Low Carbon Public Procurement in the Asia Pacific Region: an assessment

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Contents

1. Study Objectives

Paris Agreement recognizes the important role of sustainable patterns of consumption and production in addressing climate change

Target 12.7.1 calls for SPP	LCPP has emerged as an approach to GPP

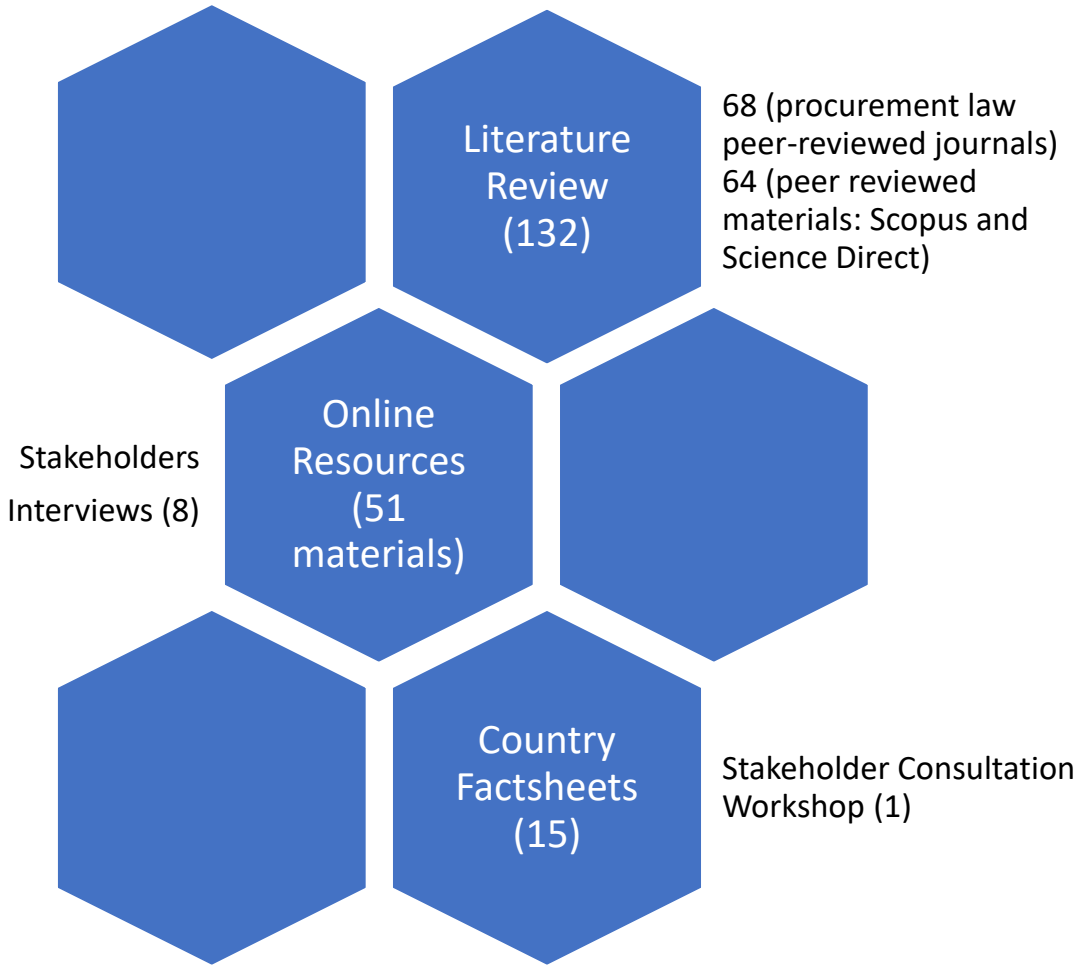
Despite the potential of LCPP, only 10% of the 194 Parties to the Paris Agreement have use SPP as a strategic policy instrument to support their NDC

Asia Pacific: China and Viet Nam	2015: Seoul Declaration on Mitigating Climate Change through Low Carbon Procurement

Advanced the NDCs of the Asia Pacific through an accelerated shift to LCPP

Assess the current Status of LCPP in 15 targeted countries in Asia Pacific	Identify common challenges and opportunities for LCPP

2. Research Methodology

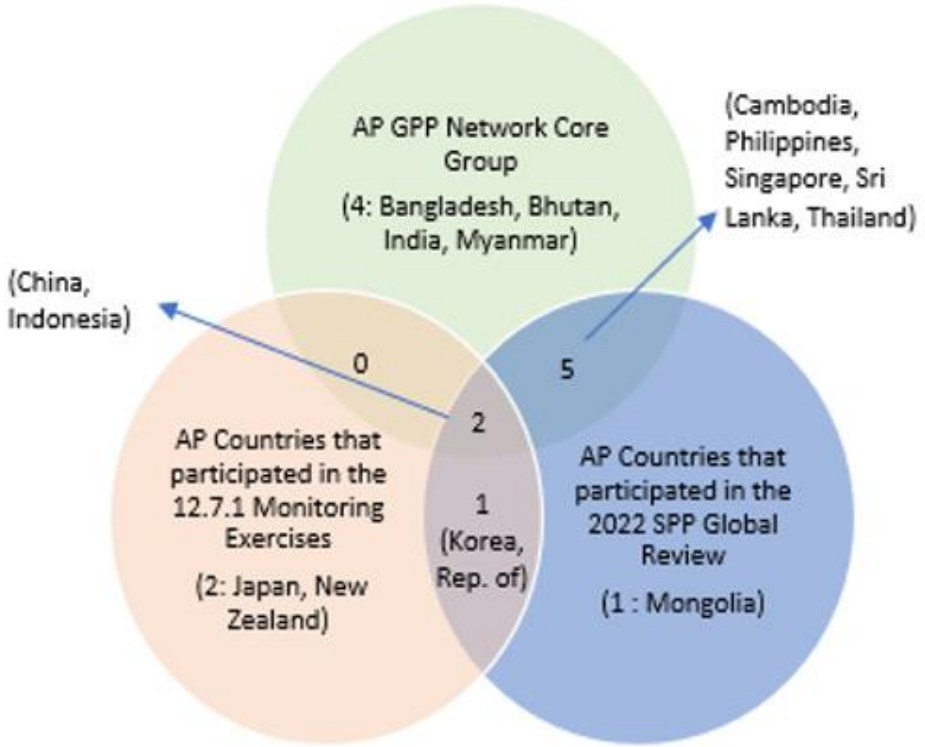


68 (procurement law peer-reviewed journals)
64 (peer reviewed materials: Scopus and Science Direct)

