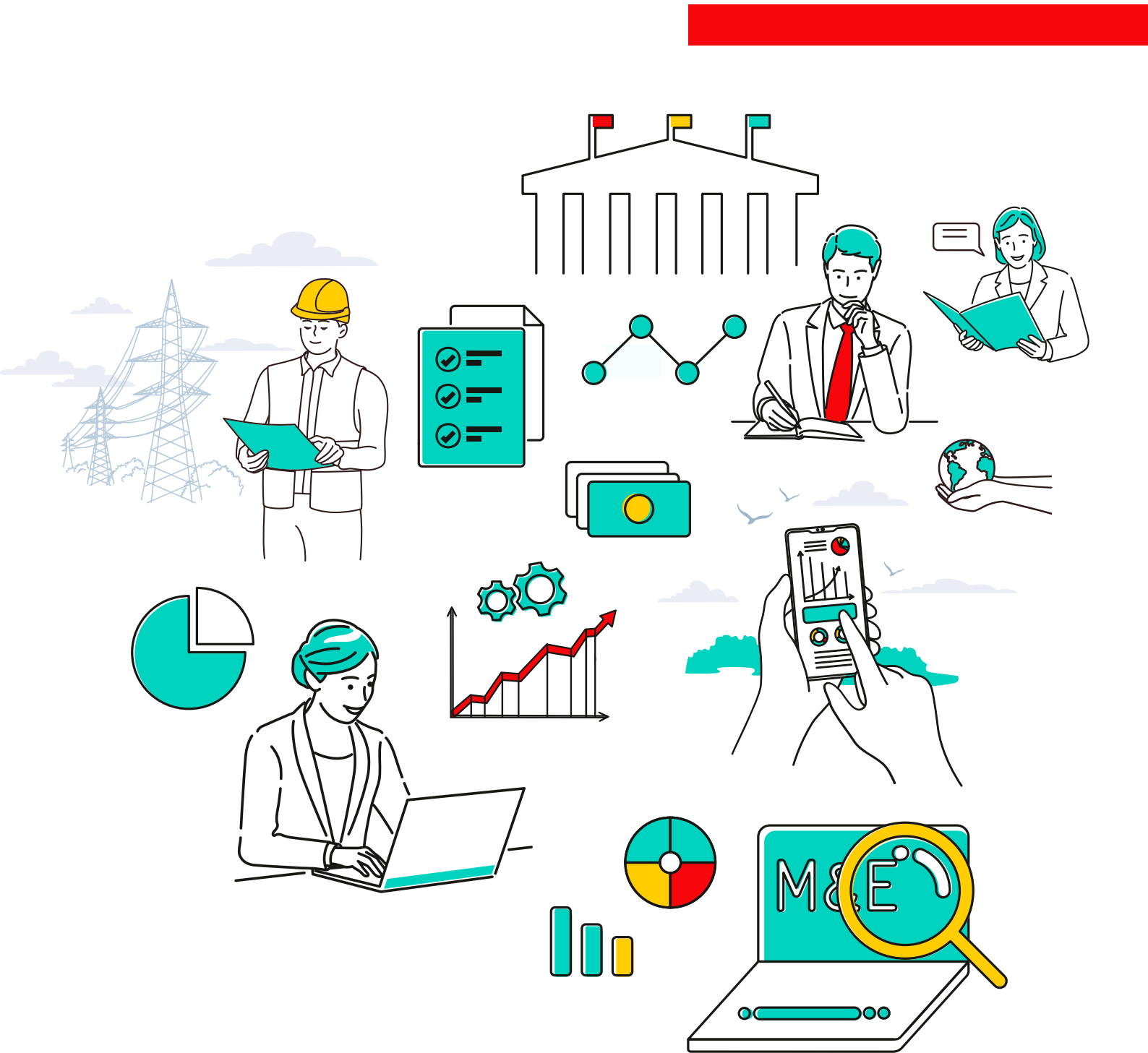


MONITORING & EVALUATION OF SUSTAINABLE PUBLIC PROCUREMENT

Practical considerations for establishing an M&E framework



On behalf of:

AS A FEDERALLY OWNED ENTERPRISE, GIZ SUPPORTS THE GERMAN GOVERNMENT
IN ACHIEVING ITS OBJECTIVES IN THE FIELD OF INTERNATIONAL COOPERATION FOR
SUSTAINABLE DEVELOPMENT.

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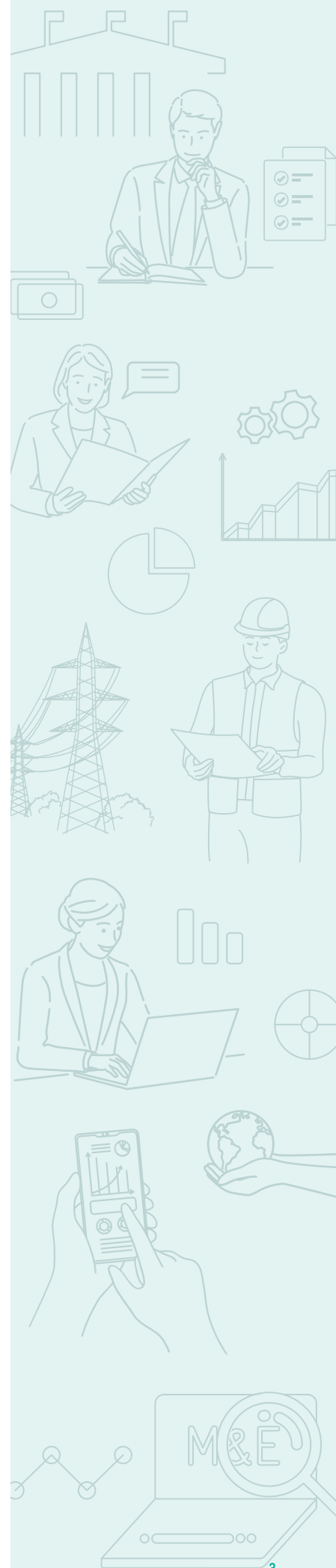
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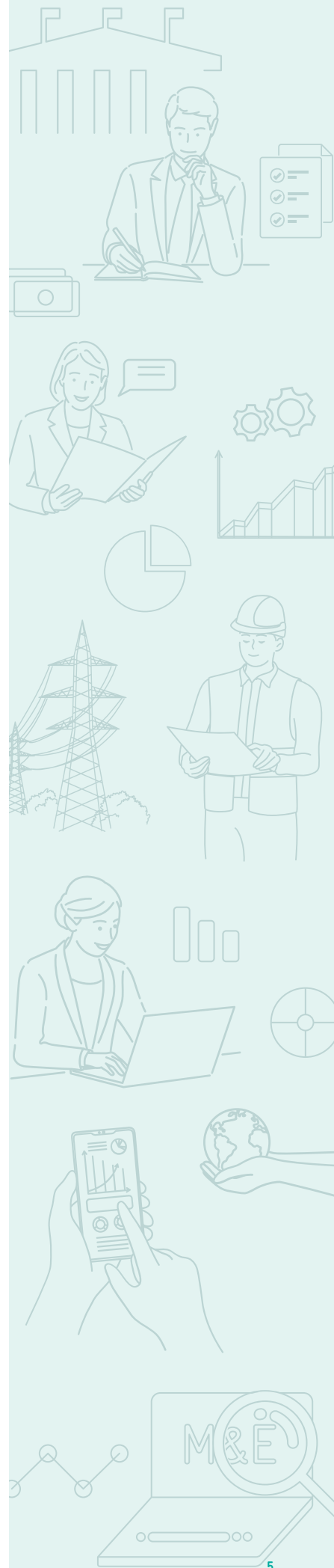


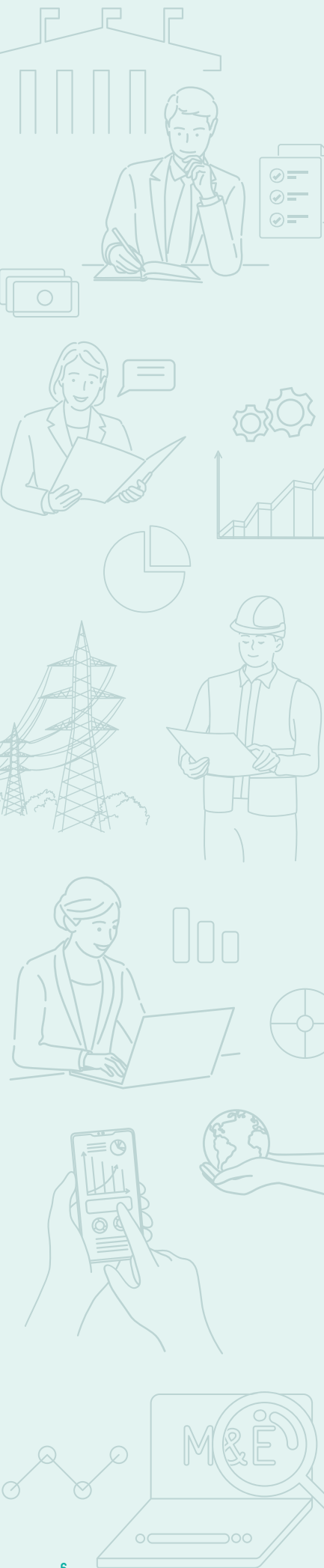
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LIST OF ABBREVIATIONS

GPP	Green Public Procurement
GHG	Greenhouse Gas
LCC	Life Cycle Costs
M&E	Monitoring & Evaluation
SDG	Sustainable Development Goals
SPP	Sustainable Public Procurement

SUMMARY

Monitoring & Evaluation (M&E) is an important process which can help track the implementation and impact of sustainable public procurement (SPP). The existence of M&E frameworks for SPP, however, remains rare in practice, and where they do exist, they are often focussed on process rather than impact, which can hamper innovation and can lead to risks of greenwashing and perverse incentives.

