Institutional arrangements for reporting the use of market mechanisms under the enhanced transparency framework to avoid double counting

Aryanie Amellina
with contributions from Yuji Mizuno, Ph.D.
Climate and Energy Area, Institute for Global Environmental Strategies (IGES)

Key Messages

- Double counting of emissions reductions credits/units from international market mechanisms leads to the risk of discrepancy between actual and reported global emissions, which may reduce global ambition of Nationally Determined Contributions (NDCs) to achieve the Paris Agreement goals. National reporting under the Paris Agreement requires enhanced institutional arrangements, including for ensuring avoidance of double counting mandated by Article 4 and Article 6 of the Paris Agreement.

- There are a number of useful data to help avoid double counting of emissions reductions from the use of international market mechanisms. However, Parties have limited experience and international guidance on what data to report in transparency framework pre-Paris Agreement. Those limitations should be addressed and improved under the enhanced transparency framework.

- Ideally, the enhanced transparency framework's Modalities, Procedures, Guidelines (MPG), complemented with the guidance for Article 6 of the Paris Agreement should guide reporting of market mechanisms to avoid double counting. The existing guidelines for Biennial Update Report (BUR) can be a starting point of discussion. Detailed guidance such as a reporting format or template will help domestic institutional arrangements.

- In parallel, Parties can take the next steps in enhancing domestic institutional arrangements through diversification of stakeholders and strengthening in-country institutional capacity for reporting. Avoiding double counting at the country level can be more effective if done through integrating arrangements for reporting market mechanisms with the existing arrangements for GHG inventory and implementing a collaborative data collection and iterative consultations between members of GHG inventory working groups.

- To meet the demands for continuous improvement and external reviews under the enhanced transparency framework, Parties will benefit from an elaborate improvement plan and capacity needs assessment. Identification of challenges and capacity needs by Parties for reporting on market mechanisms, if any, will be useful, and sharing best practices between countries can help generate new ideas for addressing them.

1. The mandate from Paris Agreement to avoid double counting

Double counting of emissions reductions credits/units from international market mechanisms leads to the risk of discrepancy between actual and reported global emissions, which may reduce global ambition of NDCs to achieve the Paris Agreement goals. Under the Kyoto Protocol reporting practice, purchased credits/units from international market mechanisms are used and claimed by "credit buyers" and also implicitly reported as reduced emissions by "credit sellers" in parallel. This issue of double counting has been discussed between countries and market mechanism observers, and finally the mandate to avoid it was reflected in the Paris Agreement.

Parties to the Paris Agreement agreed to promote transparency, accuracy, completeness, comparability and consistency, and ensure the avoidance of double counting in accounting for anthropogenic emissions and removals corresponding to their NDCs (UNFCCC 2015). An "enhanced transparency framework" under the Agreement was designed to obtain necessary information from Parties to understand where Parties are in their efforts to meet their NDCs targets, so that global efforts to meet the 2 °C and 1.5 °C target can be tracked.

The enhanced transparency framework will apply new reporting rules to both developed countries and developing countries such as a global stocktake and especially will impose new reporting requirements for developing countries such as more frequent reporting and technical expert reviews. Consequently, countries need to enhance their institutional arrangements to meet this new international framework (Figure 1).

