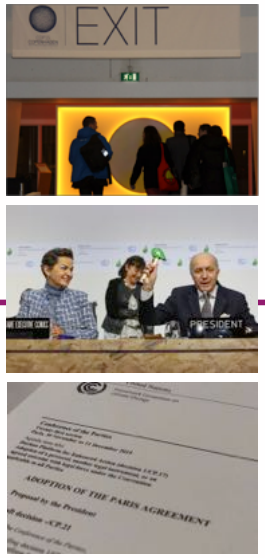


How to maximize the leverage out of the design of the NDC and implementation of the transparency framework

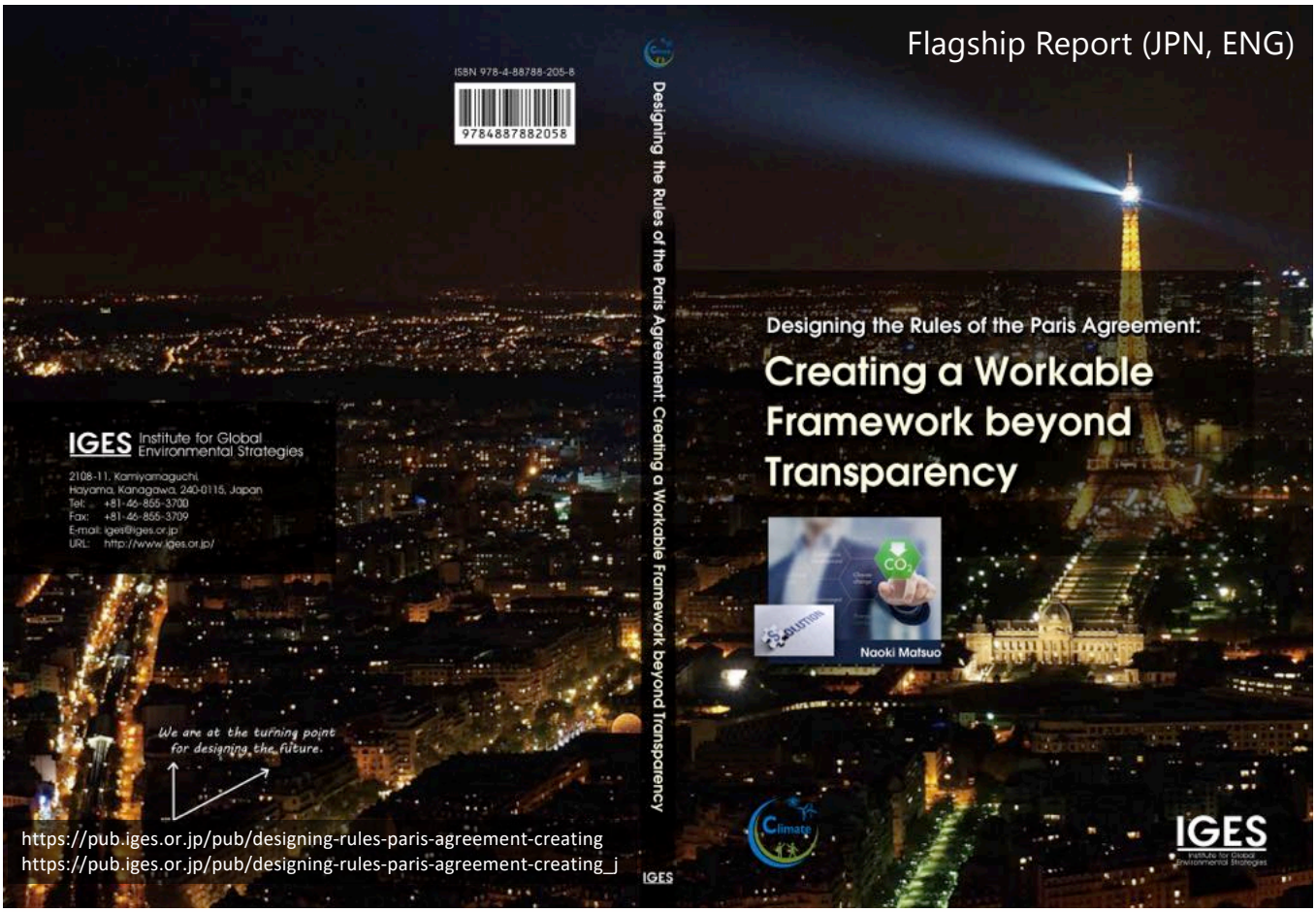
—Key elements for meaningful capacity building programs

