World Energy Council

CONSEIL MONDIAL DE L'ENERGIE

KOMITE NASIONAL INDONESIA

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What Should Be Done for Climate Change?

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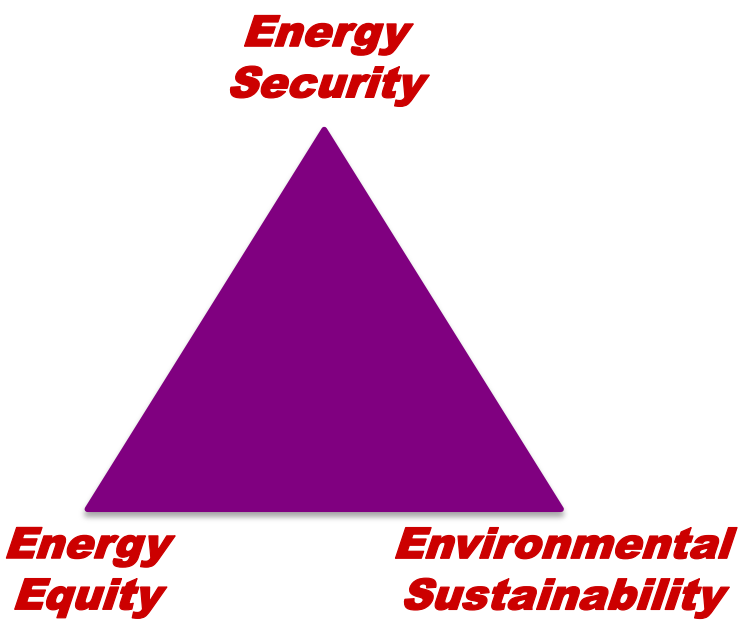
3 Core Dimensions of Energy Sustainability

3 Core Dimensions of Sustainable Energy System
Balancing the 'Energy Trilemma'



Energy Security

The effective management of primary energy supply from domestic and external sources, the reliability of energy infrastructure, and the ability of energy providers to meet current and future demand.

Energy Equity

Accessibility and affordability of energy supply across the population.

Environmental Sustainability

Encompasses the achievement of supply and demand side energy efficiencies and the development of energy supply from renewable and other low-carbon sources.

World Energy Council 2013, "World Energy Trilemma", Time to get real – the Agenda for Change.

The Energy Trilemma

Balancing the 3 core dimensions of the energy trilemma is a strong basis for prosperity and competitiveness of individual countries. Secure energy is critical to fuelling economic growth. Energy must be accessible and affordable at all levels of society to ensure social stability. The impact of energy production and energy use on the environment needs to be minimized in order to combat climate change as well as local air and water pollution and its implications.

Addressing the energy trilemma presents extraordinary environmental, social, and economic challenges requiring national and international action by not only governments, but also the private sector and civil society. Robust and enabling environments will be required toward these ends, including appropriate technology mechanisms and a global trade and investment regime that encourages and leverages investment, innovation, and technology uptake.

Towards Sustainable Energy Path

National Energy System

Drive the national energy system towards low-carbon energy sources, low-carbon and zero-carbon energy technologies, renewable energy, greater role of energy efficiency and conservation from up-stream to down stream (energy end-use), and efficient transmission & distribution systems.

- ***Governments & Policy Makers***: Policymakers must focus on reducing political and regulatory risks: 1) Have a clear vision for sustainable energy and a master plan with clearly defined energy sustainability goals, 2) Define coherent, long-term, and predictable energy policies, underpinned by well-implemented regulations, and 3) Recognise that investors are not going to provide capital without an attractive profit.
- ***Financing Community***: The financial infrastructure must exist for capital to flow easily to the energy sector: 1) Help policymakers and energy sector understand the role of different financial investors and instruments, 2) Support efforts for the standardisation of instruments, and 3) Review existing rating models and develop new approaches to bundle smaller-scale projects.
- ***Energy Industry***: The energy sector must bring clearly bankable projects to the market: 1) Be more proactive in the dialogues around energy policies, 2) Establish standard procedures and best practices for data and disclosure, 3) Create new pricing models that meet the reality of changing business models and encourage demand side response.

Some Routes to Enhance Energy Security Towards Sustainable Energy Path

Some Routes to Enhance Energy Security

Some Routes to Enhance Energy Security

Cross border transaction: the ability of the state or of market player, to draw on foreign resources and products that can be freely imported through ports or other transport channels and through cross boundary energy grids which are supported by enabling environments that need to be established.

Attracting large-scale investment in new low carbon electricity-generation sources and associated transmission and distribution networks, together with more sustainable transport infrastructures.

Adequate national & regional strategic reserves to address any transient interruption, shortage, or unpredictable surge in demand.

Deployment of low-carbon and zero-carbon energy technologies, renewable energy, promote greater role of energy efficiency and conservation from up-stream to down-stream (energy end-use), and provide efficient transmission and distribution systems.

Move the energy system towards using low carbon energy sources (fuel switching) to improve national energy mix by geographic and fuel supply diversity through government - industry partnerships.

Ensuring the security of energy supplies and the resilience of energy infrastructures so that energy is both available and affordable during the transition to low-carbon energy systems.

*) "World Energy Assessment: Energy and the Challenge of Sustainability". UNDP, UN Dept. of Economic & Social Affairs, World Energy Council (WEC).

The IPCC 5th Report - Summary for Policymakers
Working Group I – Climate Change 2013
The Physical Science Basis

IEEJ : June 2016 © IEEJ2016

B.5 Carbon and Other Biogeochemical Cycles

The atmospheric concentrations of carbon dioxide (CO_2), methane, and nitrous oxide have increased to levels unprecedented in at least the last 800,000 years. CO_2 concentrations have increased by 40% since pre-industrial times, *primarily from fossil fuel emissions and secondarily from net land use change emissions*. The ocean has absorbed about 30% of the emitted anthropogenic carbon dioxide, causing ocean acidification (see Figure SPM.4).

C. Drivers of Climate Change

Total radiative forcing is positive, and has led to an uptake of energy by the climate system. The largest contribution to total radiative forcing is caused by the increase in the atmospheric concentration of CO_2 since 1750 (see Figure SPM.5). {3.2, Box 3.1, 8.3, 8.5}