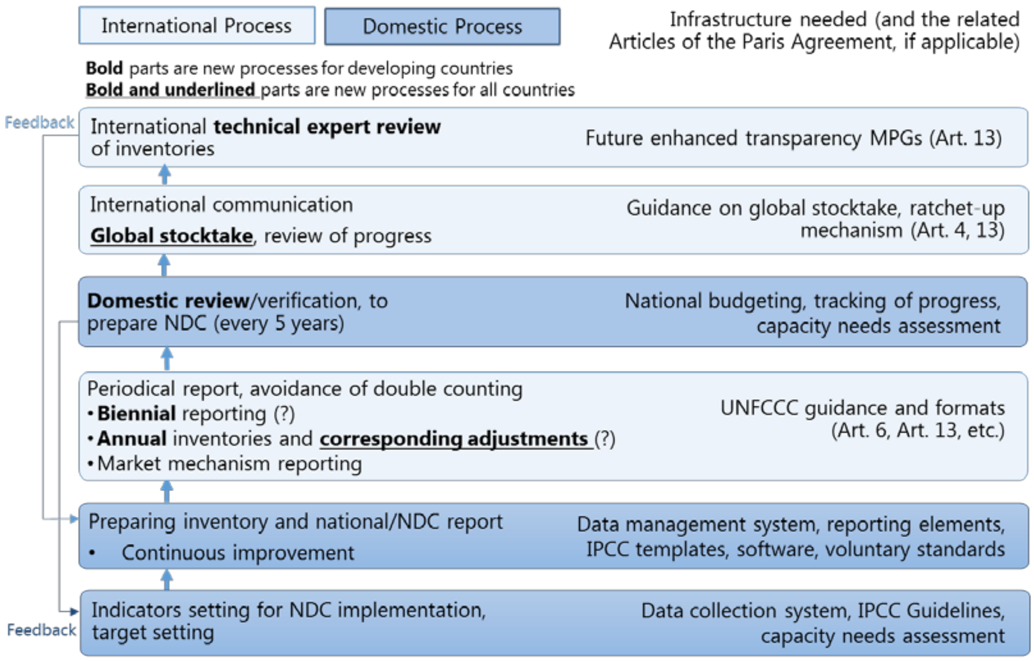

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Figure 1. Processes and infrastructures to enhance transparency under the Paris Agreement

From the perspective of international requirements and guidance, periodical reporting of a national greenhouse gas (GHG) inventory is not something new, although reporting more frequently will be a challenge for many Parties especially Least Developed Countries. On the contrary, tracking and reporting progress in implementing and achieving NDCs and ensuring avoidance of double counting are new for all Parties as there were no requirements to do those prior to the Paris Agreement. This paper will focus on the institutional arrangements for addressing the new challenge of ensuring avoidance of double counting.

Since ensuring avoidance of double counting of emissions reductions from the use of market mechanisms affects the overall emissions of a country, reporting the emissions reductions is inseparable from national emissions reporting and GHG inventory preparation. Domestic institutional arrangements for national reporting and preparing GHG inventory will facilitate individual Parties in ensuring that appropriate domestic procedures for data collection, processing, reporting, and archiving are established and operational in a sustainable manner on a continuous basis (UNFCCC 2013). To help avoidance of double counting, Parties need to ensure that domestic institutional arrangements for reporting emissions reductions, or internationally transferred mitigation outcomes from international market mechanisms, are in place.

This paper focuses on the challenge of avoidance of double counting, provides useful information related to international market mechanisms to be collected and reported by Parties to help avoiding double counting, and looks at possible ways to enhance domestic processes or institutional arrangements for collecting and reporting that information. Finally, processes for improvements and capacity needs are proposed.

2. Limited guidance and experience on reporting market mechanisms to enable avoidance of double counting

Parties to the Paris Agreement agreed to avoid double counting of emissions reductions, by applying robust accounting consistent with the guidance to be adopted for internationally transferred mitigation outcomes. Mandates related to national reporting by Parties cover, at least, a national inventory report of emissions and removals, information necessary to track progress in implementing and achieving NDCs, and avoidance of double counting of emissions reductions.

The necessity of avoidance of double counting and international guidance for ensuring double counting are emphasised in the COP21 decision as well as in Article 4, Article 6, and Article 13 of the Paris Agreement (UNFCCC 2015):

- The COP requested the Subsidiary Body for Scientific and Technological Advice to develop and recommend the guidance referred to under Article 6, paragraph 2, of the Paris Agreement, …, including guidance to ensure that double counting is avoided on the basis of a corresponding adjustment by Parties for both anthropogenic emissions by sources and removals by sinks covered by their nationally determined contributions under the Paris Agreement.