Naoki Matsuo

Principal Policy Researcher / IGES Senior Fellow

IGES
Institute for Global Environmental Strategies

Flagship Report (JPN, ENG)



https://pub.iges.or.jp/pub/designing-rules-paris-agreement-creating
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Big Challenges of the Paris Agreement

- ***All*** countries targeted
- ***Periodic*** *check/adjust process* installed
- ***MRV*** experiences accumulated
- **INDC** (192 countries); **NC** (24 years)
- Inter-ministerial arrangement

+

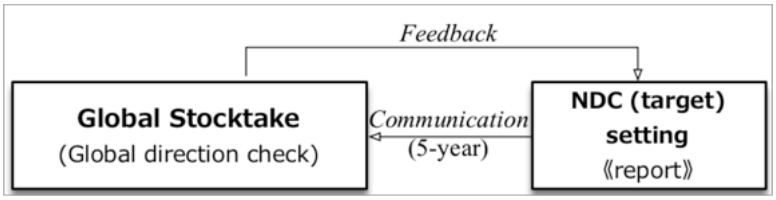
1.5–2°C above pre-industrial level

- Temp. Goal Setting *but* Extremely tough
- ***Voluntary*** target setting w/o penalty
- NDC = *Ambition* (?)

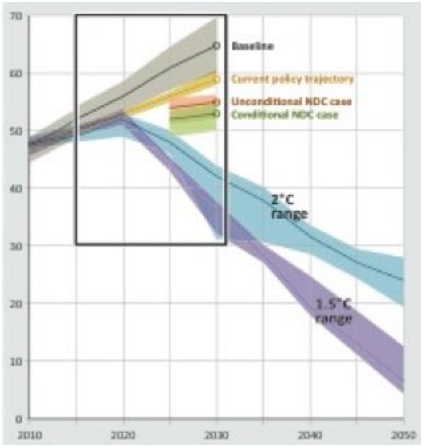
Failure of enhancing Kyoto type w/ legally binding target (Montreal Protocol-type) approach @Copenhagen

For Strengthen the NDC target !

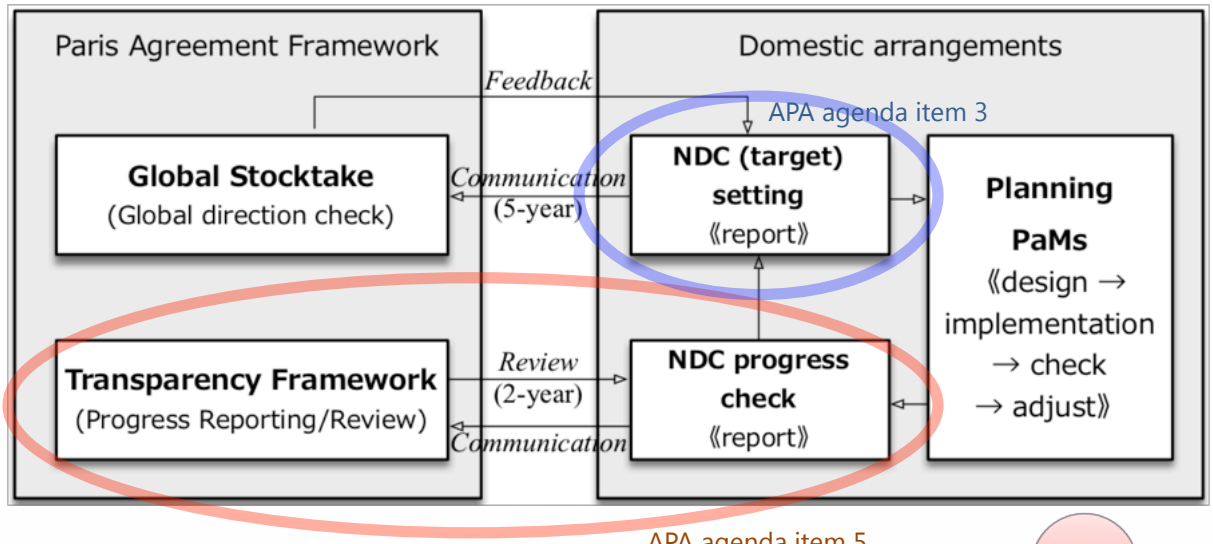
Will this process work? Even if it works…