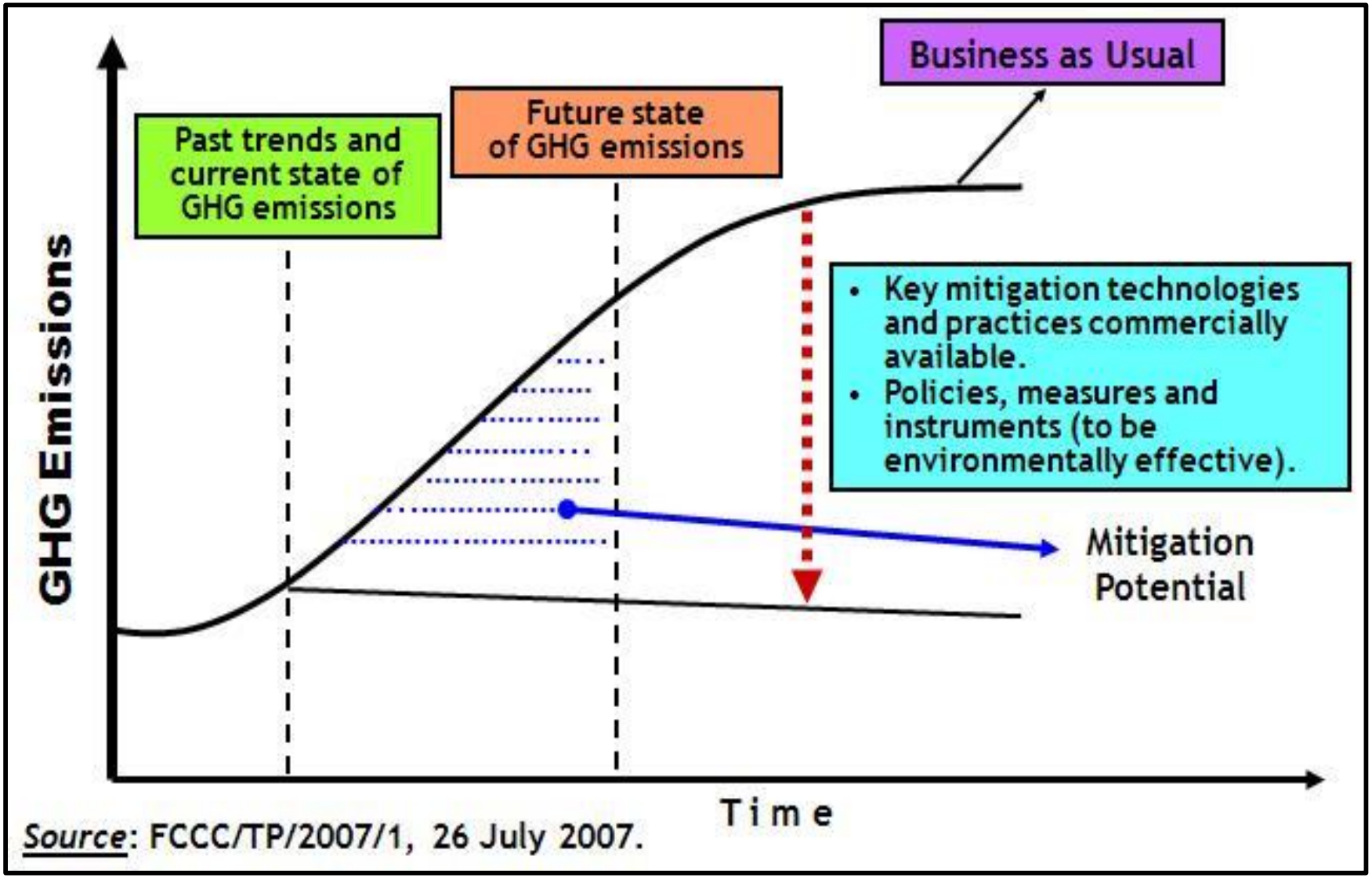
D.3 Detection and Attribution of Climate Change

Human influence has been detected in warming of the atmosphere and the ocean, in changes in the global water cycle, in reductions in snow and ice, in global mean sea level rise, and in changes in some climate extremes (Figure SPM.6 and Table SPM.1). *This evidence for human influence has grown since AR4. It is extremely likely that human influence has been the dominant cause of the observed warming since the mid-20th century*. {10.3–10.6, 10.9}

Linkages at National Level as Mitigation Actions

Coordination and Integration of Climate Actions

Mitigation Potential for a Specific Period of Time

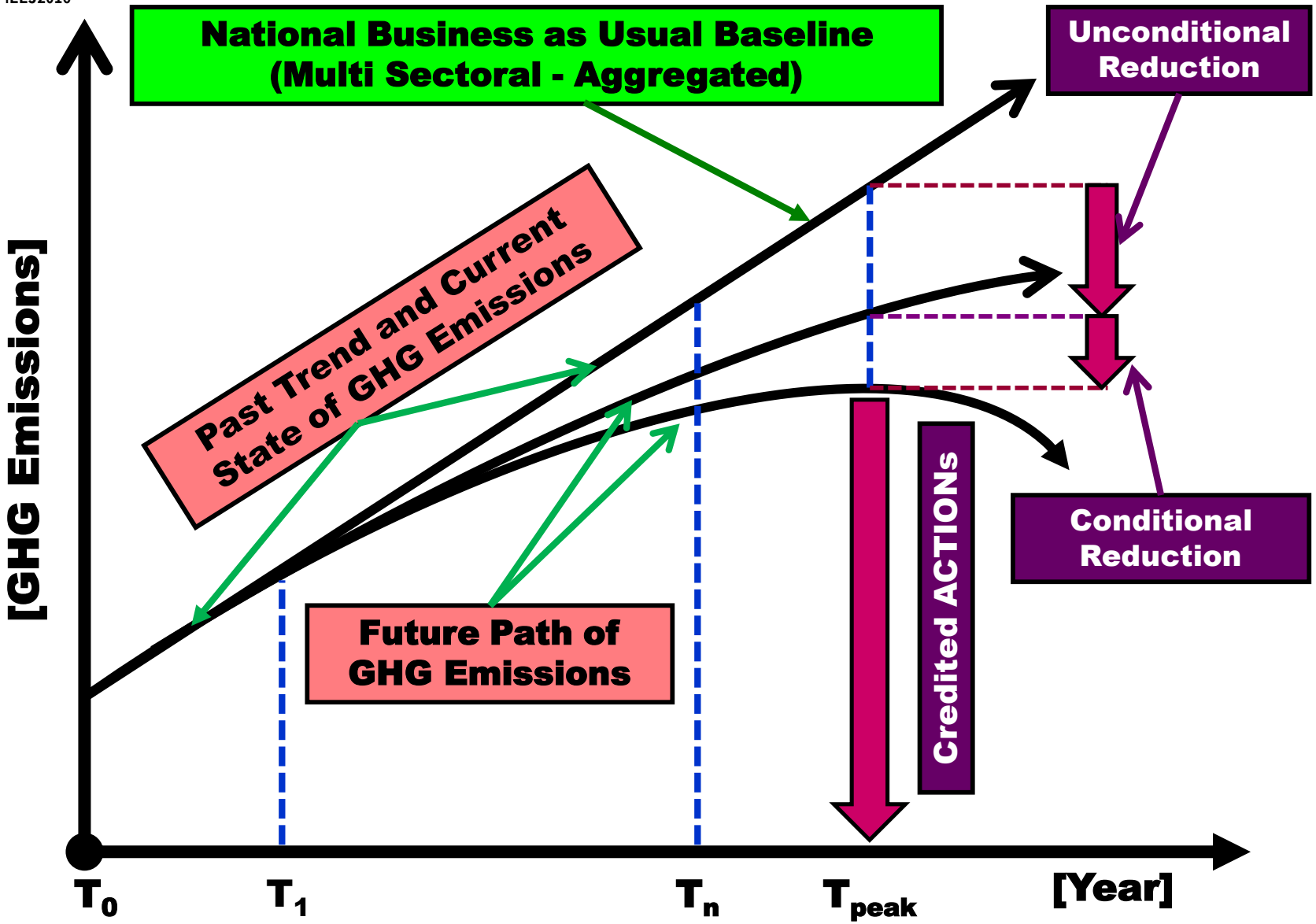


Article 3.4 of the Convention

The Parties have a right to, and should, promote sustainable development. Policies and measures to protect the climate system against human-induced change should be appropriate for the specific conditions of each Party and should be integrated with national development programmes, taking into account that economic development is essential for adopting measures to address climate change.