- The COP requested the Ad Hoc Working Group on the Paris Agreement, in developing recommendations for MPGs in accordance to Article 13 of the Paris Agreement, to take into account, inter alia, the need to ensure that double counting is avoided.
- The COP encouraged Parties to promote voluntary cancellation by Party and non-Party stakeholders, without double counting, of units issued under the Kyoto Protocol, ...
- The COP urged host and purchasing Parties to report transparently on internationally transferred mitigation outcomes, including outcomes used to meet international pledges, and emission units issued under the Kyoto Protocol with a view to promoting environmental integrity and avoiding double counting.
- Under Article 4, Parties agreed that in accounting for anthropogenic emissions and removals corresponding to their NDCs, Parties shall ensure the avoidance of double counting, in accordance with guidance adopted by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement.
- Under Article 6, paragraph 4, Parties agreed that emissions reductions resulting from the mechanism referred to Article 6, paragraph 4 of the Agreement shall not be used to demonstrate achievement of the host Party's NDC if used by another Party to demonstrate achievement of its NDC.

When there are transfers of mitigation outcomes between Parties, Parties must ensure that double counting is avoided on the basis of a corresponding adjustment by both Parties for both anthropogenic emissions by sources and/or removals by sinks covered by their NDCs. Following the Agreement in 2015, discussions among Parties are still ongoing to clarify the methods and timing in carrying out corresponding adjustments (see UNFCCC 2017; Mizuno 2017; Marcu and Zaman 2018), and a guidance for robust accounting will be adopted in COP24 in 2018.

Regardless of those technical details, the type of useful data to enable tracking and reporting, and to perform corresponding adjustment of national emissions can be identified from the perspectives of market mechanisms and inventory (Table 1). These basic data include outcomes of projects under market mechanisms claimed by a Party, such as the Certified Emission Reduction (CER) issued from Clean Development Mechanism projects, Emission Reduction Units (ERU) from Joint Implementation projects, and the Joint Crediting Mechanism (JCM) credits from the JCM projects. It is useful to collect data not only on the amount, but also on the year of reduction and year of issuance since they may relate to achievement of NDC in its target year.

Table 1. Useful data to report regarding the use of international market mechanism

Data on international market mechanisms	Source of data
Name and description of registered projects	Project owners/mechanism owner(s)
Methodologies and assumptions used in calculation of emissions and emission reduction	Project owners/mechanism owner(s)
Estimated emissions reductions from each project	Project owners
Units/credits issued and owners of those credits at the time of issuance	Project owners/mechanism owner(s)
Year(s) of issuance of units/credits	Project owners/mechanism owner(s)
Year(s) of emissions reductions represented by issued units/credits	Project owners/mechanism owner(s)
All owners of units/credits and the amount owned by each	Project owners
Amount of units/credits retired	Mechanism owner(s)
Amount of units/credits cancelled	Mechanism owner(s)
Amount of units/credits transferred out to other Party(ies)	Mechanism owner(s)

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There still is a need to clarify the applicable guidance for treatment of avoided emissions resulting from REDD+ activities, which may be converted and claimed as carbon credits by Parties under several mechanisms. Otherwise, double counting of those credits by more than one Party involved may occur. The type of guidance that should cover reporting of outcomes from REDD+ activities is still in the grey zone between guidance of Article 6 of the Paris Agreement (on market mechanisms or non-market approaches) and Article 5 (on actions related to forestry and conservation of greenhouse gases sinks, including REDD+, results-based payments, etc.). This is partly due to the complexity of measurement compared with emissions reductions from energy sector activities, the issue of permanence, and ownership of mechanisms. Although it remains to be decided, avoided emissions from REDD+ activities should be adjusted in the future in order to avoid double counting.