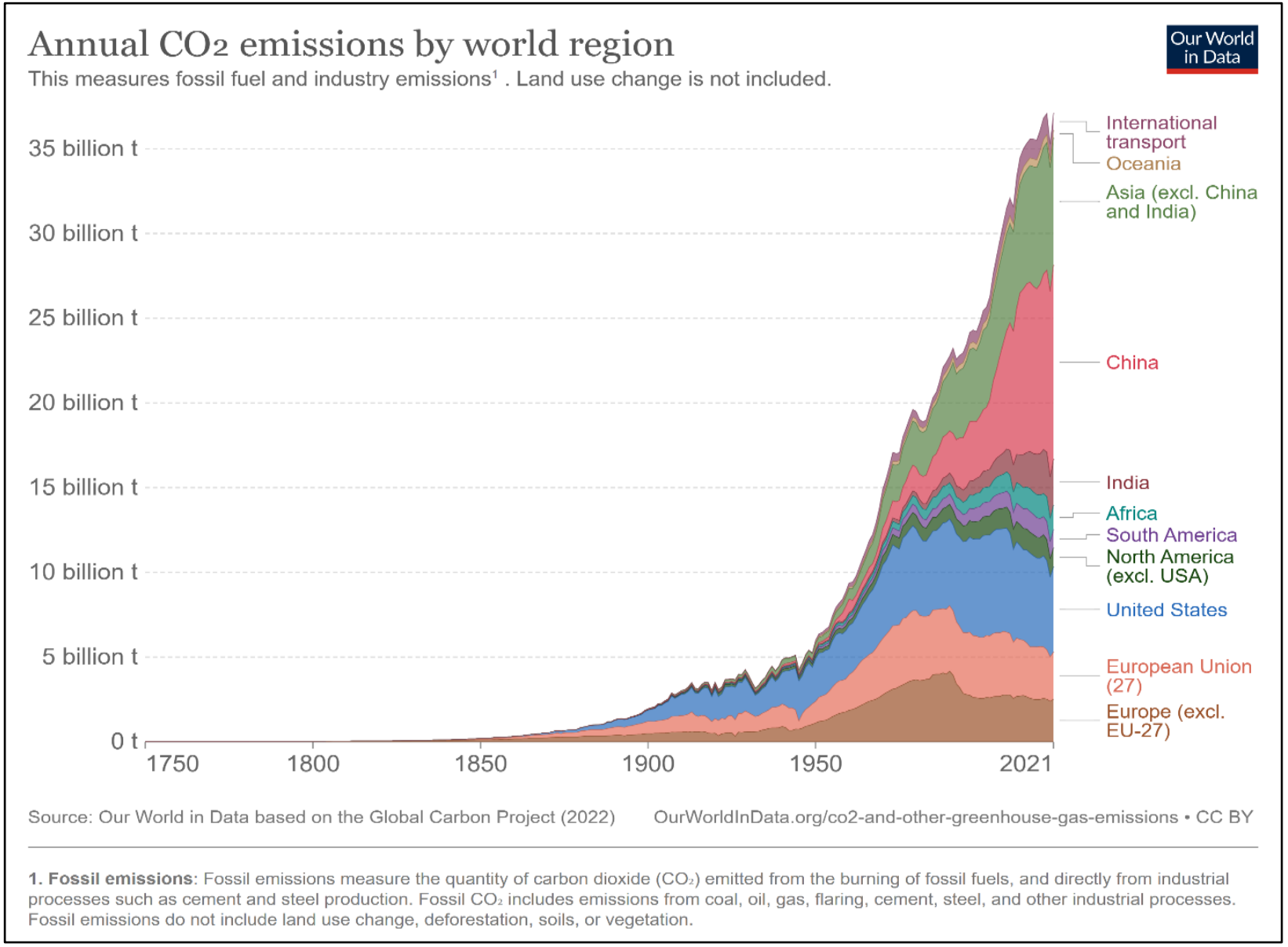
Stakeholders Interviews (8)

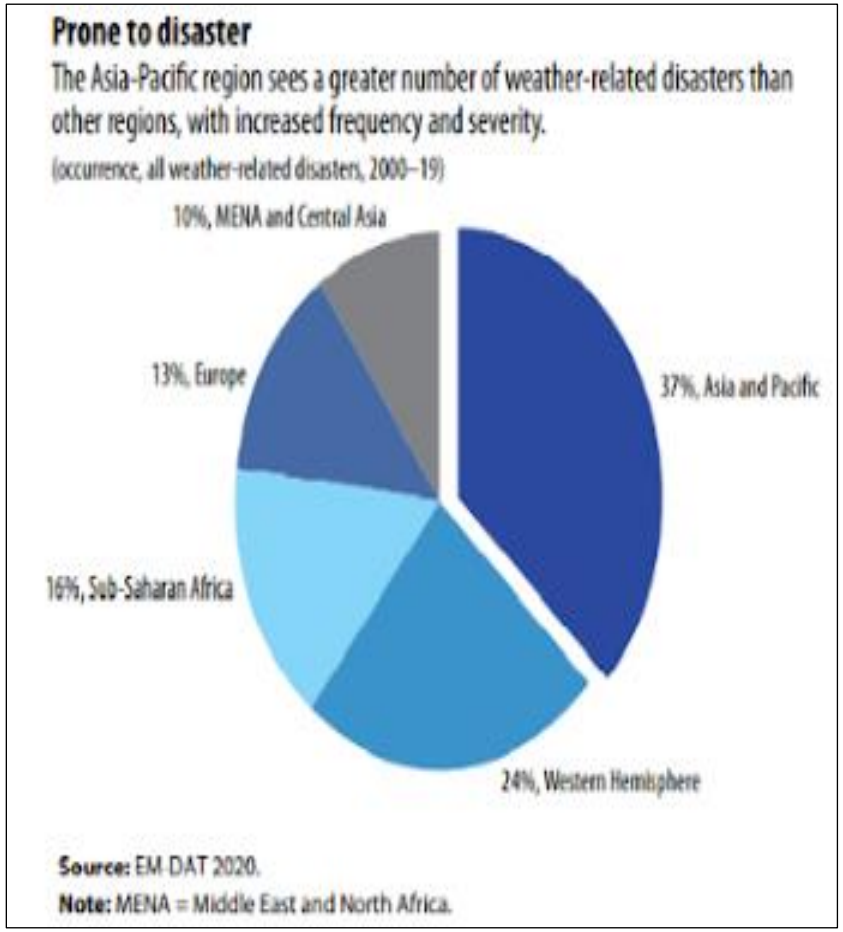
Stakeholder Consultation Workshop (1)

15 Targeted Countries



3. Annual CO_2 Emissions by world region





4. Emission Index (C02 emissions) vs. Updated NDCs: Asia Pacific Region

Emissions index numbers shown on a scale of 0-100:
100 low environmental impact

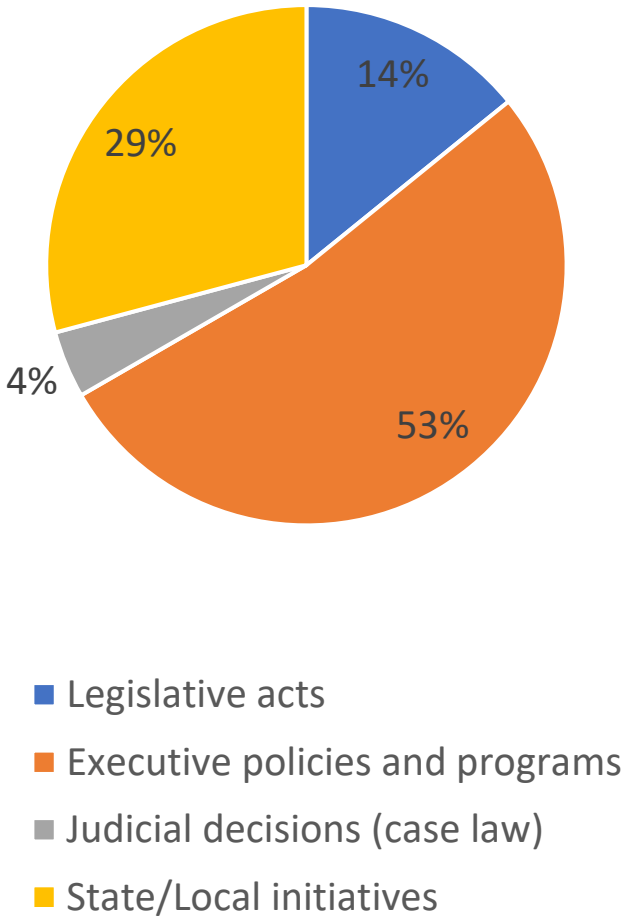
Targeted Countries in the Asia Pacific	Emission Index 0-100	Carbon emissions per capita (MtCO2s)	Carbon emissions (total) (Million MTCO2e)	Updated NDCs
China	0	7.05	10,174.68	Achieve carbon neutrality before 2060; lower CO2 emissions per unit of GDP by over 65Emissions index numbers shown on a scale of 0-100% from 2005 level.
India	60.1	1.88	2,615.82	To reduce Emissions Intensity of its GDP by 45 percent by 2030, from 2005 level
Japan	93.7	8.78	1,106.66	Reduce emissions by 46% in 2030 from the 2013 levels, Achieve net-zero by 2050
Indonesia	83.4	2.23	617.51	Increased emission reduction target from 29% to 31.89% unconditionally and from 41% to 43.20% conditionally.
Korea (Rep. of)	96	11.91	611.26	Reduce emissions by 40% by 2030 from 2018 level
Thailand	95.2	4.12	288.28	Reduce emissions by 30% from BAU level by 2030, to 40% (with conditions)
Philippines	96.6	1.3	144.26	Reduce emission by 75%, (2.71%, unconditional & 72.29% is conditional) by 2030
Bangladesh	96.1	0.61	102.16	Reduce emissions by 5% (unconditional) from BUA by 2030 and 10% (conditional) from 2011 level.
Mongolia	99	19.68	65.51	Reduce emissions by 44.9% by 2030 from the 2010 level. (22.7% unconditional & 27.2% conditional).
Singapore	99.6	6.6	38.94	Reduce emissions to around 60 MtCO2e in 2030.
New Zealand	98.5	7.52	36.54	Reduce emissions by 50% by 2030 from the 2005 level.
Myanmar	97	0.48	26.23	Reduce emissions to around 244.52 million tCO2e (unconditionally), and a total of 414.75 million tCO2e (conditional)by 2030
Sri Lanka	99.5	1.16	24.84	Reduce emissions by 14.5% for the period of 2021-2030
Cambodia	99.1	0.95	16.03	Reduce emissions to around 64.6 million tCO2e/year by 2030.
Bhutan	100	2.19	1.71	Continue to remain carbon neutral.