Integrate Climate Change Program into National Development Plan (Programmes)

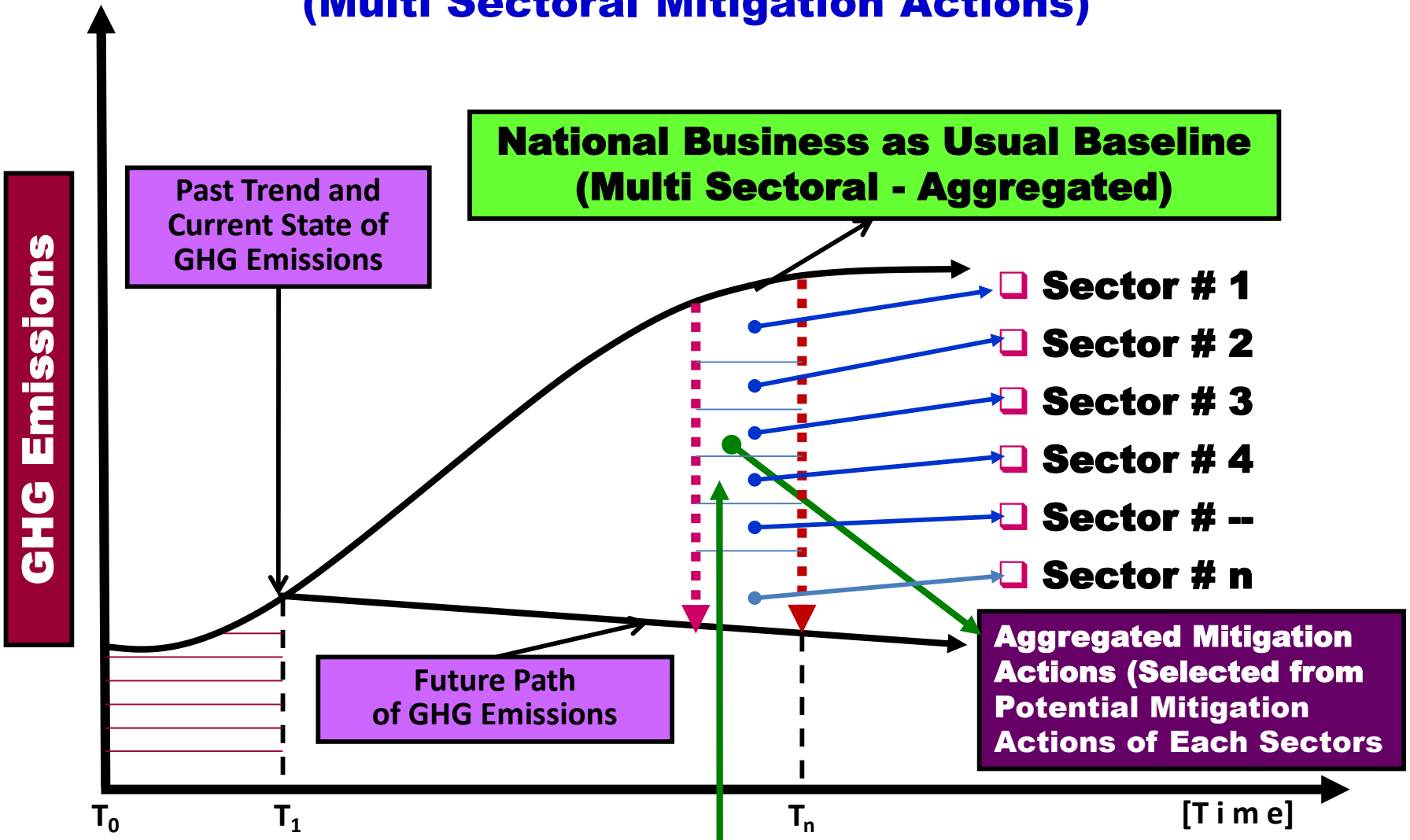
IEEJ：June 2016 © IEEJ2016



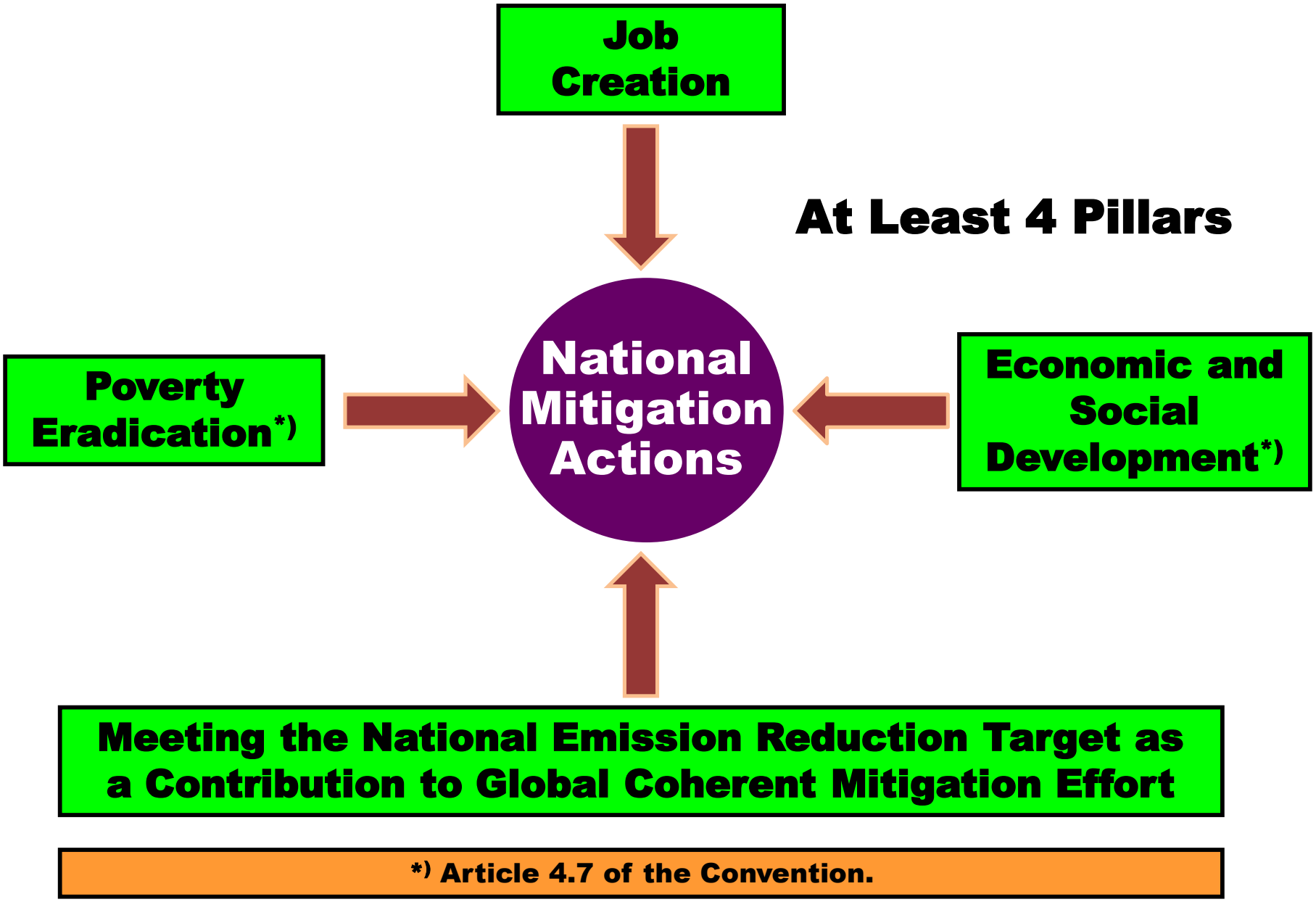
Possible National Mitigation Actions Composition of Developing Country Parties