Existing guidance on developing M&E frameworks for SPP is based on top-down approaches which recommend embedding M&E in policy and enabling it with centralised digital infrastructure (in particular, national e-procurement systems). However, one main lesson learned from past implementation of SPP is the importance of inter-ministerial cooperation, for example, between the Ministry of Finance or Central Procurement Agency, which are responsible for public procurement policy and its associated infrastructure (including e-procurement systems), and the Ministry of Environment, which

has the knowledge needed to define sustainability, provide SPP criteria and guidance, and calculate the environmental outcomes of SPP. As such, this pre-study aims to outline important factors which should be considered when establishing or enhancing an M&E framework in a multi-actor context. It does not provide definitive instructions for M&E of SPP: instead, it seeks to collect and contextualise existing guidance and research, as a starting point for more targeted research into national needs, opportunities and barriers to SPP M&E. In addition, short case studies on M&E in eight countries from Asia, Europe and North America are provided. These focus on the data collection methods used by these countries, and provide examples of integrated e-procurement approaches, standardised questionnaires or tender evaluation methods.



1 INTRODUCTION



1.1 MONITORING AND EVALUATING SPP

Sustainable Public Procurement (SPP) is a powerful tool which aims to reduce the environmental impact of government purchasing, while supporting progress towards wider environmental, social and economic policy goals. Establishing effective monitoring and evaluation frameworks for SPP remains a challenge however for many countries from all parts of the globe (WB, 2021; UNEP, 2017).

To monitor and evaluate the success of SPP, several factors can be considered:

- The extent to which SPP has been institutionalised i.e. the existence of policies, action plans, trained procurers or other activities which relate to the organisational processes and culture of contracting authorities.
- SPP-related outputs, for example, the number of calls for tender published each year which included sustainability requirements, or other measures which show that procurers are engaged in SPP activities.
- The outcomes of SPP, meaning, the actual or estimated impacts of sustainable purchasing in terms of environmental, social or economic benefits (for example, greenhouse gas (GHG) emission or life-cycle cost savings).

Keeping track of these different factors serve different purposes. Tracking institutionalisation and outputs helps agencies responsible for public procurement and/ or SPP (such as the Ministry of Finance or the Ministry of Environment) to monitor the implementation of SPP policies, while tracking outcomes helps policy-makers understand the

actual impact of SPP policies and initiatives i.e. are they helping to achieve a more green, sustainable economy. Together, monitoring implementation and impact helps the success of SPP policies to be evaluated and makes it easier to identify future improvements and opportunities.

M&E can also help collect data needed for international reporting exercises, in particular reporting on the Sustainable Development Goal (SDG) indicator 12.7.1 “Number of countries implementing Sustainable Public Procurement policies and action plans”. Six parameters are considered, including:

- A. Existence of an SPP action plan / policy, and or SPP regulatory requirements
- B. Public procurement regulatory framework conducive to sustainable public procurement
- C. Practical support delivered to public procurement practitioners in the implementation of SPP
- D. SPP purchasing criteria / buying standards/ requirements
- E. Existence of an SPP monitoring system
- F. Overall percentage of SPP

Under the SPP Index Methodology (UNEP & OPN, 2021), points are awarded for the ‘Existence of an SPP monitoring system’, which is itself fundamental for collecting the data needed to evaluate many of the other parameters, including institutionalisation indicators (in particular A and C) and output indicators (F). A detailed overview of the SPP Index Methodology, including scores allocated to each parameter, is included in Annex I.

1.2 CHALLENGES OF EXISTING METHODOLOGIES

Detailed guidance on developing a M&E framework for SPP already exists, for example, UNEP's 2016 recommendations on "Monitoring Sustainable Public Procurement Implementation". This guidance provides a comprehensive overview of how to create a top-down framework for SPP M&E. In this model approach, policies and targets for SPP are developed, followed by the creation of an M&E framework which is ideally led by the Central Procurement Body or Ministry of Finance, and embedded in wider procurement structures and infrastructure.

This type of centralised, top-down approach to M&E presents an ideal scenario which is target-driven, centrally mandated and embedded in procurement infrastructure (such as the e-procurement system). In countries where such an approach is possible, a highly effective M&E framework can be achieved.

One challenge to implementing M&E is the need for inter-ministerial cooperation. According to UNEP's 2017 Global Review of Sustainable Public Procurement, the implementation of SPP policies is led in 81% of cases by the ministry or agency with environmental responsibilities. However, other agencies involved include the procurement agency (52%), the ministry or agency with economic/financial responsibilities (29%), the ministry or agency with industry/growth responsibilities (26%), the ministry or agency with social responsibilities (19%), or an explicit inter-ministerial or inter-agency committee (45%). In addition, 23% of responses marked an additional 'other' type of lead, highlighting the diversity of institutional contexts where SPP can originate and be led from. Without an appropriate coordination between relevant ministries, it can be difficult to align policy and process. For instance, the ministry charged with promoting SPP may not be the same ministry responsible for collecting data on public procurement. A similar challenge is the decentralised nature of procurement. While national government may be responsible for some centralised procurement, sub-national entities generally take care of their own buying needs. In addition, procurement is decentralised within many public organisations, meaning each department has its own procurement officers, or procurement is done by non-specialists as part of wider responsibilities.

Similar challenges also exist for the calculation of the SDG SPP Index (indicator 12.7.1). UNEP (2020) notes that it originally planned to monitor SPP implementation at three different levels of government (i.e. national plus regional and local) in the SPP Index Methodology, and weight the results according to the government's share of procurement in total public procurement value at a country level. However, their first data collection exercise found that data availability was low, and that the time needed for calculation of just the national level of government already used all of the available resources.

In addition to the data collection challenges, using data to determine actual sustainability impact or outcomes is difficult, and rare in practice. According to UNEP's 2017 Global Review of Sustainable Public Procurement, out of 27 countries with M&E processes for SPP (66% of respondents), 10 measured institutionalisation, 26 measured outputs, but only 9 also measured outcomes.

This focus on outputs rather than outcomes can be problematic in some scenarios, as outlined below:

- **Outputs do not necessarily reflect success:** for example, if a contract is awarded using an 80:20 cost: value ratio, this would be counted towards an SPP output indicator, even if the winning bid scored zero for sustainability. Or, if SPP requirements are applied in sectors that do not offer large potential impact (for example, consultancy services), the resulting output indicator will overinflate or misrepresent actual SPP activity, leading to greenwashing.
- **Outputs do not reflect level of ambition:** if SPP requirements are low or not well defined, or M&E is based on self-reporting, tenders with very low sustainability requirements could still be counted as an SPP output, even if their contribution to the actual goal of a greener, more sustainable economy is very low. Contracting authorities would therefore appear to perform well, but the reality would be large opportunities missed.

When we consider that SPP is just one tool out of several available to governments to achieve a greener, more sustainable economy, it becomes clear that information that only deals with the implementation of SPP is incomplete, as it does not allow smart policy-making and investment in those policy instruments where the largest returns can be achieved. Despite this, existing methodologies place more importance on institutional and output indicators rather than achieved environmental

outcomes. For example, the SPP Index Methodology only allocates 0.1 points to countries calculating the actual sustainability benefits of SPP. Theoretically, this means that a country could be scored as having a high-level of SPP implementation, without needing to verify this with data on the actual outcomes of their SPP programme.

While such a focus has arguably been developed due to the practicalities of data collection, designing an M&E system which focusses on administrative process rather than actual impact fails to incentivise innovation and limits the impact that SPP can have in green market transformation. For example, if the success of the lead agency is measured against number of tenders including SPP criteria, there is a risk that lower requirements or less frequent updates will be incentivised, as this will make encouraging uptake among procurers easier.

Monitoring outcomes leaves less room for perverse incentives. If the success of the lead agency is measured against the actual policy goal, for example reduction of CO₂ or increased market share of green products, they will instead be incentivised to focus resources on activities which directly contribute to these outcomes, such as setting challenging criteria which are regularly updated to reflect market developments and best available technology.

1.3 CORE REQUIREMENTS OF EFFECTIVE M&E

At the most basic level, an effective SPP M&E system should:

1. Monitor the implementation of SPP policies and/ or initiatives (for example, implementation of steps defined in a SPP Roadmap or similar).

2. Provide data on the total amount of SPP being done (number of tenders, value, number of units), in a way that develops patterns over time and allows comparison between actors.
3. Allow estimation of the economic and environmental impact of SPP policies and/ or initiatives.

Indicators to track the above should be based on the real data needs of relevant stakeholders. This means, indicators should be:

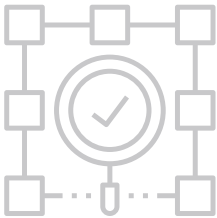
- closely linked to responsibilities, targets, and where relevant, international reporting needs (such as the SPP Index)
- calculated at a regular frequency (i.e. annually) in order to allow the identification of patterns over time
- calculated at an appropriate level of accuracy to allow evidence-based policy making.