Sources: Carbon Emissions | By Country | 2022 | Data | World Economics and Nationally Determined Contributions Registry | UNFCCC

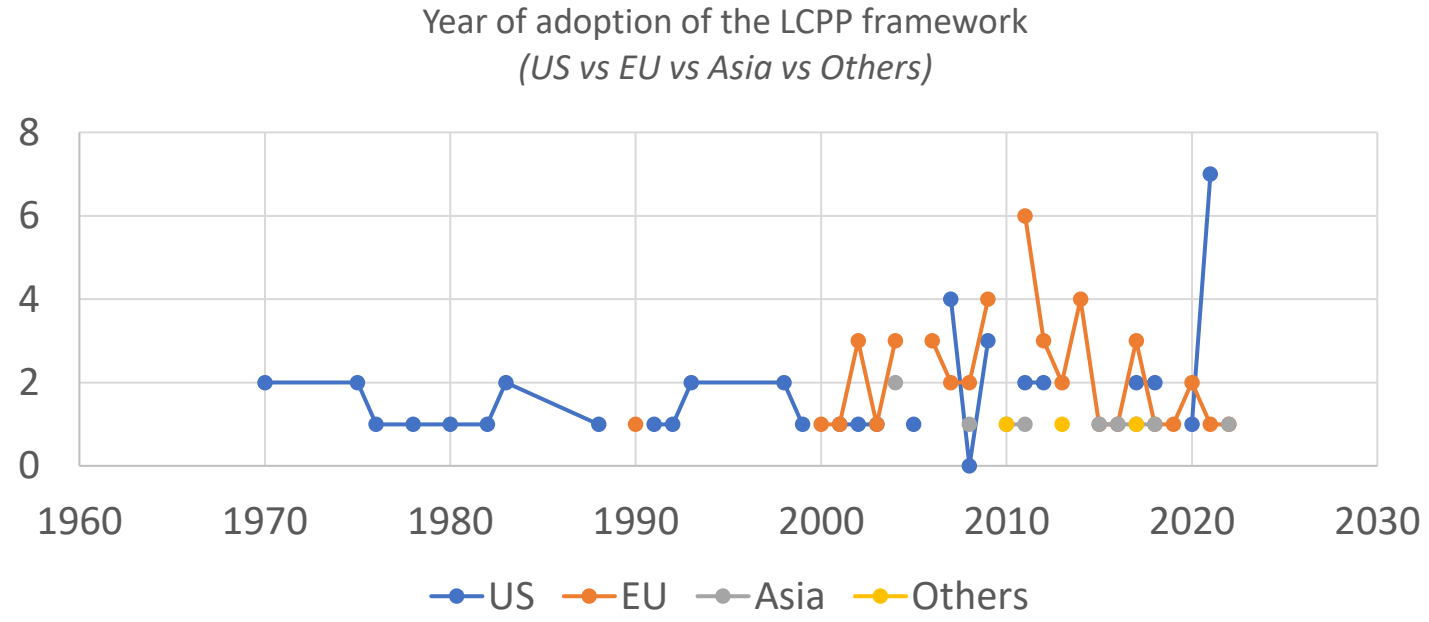
5. Drivers for escalating public demand for low carbon emissions products, works and services