Reporting the useful data regarding the use of international market mechanisms by Parties involved may seem straightforward, but developing country Parties lack experience in reporting them, or even reporting general aspects of international market mechanisms in NCs and BURs (Figure 2). A snapshot of information on market mechanisms reported by Non-Annex I Parties was taken from the latest NCs and BURs submitted by Asian developing country Parties, due to the significance of the CDM activities in the region. Among 74 countries with registered projects, 26 of them (35%) are located in Asia, and most of the registered CDM projects (78%) are located in the region (based on IGES CDM Monitoring and Issuance Database 2017).

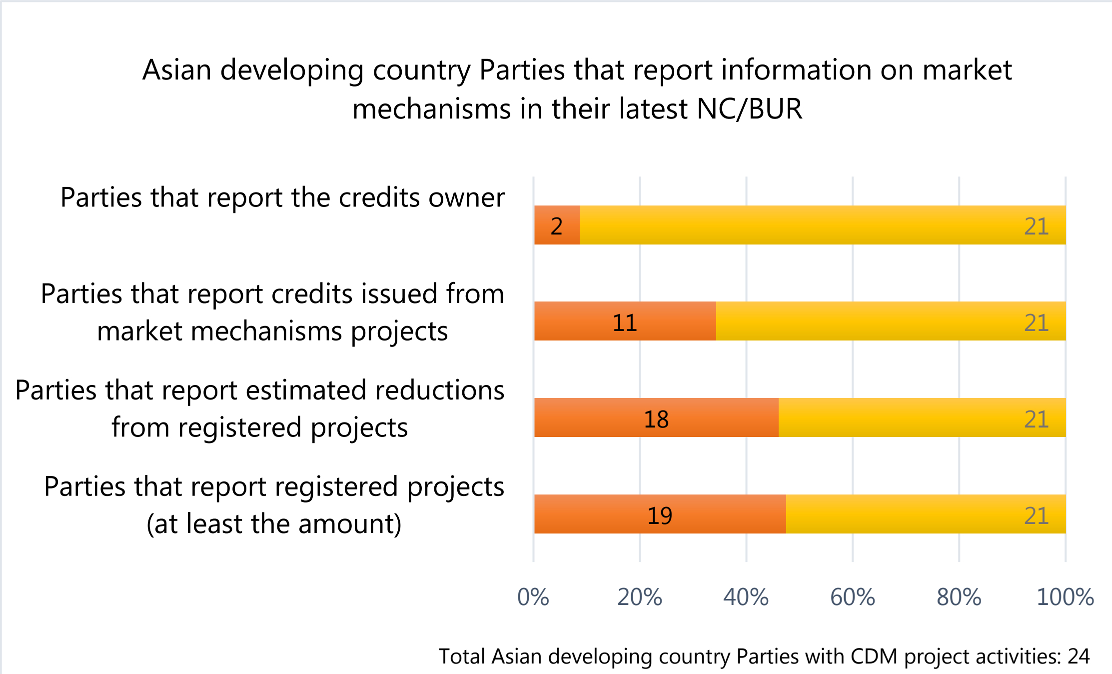

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Figure 2. Data related to the use of international market mechanisms reported by the Asian developing countries in their latest NC or BUR

A majority (around 80%) of the Asian developing country Parties reported registered CDM projects in their country and the estimated reductions from those projects. This type of information is the base for tracking progress of mitigation actions and estimated units that may be claimed towards NDC achievements or transferred out to other countries, and needs to be adjusted to avoid double counting. However, only less than half of Asian developing country Parties reported the amount of credits issued from the registered projects. Only two Parties reported the ownership of credits at the time of report submission. Although this does not necessarily mean that the remaining half of Asian developing country Parties are unaware or intentionally do not report the issued credits, if this reporting situation continues, those issued credits may be double counted by the Parties involved. Although not a comprehensive picture of the whole world, this preliminary look suggests the lack of reporting in the developing world, and this situation shall be avoided under the enhanced transparency framework.