In order to manage the resource requirements of a M&E System, opportunities to use existing data sets or to automate data collection processes should be sought.

It is also necessary to have a clear definition of what standards need to be achieved in order to be counted as a sustainable procurement. For example, what efficiency requirements need to be fulfilled, or what ecolabel requirements need to be met. It may also be necessary to prioritise certain products or services, focusing on those areas with the greatest potential for sustainability impact. Finally, to ensure the efforts of M&E are fruitful, it is necessary to define a clear implementation plan for the M&E system, including piloting, deployment and communication of results.

Each of these core requirements is discussed in the next chapter in more detail.

2 CONSIDERATIONS WHEN ESTABLISHING A M&E FRAMEWORK



.....

This pre-study represents initial efforts to collect and contextualise existing guidance, research and practice on the establishment of SPP M&E Systems. It acts as a starting point for more targeted research into national needs, opportunities and barriers to SPP M&E. To this end, three stages of M&E System development have been identified:

1. Defining purpose and scope of SPP M&E System
 2. Defining appropriate indicators
 3. Developing an implementation plan
-

2.1 DEFINING PURPOSE AND SCOPE OF SPP M&E SYSTEM

2.1.1 Identifying SPP policies, initiatives and key environmental targets

The first core requirement of an SPP M&E system is to monitor the implementation of SPP policies and/or initiatives (for example, implementation of steps defined in a SPP Roadmap or similar). This means, it is necessary to gather a complete overview of relevant SPP policies and initiatives taking place at a national (or sub-national level). From this, a list of discreet activities or tasks, including the implementation timeframe and the responsible agency, should be developed. This will provide a basis for defining institutionalisation indicators.

Once the key elements of the SPP system are implemented, e.g. the SPP legal framework, often the government sets output targets linked to a timeline. These Key Performance Indicators (KPI) are often linked to “countable” units, such as procurement value, no. of institutions, no. of green products, market penetration, and the like. An example of this is Malaysia’s target of 25% of government procurement to be green by 2025 (see Section 3.6). These KPIs should be developed according to the SMART principle, meaning they should Specific, Measurable, Achievable, Relevant, and Time-related (ICLEI, 2016). Finally, the M&E system should refer and allow measuring the policy goal, namely the environmental benefit, also referred to as outcome targets. These may be specific to SPP, such as resource efficiency, but might be linked to wider ambitions, in particular, GHG emission reduction targets or targets for achieving carbon neutrality. In addition to environmental outcomes, stakeholders may be

interested in the economic impact of SPP policies and initiatives. This could include the costs and savings accrued by SPP, as well as the potential contribution of SPP to industrial and social targets (for example, increase of ecolabelled products or creation of green jobs in local SMEs, etc.).

As such, it is recommended that consultation is already undertaken at this stage with all agencies responsible for public procurement and SPP policies and initiatives, as well as those responsible for coordinating government activities towards environmental targets and other relevant policy priorities. The purpose of this consultation is to understand the data needs of all relevant stakeholders, including their accuracy and disaggregation requirements.

Table 1 presents a list of potential stakeholders and their different data needs.

2.1.2 Defining the scope of the SPP M&E System

In decentralised procurement systems, local and regional governments, as well as other institutions like hospitals and universities, are major public buyers. This increases the resources required

for M&E, and in the case of UNEP's SPP Index Methodology (2020), including regional and local governments was found to be unmanageable due to low data availability and time needed for calculations.

The scope of the national M&E Systems considered by this pre-study vary (see Chapter 3 M&E Examples). To include all levels of government, it appears necessary to have either:

- Supportive regulatory framework i.e. Korea (3.1), which require all levels of government to submit data
- Supportive e-procurement infrastructure i.e. Estonia (3.3) or Switzerland (3.4), which require procurers to say whether tenders contain SPP criteria when uploading them to the system.

Another approach, which Japan (3.2) follows, is to make reporting mandatory for central government only. Japan also allows local government to participate in reporting, but only on a voluntary basis.

TABLE 1: OVERVIEW OF POTENTIAL STAKEHOLDERS AND THEIR DIFFERENT DATA NEEDS

MINISTRY/ AGENCY	POTENTIAL DATA INTERESTS
Central Procurement Agency or Ministry of Finance	<ul style="list-style-type: none"> • Financial impact of SPP (costs and life cycle savings)
Ministry of Environment / Environmental Protection Agency	<ul style="list-style-type: none"> • Environmental impact of SPP, such as GHG and HFC emission reduction. • Direct impact (savings accrued directly by public sector) • Indirect impact (savings accrued by wider market transformation)
Ministry of Economy / Industry Board / Innovation Agency / Ministry of Labour or SMEs	<ul style="list-style-type: none"> • Procurement contracts won by domestic suppliers, and associated job creation
SDG 12 Focal Point (mostly in the National Procurement Agency or the ministries of finance or environment)	<ul style="list-style-type: none"> • Measurement of the SPP Index
Individual contracting authorities	<ul style="list-style-type: none"> • Compliance with SPP obligations set in central KPI's • Financial and environmental impact of SPP • Benchmarking against other contracting authorities • Public relations (Walk the Talk)

2.1.3 Initial data mapping

At this early stage, it is already worth considering what data is already available, as this will be a major enabling or limiting factor of the M&E framework established. UNEP (2016) recommends that a preliminary analysis of existing software, data tracking tools and reporting mechanisms is conducted, and opportunities for integration are sought. For example, in the Philippines, a consultant was used to map existing possibilities for the MRV system, which included consideration of general public procurement reporting requirements, data collected through the e-procurement system, and the potential use of data collected through the inventory management system of the central purchasing authority (see section 3.8).

2.2 DEFINING APPROPRIATE INDICATORS

Indicators tracked by national M&E frameworks can vary widely between countries depending on the factors identified above, such as policy (including sectoral priorities or specific sustainability targets), the legal framework (such as obligations on procurers to provide data), infrastructure (like the existence of an e-procurement system), or interactions with other tools (such as links between SPP and a national Type-I ecolabel).

Indicators can also support international reporting and benchmarking efforts, such as the SPP Index. An overview of possible indicators is included in Table 2. The institutionalisation indicators are based on data requested by the SDG SPP Index methodology (indicator 12.7.1); however, these indicators should not be adopted uncritically, but instead should be aligned with the policies, initiatives and targets identified under Step 1.

UNEP (2016) recommends starting with a few indicators that are easy to manage, especially if manual / voluntary approaches to data collection are being used. Indicators can then be increased over time as SPP monitoring and tracking tools are expanded and improved.

In cases where SPP policies are also coupled with ecolabel initiatives, it may also be useful to track market transformation indicators. For example, if a sustainable product is defined as a product holding

an ecolabel, it is interesting to monitor whether increased procurement of ecolabelled products is also leading to an increased number of ecolabel holders. From this, it may even be possible to estimate the wider indirect impacts of SPP. Market transformation indicators could include:

- Number of ecolabelled products and companies
- Market share of ecolabelled products
- Direct generation of green jobs (number of hours, days of full-time equivalent positions)

2.2.1 Identifying data collection method

The two most commonly used data-gathering methods are standardised questionnaires and e-procurement platforms (UNEP, 2017). In recognition that centralised or mandatory approaches are not available in many contexts, we would also add a third option – evaluation of tenders. Each of these three approaches is described below.

Whichever approach is selected, the frequency and format of data collection should be defined. It should also be very clear which contracting authorities are expected to report, and under what circumstances.

Ultimately, the M&E framework should provide well-informed scientific calculation of the outcomes of SPP at regular intervals, ideally aligned with budget cycles. Over time, it should reveal patterns in public procurement, which can be disaggregated to levels useful for policymakers. This should include:

- Contracting authority and contracting authority type (i.e. individual results for benchmarking purposes, plus differentiation between national, regional and local levels, when in scope).
- Product and service groups (i.e. sustainability outcomes of purchasing in priority product areas – see section 2.2.2 on prioritisation)
- Ambition level of contracts (i.e. number of tenders which include SPP criteria meeting defined ambition thresholds – see 2.2.3 on defining proxy values)

E-Procurement Platforms

E-procurement platforms can provide accurate information for the whole procurement system (or all public buyers who have access to the platform).