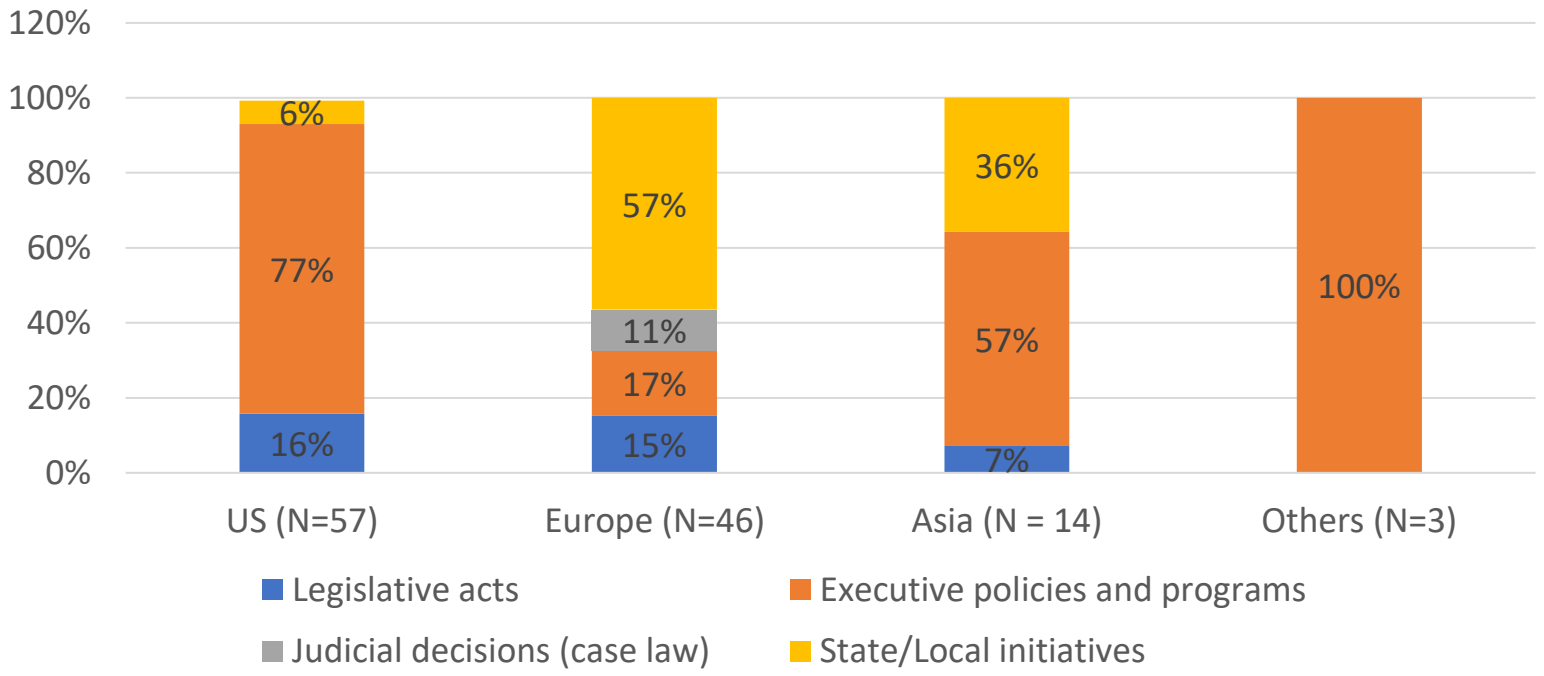
Low carbon procurement policies

6. LCPP Framework: Literature Review



N = 120



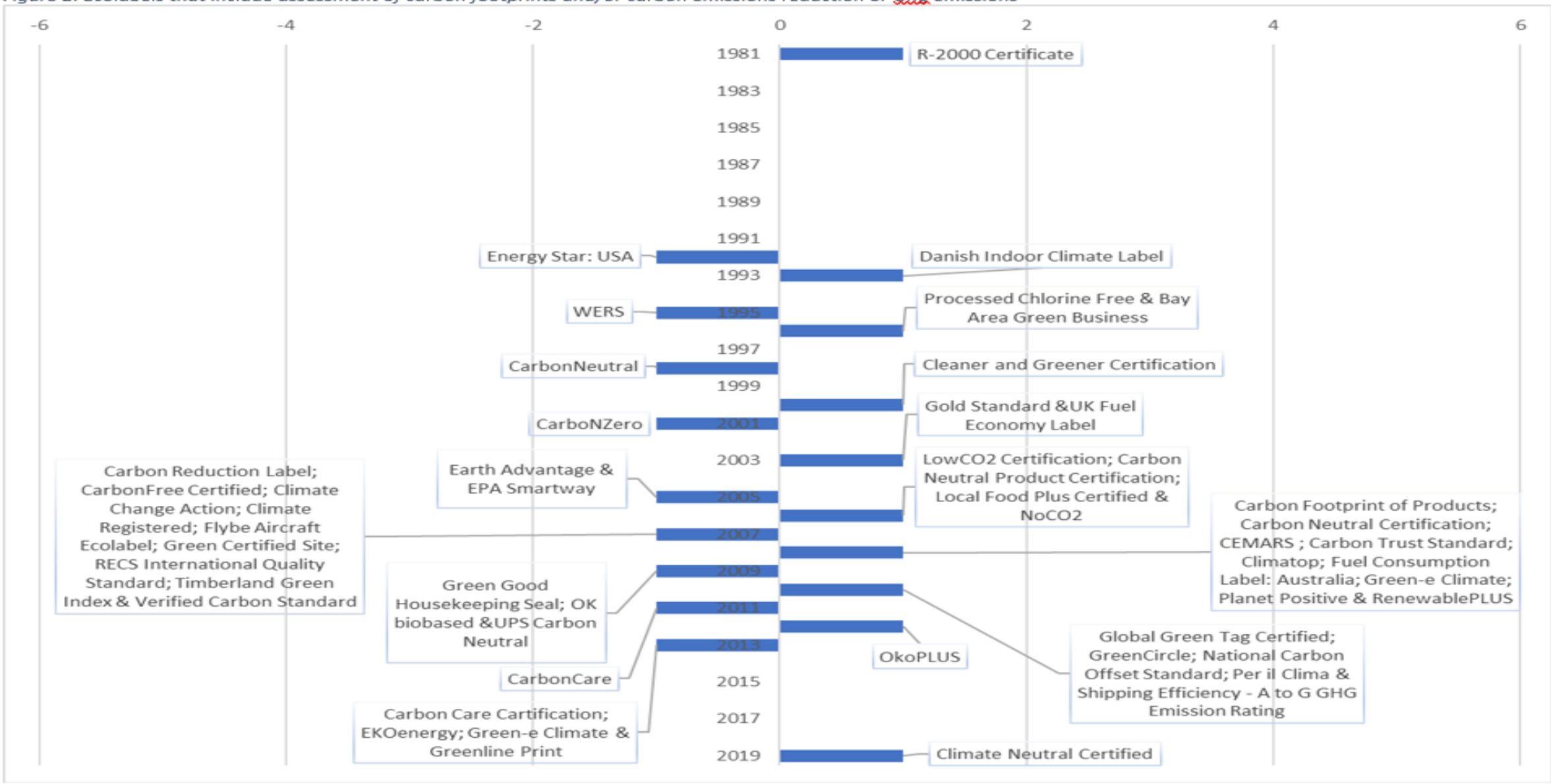


6. LCPP Framework: Literature Review

Low-carbon Tenders	Brief Description	Main Requirements	Example
Product-centered tenders	Introduce product-related criteria for low-carbon purchasing, which provide provisions for procurement of products combined with service elements	● Use of high energy efficiency standards for products ● Consideration of life-cycle aspects ● Use of functional criteria leading to less use of resources ● Redefinition of needs	Tenders for leasing or renting of products, i.e., fast evolving technology or electronic vehicles
Tenders for services related to public buildings	Set both minimum standards and incentives for CO2 reduction during service provisions	● Use of detailed energy audit as baseline ● Definition of technical and administrative tender specifications based on the preliminary evaluation of the building and installations. ● Implementation of energy conservation measures ● Establishment of penalties for lower savings than guaranteed savings offered by the bidder. ● Definition of a measurement and verification plan, according to international established standards	Tenders for Energy Savings Contract Models
Tenders for services that produce transport emissions	Provides for reorganization of goods distribution focusing on provision of the service in an energy and resource efficient manner	● Use of common minimum criteria for vehicles ● Use of international standards for calculating and reporting emissions ● Optimization of routes and redesign of existing service conditions ● Definition of regular monitoring requirements for service providers ● Promotion of less polluting means of transport (like public transport, bicycle, etc.)	Tenders for the procurement of low-carbon transport services
Tenders that produce emission on the service providers facilities	Requires either specific facilities for the execution of the contract or the procurement of new procurement or energy using products for the service procured.	● Set up energy efficiency requirements for products. ● Set up CO2 emissions requirements for service provider's facilities.	Tenders for the procurement of equipment of products exclusively for specific service, e.g., health procurement
Tenders for design, architectural and engineering services	Requires design of new buildings and infrastructure to have high relevance on CO2 emissions both during construction and use phase	● Definition of energy standards for the design phase of buildings, installations or urban furniture ● Evaluation of the CO2 impacts of construction materials in the design phase ● Evaluation of the CO2 performance of bidders	Tenders for green buildings