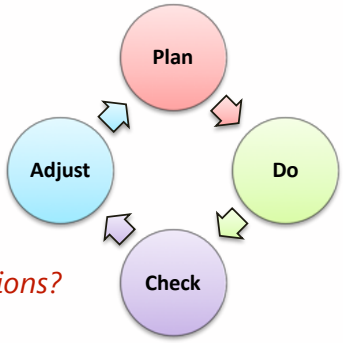
Global National



Essence of the operation of the PA framework



PDCA-cycle of targets/ambitions (global)
+
PDCA-cycle of actions (national)



*Is "**transparency**" good enough to foster the performance of domestic actions?*

Experiences in the current international processes

"Review" is for *completeness* and *transparency* of the national report. Not for contents of PaMs.

UNFCCC

Transparency arrangement
- National Communication + In-Depth Review (4-year cycle)
- Biennial (Update) Report + IAR/ICA (2-year cycle)

National GHG Inventory

NAMA

CDM, JI

REDD-Plus

GHG MRV
(Measurement, Reporting, Verification)
for
Transparency and Accountability

IEA, APEC

Energy Policy Review

Instruments we have is "National Reporting System" + Review

NDC Guidance ← How to express the NDC w/ target?

Transparency Framework Guidelines ← How to track progress?

God is in the details...

Developing a report is an **good exercise** for the country and for the person in charge, for...

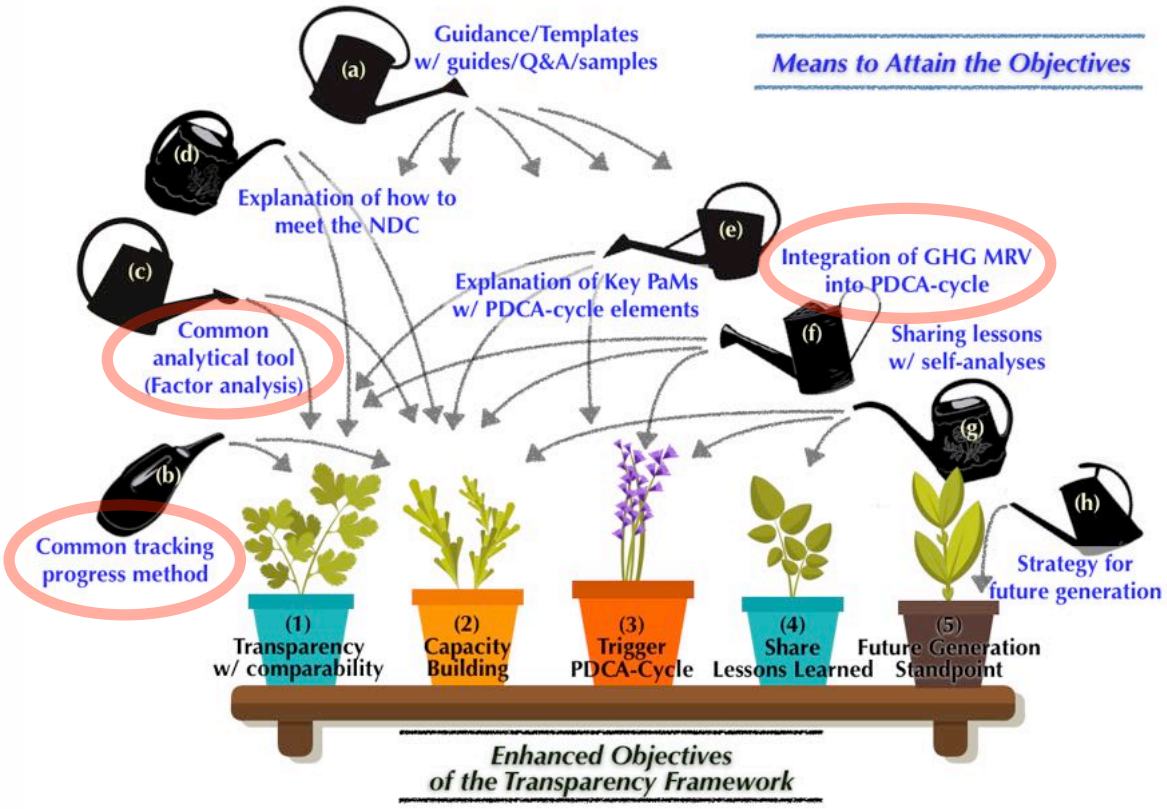
- Understanding/recognizing/reconsidering the situation;
- Considering what to be done and how, in order to **improve performance**;