Future Path of GHG National Emissions Reduction

(Multi Sectoral Mitigation Actions)



National integrated processes in meeting the national emission reduction target based on cost effectiveness and its implementability level.


Job Creation
At Least 4 Pillars
Poverty Eradication*)
National Mitigation Actions
Economic and Social Development*)
Meeting the National Emission Reduction Target as a Contribution to Global Coherent Mitigation Effort
*) Article 4.7 of the Convention.

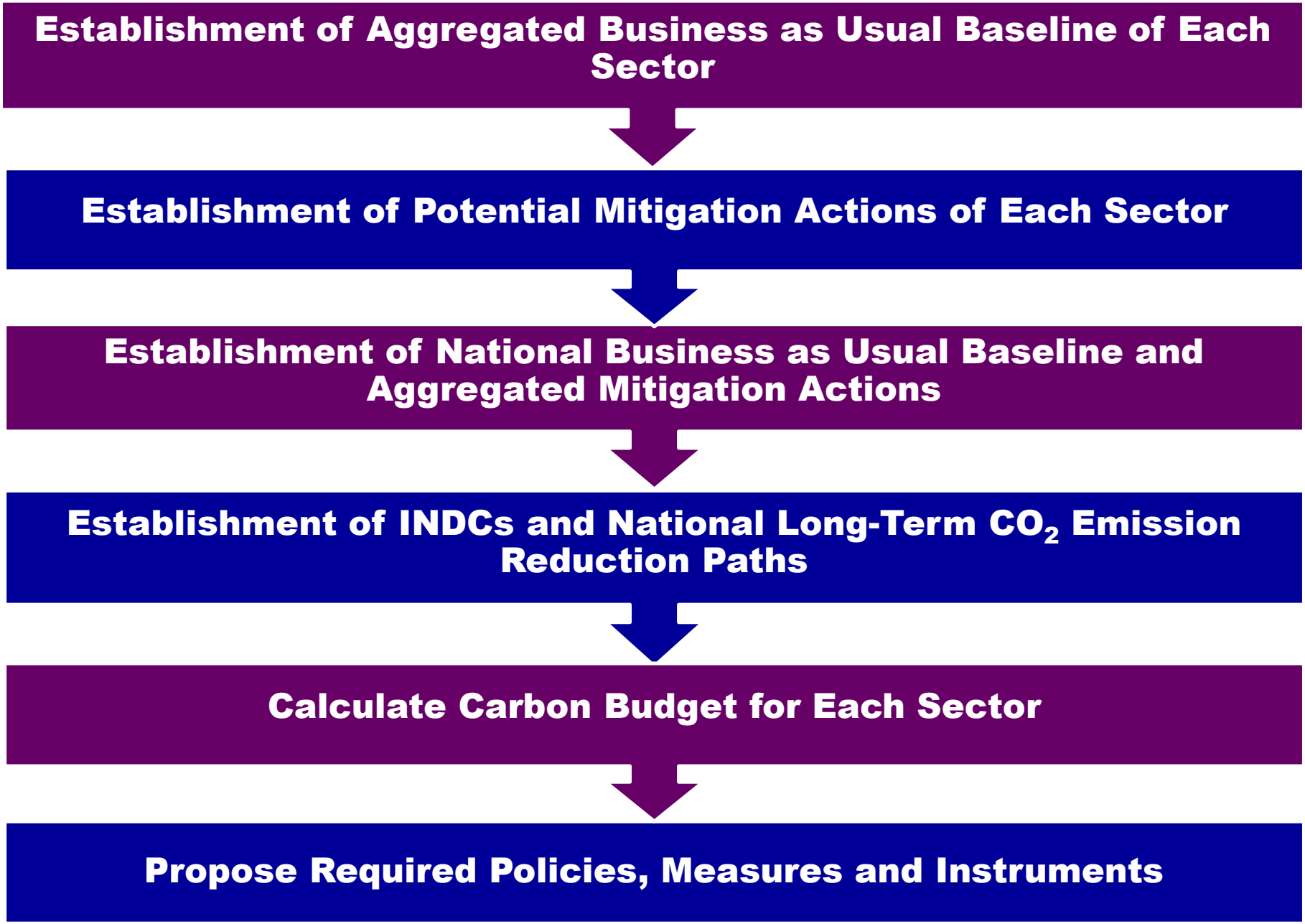

Establishment of Aggregated Business as Usual Baseline of Each Sector
Establishment of Potential Mitigation Actions of Each Sector
Establishment of National Business as Usual Baseline and Aggregated Mitigation Actions
Establishment of INDCs and National Long-Term CO_2 Emission Reduction Paths
Calculate Carbon Budget for Each Sector
Propose Required Policies, Measures and Instruments

Table of Resume Mitigation Actions
(Unconditional Reduction)

No	Sector	Type of Mitigation Action	Objective	Emissions Reduction (Estimation)		Co-Benefits
				[Mt CO_2]	[%]	
1						
2						
3						
4						
5						
6						
..						
N-1						
N						
TOTAL				xx.xx	xx.xx	

Table of Resume Mitigation Actions
(Unconditional Reduction)

No	Time Frame			Associated Costs	
	Required Completion Period	Operation / Implementation Date	Economic Life Time	Total Mitigation Cost	Abatement Cost
	[Years]	[xx,xx,xx]	[Years]	[US$]	[US$/$tCO_2$]
1					
2					
3					
4					
5					
6					
..					
N-1					
N					
TOTAL				xx,xxx.xx	xxx.xx