6. LCPP Framework: Literature Review

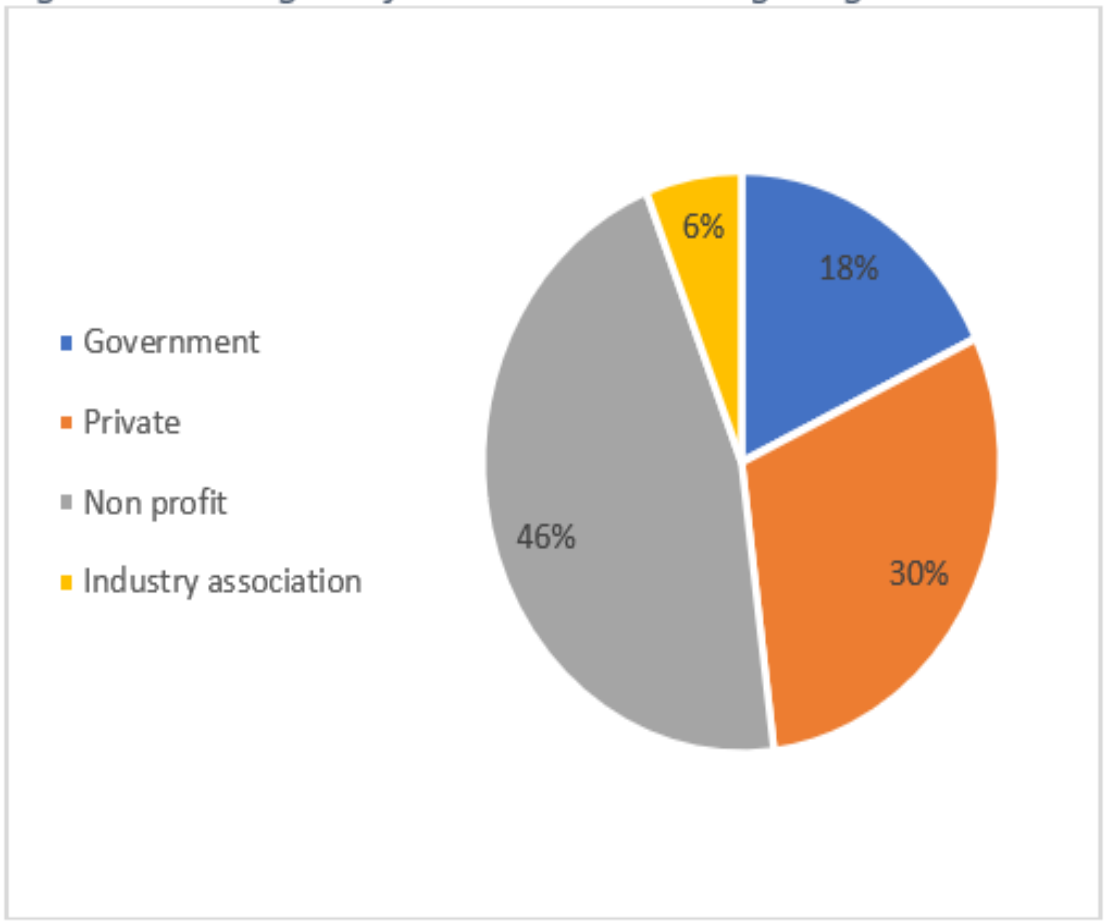
Figure 2. Ecolabels that include assessment of carbon footprints and/or carbon emissions reduction or Ghg emissions



Source: Ecolabel Index | Who's deciding what's green?, last visited February 3, 2023.

6. LCPP Framework: Literature Review

Figure 3. Managers of Ecolabels with Mitigating Climate Change Related Indicators



Source: Author's assessment, data from ecolabel index

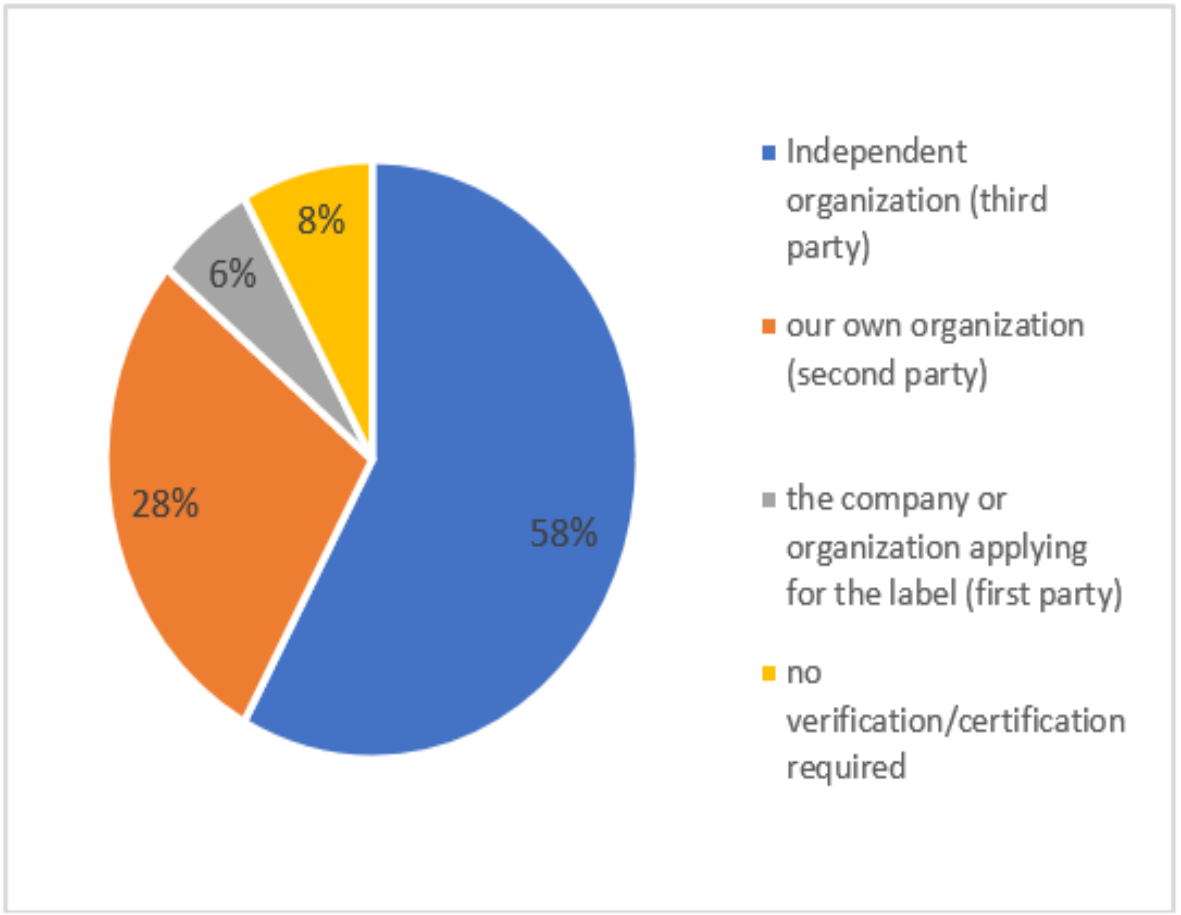
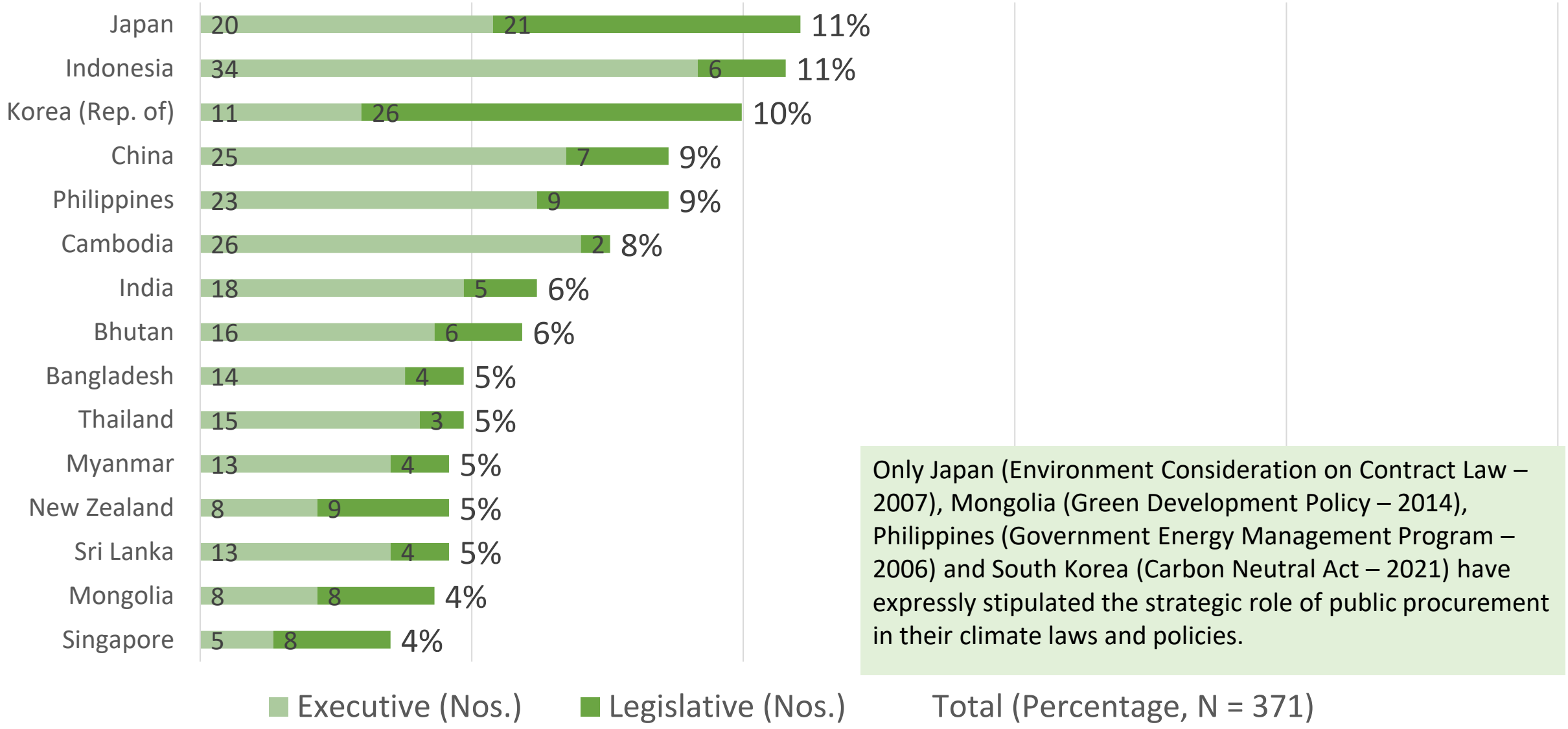