TABLE 2: POTENTIAL INSTITUTIONAL, OUTPUT AND OUTCOME INDICATORS FOR SPP

INSTITUTIONALISATION	OUTPUT	OUTCOME
<p>Provisions for SPP in policy, including:</p> <ul style="list-style-type: none"> • SPP included in overarching policies (Sustainable Development Strategy, Green Economy Roadmap etc) – Yes/No • Existence of SPP Action Plan – Yes/No <p>Provisions for SPP in legal and regulatory framework, including:</p> <ul style="list-style-type: none"> • Ability to set sustainability technical specifications – Yes/No • Ability to apply functional or performance-based specifications – Yes/No • Ability to use pre-qualification/selection criteria – Yes/ No • Ability to use award criteria – Yes/No • Ability to use LCC – Yes/No • Ability to include sustainability requirements in contract performance clauses – Yes/No • Mandatory requirements to by sustainable products (i.e. meeting minimum criteria or ecolabels) – Yes/No <p>Practical support for SPP:</p> <ul style="list-style-type: none"> • Guidelines, tool, or official catalogue of ecolabelled products is available and periodically revised – Yes/No • Communication of SPP – i.e. number of news items published; number of subscribers/followers etc. • Training on SPP i.e. Number of training sessions provided; number of procurers trained; number of women trained etc. • SPP case studies i.e. number of case studies written; number of case studies translated into local language etc. • SPP Helpdesk i.e. number of queries answered. • SPP Criteria i.e. number of criteria sets published/ revised 	<ul style="list-style-type: none"> • Number of tenders which include sustainability criteria • Total value of contracts which include sustainability criteria • Total amount of sustainable products purchased (units) 	<p>Environmental:</p> <ul style="list-style-type: none"> • GHG emission or air pollution saving • Water, energy, and material savings • Waste reduction <p>Economic:</p> <ul style="list-style-type: none"> • Cost savings (life-cycle costs) • Externality cost savings
<p>Potential data sources: questionnaires, interviews, direct review of plans</p>	<p>Potential data sources: tender publications and e-procurement platforms, surveys</p>	<p>Potential data sources: cost and consumption data, product labels (ecolabels, efficiency standards)</p>

Source: SEAD, 2013; SWITCH-Asia, 2020; UNEP, 2017; UNEP & OPN 2021.

As noted by the World Bank (2021) integrating M&E into e-procurement can “reduce the burden on procurers and improve data consistency and quality”.

A list of factors which make good electronic data sources is provided by UNEP (2016) – see Box 1

UNEP (2016) recommends the prioritisation of electronic data sources that are:

- Already available (such as financial software, vendor databases, procurement platforms or SAP systems – all of which can provide output indicator data)
- Centralised (i.e. can be accessed by a large number of public authorities)
- Require input from as few people as possible (thereby minimising errors and bias, and saving time)
- Ensure data tracking is routine (for example, is done as part of each procurement process rather than as a separate exercise at the end of the year)
- Compulsory (for example, monitoring data must be completed before the system allows a contract to be finalised).

Several countries have embedded monitoring and evaluation directly into their e-procurement system, such as Estonia (3.3) and Switzerland (3.4). These approaches only count published tenders (i.e. above threshold procurement) and therefore do not include low-value purchasing which may nevertheless represent low-hanging fruit for SPP. Another approach is to create a separate online tool which can accept data from the e-procurement system plus other sources (like green catalogues), as has been established in the Republic of Korea (3.1). As such, if an e-catalogue exists, it is also highly recommended that purchase volumes made through the e-catalogue are included in the M&E system.

Standardised Questionnaires

Separate collection of sample data is less accurate and more time consuming, however, it may be the only option available in the short-term. Due to their more resource intensive nature, such approaches

in practice appear to be limited to a select group of public buyers. For example, Japan (3.2) and Malaysia (3.6), both only require national agencies to submit data. This approach to M&E therefore only gives results for a small portion of the total public procurement spend within a country. In addition, if returning questionnaires is voluntary, there is a high risk that contracting authorities will not participate, and that the eventual data will be unrepresentative (i.e. only submitted by the most committed procurers of SPP) or of low quality (as time to gather accurate data or provide details will not be taken). This is the current experience in Thailand (3.7).

Defining a standardised format for reporting is essential for allowing aggregation and comparison of questionnaire data. Ideally, questionnaires should be built using online tools, and should provide pre-set, well defined answers (for example, in the form of check-boxes or drop-down menus).

Evaluation of tenders

To avoid reliance on voluntary submission of data, a third method could be analysing the tenders published each year, in order to examine how many contained SPP criteria. This is a resource intensive process; therefore, it might be necessary to focus on key sectors.

A methodology for tender evaluation, based on an approach used by Welz and Stuermer (2020) in a study on the implementation of SPP in ICT procurement by the Swiss public sector, is presented in Box 2:

- Identify relevant procurement priority category using Common Procurement Vocabulary (CPV) codes¹;
- Identify calls for tender containing sustainability criteria for the given period;
- Classify identified tenders into defined categories (in this case a differentiation was made between tenders that used a ‘basic’ and a ‘comprehensive’ SPP approach);
- Calculate the national proportion of SPP compared to total procurement within the priority sector;

¹ European classification system for public procurement aimed at standardising the references used by contracting authorities to describe procurement contracts: https://ec.europa.eu/growth/single-market/public-procurement/digital-procurement/common-procurement-vocabulary_en

- Evaluate this proportion in the context of policies, targets and/or against performance of other countries.

Whether such an approach can be used to calculate the outcomes of SPP depends on how sustainability is defined in the tenders. For example, if the minimum technical requirements are based on defined criteria, such as ecolabel criteria or national SPP criteria sets, it would be possible to define a proxy product which represents the average sustainability outcomes of products meeting the minimum SPP criteria and use this proxy to estimate the total impact of evaluated tenders (see 2.2.3 for more details). However, many tenders use lower requirements than those set by an ecolabel or only partially apply national SPP criteria. Such variables make estimating the sustainability outcomes of tenders more complicated. For those conducting the evaluation, clear guidelines on what to count as SPP (including defining 'basic' and 'comprehensive' thresholds) are important.

Another factor to consider is that not all tenders have successful outcomes. They may fail to attract enough bids, or bidders might not be able to meet the specifications. For this reason, such an approach should only count tenders with contract award notices. Finally, as with the first approach, this approach only gathers information on purchases made above nationally defined thresholds requiring open calls for competition.

Finally, this option would offer opportunities for extrapolation of data. For example, the amount of SPP tenders could be calculated for one city, and then used to inform an estimate of SPP across local government. However, this would only provide an estimate, and could not account for varied practices and different levels of SPP implementation across cities.

2.2.2 Identifying priority product, service and works categories

Some products and services categories are of more relevant for SPP than others, due to their high environmental impact or high purchasing volume. Focusing on a few specific priority products or services can help focus resources.

It is likely the SPP priority products were already identified in the initial mapping of policies and priorities. If this is not the case, then it may be necessary to focus resources for monitoring and evaluation on those sectors with the greatest relevance to national sustainable development priorities, product groups with significant public procurement expenditure or where the public sector is a core customer (meaning it has more influence over suppliers), sectors where sustainable products are already readily available or industry demand is high, or product categories where the risk of not taking SPP action is high (i.e. product categories where the risk of environmental damage or negative social impacts within the country are high). A methodology for conducting a SPP prioritisation exercise is provided by UNEP², which considers factors such as: relevance to overall public procurement expenditure; relevance to overarching sustainability priorities; availability of defined sustainability standards, and, availability of data.

The lack of data on public procurement can be a particular challenge when identifying priority products and services and is indeed one of the reasons why a M&E Framework is required in the first place. For this reason, a more flexible and participatory approach may instead be required for identifying priority sectors.

To start, expert input could be used to identify a long list of relevant sectors, and quantitatively assess their relevance against a list of criteria (see Box 3):

- Market relevance: what sectors are of greatest importance to the national economy?
- Environmental relevance: what products and services have the greatest environmental impact?
- Procurement relevance: what products and services are procured in large volumes by the public sector?
- Cost-saving potential: for which products and services does SPP also offer opportunities for LCC savings?
- Established interest: have procurers already shown interest in any particular sectors? Likewise, have any industrial actors already made demands for greater support through SPP? Have ecolabels or SPP criteria been developed for any specific products or services?

² UNEP SPP Prioritisation methodology: <https://wedocs.unep.org/bitstream/handle/20.500.11822/35412/IPE.pdf>

- Complexity of criteria: can criteria be easily developed and implemented for the particular product or service?
- Relation to government objectives: would SPP of the product or service support government policy objectives?

This assessment should be kept simple. Each criterion should be scored on a simple scale, for example, 3 for high relevance/potential, 2 for some relevance/potential, and 1 for low relevance/potential. From this, a total score can be calculated for each, and a shortlist of relevant products and sectors identified.

Once the short list is prepared, a participatory process is recommended for assigning a 'Stakeholder interest' score to each remaining product or service. For example, a workshop, where the short list is presented to key stakeholders, who then rank the list according to their priorities.

2.2.3 Defining SPP

A common output-based indicator is the number of tenders which include SPP criteria. To count this, it is necessary to clearly define what counts as SPP.

Ideally, the definition should be set in reference to existing standards or criteria which are regularly updated. According to UNEP (2016), this can include:

- Type I ecolabels
- National SPP Criteria sets i.e. voluntary or mandatory SPP criteria designed so that procurers can easily copy and paste sustainability requirements into their tenders.
- Single-attribute label (i.e. organic, energy efficient, recycled etc.)

The advantage of using Type I ecolabel or SPP criteria sets is that they consider multiple aspects of sustainability, whereas standards only consider one issue, and by focusing on this, it may incentivise procurers to focus on this one aspect at the expense of others (UNEP, 2016). For example, if the only measure of SPP is the requirement of an energy label, opportunities for improved material efficiency might be missed. As such, a Type I ecolabel which considered both energy and material efficiency might be preferable to a single-attribute label in cases where more than one type of environmental outcome is desired.