Table of Resume Mitigation Actions
(Conditional Reduction)

No	Sector	Type of Mitigation Action	Objective	Emissions Reduction (Estimation)		Co-Benefits
				[Mt CO_2]	[%]	
1						
2						
3						
4						
5						
..						
N-1						
N						
TOTAL				xx.xx	xx.xx	

Table of Resume Mitigation Actions
(Conditional Reduction)

No	Time Frame			Associated Costs	
	Required Completion Period	Operation / Implementation Date	Economic Life Time	Total Mitigation Cost	Abatement Cost
	[Years]	[xx,xx,xx]	[Years]	[US$]	[US$/$tCO_2$]
1					
2					
3					
4					
5					
..					
N-1					
N					
TOTAL				xx,xxx.xx	xxx.xx

Table of Resume Mitigation Actions
(Conditional Reduction)

No	Type of Support Received & Its Associated Costs				
	Capacity Building Cost	Development Cost	EPC Cost	Operation Cost	Decommissioning Cost
	[US$]	[US$]	[US$]	[US$]	[US$]
1					
2					
3					
4					
5					
..					
N-1					
N					
TOTAL	xx,xxx.xx	xx,xxx.xx	xx,xxx.xx	xx,xxx.xx	xx,xxx.xx

Some Key Elements of COP 21 Decision

II. Intended Nationally Determined Contribution

→ Expected Long-term Aggregate GHG Emissions Path; → Facilitative dialogue among Parties in 2018 to take stock of the collective efforts of Parties.

Para 17. ***Notes*** **with concern that the estimated aggregate greenhouse gas emission levels in 2025 and 2030 resulting from the intended nationally determined contributions do not fall within least-cost 2˚C scenarios but rather lead to a projected level of 55 Gt in 2030, and** ***also notes*** **that much greater emission reduction efforts will be required than those associated with the intended nationally determined contributions in order to hold the increase in the global average temperature to below 2˚C above pre-industrial levels by reducing emissions to 40 Gt or to 1.5˚C above pre-industrial levels by reducing to a level to be identified in the special report referred to in paragraph 21 below;**

Para 20. ***Decides*** **to convene a facilitative dialogue among Parties in 2018 to take stock of the collective efforts of Parties in relation to progress towards the long-term goal referred to in Article 4, paragraph 1, of the Agreement and to inform the preparation of nationally determined contributions pursuant to Article 4, paragraph 8, of the Agreement;**

III. Decisions to Give Effect to the Agreement - Mitigation

→ INDC pursuant to decision 1/CP.20 contains a time frame up to 2025 to communicate by 2020 a new NDC & to do so every 5 years thereafter; → INDC pursuant to decision 1/CP.20 contains a time frame up to 2030 to communicate or update by 2020 these contributions and to do so every 5 years thereafter.

Para 23. ***Urges*** **those Parties whose intended nationally determined contribution pursuant to decision 1/CP.20 contains a time frame up to 2025 to communicate by 2020 a new nationally determined contribution and to do so every 5 years thereafter pursuant to Article 4, paragraph 9, of the Agreement;**

Para 24. ***Requests*** **those Parties whose intended nationally determined contribution pursuant to decision 1/CP.20 contains a time frame up to 2030 to communicate or update by 2020 these contributions and to do so every 5 years thereafter pursuant to Article 4, paragraph 9, of the Agreement;**

Para 25. ***Decides*** **that Parties shall submit to the secretariat their NDC referred to in Article 4 of the Agreement at least 9 to 12 months in advance of the relevant meeting of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement with a view to facilitating the clarity, transparency and understanding of these contributions, including through a synthesis report prepared by the secretariat;**

COP 21 Decision
III. Decisions to Give Effect to the Agreement – Paragraph 27

The Information to be provided by Parties Communicating their INDCs, in order to facilitate Clarity, Transparency and Understanding

Agrees **that the information to be provided by Parties communicating their nationally determined contributions, in order to facilitate clarity, transparency and understanding, may include, as appropriate, inter alia, quantifiable information on the reference point (including, as appropriate, a base year), time frames and/or periods for implementation, scope and coverage, planning processes, assumptions and methodological approaches including those for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals, and how the Party considers that its nationally determined contribution is fair and ambitious, in the light of its national circumstances, and how it contributes towards achieving the objective of the Convention as set out in its Article 2;**

Time frames and/or periods for implementation	
Timeframe for implementation	Specify the year that the contribution will start and when it will end.
Scope and coverage	
Scope of gases included in the contribution	Carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), HFCs, PFCs, SF_6, NF_3 (delete any that do not apply).
Sectors/sources covered by the contribution	List the sector/sources from the IPCC Guidelines for greenhouse gas inventories[8] that apply; and any sectors/sources that have been excluded from the contribution.
Geographies covered by the contribution	If all national territories are included, this be stated; otherwise the geographies that have been excluded should be stated.
Assumptions and methodological approaches	
Methodology for emissions accounting	Refer to methodologies which are used for emissions accounting, e.g. 2006 IPCC Guidelines for National Greenhouse Gas Inventories.[9]
Global warming potentials	Refer to the document which specifies the global warming potentials, or else refer directly to the global warming potential which has been used, e.g. 100 year timescale in accordance with IPCC's 4th Assessment Report.
Approach for land use, land use change and forestry emissions	Approach for land use, land use change and forestry emissions State whether emissions (or net emissions[10]) associated with land use, land use change and forestry are included in the contribution. If so, information regarding the points below should be stated, where available: - the separation of the net emissions into emissions of CO_2 and other GHGs, and removals of CO_2; - which categories are included (i.e. forest land, cropland, grassland, wetland, settlements, other land); - which activities are included (i.e. afforestation, deforestation, reforestation; forest management, re-vegetation, cropland management, grazing land management; soil carbon management; agroforestry, other relevant activities); - which methodological approach (or approaches) for GHG estimation and reporting has or have been used (e.g. IPCC 2006 Guidelines, 2003 IPCC Good Practice Guidance). In case the approach for including land use, land use change and forestry has yet to be determined, this should be clearly stated, ideally with a timeframe for when this will be addressed.
Net contribution of International Market Based Mechanism	State whether international market-based mechanisms will be used to fulfil the contribution. If they will be used, the information below should be stated, if known: - what proportion of the emission reductions to be achieved by the contribution will be fulfilled by market-based mechanisms (e.g. % or Mt CO_2eq contribution); - what type of mechanisms are anticipated to be used (e.g. CDM units, JCM units, compliance units from emissions trading schemes, REDD+ etc); - what vintages of units will be used (e.g. only those relating the timeframe for implementation of the contribution); - how double-counting of those mechanisms will be avoided (e.g. being used by two countries or two institutions).

TEMPLATE FOR INFORMATION

Information to Facilitate Clarity, Transparency and Understanding (Applicable to All Forms of Contribution)

Reference: Emelia Holdaway & Chris Dodwell of Ricardo-AEA, Kiran Sura & Helen Picor of CDKN; "A Guide to INDCs".

