Preparing for COP 21, Paris, a Low-Carbon Climate-Resilient Future and the New Climate Agreement: *Equity, the 'Principle of Common but Differentiated Responsibilities' ("CBDR") and Sustainable Development*

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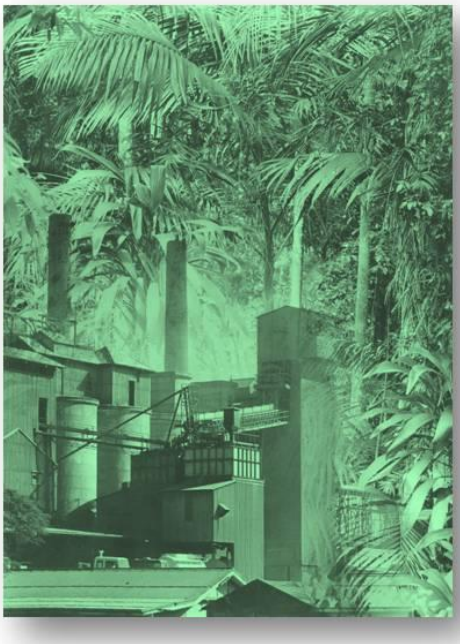
CBDR – a principle from international law- is a unifying concept for both the UNFCCC (at Article 3) and the Kyoto Protocol (at Article 10).

Sustainable development is a scientific concept that is also a common obligation under the UNFCCC (at Article 2, *"Objective"*) and the Kyoto Protocol (at Article 2, "*Achieving quantified emission limitation and reduction commitments*").



But, a greater focus has been placed on CBDR and commitments to cut CO_2 emissions, compared to finding sustainable solutions with mitigation and adaptation measures.

Yet, a sustainable solution would ensure that future risks from climate change to people, economies, and ecosystems would be equitably addressed in the new climate agreement.

The application of CBDR to cut GHG emissions under both climate treaties created a divide between developed and developing countries.

A greater responsibility was placed on developed countries to take the lead to cut emissions because of their higher share of historic global emissions.

However, the divide between developed and developing countries eventually became a "deadlock" at COP20, Lima in 2014!

To facilitate negotiation for the new climate agreement at COP21, it is clear that a problem-solving approach is essential to resolve this issue.

CBDR is a cornerstone for the contributions to be made by UNFCCC Parties to reduce CO_2 emissions to combat global warming.

CBDR is also a cornerstone for achieving sustainable development in the mix of mitigation and/or adaptation measures needed to limit global temperature rise to a maximum of 2°C above pre-industrial levels by 2100.

Finding a problem-solving approach to 'resolve the divide' should not be seen as the sole province of science; nor as the exclusive domain of law and policy. Rather, there needs to be a more effective integration between science, law and policy within a framework of the accepted principles and concepts of conflict resolution for environmental disputes.

CBDR, Sustainable Development & Climate Change

CBDR has two underlying elements:

> *"The first concerns the common responsibility of States for the protection of the environment, or parts of it, at the national, regional and global levels.*
>
> *The second concerns the need to take into account the different circumstances, particularly each State's contribution to the evolution of a particular problem and its ability to prevent, reduce and control the threat* **(1)***".*

The interdependence between CBDR and sustainable development emerged in Principle 7 of the *Rio Declaration on Environment and Development (1992)*:

> *"States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities.*
>
> *The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command"* (Emphasis added).

Equity, Sustainable Development and CBDR

Equity is a key element for both sustainable development and CBDR.

Principle 7 of the "*Rio Declaration*" highlights the link between sustainable development and global environmental management and protection. Equity - especially intergenerational equity - is central to the concept of sustainable development:

> "*The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations* (Principle 3, Rio Declaration)".

It is clear under UNFCCC Article 3.1 ("*Principles*") that equity is also a core element of CBDR for actions taken to combat climate change:

> *"The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country Parties should take the lead in combating climate change and the adverse effects thereof* (Emphasis added)*"*.

This interdependence between equity, CBDR, sustainable development and climate change needs to resonate with the new climate agreement and the "*ultimate objective*" of Article 2, UNFCCC **(2)**.

CBDR and Historic Contributions to Global Warming

Research undertaken by Matthews et al., (2014) extended the diffusion of knowledge on climate change by focussing on contributions to global temperature rise from CO_2 emissions from fossil fuel use and land use emissions (Table 1). The temperature rise pre-industrial to 2005 was 0.7°C.

Developed countries and major emerging economies led in the historical contribution to global temperature rise through the burning of fossil fuels. The top seven ranking UNFCCC Parties in Table 1 accounted for about 63% of historical global warming; the top 20 around 82%

For developing countries such as Brazil, Columbia, Venezuela, Indonesia and Nigeria, the dominant contribution to global warming originated from land-use emissions - the deforestation of tropical forests.