2.2.4 Defining a methodology for converting outputs into outcomes

SPP criteria are used to set requirements for goods, services and works, but do not necessarily reflect the actual outcomes achieved. On the one hand, goods procured may go beyond minimum standards. On the other hand, the resulting procurement may not reach the required standard, for example, if a contract is not delivered to specification, or specifications were not mandatory (i.e. award criteria). It is not possible to collect data on the exact outcomes achieved by each procurement, as this would require the characteristics of each product purchased to be reported and aggregated, which would add a great deal of complexity to the process. Instead, it is easier for a procurer to report that the standards of an energy efficiency label are met, rather than provide the actual annual energy consumption of the product in question (UNEP & KEITI, 2019).

To account for this, proxies for sustainable products and conventional products can be established. The proxy product represents the average sustainability outcomes of products meeting the minimum SPP criteria. In the case of ecolabels, the proxy could also represent the average value of test results of products awarded the label, which is the approach used in the Republic of Korea (UNEP & KEITI, 2019).

In this example, 10 environmental impact categories are established for sustainable and non-sustainable proxies in 134 product categories:

- Reduction of toxic substances
- Recycling of resources
- Energy saving
- Low noise
- Eco-design
- Reduction of ecosystem toxicity
- Resource saving
- Reduction of indoor air pollutants
- Reduction of outdoor air pollutants
- Reduction of human toxicity.

In addition, reduction of CO₂ equivalent emissions is calculated for a smaller pool of products (19 in total – including electrical and electronic goods, construction materials and furniture) by comparing ecolabelled products with conventional products using data from the National Life Cycle Inventory Analysis database³.

Korea has also converted the environmental benefits of green purchasing into a monetary value by establishing an economic conversion methodology, based on the costs of resource saving, energy saving and / or the reduction of air pollutants (UNEP & KEITI, 2019).

SPP in Korea is established, and the market for sustainable products is well developed. Therefore, it is possible for them to base their M&E on their national ecolabel standards. In some countries however, especially where SPP is at a nascent phase, sustainability requirements in tenders may not reach the same high standards as defined in a national ecolabel. In these cases, it may be necessary to define 'basic' (lower than ecolabel) and 'ambitious' (meeting ecolabel) standards⁴, so that initial progress can still be monitored.

2.3 DEVELOPING AN IMPLEMENTATION PLAN

2.3.1 Piloting

Before the M&E framework is fully launched, the lead agency should pilot the M&E system. If the M&E system requires data submissions from other stakeholders, the pilot should be conducted with a representative sample of data providers to make sure that the collection methods are fit for purpose. Questions could include, but are not limited to, the following:

- Is the data being returned in a usable and consistent format?

- Are any holes emerging in the data? If so, what is preventing respondents from answering these questions?
- Is SPP taking place that is not accounted for in the methodology? Is there a way this can this also be captured?
- Does the data allow the estimation of SPP outcomes?
- Are the results of the M&E meaningful and useful to the relevant stakeholders identified under Step 1?

Another option is to first develop and pilot an internal M&E system. For example, the Ministry of Environment could monitor its own SPP or GPP first. As well as creating a process which could be rolled out to other Ministries over time, collecting impact on the environmental outcomes of its purchasing would allow the development of evidence-based case studies, which could be used to inspire other public buyers

2.3.2 Deploying M&E

The deployment of M&E should be planned as part of a participatory process, through which all relevant ministries are consulted. Clear responsibilities should be assigned, and KPIs defined – the implementation of the M&E system also needs to be monitored and evaluated!

Once an implementation plan has been agreed, the M&E framework should be deployed. If the system is designed in a way which relies on data submitted by national or sub-national contracting authorities, these obligations must be clearly communicated to contracting authorities. Guidance and training should also be provided if necessary.

2.3.3 Communication of results

This final step is essential. If the outcomes of M&E are not shared with policymakers and practitioners, then the benefits of M&E will not be achieved. Reports should be presented in a user-friendly

³ <http://www.epd.or.kr/eng/main.do>

⁴ Such an approach has some similarities to the structure of the European Commission's GPP Criteria, which are split into 'core' and 'comprehensive' criteria. However, the division of the EC's Criteria is not based on the EU Ecolabel criteria, and instead differentiate between ambition but also the administrative costs of implementation for companies (with low costs being considered core criteria, while more innovative demands are classed as comprehensive).

way, for example, using visual graphics and avoiding jargon.

Remember, not all stakeholders have the same data needs. For example:

- Procuring entities benefit from data on their own performance and the performance of individual tenders,
- Responsible lead agency for SPP requires aggregated data showing progress against national targets,
- Policymakers and politicians require contextualised data, showing the impact of SPP policies and contribution of SPP to wider policy objectives, plus how the country compares to other nations.

Information about how government money is spent should also be available to the public, in line with the principle of transparency.

Methods to visualise the M&E results should be selected according to the type of data being depicted. For example, tools such as scorecards can provide a simple way to show how much progress an

authority is making, and what areas require further action (UNEP, 2016). This form of visualisation is particularly relevant to institutionalisation indicators. For example, the scorecard could be used to list all institutionalisation indicators, and each indicator is awarded a colour based on progress i.e. green for 'achieved', orange for 'underway' or red for 'not yet began'.

When it comes to the visualisation of outputs and outcomes, graphs and charts can be used to show progress overtime, or as an easy way to compare sectors, contracting authorities, levels of government and so on. Another approach is to translate environmental savings into understandable terms, like in the state of Massachusetts, where CO₂ emissions are converted into more tangible numbers, such as 'barrels of oil saved', 'car journeys avoided' or 'number of trees planted' (3.5). For example, as a result of their recycled and energy efficient procurement in 2016, Massachusetts saved the same amount of CO₂ as taking 30,349 cars off the road (i.e. 154,551 tonnes of CO₂).

3 M&E EXAMPLES



In this section, an overview of M&E frameworks already established in the following countries will be provided:

- Republic of Korea
 - Japan
 - Estonia
 - Switzerland
 - State of Massachusetts
 - Malaysia
 - Thailand
 - Philippines
-

3.1 REPUBLIC OF KOREA

In 2005, the Republic of Korea launched a GPP Policy which included requirements for contracting authorities at all levels of government to set their own voluntary targets and produce yearly progress reports on GPP. As a result, GPP implementation is being monitored in around 30,000 procuring entities, and its approach is frequently recognized as best practice (UNEP & KEITI, 2019).

Two aspects of GPP are monitored in the Republic of Korea:

- Number of public authorities developing GPP implementation plans and reporting on their implementation.
- The share of green products purchased (i.e. percentage of products certified by the Korean Ecolabel and/or Good Recycled Mark as units and expenditure compared to total expenditure in priority product groups).

Data on the above is collected using the GPIS-I online monitoring system, which gathers data from three different data sources (WB, 2021):

- Data on central government procurement is gathered from the KONEPS e-procurement system (compiled monthly in an Excel file and integrated into GPIS-I);
- Data on low-volume purchases is automatically tracked and transferred to GPIS-I from the country's e-shopping mall "Green Market";

Data from other contracting authorities is tracked using their own online accounting systems and manually input into GPIS-I.

RESULTS

In 2017, 97% of State agencies submitted their implementation plans for 2018, along with a report on implementation performance for the previous year. Between 2006 and 2017, the total expenditure on green products by all public institutions increased from USD 758 million to USD 2,945 million, which is an increase in the share of green procurement to 47.5% of the total expenditure volume. Based on these quantities, SPP was estimated to have saved 665,000 tonnes of CO₂ in 2017 (UNEP, 2021).

Between 2005–2017, the number of ecolabelled products has increased from 2,721 to 14,647, and total green purchases made by the Public Procurement Service are calculated to have led to the creation of 4,415 new green economy jobs (UNEP, 2021).

REQUIREMENTS

The Republic of Korea benefited from a strong institutional framework. The Ministry of Environment, Korea’s Environmental Industry & Technology Institute (KEITI), the Ministry of Economy and Finance and the Public Procurement Service have worked closely together. In addition, the M&E framework benefits from being embedded in e-procurement platforms with automated processes, and from the compulsory reporting requirement on all public authorities. The existence of a strong ecolabel is also very helpful in monitoring GPP, as it provides a clear definition of what can be counted as sustainable. This makes it easier to quantify the amount of GPP done, and to convert this into environmental outcomes (Asia Pacific GPP Network, 2021).

In order to resource its M&E duties, KEITI has four staff dedicated to this topic (Asia Pacific GPP Network, 2021).