Figure 4. Verification Standards of Ecolabels with Mitigating Climate Change Related Indicators

7. Climate Change Laws and Policies: Asia Pacific Region



Only Japan (Environment Consideration on Contract Law – 2007), Mongolia (Green Development Policy – 2014), Philippines (Government Energy Management Program – 2006) and South Korea (Carbon Neutral Act – 2021) have expressly stipulated the strategic role of public procurement in their climate laws and policies.

Source: Author's assessment, data from www.climate-laws.org

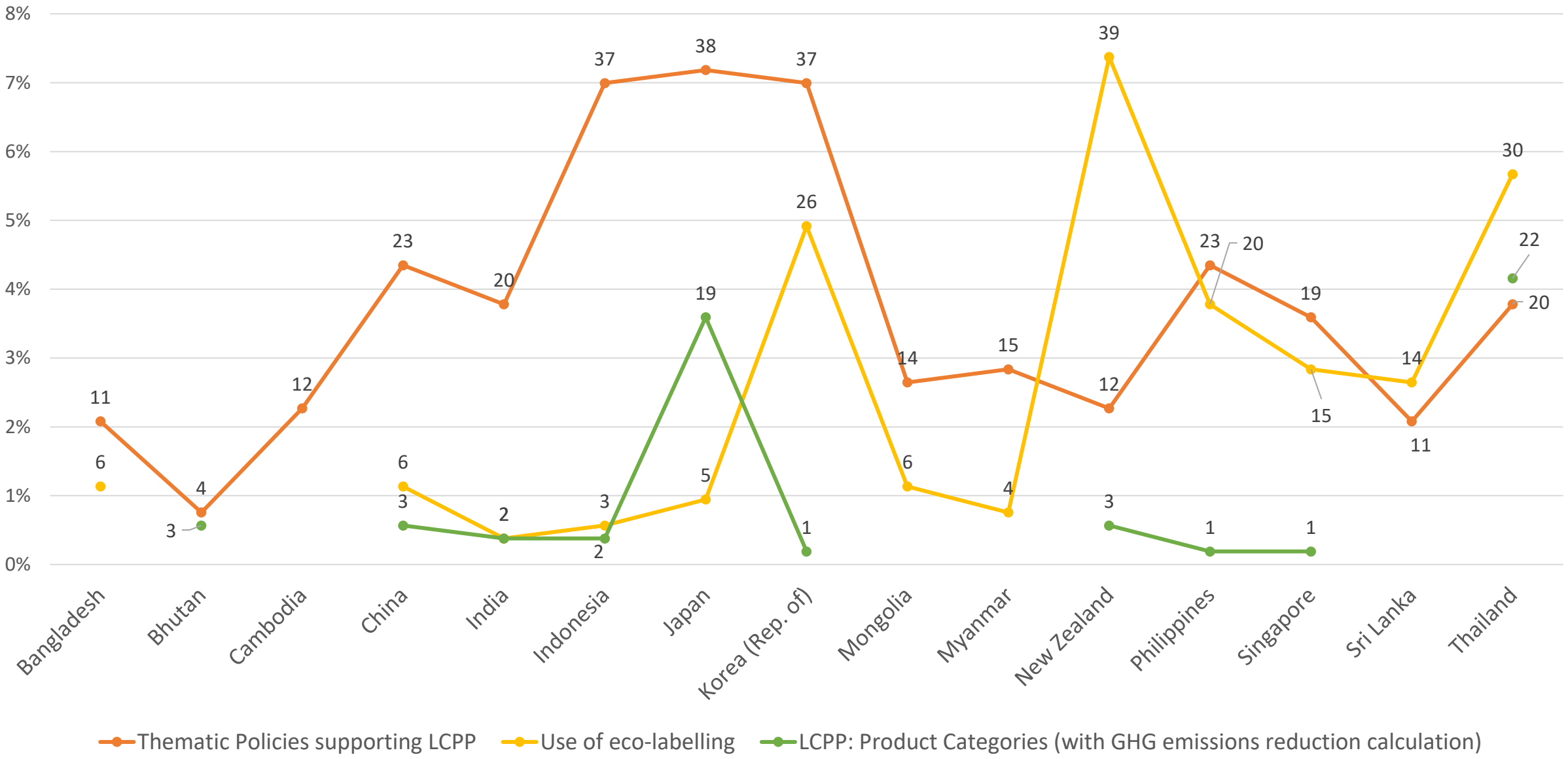
8. Sustainability Clauses in the Public Procurement Regulations: Asia Pacific Region

AP Countries	Total Cost of Ownership Law Clause	Life Cycle Costing Law Clause	Value for Money Law Clause	Most Economically Advantageous Tender (MEAT) Law Clause	Sustainability Law Clause	Awards to SMEs Clause	Domestic Preference Clause
Bangladesh							
Bhutan							
Cambodia							
China							
India							
Indonesia							
Japan							
Korea (Rep. of)							
Mongolia							
Myanmar							
New Zealand							
Philippines							
Singapore							
Sri Lanka							
Thailand							

Legend: **Green** (express clause/s); **Blue** (implied clause/s, e.g., no MEAT clause, but with non-priced criteria/socio-economic considerations clause/s, etc.,
Orange (None)

Source: Author's assessment, data from Global Public Procurement Database (GPPD)

9. LCPP Policies and Practices: Asia Pacific Region



Source: Author's assessment, data (see research methodology)