This limitation of reported data may largely be due to the lack or requirements from the Kyoto Protocol on reporting market mechanisms and avoiding double counting. The UNFCCC for biennial update reporting guidelines includes a sub-heading for reporting information on international markets (UNFCCC 2011). However, it does not provide recommendations on what and how to report and its purpose was not to avoid double counting. The limited reporting also may be due to limited access to data from the mechanisms owner(s) as well as a coordination gap between responsible entities for implementing market mechanisms and responsible entities for national reporting.

Most Parties may already have useful data and information by accessing the CDM Registry and by receiving reports from the CDM project developers. Such access to data and information needs to be ensured for all Parties through sharing of information between the CDM and the UNFCCC secretariat and all the national focal points for international market mechanisms, such as the CDM Designated National Authorities, on the outcomes of CDM projects. Nevertheless, decisions made by countries on what data to report in the BUR may be influenced by the priority put on some elements described in the NC and/or BUR reporting guidelines. In order to utilise resources efficiently, countries may prefer to focus only on mandatory reporting elements particularly the national GHG inventory. Therefore, reporting information and the use of credits from market mechanisms need to be a requirement under the enhanced transparency framework MPGs so that avoidance of double counting is prioritised.

The MPGs can also provide detailed technical guidance to be more helpful for Parties. Considering that the MPGs will be built upon the existing arrangements for pre-Paris Agreement national reporting, including NCs, BUR, biennial report (BR), international assessment and review and international consultation and analysis (UNFCCC 2015), the MPGs may elaborate the current BUR and BR guidelines and complement them with guidance for Article 6 approaches and mechanisms. Availability of a detailed guidance such as a reporting format or template will greatly help domestic institutional arrangements especially in data collection.

3. Enhanced domestic institutional arrangements for reporting to avoid double counting

Quality and process of national reporting are built with several institutional arrangements, such as national formal/legal arrangements, a single overall coordinating body, arrangements/systems for involvement of stakeholders, domestic resources for sustaining a team of experts, in-country institutional and technical capacity building, and a continuous improvement plan (Umemiya et al. 2017; UNFCCC 2013). Throughout the years, Parties have built basic institutional arrangements especially for preparing the GHG inventory, which resulted in the establishment of coordinating body and timely reporting of NC by most Asian developing country Parties. Considering the level of capacity built for GHG inventory as a core part of NC and BUR, expanding stakeholders' involvement and strengthening in-country capacity for reporting market mechanisms can be done more effectively by integrating it with the inventory preparation process.

Following the establishment of formal arrangements and a coordinating body for GHG inventories, efforts to enhance institutional arrangements can focus on diversifying the range of involved stakeholders, intensifying the role of stakeholders, and strengthening in-country capacity to reduce reliance on external experts. Diversifying the range and intensifying the role of stakeholders can reinforce nationwide ownership of NC and BUR, and create an efficient process for frequent reporting. In particular, the private sector, such as companies, and the owner of each market mechanism have a crucial role in providing data and participating in the consultation process for reporting of market mechanisms to avoid double counting. A simple communication and reporting procedure can be established between the market mechanism owner and the private companies involved in projects under the mechanisms. If necessary, a formal agreement can be provided by the mechanism owner to ensure that information provided by the private sector will be used for report preparation only and not for other purposes, such as done in Belize (UNFCCC, year unknown).

Strong ownership and policy integration among the coordinating entity and stakeholders involved in data collection and report preparation is crucial for enhancing the national report. To strengthen ownership and integration among entities that hold different data and mandates, preparation of report can be coordinated in a decentralised way, using collaborative and iterative approaches. In such a decentralised arrangement, the coordinating entity can play the role of a facilitator of a collaborative data collection and an iterative quality control process, instead of receiving data from stakeholders in parallel and compiling them into a single report. In order to allow such process, inventory preparation needs to provide time and platform for interaction between stakeholders to share feedback and keep track of coverage of report throughout the preparation process (Figure 3).