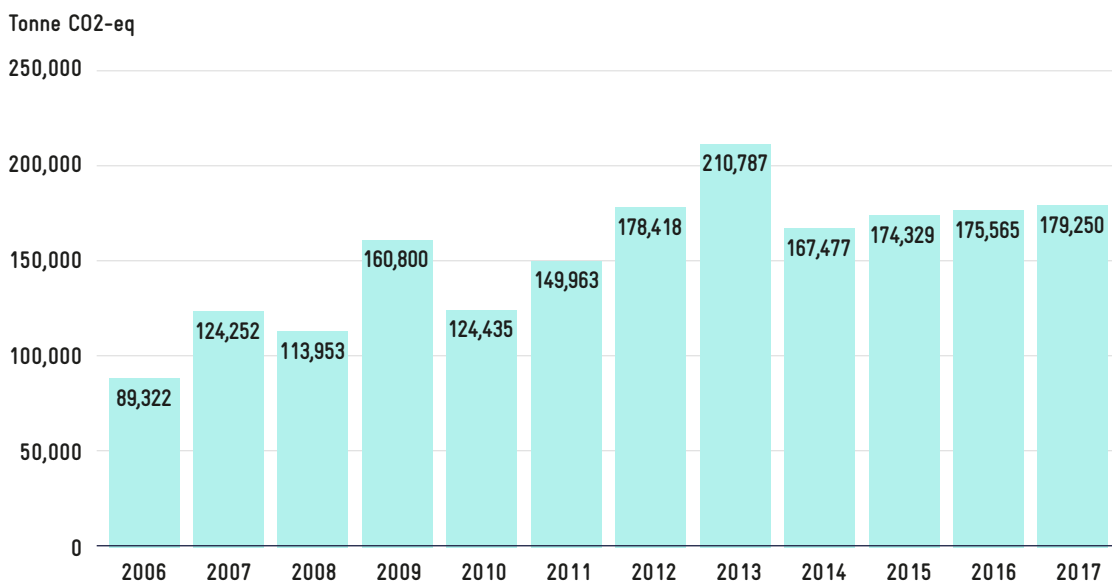
3.2 JAPAN

To collect data on GPP implementation in Japan, the Ministry of the Environment provides a standardised reporting form to central ministries and their agencies. Each agency fills this out with the number of products purchased each month (both green and in total), which is automatically calculated into an annual total (SWITCH-Asia, 2020). From this, the Ministry of Environment can calculate:

- Overall consumption of green products (in units),
- Percentage of green products as a percentage of total consumption.
- Estimated impact in terms of GHG emission reductions for 19 product categories.

In order to estimate GHG emissions, a ‘proxy green product’ is defined for each product category, based on the minimum green specifications set in Japan’s GPP Policy. For energy-consuming products (or products that can affect energy consumption, such as tyres), CO₂-eq emissions are estimated based on energy consumption during the use-phase. The number of years of use is specific to the type of product, and the emission factors of the energy source used. For non-energy consuming products, different factors are used to translate product

FIGURE 1: ESTIMATED AMOUNT OF CO₂-EQ EMISSIONS AVOIDED THROUGH GPP BY JAPAN’S CENTRAL GOVERNMENT



Source: SWITCH-Asia, 2020, (data source: Green Purchasing Results by National Institutions in Fiscal Year 2017)

properties into CO2-eq emissions (SWITCH-Asia, 2000). The following calculation is then performed:

GHG Emission Savings = Total number of products purchased during the year * (% that is green – % of market share of the green products in year 2000) * conversion factors of green product characteristics to CO2-eq emissions * years of use of product.

The government also evaluates the share of green products in the overall market for 10 product groups using data submitted annually by respective industry associations (SWITCH-Asia, 2020).

Local authorities are not obliged to submit plans but are also encouraged to define a GPP policy each year. This is monitored using an annual survey that is sent to the responsible person for GPP in each local authority, based on a list of contacts which the Government keeps up to date. The survey (mainly multiple-choice questions) covers topics including plans and management systems in place, GPP obligations, success factors and challenges (SWITCH-Asia, 2020).

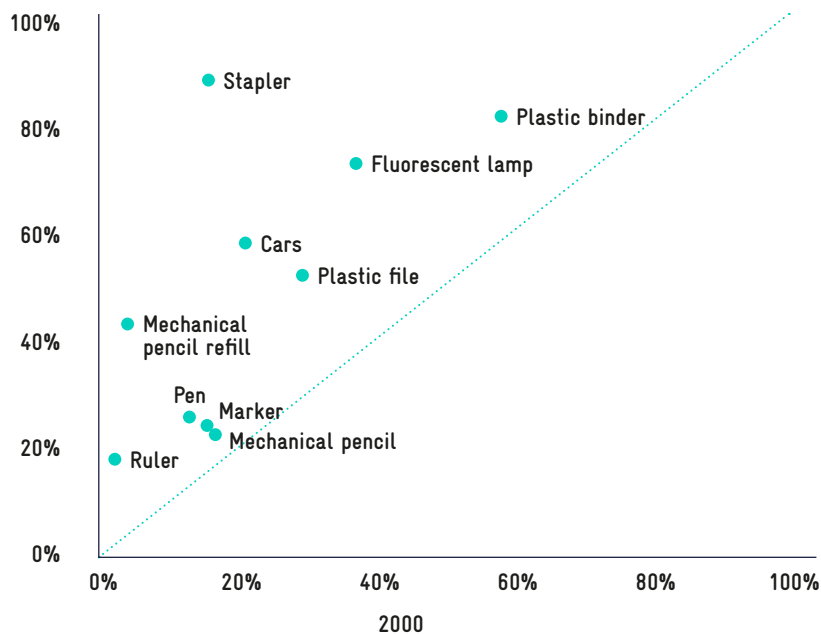
RESULTS

At the level of central government, the number of product groups with a GPP rate of more than 95% has increased since 2001, from 40 out of 90 product groups (44%) to 182 out of 205 product groups (98%) in 2017.

The amount of CO2-eq emissions avoided by Japan's central government is estimated to have increased from 89,322 tonnes in 2006 to 179,250 by 2017 (as detailed in Figure 1).

With regards to total market share, Figure 2 shows how market share for the ten tracked product group has changed since 2000. Across all product groups, the market share of sustainable products has increased. For example, the market share of sustainable florescent lights increased from under 40% to over 70% of the market (SWITCH-Asia, 2020).

FIGURE 2: PERCENTAGE OF GREEN PRODUCTS AVAILABLE ON THE JAPANESE MARKET



Source: SWITCH-Asia, 2020 (data source: Green Purchasing Results by National Institutions in Fiscal Year 2017)

At the level of local government, in 2017 54% reported the existence of a GPP Policy, including 100% of prefectures, 74% of cities, but only 32% of towns. Based on this, the Ministry of Environment prepared the "Green Purchase Guideline for Local Authorities", which is updated regularly. It also provides benchmarking feedback to local authorities, including information on the GPP situation in neighbouring authorities and other authorities of a comparable size (SWITCH-Asia, 2020).

REQUIREMENTS

The Ministry of Environment estimate that in terms of administration, monitoring SPP costs around \$32,000 USD per year. This includes updating the basic policy and dissemination activities (UNEP, 2016).

3.3 ESTONIA

GPP has been monitored in Estonia since 2007. At first, whenever a tender announcement was published in the National Register of Public Procurement, the procurer was required to specify whether environmental requirements had been included (using a yes/no question). In 2008, an amendment was made to the Public Procurement Act which also required a short description of the environmental specifications to be included. In 2011, questions were embedded into the standard form that was to be completed on the e-procurement platform as part of a tender announcement.

A major challenge was the lack of official GPP criteria to help define what could be considered green. As a result, procurers had to decide for themselves what counted as GPP. Using this system, it was found that while 65% of self-reported GPP did include green requirements (35% required environmentally-friendly materials and technologies, and 30% were purchased from companies with environmental management systems), the remaining 35% did not signify actual performance beyond minimum regulation (UNEP, 2016).

As such, an update was prepared in 2014 to improve the quality of responses. These included:

- **Moving GPP reporting earlier in the tendering process:** the e-procurement system requires input at several stages of a tender process, from early preparation to announcement, to publication of results. Information about GPP was moved from the announcement of the tender, to the earliest stage (definition of technical specifications and award criteria).
- **More guidance on green criteria:** new criteria based on the European Commission's voluntary GPP Criteria but adapted to the Estonian context were created for ten product groups (as of 2016) including paper, IT equipment, vehicles, cleaning services and products, gardening services and products, textiles, furniture, catering services, construction and electricity.
- **Automatic recording of 'greened' tenders:** if procurers select environmental criteria provided by the platform, these are automatically counted. Procurers can also set their own green criteria and manually mark it as green, with this information being automatically included in the Procurement Announcement. In addition, the use of green criteria is indicated on the Platform with the use of a green leaf icon, making it clear to bidders that there is a green element included in a tender.

Using data collected on the e-procurement system, the following indicators are tracked:

- Total amount of tenders (in number and economic value) that include green criteria
- Amount of green tenders as percentage of all tenders conducted.

RESOURCES REQUIRED

Development costs are estimated at €36,000, which is equivalent to 600 labour hours (financed up to 85% by the European Social Fund "Better Implementation of Environmental Management in the Public Sector" project) (UNEP, 2016).

3.4 SWITZERLAND

To establish a monitoring system for public procurement, an internal working group led by the Federal Office for the Environment (FOEN) was created. The goal of the working group was to design a monitoring system which minimised burden on procurers while obtaining meaningful results. As such, they decided to integrate the monitoring system into the SIMAP electronic platform, which is used by federal, regional and municipal government in Switzerland to announce tenders above World Trade Organisation thresholds (UNEP, 2016).

In the first implementation phase, some pilot product groups (paper products, IT equipment, textiles, vehicles, furniture, all-purpose cleaners and cleaning services, construction and civil engineering) were chosen, based on the existence of federal SPP recommendations and/or the relevance in terms of federal expenditure and sustainability impacts.

To collect data, an automatic alert was added to SIMAP, which was triggered when a centralized procurement agency published an award notice using a procurement code (a mandatory category based on Common Procurement Vocabulary of the European Union) for a relevant product group. The alert reminds the procurer that an SPP questionnaire will need to be completed before the award announcement can be published on SIMAP (which must be done within 30 days of the contract award) (UNEP, 2016).