TEMPLATE FOR INFORMATION

Information to Facilitate Clarity, Transparency and Understanding (Applicable to Action-Based Contribution)

Name of action	Base year	Methodology for assessing base year and anticipated future emissions	Anticipated emission reductions
Brief title for the activity	State the base year for the activity.	Refer to documents which provide the methodology for calculating base year emissions, and projecting or evaluating future emissions.	State the anticipated impact that the activity will have on emissions reductions over the time period for implementation of the INDC (e.g. XX Mt CO_2eq).

TEMPLATE FOR INFORMATION

Quantifiable Information on the Reference Point (Applicable to Outcome-Based Contribution)

Outcome-based contribution : base year emissions outcome	
Base year	State the base year for the contribution (whether goal-based or activity-based).
Base year emissions	State base year emissions (e.g. XX Mt CO_2eq).
Methodology for assessing base year emissions	Refer to documents which provide the methodology for calculating base year emissions.
Outcome-based contribution : fixed level outcome	
Base year	State that, by definition, a fixed level goal does not have a base year, but consider providing further detail regarding the definition of the fixed level goal.
Outcome-based contribution : base year intensity outcome	
Base year	State the base year for the contribution.
Base year emissions intensity	State base year emissions (e.g. XX Mt CO_2eq/GDP, XX Mt CO_2eq/capita).
Methodology for assessing base year emissions intensity	Refer to documents which provide the methodology for base year emissions.
Baseline and projection methodology for emission intensity factors	Refer to documents which provide the methodology for both the base year for the emission intensity factors (e.g. GDP, population) and as well as how these factors are expected to grow over time, including historical trends. Note that explanation only needs to be provided for the emission intensity factors that are explicitly included in the contribution.
Outcome-based contribution : baseline scenario outcome	
BAU emissions in the target year	State the BAU target year emissions (i.e. XX Mt CO_2eq).
Baseline projection methodology	State whether the baseline scenario is fixed or dynamic, and refer to documents which provide further details regarding the baseline projection methodology.
Projection methodology for low carbon scenarios	Refer to documents which provide the methodology for the low carbon scenarios.

Some Key Elements of Paris Agreement

Some Key Elements of Paris Agreement

GLOBAL GOAL

Article 2

1. **This Agreement, in enhancing the implementation of the Convention, including its objective, aims to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty, including by:**

   (a) Holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;

   (b) Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production;

   (c) Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.

2. **This Agreement will be implemented to reflect equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.**

Key Elements: Global Peaking – Communicate a NDC Every 5 Years	Article
Undertake and communicate ambitious efforts.	Article 3
Global Peaking and Balance of Emissions & Sink: Global peaking as soon as possible; Balance of emissions and sinks by the 2nd half of century; Successive NDC will represent a progression beyond the Party's current NDC & reflect its highest possible ambition.	Article 4.1 Article 4.2 Article 4.3
Developed country Parties should continue taking the lead by undertaking economy-wide absolute emission reduction targets; Developing country Parties move over time towards economy-wide emission reduction or limitation targets: Support shall be provided to Developing country Parties The LDC and SIDS may prepare and communicate strategies, plans and actions for low GHG emissions development reflecting their special circumstances; Mitigation co-benefits resulting from Parties' adaptation actions and/or economic diversification plans can contribute to mitigation outcomes under this Article.	Article 4.4 Article 4.5 Article 4.6 Article 4.7
Clarity, transparency & understanding, and Communicate a NDC every 5 years: Consider common time frames for NDC at its 1st session; A Party may at any time adjust its existing NDC with a view to enhancing its level of ambition.	Article 4.8 Article 4.9 Article 4.10 Article 4.11
Public registry; Environmental integrity, transparency, accuracy, completeness, comparability and consistency, and ensure the avoidance of double counting: Should take into account, as appropriate, existing methods and guidance under the Convention; Parties shall take into consideration in the implementation of this Agreement the concerns of Parties with economies most affected by the impacts of response measures, particularly developing country Parties.	Article 4.12 Article 4.13 Article 4.14 Article 4.15

Key Elements: Global Stocktake - ITMO	Article
Low GHG Emission Development Strategies (LGEDS): Formulate and communicate long-term LGEDS, mindful of Article 2 taking into account their CBDR & RC, in the light of different national circumstances. .	Article 4.19
Global Stocktake: Periodically take stock of the implementation of this Agreement to assess the collective progress towards achieving the purpose of this Agreement and its long-term goals; Global stocktake every 5 years; First global stocktake in 2023 and every 5 years thereafter; The outcome of the global stocktake shall inform parties in updating and enhancing, in a nationally determined manner.	Article 14.1 Article 14.2 Article 14.3
Market Mechanisms - Internationally transferred mitigation outcomes (ITMO): A voluntary basis in cooperative approaches that involve the use of ITMO towards nationally determined contributions; Promote sustainable development and ensure environmental integrity and transparency, including in governance, and shall apply robust accounting to ensure, inter alia, the avoidance of double counting, consistent with guidance adopted by the COP serving as the meeting of the Parties to the Paris Agreement; The use of ITMO to achieve NDCs under this Agreement shall be voluntary and authorized by participating Parties. To incentivize and facilitate participation in the mitigation of GHG emissions by public and private entities authorized by a Party; To contribute to the reduction of emission levels in the host Party, which will benefit from mitigation activities resulting in emission reductions that can also be used by another Party to fulfil its NDC; To deliver an overall mitigation in global emissions; Shall not be used to demonstrate achievement of the host Party's NDC if used by another Party to demonstrate achievement of its NDC.	Article 6.1 Article 6.2 Article 6.3 Article 6.4 Article 6.5

Key Elements: Technology Development & Transfer	Article
Parties share a long-term vision on the importance of fully realizing TD&E in order to improve resilience to climate change and to reduce greenhouse gas emissions; Noting the importance of technology for the implementation of mitigation and adaptation actions under this Agreement and recognizing existing technology deployment and dissemination efforts, shall strengthen cooperative action on TD&T; The Technology Mechanism (TM) established under the Convention shall serve this Agreement; A technology framework is hereby established to provide overarching guidance to the work of the TM in promoting and facilitating enhanced action on TD&T in order to support the implementation of this Agreement, in pursuit of the long-term vision referred to in paragraph 1 of this Article; Accelerating, encouraging and enabling innovation is critical for an effective, long-term global response to climate change and promoting economic growth and sustainable development. Such effort shall be, as appropriate, supported, including by the TM and, through financial means, by the Financial Mechanism of the Convention, for collaborative approaches to research and development, and facilitating access to technology, in particular for early stages of the technology cycle, to developing country Parties; Support, including financial support, shall be provided to developing country Parties for the implementation of this Article, including for strengthening cooperative action on TD&T at different stages of the technology cycle, with a view to achieving a balance between support for mitigation and adaptation. The global stocktake referred to in Article 14 shall take into account available information on efforts related to support on TD&T for developing country Parties.	Article 10.1 Article 10.2 Article 10.3 Article 10.4 Article 10.5 Article 10.6