Table 1: ***Comparative Evaluation of Historical Rise in Global Temperature Rise (Pre-Industrial – 2005) and Carbon Dioxide Reduction Commitments***

UNFCCC Party	*Contribution to Global Temperature Rise: Pre-industrial to 2005 (°C)* (3)	*Intended Nationally Determined Contributions:* Post-2020 CO_2 Reduction Commitments (4)
1. USA	0.151°C	26-28% on 2000 levels by 2030
2. PR China	0.063°C	Emissions to peak in 2030 or earlier
3. Russian Federation	0.059°C	"25-30% of 1990 levels by 2030" (5)
4. Brazil	0.049°C	-
5. India	0.047°C	-
6. Germany	0.033°C	EU 40% on 1990 levels by 2030
7. UK	0.032°C	EU 40% on 1990 levels by 2030
8. France	0.016°C	EU 40% on 1990 levels by 2030
9. Indonesia	0.015°C	-
10. Canada	0.013°C	30% on 2005 levels by 2030
11. Japan	0.013°C	25.4% on 2005 levels by 2030
↓	↓	
19. Australia	0.006°C	26-28% on 2005 levels by 2030

INDCs and Post-2020 Climate Actions

In preparing for COP21, UNFCCC Parties have committed to publicly outline what post-2020 climate actions – *mitigation measures or [mitigation + adaptation measures]* – which they intend to take as their *Intended Nationally Determined Contributions* ("INDCs").

INDCs are crucial at COP21 to negotiate the new climate agreement for moving to a low-carbon, climate-resilient future.

As at 18 August 2015, 29 UNFCCC Parties – accounting for 58.5% of global emissions - have submitted INDCs: Column 3 of Table 1 has a summary of the INDCs already submitted by some UNFCCC parties.

The comparative evaluation in Table 1 clearly illustrates a significant imbalance between the major contributors to historic global temperature rise and their INDC commitments to cut CO_2 emissions.

Climate Change, Equity and Conflict Resolution

The comparative evaluation also raises a key issue for conflict resolution: to find a pathway that is the most appropriate to resolve the existing divide in responsibilities to cut CO_2 emissions - as well as offsetting this imbalance?

Should CBDR now be interpreted to be inclusive of the existing global situation: That is, to move forward and away from the "strict" interpretation of CBDR that prevailed from the time the UNFCCC came into force in 1994?

This could mean giving effect to an interpretation that is consistent with applying CBDR to changing scientific knowledge on historical contributions to CO_2 emissions by all UNFCCC Parties from pre-industrial to 2015?

To achieve this goal, a conflict resolution pathway based on a framework that focusses on equity - given equity is a key element for both CBDR and sustainable development - warrants consideration.

Such a pathway would have the following elements:

i. The foundation of the pathway would be to ensure that, under CBDR, the share in global effort to limit global temperature rise below 2°C by 2100 is equitable for all UNFCCC Parties.

ii. This would require the UNFCCC Parties, which have led in the historical contribution to global temperature rise, to take the lead by being influential in adopting INDCs that enable the world to move to a low-carbon, climate-resilient future.

iii. It is not simply a case for the INDCs of these Parties to offset their individual historic contributions to global temperature rise.s

iv. Rather, equity and sustainability should be the basis for sharing the responsibility for reducing CO_2 emissions.

v. INDCs by the Parties that have contributed to global warming need to be based on common ground, by adopting recommendations arising from the Fifth Assessment Report of the IPCC (2014):

"Scenarios reaching atmospheric concentration levels of about 450 ppm CO_2 by 2100 (consistent with a likely chance to keep temperature change below 2°C relative to pre-industrial levels) include substantial cuts in

anthropogenic GHG emissions by mid-century through large-scale changes in energy systems and potentially land use …

Scenarios reaching these concentrations by 2100 are characterized by lower global GHG emissions in 2050 than in 2010, 40 % to 70% lower globally".

vi. *The time span for achieving this goal would need to be uniform for all Parties and determined on the basis of their "respective capabilities" and "in light of different national circumstances."*

vii. *It is now increasingly recognized that the 2°C limit will require zero, overall global emissions by the second half of the century: 2050-2070. This is a long-term goal that the UNFCCC Parties that have largely contributed to historic, global temperature rise should be influential at COP21: By referring it to become part of the new climate agreement.*

Evaluating the Compatibility of the INDCs of UNFCCC Parties with Sustainable Development

A problem for moving to a low-carbon, climate-resilient future is how to evaluate whether an INDC is not only consistent with sustainable development – but also, the optimal contribution for achieving sustainable development?

The application of a contemporary methodology for evaluating sustainable development has its basis in principles and concepts from both policy ("*Multi-Objective Analysis*") and conflict resolution ("*Principled Negotiation*").

Multi-objective analysis is widely used as a decision-making aid for resolving public sector problems involving multiple and competing objectives e.g. Environmental policy, energy, water resources **(6)**.

Finding sustainable solutions requires the multiple and competing objectives of sustainable development – *ecological, economic, social (including cultural)* - to be counter-balanced i.e. to ensure equitable access for all UNFCCC Parties to sustainable development.