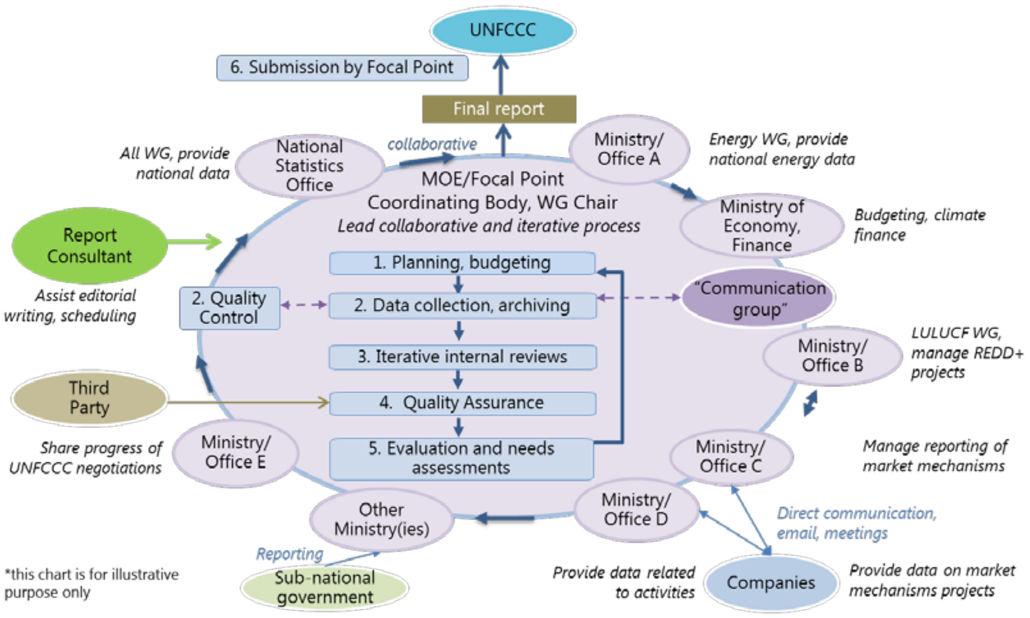

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Figure 3. Illustration of an institutional arrangement for reporting where coordinating entity facilitates open, collaborative, and iterative process

As data collection and quality control are critical points in reporting, it is desirable for inventory working group members to have the mandate for not only submitting activity data to the coordinating entity, but also to ensure data quality, including those related to market mechanisms activities. For enhancing data identification and collection process, countries can consider establishing a "communication group" consisting of data experts from governmental and non-governmental agencies, who can help identify data sources with their experience and knowledge. To enhance data collection integrated with data archiving, countries can consider investing in solutions based on information technologies, such as an Online Data Portal or a website to upload the data useful for the next cycle of reporting. At the time of writing, a number of developing country Parties are developing an Online Data Portal, such as Costa Rica, to facilitate national reporting under the enhanced transparency framework (MINAE 2018), and Thailand for Nationally Appropriate Mitigation Actions (NAMA) in the energy sector (TGO 2017). Other countries, such as Japan, upload data and information used for their national report to a website. These solutions will ensure institutional memory is retained even when staff change.

For iterative internal review processes and quality assurance, a valuable experience can be observed from Macedonia (UNFCCC, year unknown), where for each sector, a 'data enterer' fills in a database or template with values of activity data and emission factors, in parallel with a 'data checker' who validates the input data. In case of detected errors, both sectoral experts perform a recalculation. In addition, the involvement of third-party entities is ideal for quality assurance.