The indicators used include:

- Volume of tenders (in economic value) that include sustainability criteria;
- Volume of contracts/awarded bids (in number) showing evidence of compliance with label or standard specification;
- Volume of contracts/awarded bids (in number) showing evidence of compliance with the eight core ILO conventions either by a positive audit or an SA-8000 certificate;
- Usefulness of the different support services and criteria recommendations on SPP provided by the government.

Some limitations in the Swiss approach have been identified. First, the monitoring system only gathers data on contracts above WTO thresholds, which accounts for a small portion of total spending. In addition, the method used only tracks that minimum requirements are met but does not allow evaluation

of how sustainable the awarded product/service is beyond minimum standards (UNEP, 2016).

The SIMAP system is in the process of being replaced with a new procurement platform called KissSimap. As part of this update, procurers will be prompted to complete a new questionnaire, which will cover four dimensions: quality-oriented procurement; sustainable procurement; innovative procurement; and, supplier-friendly procurement. The new system should be in place by 2023.

RESOURCES REQUIRED

Making changes to the SIMAP platform required approximately 70,000 USD plus inhouse resources (UNEP, 2016).



3.5 STATE OF MASSACHUSETTS (USA)

Since 2001, Massachusetts has published annual reports on the results of its Environmentally Preferable Products (EPP) programme.

The state gathers data on specific products or services which are acquired, used, or managed through state-wide contracts and for which benefit calculators exist. In 2016, this included: ICT, lightbulbs, recycled or remanufactured products (e.g. toner cartridges, motor oil, antifreeze, paper products), and waste selectively collected for recycling. Data is collected on the number of products directly purchased or used in service contracts and on the amount of waste generated (UNEP & KEITI, 2019).

To collect this data, suppliers are required to report sales of EPP (or waste levels in the case of waste management contracts) on a quarterly basis. As well as informing overall monitoring, this is also helpful for ensuring that suppliers comply with contract specifications. Suppliers report using an online vendor-reporting system which requires suppliers to provide information in a standardised way.

Each year, the EPP programme reviews the tender documents plus suppliers' reports using an internally developed tool which calculates cost savings and environmental benefits.

Publicly available tools are used to estimate the benefits of GPP. These include:

- **Energy Star Savings Calculator:** US EPA and Department of Energy tool which estimates energy and operating cost savings of energy-efficient office equipment.
- **Electronics Environmental Benefits Calculator:** tool developed by the US EPA to estimate environmental benefits of greening the purchase, use, and disposal of electronics
- **EnviroCalc:** tool developed by Massachusetts EPP programme to estimate environmental benefits of purchasing recycled content and energy efficient products.
- **EPA Waste Reduction Model – WARM:** tool created by US EPA to calculate GHG gas emissions produced by waste management processes – source reduction, recycling, combustion, composting, anaerobic digestion and landfilling – on basis of typical municipal solid waste.

For energy using products, economic benefits over the product lifetime are also calculated (or in case of toner cartridges the average cost of remanufactured cartridges is compared to original equipment manufacturer cartridges).

To help communicate the results, the benefits are translated into understandable terms (for example, CO₂-eq tonnes is translated into annual emissions from cars, or tonnes of waste is translated into the number of households who would produce the same annual waste – see Table 3 for more examples). Some tools produce these results directly (like EnviroCalc). Otherwise, the EPA’s Greenhouse Gas Equivalencies Calculator can be used.

TABLE 3: ESTIMATED BENEFITS OF MASSACHUSETTS PROCUREMENT OF RECYCLED AND ENERGY EFFICIENT PRODUCTS ACCORDING TO THE ENVIROCALC TOOL (YEAR 2016)

ENVIRONMENTAL BENEFIT	AMOUNT	EQUIVALENT TO
Weight of material recycled	53,781 Tonnes	Annual solid waste generation of 25,268 households
Trees saved	354,024 units	3,540 acres of wood plantation
Landfill space saved	169,306 cubic yards	8,465 loaded garbage trucks
Electrical energy saved	118,017,224 kWh	Annual electricity usage of 10,407 households
Electrical costs saved	USD 16,522,411	N/A
Labour costs saved	USD 4,132,521	N/A
Non-electrical energy saved	479,580 million BTU	Energy content of 82,686 barrels of oil
GHG emissions saved	151,551 tonnes of CO ₂	Annual tailpipe emissions of 30,349 cars

Source: UNEP & KEITI (2019)

3.6 MALAYSIA

GPP was first mentioned in Malaysian policy in 2009, as part of its National Green Technology Policy, and over the last decade, GPP has gradually been strengthened as a priority. Since 2014, it has been monitoring GPP expenditure on product and service categories prioritized in its GPP Long-Term Action Plan 2016–2030 (SWITCH-Asia, 2020). In its 11th National Development Plan (2016–2020), Malaysia set the target that at least 20% of government procurement in selected product and service categories should be green by 2020. Categories have been selected according to the size of public sector demand, the availability of green standards (facilitated by the MyHIJAU label⁵), the environmental impact of the category, plus opportunities to support local companies.

To help achieve this, Malaysia has made GPP mandatory for all 25 government ministries and agencies, requiring each to appoint a GPP focal point, and to submit annual GPP implementation plans.

A standard data-collection spreadsheet is also currently provided on an annual basis to all 25 government ministries and agencies, which ministries are instructed to complete via a 2016 circular from the Ministry of Finance. The spreadsheet has been created by the Ministry of Energy, Science, Technology, Environment & Climate Change (specifically by GreenTechMalaysia). Data is collected on:

- product category
- allocated budget
- tender announcement period
- green criteria required
- main characteristics of the procurement process,
- Procurement results
- total procurement cost

It is planned that GPP data tracking will be embedded into the e-procurement system in future (SWITCH-Asia, 2020).

Since 2016, GreenTechMalaysia has been estimating the environmental benefits for 7 energy-related product categories: solar and mini-hydro energy; ICT equipment; Multi-purpose imaging equipment; street lighting; indoor lighting; air conditioning systems and fans; and, televisions. For each product, the specific environmental characteristics of the purchased product must be included in the data collection spreadsheet. GreenTechMalaysia then calculate the benefit, in comparison to an average, non-green conventional product which acts as a baseline (SWITCH-Asia, 2020). The calculation is as follows:

GHG Emission Savings = Total number of products purchased during the year * (Conventional product environmental parameters – Green product environmental parameters) * Conversion factors of the green characteristics to CO₂-eq emissions.

To qualify as green, products and services must comply with the GPP criteria set by government. These align with national and international ecolabelling schemes, but have been adapted where needed, to ensure sufficient availability for procurers (SWITCH-Asia, 2020).

RESULTS

In the year 2018, all 25 Ministries participated in the monitoring exercise. In total, 904.4 million RM was reportedly spent on green procurement. The reduction in CO₂-eq emissions achieved in energy-related product categories is estimated at 1,031.3 tonnes (SWITCH-Asia, 2020). However, the manual and voluntary nature of the submission means that data can be inconsistent and not all GPP is being declared. It is also difficult to estimate the life cycle cost savings of GPP, because data on the cost of energy is not available. More automated data collection and the development of software or a tool which could calculate LCC costs would support the enhancement of the GPP M&E system in Malaysia.

⁵ <https://www.myhijau.my/>

3.7 THAILAND

Thailand sets annual targets for GPP for all types of contracting entities (from central to local government, plus state enterprises, public organisations and university) through its four-year Green Public Procurement Promotion Plans. Its Third GPP Plan (2017–2021) includes 22 priority product categories.

The Government has been monitoring GPP implementation and estimating the impact of GPP since 2009, including:

- The number of implementing agencies i.e. agencies which have complied with at least one of the following: signed a declaration of SPP implementation or an equivalent official letter; registered on the GPP website (where they are able to access the reporting system); participated in a GPP training workshop; or, submitted GPP reporting data.
- The level of actual green products and services purchased within prioritised categories (i.e. categories for which GPP criteria sheets have been defined). To qualify as green, products and services have to comply with the Thai Ecolabel, Green Leaf label (for hotels), or the environmental procurement criteria developed by the Pollution Control Department (PCD), and/or be included in the Thai Green Cart directory (a database produced by the PCD that lists products on the market that comply with either of the first two criteria (i.e. certified for Thai Ecolabel or complying with GPP Criteria).

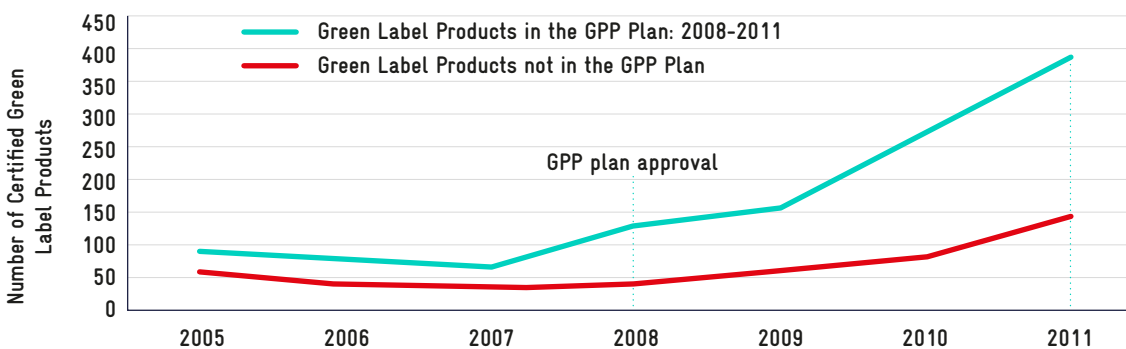
The indicators used are as follows (UNEP, 2016):

- Total amount of purchases of designated products/services that are green (both in units and economic value)
 - Percentage of designated products/services that are green in relation to total purchases of those products/services
- Data is requested on 39 types of products and services.