Key Elements: Transparency	Article
In order to build mutual trust and confidence and to promote effective implementation, an enhanced transparency framework for action and support, with built-in flexibility which takes into account Parties' different capacities and builds upon collective experience is hereby established; Flexibility for developing country Parties, in light of their capacities; The transparency framework shall build on and enhance the transparency arrangements under the Convention, recognizing the special circumstances of the LDC and SIDS, and be implemented in a facilitative, non-intrusive, non-punitive manner, respectful of national sovereignty, and avoid placing undue burden on Parties; The transparency arrangements under the Convention, including NatCom; BUR; IAR &, shall form part of the experience drawn upon for the development of the modalities, procedures and guidelines under paragraph 13 of this Article; The purpose of the framework for transparency of action is to provide a clear understanding of climate change action in the light of the objective of the Convention as set out in its Article 2, including clarity and tracking of progress towards achieving Parties' individual NDCs under Article 4, and Parties' adaptation actions under Article 7, including good practices, priorities, needs and gaps, to inform the global stocktake under Article 14; Mandatory inventory as per IPCC good practice methodologies; Developed country Parties shall, and other Parties that provide support should, provide information on financial, technology transfer and capacity-building support provided to developing country Parties under Article 9, 10 and 11; Developing country Parties should provide information on financial, technology transfer and capacity-building support needed and received under Articles 9, 10 and 11	Article 13.1 Article 13.2 Article 13.3 Article 13.4 Article 13.5 Article 13.7a Article 13.9 Article 13.10

Key Elements: Transparency	Article
Information submitted by each Party under paragraphs 7 and 9 of this Article shall undergo a technical expert review (TER), in accordance with decision 1/CP.21. For those developing country Parties that need it in the light of their capacities, the review process shall include assistance in identifying capacity-building needs; The TER under this paragraph shall consist of a consideration of the Party's support provided, as relevant, and its implementation and achievement of its NDC. The review shall also identify areas of improvement for the Party, and include a review of the consistency of the information with the modalities, procedures and guidelines referred to in paragraph 13 of this Article, taking into account the flexibility accorded to the Party under paragraph 2 of this Article. The review shall pay particular attention to the respective national capabilities and circumstances of developing country Parties; The COP serving as the meeting of the Parties to the Paris Agreement shall, at its 1st session, building on experience from the arrangements related to transparency under the Convention, and elaborating on the provisions in this Article, adopt common modalities, procedures and guidelines, as appropriate, for the transparency of action and support.	Article 13.11 Article 13.12 Article 13.13

Flow of Required Tasks - BUR & ICA Developing Country Parties

Biennial Update Report (BUR)

i) National circumstances and institutional arrangements relevant to the preparation of the national communications; ii) National Greenhouse Gas inventory, including a national inventory report; iii) Mitigation actions and their effects including methodologies and assumptions; iv) Constraints and gaps, and related financial, technical and capacity needs; v) Description of the support needed and received; vi) Information on the level of support received for the preparation of the BUR; vii) Information on domestic MRV; viii) Any other relevant information.

Final SR noted by SBI and posted on UNFCCC.int

International Consultations and Analysis (ICA)

- Technical Analysis: i) Technical analysis of BURs by TTE; ii) Draft summary report (SR); iii) Review & comment on draft SR by the Party concerned; iv) Final SR by TTE and the Party concerned.
- A facilitative sharing of views in the form of a workshop under the SBI.

Record of the facilitative sharing of views

Aggregate Effect of the Intended Nationally Determined Contributions: An Update

Synthesis Report by the UNFCCC Secretariat

FCCC/CP/2016/2 – 2 May 2016

UN Updates Synthesis Report of National Climate Plans

Covers 189 Countries, 95.7% Global Emissions

Report / 02 May 2016

- **The UN Climate Change Secretariat has published an update to its synthesis report on the collective impact of national climate action plans (Intended Nationally Determined Contributions, or INDCs), submitted by governments as contributions to global climate action under the Paris Agreement.**
- **Since the publication last October of the 1st synthesis report prepared ahead of the Paris Climate Change Conference, 42 additional countries submitted their INDCs. The updated report now captures the overall impact of 161 national climate plans covering 189 countries and covering 95.7% of total global emissions. (The European Union and its 28 member States submit a joint INDC.)**
- **There are 137 of the 161 INDCs (85%) which include an adaptation component, reflecting a common determination of governments to strengthen national adaptation efforts.**
- **INDCs are expected to deliver sizeable emission reductions and slow down emissions growth in the coming decade. However, these are still not enough to keep the global temperature rise since pre-industrial times to below 2, or preferably 1.5 degrees Celsius.**

Some Key Elements – For Moving Forward

- ***Decides*** **to convene a facilitative dialogue among Parties in 2018 to take stock of the collective efforts of Parties in relation to progress towards the long-term goal referred to in Article 4, paragraph 1, of the Agreement ....**
- ***Urges*** **those Parties whose INDC pursuant to decision 1/CP.20 contains a time frame up to 2025 to communicate by 2020 a new NDC and to do so every 5 years ....**
- ***Requests*** **those Parties whose INDC pursuant to decision 1/CP.20 contains a time frame up to 2030 to communicate or update by 2020 these contributions and to do so every 5 years ....**
- ***Decides*** **that Parties shall submit to the secretariat their NDC referred to in Article 4 of the Agreement at least 9 to 12 months in advance of the relevant meeting of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement ....**

++++++++++++++++++

- **Each Party's successive NDC will represent a progression beyond the Party's then current NDC and reflect its highest possible ambition, ...**
- **Each Party shall communicate a NDC every 5 years in accordance with decision 1/CP.21 ....**
- **The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement shall undertake its first global stocktake in 2023 and every 5 years thereafter unless otherwise decided by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement.**

Some Associated Key Issues for the Way Forward at National Level to Support the Increasing Role of RE

Some Associated Key Issues for the Way Forward at National Level to Support the Increasing Role of RE

- Endowment resources mapping and its site characteristic to confirm the potential role of renewable energy.
- Integration of climate change policy into national energy policy to support renewable energy
- The availability of the long-term policy and its implementing rules to support renewable energy development & deployment and institutions to maintain its sustainable role.
- The availability of the financing instruments to support renewable energy development & deployment, i.e.: long-term financing, fit, system incentives, security package, etc.
- Assessments of its impact to electricity market to ensure undistorted price signal, and its cost effectiveness & its implementability level of its associated technologies including its challenges & barriers, its associated costs, land arrangement, environmental impact, job creation, poverty reduction, economic & social development, grid access, power purchase agreement, etc.
- Business Model particularly for of-grid system.