To strengthen the sustainability of reporting, some developing country Parties such as the Philippines and Namibia have decided not to rely on external experts for preparation of their next national communications (UNFCCC, year unknown). As a step towards reducing reliance, the role of external experts can be limited to scheduling and editorial support only. It will also be useful to record challenges faced during the data collection and calculation process for evaluation, improvement planning, and capacity needs assessment.

4. Challenges in reporting market mechanisms need to be identified in capacity needs assessment and improvement plan for reporting

Prior to the Paris Agreement, Annex I Parties and Non-Annex I Parties had different level of requirement for reporting domestic institutional arrangements. Annex I Parties shall provide information on changes in their domestic institutional arrangements, through a biennial report (BR). Non-Annex I Parties may provide an update on national circumstances and institutional arrangements relevant to the preparation of the National Communications on a continuous basis, through a BUR. There is no specific requirement for Non-Annex I Parties regarding how to provide this information, but most of them provided an explanation of the existing law or legal documents on domestic climate change policies, the coordinating body for preparation process of the BUR, and an organisational chart showing the other entities involved in the preparation process.

One of the important innovations under the Paris Agreement's enhanced transparency framework is the requirements for all Parties to continuously improve their national reporting and to be externally reviewed. Institutional arrangements may be one of the components of external review process and the existence of an improvement plan may be adopted as a reporting element. To meet this requirement, Parties will need a robust system for evaluation and improvement planning, which utilises inputs from the lessons learned and from external reviews by other countries (Figure 1).

Parties are therefore encouraged to put in place necessary domestic processes to improve reporting over time (Matsuo 2017; CEEW 2017; GHGMI 2017) and report on the progress of improvement plan implemented (Government of Norway 2017). For this purpose, elaboration and implementation of a collaborative and iterative process (Figure 3), a "Plan-Do-Check-Act" cycle, stepwise approach, and a methodological capacity needs assessments will be crucial for Parties. Challenges and capacity needs related to reporting market mechanisms, if any, need to be identified in improvement planning and capacity needs assessment (Figure 4). To help addressing challenges, sharing best practices between countries in enhancing institutional arrangements can help generate new ideas.

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Figure 4. Continuous improvement cycle for national reporting

Conclusion and Proposals

Parties to the Paris Agreement agreed to ensure avoidance of double counting of emissions reductions from the use of international market mechanisms. Although useful data may be available, Parties have limited experience and guidance from the UNFCCC on what data to report in the transparency framework pre-Paris Agreement. If the current reporting of emissions continues, Parties may fail to meet their goal to avoid double counting. For enhancing reporting of market mechanisms, an international guidance for national reporting under the enhanced transparency framework, with more details on reporting elements, can help Parties report in a manner that helps ensure avoidance of double counting. Domestically, institutional arrangements may be enhanced by integrating arrangements for reporting market mechanisms with the arrangements for preparing GHG inventory. Challenges, and capacity needs, if any, and improvement plans needs to be identified in the process of improvement planning and capacity needs assessment for continuous improvement in overall reporting.

In conclusion, this paper proposes three ways to enhance institutional arrangements for reporting, particularly reporting of market mechanisms to avoid double counting:

i. Adopting international guidance for reporting international market mechanisms to avoid double counting, under the enhanced transparency framework MPG and complemented with guidance for robust accounting of emissions reductions from international market mechanisms.

ii. Enhancing domestic institutional arrangements by integrating reporting of market mechanisms with the preparation of inventory, broadening stakeholders' engagement, and developing in-country capacity.

iii. Identifying the challenges, needs, and possible ways to improve reporting the use of market mechanisms and communicating them in the national reports (national communications and/or BUR).

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Contact: amellina@iges.or.jp

Institute for Global Environmental Strategies (IGES)

Climate and Energy Area

2108-11 Kamiyamaguchi, Hayama, Kanagawa, 240-0115, Japan

Tel: 046-826-9592 Fax: 046-855-3809 E-mail: ce-info@iges.or.jp

www.iges.or.jp