Not additional burden, but net benefit

GHG mitigation measure has its primary objective

Specifying "reporting items" *concretely* which are useful for these purposes

5 Objectives and 8 Means



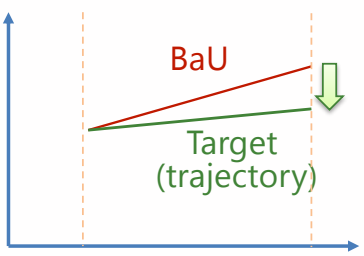
NDC and Its Progress Status Method

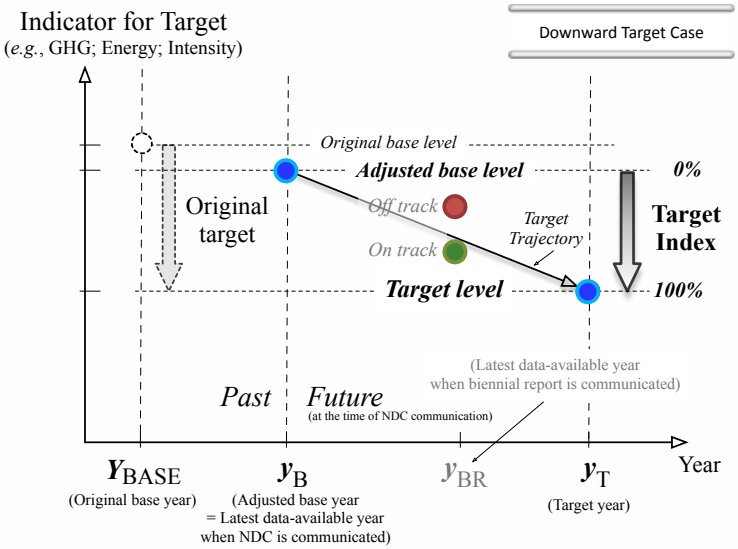
Object	× Reference	× Represen-tation	× Coverage	× GHG Scope	× Time Frame	× Market Mechs	× Condition

GHG / Energy / PaMs KPI (Policies and Measures Key Performace Indicator)	× Abs. Value / Intensity	× Reduction / Increase	× Base year / BaU	× % / Magnitude	× Economy-wide / Specific sector(s) / Specific activity	× All excl. LUCF / All incl. LUCF / Specific GHG	× Target year / Target period	× Use / Non-use	× Yes / No

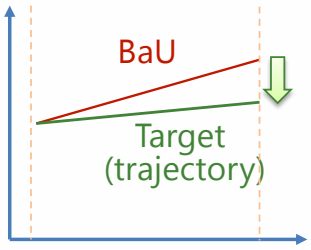
PaM / Project	× Introduction	× Target period
Emission Peak	× Achievement	× Target period

Well-defined target (elements)





Reductions from BaU-Type NDC



Iran, Fiji, St. Vincent and the Grenadines, St. Kitts and Nevis

Object	× Reference	× Represen-tation	× Coverage	× GHG Scope	× Time Frame	× Market Mechs	× Condition
GHG Energy PaMs KPI (Policies and Measures Key Performace Indicator)	× Abs. Value Intensity	× Reduction Increase	× Base year BaU	× % Magnitude	× Economy-wide Specific sector(s) Specific activity	× All excl. LUCF All incl. LUCF Specific GHG	× Target year Target period	× Use Non-use	× Yes No
PaM Project	× Introduction						× Target period		
Emission Peak	× Achievement						× Target period		