The potential for multi-objective analysis to evaluate the compatibility of INDCs with sustainable development and climate change is clearly evident

Linking a conflict resolution framework with two key elements of "principled negotiation" is the pathway for achieving this goal:

i. The INDC developed by each UNFCCC Party must be seen by all other Parties as a "*creative option for mutual gain*"; and

ii. "*To insist on the use of objective criteria*" as a pre-condition to evaluate each INDC.

For an INDC to be seen as a "*creative option for mutual gain*", it should be climate change-effective, enhance and promote the cost-effectiveness of mitigation and adaptation measures and be equitable relative to other INDCs.

The need for the evaluation to be based on "*objective criteria*" requires the multiple objectives for sustainable development to be framed, agreed to and endorsed before negotiations commence. The same objectives are used to evaluate every INDC.

These objectives provide a foundation for evaluating each INDC for its compatibility with sustainable development. Compatibility could be assessed as "*compatible*", "*non-compatible*" or "*uncertain*"; reasons should be given for these conclusions.

The following examples of multiple objectives for achieving sustainable development, which could be framed for COP21, are based on decisions and recommendations arising from past UNFCCC Conferences and publications.

I Ecological Objectives:

(a) *To ensure that the combined total of contributions in all INDCs are effective in stabilizing atmospheric CO_2 concentrations at a level that will limit global temperature rise below 2°C by 2100.*

(b) "*Green growth that is efficient in its use of natural resources, clean in that it minimizes pollution and environmental impacts, and resilient in that it accounts for natural hazards and the role of environmental management and natural capital in preventing physical disasters* **(7)**."

II Economic Objectives:

(a) To enhance and promote the cost-effectiveness of mitigation and adaptation measures to reduce CO_2 emissions whilst ensuring that these measures do not aggravate existing inequities within and across UNFCCC Parties to the new Climate Agreement; and

(b) To develop a strong, growing and diversified economy together with maintaining and enhancing international competitiveness that enable economic development to proceed in a sustainable manner.

III Social Objectives:

(a) To minimize the extent environmental costs and economic benefits are shared disproportionately between all UNFCCC Parties to the new climate agreement; and

(b) To protect the most vulnerable, alleviate poverty and create a future with prosperity for all.

IV Cultural Objectives:

(a) To provide financial and technology capacity-building support for developing countries for preparing their INDCs to reduce CO2 emissions for moving to a low-carbon, climate-resilient future and for achieving sustainable development; and

(b) To provide funds for vulnerable developing countries through an "Environmental Performance Bond" to cope or to adapt with any projected risks of climate change. If environmental damages occur, the bond would be used to rehabilitate or repair their environment.

SUMMARY

1.0 The new climate agreement, to be negotiated at COP 21, Paris in December 2015, needs to resonate with the interdependence between equity, CBDR and sustainable development in ensuring that global temperature rise is kept below 2^0C by 2100.

2.0 The multiple and competing objectives of sustainable development must be assessed and balanced equitably to ensure that future risks to people, economies,

and ecosystems, from climate change, have been effectively addressed in the new climate agreement.

3.0 The new climate agreement should represent the best of the available sustainable development options and secure as much available value as possible for all UNFCCC Parties.

Dr Ted Christie and Environmental Dispute Resolution:

Author of the cross-disciplinary (*law/science/negotiation*) book, "*Finding Solutions for Environmental Conflicts: Power and Negotiation*" (2008) Edward Elgar Publ., Cheltenham, UK.

Read more About Dr Ted Christie

End Notes and Hyperlinks

1. Centre for International Sustainable Development Law, McGill University Faculty of Law Montreal, Canada, (2002), 'The Principle of Common but Differentiated Responsibilities: Origins and Scope' http://cisdl.org/public/docs/news/brief_common.pdf

2. Article 2, UNFCCC: "The ultimate objective of this Convention and any related legal instruments that the Conference of the Parties may adopt is to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner".

3. H Damon Matthews, Tanya Graham, Serge Keverian, Cassandra Lamontagne, Donny Seto and Trevor J Smith, 'National contributions to observed global warming', 2014 Environ. Res. Lett. 1-9 doi:10.1088/1748-9326/9/1/014010
http://iopscience.iop.org/1748-9326/9/1/014010/pdf/1748-9326_9_1_014010.pdf

4. CAIT Climate Data Explorer, World Resources Institute, August 2015
http://cait.wri.org/indc/

5. Kelly Levin and Thomas Damassa, 'Russia's New Climate Plan'. World Resources Institute, June 2015
http://www.wri.org/blog/2015/04/russia%E2%80%99s-new-climate-plan-may-actually-increase-emissions

6. To read more on "Sustainable development and multi-objective analysis" ***(at pages 118-126)***, download the following Google eBook by clicking on the following link:
https://books.google.com.au/books/about/Finding_Solutions_for_Environmental_Conf.html?id=RTQNCPp6EeQC&redir_esc=y

7. 'A Guidebook to the Green Economy", Division of Sustainable Development, UNDESA, August 2012.
https://sustainabledevelopment.un.org/content/documents/GE%20Guidebook.pdf