance and state financial system were one of the main causes in this issue. Program of intervention policies, plans and program needs flexible or responsive governance and state financial system.

48. The main challenge on NDC implementation guidelines program is to transform the adopted global guidelines into operational guidelines on ground with various conditions of regions and stakeholders, also difference systems among institutions, organizations, private sectors, and communities. The NDC implementation guidelines program needs to be accompanied by supervision or mentoring for development and operationalization of NDC implementation guidelines on ground.

49. The implementation of the NDC will start in 2020, but climate change actions for national commitment pre 2020 became valuable modalities for the implementation of NDC. Four area of NDC implementation cover ministries, provinces, private sectors, and communities. The main gaps on implementation of climate change measures at ministries and provinces area were partial mainstreaming of climate change actions and lack of political support from legislative and political leaders. Compliance and law enforcement in private sectors are key issues to enhance their capacity for NDC implementation. Generating collective actions for communities is one of gaps to scale up climate programs or projects. Further analysis of NDC implementation presented on the capacity gaps and needs of five key components of NDC implementation concept.

50. The implementation of the NDC monitoring and review program will start in 2020, while monitoring and review on climate change actions has been implementing for national commitment pre 2020. Based on the progress of monitoring and review system, the gaps were on the monitoring of resiliencies level of the adaptation measures, also on the monitoring of corrective actions and/or interventions on policies, plans, and programs. the NDC monitoring and review program needs to strengthen the capacity on monitoring corrective actions and/or interventions on policies, plans, and programs. Enhancing resiliency measurement methods and its monitoring systems is also needed.

51. Two main mitigation sectors in the first NDC Indonesia are forestry and energy. Based on the national greenhouse gases inventory, forestry sector indicated wider gap compare to energy sector. Transition of dominant source of emission from forestry to energy sector in the next decade (2020-2030) remain challenges for NDC implementation. The mitigation

measures for NDC implementation need to consider some changes on emission sources. This consideration may help to enhance capacity in both main NDC sectors, while maintain the commitment.

52. The government has been working to improve resiliency measurement, information system and developing adaptation schemes. The first gap on adaptation aspect is resiliency measurement, which needs to be improved to result reliable measurement. Wide range and various depth of climate change exposures, sensitivity, and potential impacts also created gaps on adaptation efforts to improve resiliency. Global consensus or guidance on adaptation with clear scoping on exposures, sensitivity, potential impacts, and adaptive capacity will help to accelerate adaptation measures.

53. Means of implementation (finance, technology, capacity-building) program had some gaps such as ability of stakeholders and institutions to access finance, lack of domestic technology, also compatibility and feasibility of imported technology, and program or project based capacity-building activities. Means of implementation requires significant improvement on ability to access finance, acceleration on technology development, and development of capacity building system.

54. Policies and activities related to the national MRV (measurement-reporting-verification) showed its significant progress, but also indicated some gaps. The national MRV system was still in developing stages, while the national registry system (NRS) which has been running to support the national MRV has not been well integrated with the development planning system, other governance systems, and non-state actors area. The national MRV needs to be strengthened and the national registry system (NRS) needs acceleration to be integrated into the development planning system, other governance systems, and non-state actors area.

55. Indonesia commits to periodically communicate its greenhouse gases emissions from various sectors through national communications (NCs) and biennial update reports (BURs). Indonesia has developed national transparency framework, through (i) the national registry system (NRS) for mitigation, adaptation, and means of implementation, (ii) the national greenhouse gases inventory system, (iii) the measurement-reporting-verification (MRV) system for mitigation including reducing emissions from deforestation and forest degradation (REDD+), (iv) the safeguard information system for REDD+, (v) information system for vulnerability, and (vi) the joint adaptation and mitigation at the village level. The gaps in transparency framework were mainly related to realization of the framework in the other ministries or institutions outside the MoEF, province level, private sectors, and communities. The government and stakeholders need to strengthen the involvement of other ministries or institutions outside the MoEF, provinces, private sectors, and communities.