The PCD has created an electronic reporting system, but paper reporting can also be submitted. Implementing agencies are requested to submit procurement data annually (according to the Thai fiscal budget year). Once data is received, quality control is performed by a PCD officer, to check the correctness and completeness of data. The data is then analysed, and a report is prepared for the Thai GPP sub-committee which compares results against targets and KPIs set in the GPP Action Plan. GHG reduction is also calculated automatically for 5 pioneer products.

Approximately 3000 organisations have expressed interest in participating, including government agencies, state enterprises, academic institutions, and local government and special administrative offices (BMAs and Pattayas). However, participation in monitoring exercises remains voluntary, and PCD receives very few responses (approximated 10%). Barriers to participation exist. Some procurement officer, especially from older generations, are unfamiliar with the online reporting template. Others have insufficient knowledge and skills to complete the forms, and it can be time consuming to complete. The time available to the PCD for quality control is also limited.

FIGURE 3: EFFECT ON THE MARKET OF THE THAI GPP PLAN IN NUMBERS OF GREEN LABEL PRODUCTS CERTIFIED BY YEAR



Source: UNEP (2016)

To incentivise participation, a GPP Recognition Award was given to the best performing agencies based on the reports submitted to the PCD (UNEP, 2016). However, this initiative was discontinued due to budget restraints. As a result of the voluntary nature and lack of incentives, submission of data on GPP is low, and the data which is submitted is often incomplete.

RESULTS

Between 2008 and 2011, around 61% of total expenditure in 12 selected products was on green products or services (570.02 Million Baht). This resulted in an estimated 223.51 Million Bhat of cost savings and 25,685 tonnes of CO₂ eq savings. Due to the voluntary nature of GPP reporting, only 40% of agencies participated (UNEP, 2016).

The number of green labelled products was also tracked, and a comparison made between product categories included in the GPP Plan, and product categories not included. As demonstrated in Figure 7, the growth in the number of products obtaining green labels has been larger in categories relevant to GPP, indicating that GPP is effectively incentivising sustainability certification in Thailand (UNEP, 2016).

REQUIRED RESOURCES

The estimated costs and personnel resources needed to set-up and implement the monitoring for the first GPP Plan are as follows:

- 1 million Baht (USD 30,000) and three person-months for setting up the products and reporting database;
- 1 week needed for each implementing agency to track and report purchases;
- 1 person-month required to compile annual results (plus more time for report call back).
- Two full-time staff dedicated to compiling product database and collecting data (UNEP, 2016).

3.8 PHILIPPINES

According to the Government Procurement Reform Act of the Philippines, the Government Procurement Policy Board (GPPB) and its Technical Support Office (TSO) are responsible for the monitoring and evaluation of procurement activities.

M&E of SPP is not yet established in the Philippines. However, an initial, non-mandatory sub-indicator has been added to the Agency Procurement Compliance and Performance Indicators (APCPI) system. APCPI monitors compliance of all procuring agencies with the Government Procurement Reform Act. The APCPI follows the methodology of the Assessment of National Procurement Systems (MAPS) as developed by the OECD, and is based on four pillars: Compliance with the Legislative Framework; Agency Institutional Framework and Management Capacity; Procurement Operations and Market Practices; Integrity and Transparency of the Agency Procurement System. Procuring agencies submit annual self-assessments via the APCPI, which are evaluated and finalised by the GPPB-TSO. In 2017, an optional sub-indicator was added to the APCPI entitled "Existing Green Specifications for GPPB-identified non-CSE items are adopted". This non-mandatory indicator is measured on a 'pass/fail' basis. To pass, at least one 'non-common supply equipment (non-CSE)⁶ must be purchased using green technical specifications.

In addition, a methodology to calculate the SPP of Common Supply Equipment (CSEs) has been identified via the Department of Budget and Management Procurement Service's (DBM-PS) internal inventory service. DBM-PS acts as the lead agency for the procurement of CSEs, which it buys on behalf of all government users. Its internal inventory management system (SBM-PS) is able to calculate the volume and contract value of all CSEs procured using green technical specifications. From this, it is also possible to estimate the environmental impact of CSE GPP.

⁶ Categorisation used in the Philippines to denote an item which is purchased directly by the procuring entity, rather than centrally by the national procurement service.

Finally, the Philippine Government Electronic Procurement System (PhilGEPS) offers an open data platform, which could provide a source of future SPP data. However Version 1.5 of the e-procurement system does not allow tenders to be marked as containing green specifications. As such it is not possible to determine the extent to which GPP is being implemented (Goleetian, unpublished report).

RESULTS

The different tools in the Philippines provide different data possibilities for monitoring and evaluating SPP. For example, in 2018:

- ACPCI: 77 procuring agencies used green technical specifications for non-CSE items 32 of which were agencies of the national government. The top three non-CSE categories for which use of green specifications were reported are: computer monitors, desktop computers and laptops; air conditioners; and, training facilities, hotels and venues (Goleetian, unpublished report).

- DBM-PS inventory management system: GPP specifications were applied in two CSE categories – toilet paper (13% of total value or 10% of total amount) and LED lightbulbs (100% of total value). The inventory management system provided data on the total number of units purchased (34 million units and 13 million units respectively), as well as the total value of these contracts (Goleetian, unpublished report).

At present, the impact of GPP in the Philippines is not being measured. However, using proxy values, it would be possible to convert the unit data provided by DBM-PS's inventory management system into environmental or financial impact. For example, the environmental impact of toilet paper certified with the Environmental Choice Philippines label could be calculated against a representative 'conventional' product. Likewise, the energy savings of the LED Lightbulbs (and associated potential financial savings) could be calculated against requirements set in a previous, non-green tender.

4 NEXT STEPS FOR PROJECTS SEEKING TO ESTABLISH OR ENHANCE A M&E FRAMEWORK



As mentioned at the beginning of this pre-study, a centralised, top-down approach to M&E, embedded in policy and e-procurement infrastructure is the approach recommended by key actors such as UNEP and the World Bank. In some countries, however, the required institutional commitment or infrastructure necessary for this approach may be missing.

For projects wishing to establish or enhance M&E of SPP, a detailed scoping study should be the first step. This study should analyse the current situation in the country, and establish opportunities and challenges for enhancing or establishing an M&E framework. The scoping study should answer the following guiding questions:

- **Existence of M&E framework:** Are any M&E activities already being implemented? Both national and subnational level should be considered. If yes, what indicators have been established, and are these institutional, output or outcome focussed? What methodology is used for data collection, and what are the strengths and weaknesses of this methodology?
 - **Legal and policy framework:** have targets for SPP been set? Are any mandatory reporting requirements already established?
 - **Institutional framework:** what stakeholders are involved in SPP implementation? How much influence do they have over procurement policy and infrastructure? To what extent do the Ministry of Finance / Central Purchasing Body support SPP activities?
 - **Digital procurement infrastructure:** what data is collected via the national e-procurement system? What information about SPP and/ or overall procurement spend and trends can already be drawn from this data? Is there an opportunity to introduce new data fields?
 - **Existence of ecolabels or SPP Criteria:** has 'sustainable' been clearly defined for key products and/or services?
- Once the current status of M&E in partner countries has been established, it will be possible to identify capacity building activities which could help enhance or establish M&E. These could include:
- Capacity building and/or guidance on developing M&E indicators (with special emphasis on outcome-focussed indicators)
 - Capacity building and/or guidance on data collection and evaluation methods (for example, support for developing standardised questionnaires or establishing a method for evaluating tenders.
 - Further development of case studies which show how M&E has been developed in other countries, such as Malaysia and Thailand.

- Support to develop proxy values for partner countries alongside a tool which uses proxies to convert SPP outputs into relevant sustainability outcomes.

In addition to activities directly targeting enhancement or establishment of the M&E framework, the following related actions would also be beneficial:

- Identification of key sectors: as with other project activities, resources should be focused on sectors with the highest environmental and/or spend relevance. Identifying key sectors is particularly important for countries where the only M&E actions currently available are more resource intensive options (such as the evaluation of tenders).
- Establish or update ecolabel/SPP criteria for key sectors: to improve the accuracy of monitoring, the criteria which a product should meet to be counted as SPP should be updated regularly, so that it does indeed reflect the best products available on the market.

Finally, projects should always remember that SPP is not the end goal, and that public procurement is just one tool of many available to governments to help promote the transition to a sustainable economy. For this reason, M&E of SPP must focus on environmental outcomes. Without this, there is a risk that practitioners lose sight of SPP's essential purpose, and opportunities for real impact will be lost. By providing data on the environmental and financial savings achieved by SPP, M&E can motivate the continual change and improvement needed among practitioners, as well as maintain or enhance political support for such activities. M&E is therefore an essential tool, because in keeping track of SPP outcomes, it also provides the sense of purpose necessary for achieving the highly ambitious goal of a sustainable economic transition.

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