Iran	–4% (unconditional) and –12% (conditional); 7-GHGs
Fiji	–10% (unconditional) and –30% (+500 million USD); CO_2
St. Vincent and the Grenadines	–22% (conditional); fixed BaU; Target year 2025; 4-GHGs
St. Kitts and Nevis	–22% (2025) / –35% (2030) (conditional); CO_2

Activity-Type NDC

Sudan, Samoa, Antigua and Barbuda

Object	× Reference	× Represen-tation	× Coverage	× GHG Scope	× Time Frame	× Market Mechs	× Condition
GHG Energy PaMs KPI (Policies and Measures Key Performace Indicator)	× Abs. Value Intensity	× Reduction Increase	× Base year BaU	× % Magnitude	× Economy-wide Specific sector(s) Specific activity	× All excl. LUCF All incl. LUCF Specific GHG	× Target year Target period	× Use Non-use	× Yes No
PaM Project	× Introduction						× Target period		
Emission Peak	× Achievement						× Target period		

Sudan	Sector specific targets on KPIs & associated actions. Costs estimation.
Samoa	100% of Electricity by renewables by 2025 (conditional).
Antigua and Barbuda	Enhance existing policies (unconditional) and new measures (cond.).

Exercise for Tracking the Progress

		2026 submission (latest data: 2024)
1	Increase renewable electricity capacity from 7.62% in 2014 to 20% by 2020 and to 30% by 2030 as a share of total electricity generation capacity.	25%
2	Reduce electricity transmission losses from 13.7% in 2014 to 10.8% by 2020 and to 7.8% by 2030.	9.2%
3	Reduce building heat loss by 20% by 2020 and by 40% by 2030, compared to 2014 levels.	26%
4	Reduce internal energy use of Combined Heat and Power plants (improved plant efficiency) from 14.4% in 2014 to 11.2% by 2020 and 9.14% by 2030.	10.1%
5	Implement advanced technology in energy production such as super critical pressure coal combustion technology by 2030.	Not yet
6	Improve national paved road network. Upgrading/Paving 8000 km by 2016, 11000 km by 2021.	12,000 km
7	Improve Ulaanbaatar city road network to decrease all traffic by 30-40% by 2023.	Around 40%
8	Increase the share of private hybrid road vehicles from approximately 6.5% in 2014 to approximately 13% by 2030.	14%
9	Shift from liquid fuel to LPG for vehicles in Ulaanbaatar and *aimag* (province) centres by improving taxation and environmental fee system.	10% shifted
10	Improve enforcement mechanism of standards for road vehicles and non-road based transport.	Uncertain

Whether these actions are on track to meet the targets?

Understanding the Emission Trend and NDC Target

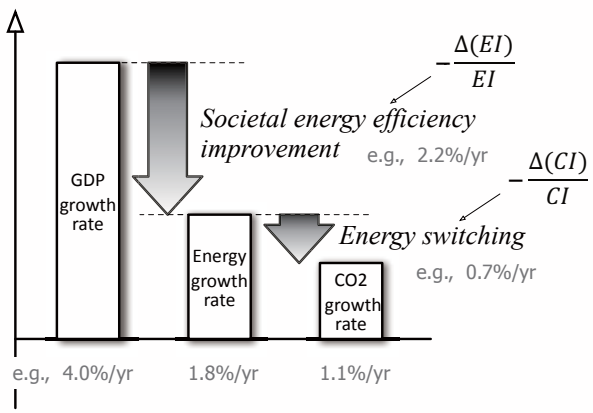
$$\frac{\Delta(CO_2)}{CO_2} = \frac{\Delta(GDP)}{GDP} + \frac{\Delta(EI)}{EI} + \frac{\Delta(CI)}{CI}$$