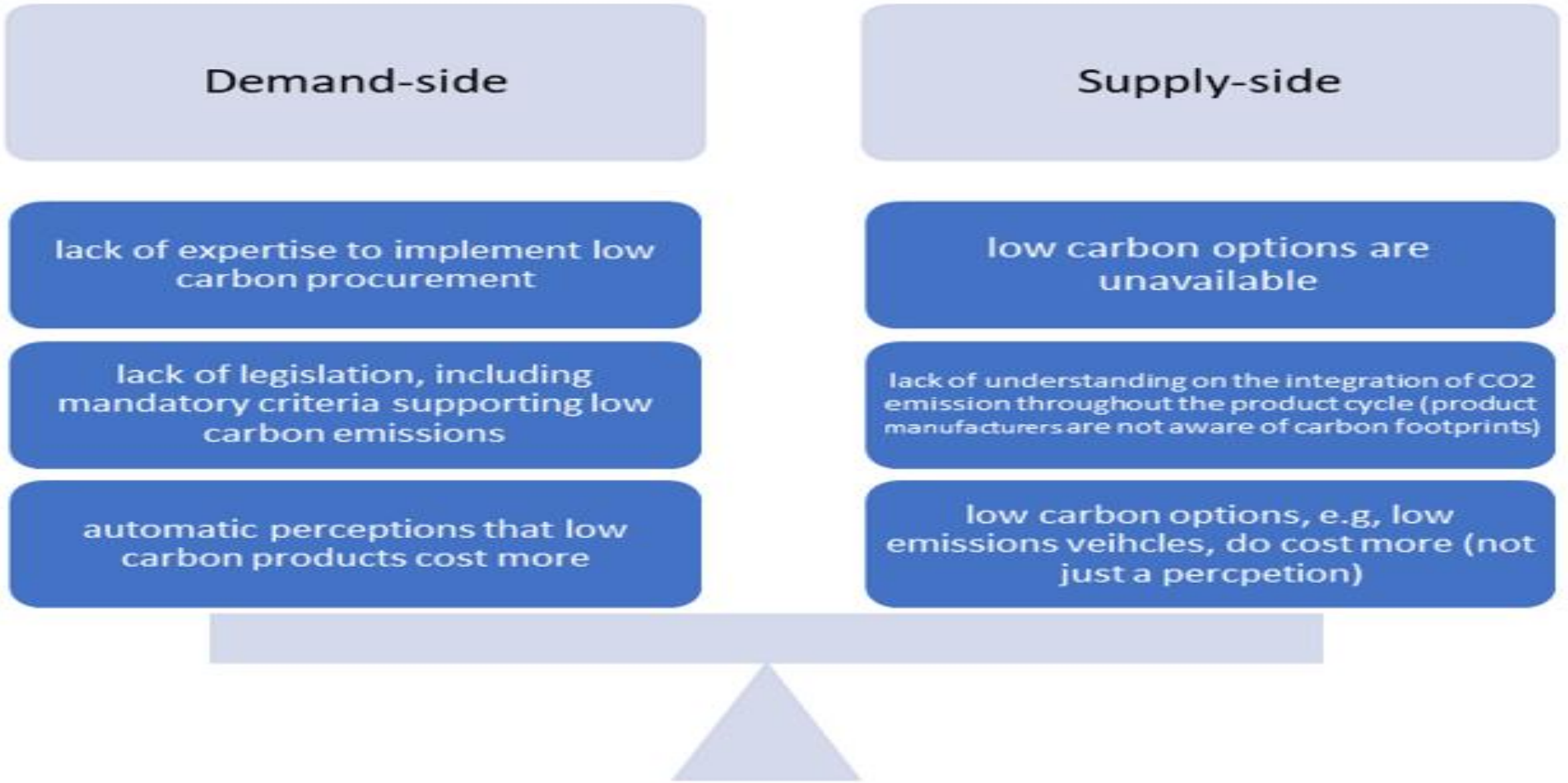
10. Asia Pacific LCPP Practices: Literature Review (22 pilot LCPP projects)

- Bhutan has 3 pilot projects covering air conditioning (e.g., mandatory procurement of CFC free refrigerators in all agencies under the Ministry of Health), building (e.g., use of energy consumption criteria for building), and vehicles (e.g., electric vehicles)
- China has implemented 12 projects covering 3 product categories – building, equipment and vehicles.
- India has 2 pilot projects covering building and air conditioning units (see Table 8 on recorded best practices for SPP for building and cooling sector in India).
- Indonesia has one covering 2 product categories – vehicles and supplies
- Japan has already identified 19 product categories requiring the calculation of GHG emissions reduction, even required the installation of electric vehicles beginning 2022
- New Zealand has 1 pilot project covering 3 product categories – vehicles, heating and building.
- Philippines through EU Switch project had implemented 1 pilot project covering local streetlights – use of solar lights
- Thailand had 1 recorded pilot project covering 22 product categories with GHG emissions reductions

10. Asia Pacific LCPP Practices: Literature Review Best Practices in SPP for buildings and the colling sector in India

Best Practices	Brief Description	LCPP Policies/Practices
Green Room Air Conditioner on Government e-Marketplace	Government eMarketplace (GeM) is a digital platform for all public procurement in India. On 5 June 2021, Green Room Air Conditioners product category was launched for voluntary purchase by Government bodies.	Use of green room air conditioner specifications based on existing national and international evidence-based policies, integrating existing eco labels and standards, and use of life-cycle cost assessment that results to an overall lower impact on the environment, e.g., technical specifications for compressor types include safety and performance, energy performance, refrigerants with zero ODP, at least 80% recycled plastic contents, paints without heavy metals, recycled or biodegradable packaging materials, and green disposal (take back or buy-back option).
EESL Super-Efficient Air Conditionner Program	The Super-Efficient Air Conditioning Program by Energy Efficiency Services Limited (EESL), the energy service company of the Government of India, is a bulk procurement program launched in February 2019, which aims to integrate energy efficiency in India's colling sector.	Procurement of super-efficient air conditioner, which is at least 30% more efficient that the best-in-the-maker product and uses low GWP refrigerants, with mandatory requirements for supplier's design, manufacture, supply, install and provide after-sales O&M with extended customer support, including buy-back scheme, safe disposal of refrigerant and e-waste disposal certificate. The use of bulk procurement (demand aggregation) resulted in a price comparable to the most energy-efficient conditioners available in the market, resulting in a price drop of 22% of split air conditioners and pushed major manufacturers to start supplying split ACs with a minimum of 5.4 ISEER.
Retrofit of Air-conditioning to improve Indoor air quality for Safety and Efficiency (RAISE) program	RAISE, a national level program, was launched jointly by EESL and USAID with focus on retrofitting existing buildings to enhance indoor air quality (IAQ), thermal comfort and energy efficiency in the air conditioning system.	Some of the retrofit measures implemented were a) integration of energy efficiency measures including up-gradation of air conditioning systems for enhanced energy efficiency and cooling performance, b) increased ventilation for dilution and lowering the buildup of pollution and pathogens using sensor-controlled automation of fresh air dampers, c) enhanced filtration to minimize particulate matter, pollutants and pathogens, and d) monitoring and display of IAQ.
Chiller Energy Efficiency Program	Conceptualized and developed in partnership with the USAID MAITREE program, EESL's Chiller Energy Efficiency program aims to expedite the timely replacement of superannuated, inefficient chillers and other central cooling plant equipment with energy efficient models. The program will incentivize manufacturers to invest in research, development, and deploy more efficient technologies.	ESCO financing adopted consists of EESL providing 100% financing upfront. Project-specific deemed savings are the basis of estimating returns for EESL and the customer. Monetary savings resulting from the replacement or retrofit will be shared in a predetermined ratio with the customer. Owners will be able to save 20-30% energy, at zero upfront cost, while upgrading to highly efficient machines compliant with BEE's Standards and Labeling Scheme and matching global efficiency benchmarks
Lucknow Development Authority (LDA)'s Green Building Criteria	Under the Pradhan Mantri Awas Yojana (PMAY), the LDA planned to construct affordable housing comprising of 48,000 dwelling units in various parts of the city to cater to the Economically Weaker Sections (EWS) and the Low-Income Group (LIG) categories.	LDA mandatorily adopted Green Building Criteria (GBC) for all (residential & commercial) its buildings as an SPP approach. The criteria formulated accounted for the following - a) Scalability & Cost-effectiveness, b) Energy Efficiency,. c) Favorable thermal comfort conditions, d) Buildings must be resilient and protect occupants from pollution, e) Opting for green building materials for construction, i.e., complying with energy codes such as ECBC-R.