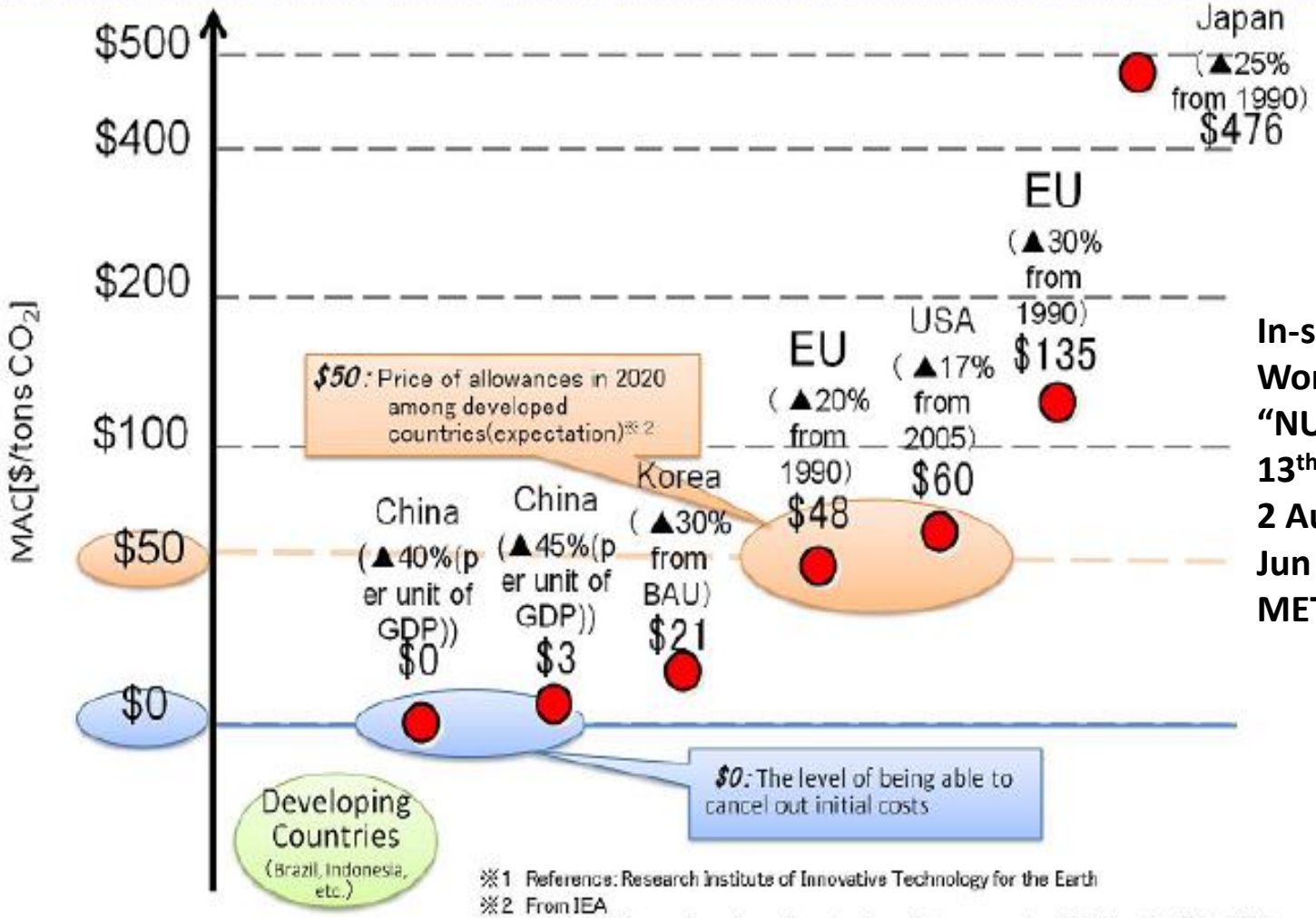
Some Associated Key Issues for the Way Forward at National Level to Support the Increasing Role of RE

- Integration of renewable energy into long-term capacity expansion and grid extension plans; Operation planning; Real time system operation to maintain stable, secure and economic of on/off-grid integration: balancing system, required system communications & controls; Asset management; Technical standards for connection applications.
- Power purchase agreement (PPA) based on balance engagement legally, commercially, financially and operationally.
- Integration of renewable energy deployment as mitigation action into long-term national energy mix to support the sustainable role of renewable energy as key part in preserving long-term demand and supply balanced.
- The availability of R&D; Technology dissemination & its required capacity building: Non-state actors (private sector) participation; Local manufactures (industry participation), and Long-term investment, etc.
- Increase participation of renewable energy as part of NDCs (for next strategic review) and maintaining and conducting its required process to fulfill the UNFCCC frameworks & processes.

To Support 5 Years Cycles Enhancement of NDC

1. Strengthen the implementability level of the current NDC (still part of under the next NDC), and improve quality of its required information according to COP 21 Decision, Paragraph 27.
2. Increase level of ambition to support achievement of global goal as a part of long-term global coherent actions.
3. The long-term emission trajectory of the next NDC follow the direction of global GHG emissions path compatible to keep temperature change below 2 ^{0}C relative to pre-industrial levels as a global goal.
4. Enhancement of national and sub-national institutions, which linkages to associated sectors at national & sub-national level; Establishment of rules, modalities and procedures for national & sub-national levels including its system arrangements & regular processes and its linkages to international (UNFCCC) MRV rules and procedures which taking into consideration enlargement participations of NSA/private sectors/publics.
5. Establish long-term deep carbonization roadmaps of its associated sectors at national & sub-national levels, including its carbon budget corresponds to the increasing level of ambition (Point 2), in which in energy sector by increasing roles of low-carbon and zero-carbon energy technologies, renewable energy, greater role of energy efficiency & conservation from up-stream to down-stream, provide efficient transmission and distribution systems, and move the energy system towards using low carbon energy sources (fuel switching) to improve national energy mix.

- Japan's target is conditional and inscribed under the CA (not KP 2CP).
- MAC of Japan's target is significantly higher than those of other AI and N-AI Parties.



※1 Reference: Research Institute of Innovative Technology for the Earth
※2 From IEA
※3 China proclaims to lower its carbon dioxide emissions per unit of GDP by 40-45% by 2020 compared to the 2005 level.

In-session Workshop on "NUMBER"; 13th AWG-KP, 2 August 2010; Jun Arima, METI, Japan.

To Support 5 Years Cycles Enhancement of NDC

6. Enhance national policies, measures and related instruments at national & sub-national levels to secure long-term national low-emissions path and climate-resilient development through integration into national policy of associated sectors to support achievement of global goal .
7. Enhance enabling environment to strengthen and enhance cooperation to achieve global goal collectively through mutual collaborations (cooperative approach) to raise level of ambition of the next NDC, particularly for strengthening finance, technology transfer and capacity-building to support conditional emissions reduction in which seek its engagement through ITMOs, possible through bilateral mechanisms and direct emissions trading (Paris Agreement, Article 6).
8. Through application of appropriate comprehensive and integrated modeling tools with minimize uncertainty in GHG emission scenario projections under system conditions multi-sectors, multi-scale and multi regional, for integrated mitigation assessment to establish the next NDC including its long-term CO_2 emission reduction paths to support achievement of global goal as national integrated processes in meeting the national emission reduction target based on cost effectiveness and its implementability level.
9. Strengthen the synergies between associated government institutions at national and sub-national levels including non-governmental stakeholders to institutionalize the next NDC development and implementation in the light of national circumstances as a part of national development plans.

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Thank You