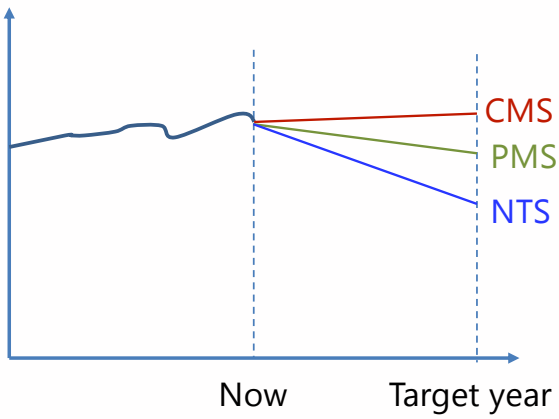
(CO_2 growth rate) = (GDP growth rate)

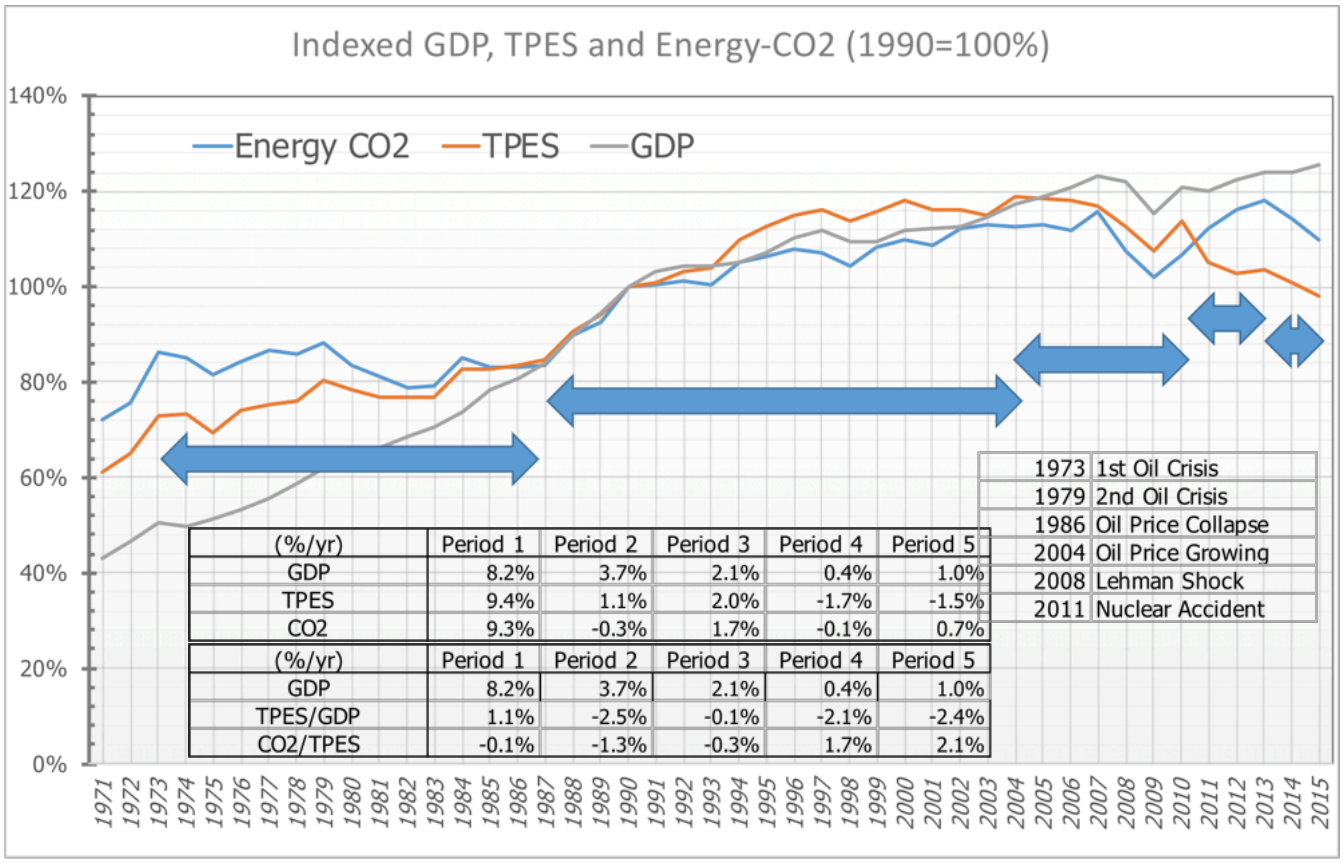
– (societal energy efficiency improvement rate)

– (rate of decarbonization of the energy mix).