11. Some of the Challenges: Stakeholders Inputs



12. Opportunities for LCPP: Stakeholders Inputs

"If you had a magic wand, what would you change in order to incentivize and promote low carbon public procurement in public procurement processes?"

A self-sustaining financial mechanism for GPP and ecolabelling… Give some incentives…. Provide some facilities and at the same time we can transform the private sector into green

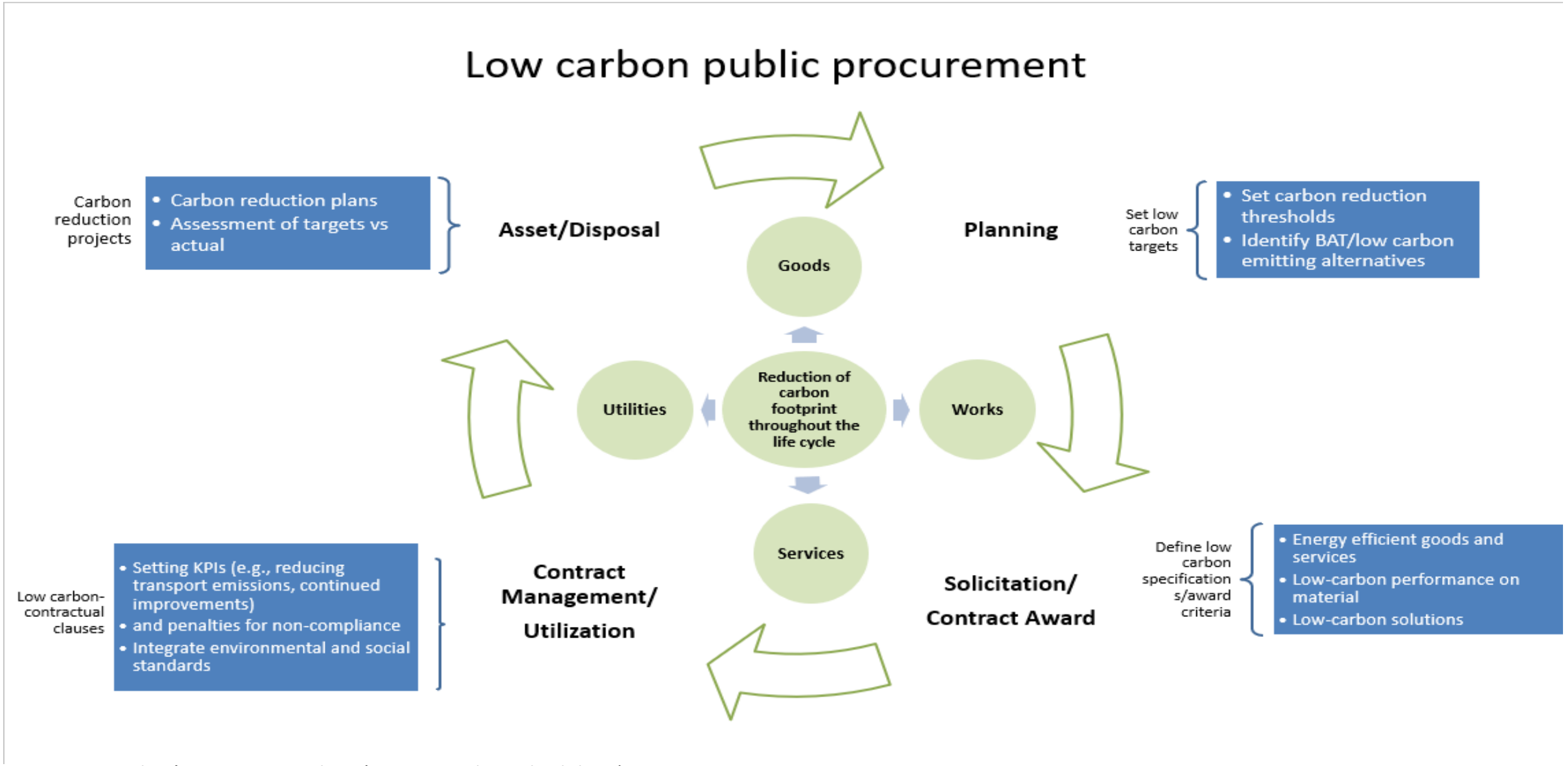
Ensure an adequate budget to promote low carbon public procurement…

Equip the persons who are supposed to implement it. If they are equally equipped with the capacity, the policy will not translate into action, and it will just remain a dream.

Make it (low carbon option) the same price and more attractive than others…

Make a world where you just couldn't buy things that damage our environment…

13. Integration of low carbon criteria in public procurement cycle



Source: Author's assessment, data (see research methodology)

14. LCPP in Most Recent NDCs Reporting: Case of Three AP Countries

While the strategic role of public procurement as one of the long-term strategies toward carbon neutrality has been highlighted in some AP countries, only three countries in AP (two are from targeted AP countries) have in fact included the application of public procurement in the achievement of the NDCs – Sri Lanka, China and Viet Nam.

In the most recent submissions of their NDCs, they highlighted at least three strategies on how public procurement can help accelerate the achievements of NDCs through:

1. Inclusion of ISO certified companies to the Green Public Procurement (Sri Lanka),
2. Government procurement of energy -efficient products (China) and
3. Promoting regulations related to green public procurement to enhance mitigation and co-benefits from public investment projects. (Viet Nam.)

15. UNFCC Guide to NDC Reporting

Reporting countries in the preparation of their updates to their NDCs and accompanying information, UNFCCC has issued guide questions composed of seven sections, each with corresponding sub-sections:

1. Quantifiable information on the reference point (including, as appropriate, a base year)
2. Time frames and/or periods for implementation
3. Scope and coverage
4. Planning processes
5. Assumptions and methodological approaches, including those for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals
6. How the Party considers that its nationally determined contribution is fair and ambitious in the light of its national circumstances
7. How the nationally determined contribution contributes towards achieving the objective of the Convention as set out in its Article 2

16. Maximizing the use of LCPP in NDCs – How AP can leverage their purchasing power in achieving their NDCs

Using the cases of the three AP countries reporting on public procurement in their Updated NDCs, public procurement is incorporated in Section 4 in planning processes, which focus on domestic laws, policies, plans and processes relevant to or with the aim of implementing and achieving the NDC (existing and planned).

Specifically, reporting countries have identified the role of public procurement in sub-section (d) on the adaptation action and/or economic diversification plans resulting in mitigation co-benefits by submitting information on

(i) economic and social consequences of response measure that have been considered in developing their NDCs,

(ii) specific project, measures and activities implemented to contribute to mitigation co-benefits, including information on adaptation plans that also yield mitigation co-benefits, which may cover, but are not limited to, key sector such as manufacturing and industry, energy and mining, transport and communication, construction, tourism, real estate, agriculture, and fisheries.

Accordingly, Sri Lanka, China and VietNam have reported public procurement as one of their specific activities to contribute to mitigation, more particularly in the procurement related to manufacturing, energy and transportation.

Thank you.

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