Annual growth rate for some period







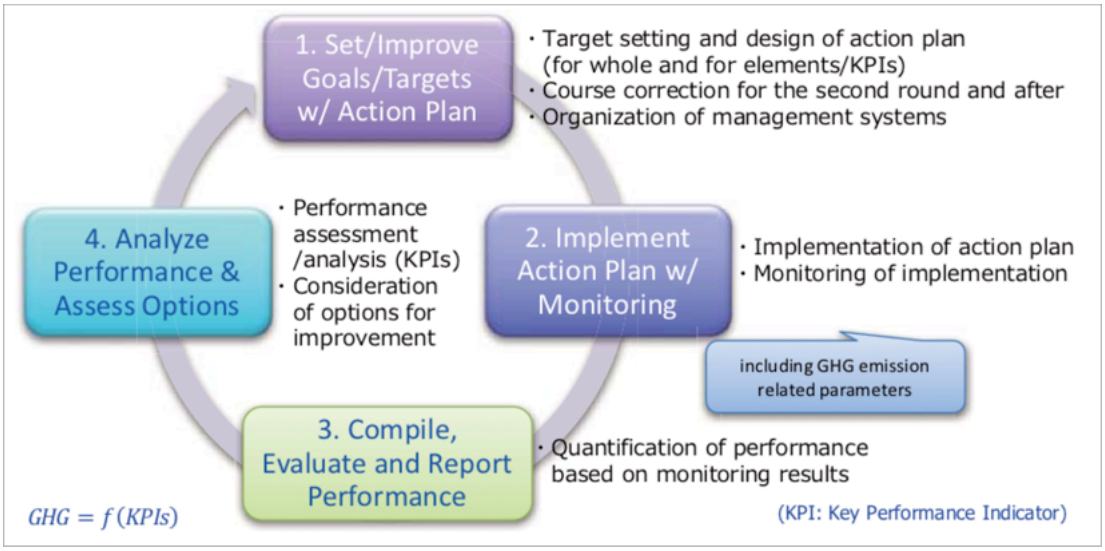
(%/yr)	Period 1	Period 2	Period 3	Period 4	Period 5
GDP	8.2%	3.7%	2.1%	0.4%	1.0%
TPES	9.4%	1.1%	2.0%	-1.7%	-1.5%
CO2	9.3%	-0.3%	1.7%	-0.1%	0.7%

(%/yr)	Period 1	Period 2	Period 3	Period 4	Period 5
GDP	8.2%	3.7%	2.1%	0.4%	1.0%
TPES/GDP	1.1%	-2.5%	-0.1%	-2.1%	-2.4%
CO2/TPES	-0.1%	-1.3%	-0.3%	1.7%	2.1%

1973	1st Oil Crisis
1979	2nd Oil Crisis
1986	Oil Price Collapse
2004	Oil Price Growing
2008	Lehman Shock
2011	Nuclear Accident

Introduction of PDCA-cycle (with GHG MRV)

Requirement to provide available information for GHG MRV incorporated in the PDCA cycle process of key actions.



(e.g.,) Hybrid Vehicle Promotion Program

- Overall objectives (main and co-benefits) of the PaM
- Choice from various PaM options (alternatives)
- Rough sketch and understanding the key characteristics of the chosen PaM
- **Key designing features**
  - Institutional arrangements and coordination among stakeholders/actors
  - Business model and costs/benefits analysis
  - Incentive setting
  - PDCA-cyclic process design with KPIs
  - Financing

Sharing Lessons Learned among Parties
—Biennial Transparency Report as a good channel—

Party A
describes the followings in its BTR...

- Experiences
- Lessons learned

+

- **Analysis of success/failure**
- **Applicability conditions**

⇩

Very good exercise to go beyond (under PDCA-cycle)

Interaction

Parties
in similar situations

Supported by

- UNFCCC Secretariat
- International Organizations
- Donor Agencies
- Research Institutes
- NGOs