

ISO and climate change: identifying opportunities

by Mark Barthel and
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In brief

“Climate change is one of the most significant issues facing the world community as it seeks to embrace sustainable development,” state the authors. And there are growing expectations of the part that the voluntary technical standards developed by ISO can play in mitigating the problem. In late 1997, at the United Nations Framework Convention on Climate Change’s (UNFCCC) third Conference of the Parties in Kyoto, Japan, ISO pledged its support to the international moves towards developing solutions.

ISO has since formed two groups as focuses for its support to the UNFCCC:

- *the ISO/TC 207 Climate Change Task Force, which is examining the potential application of the ISO 14000 series of environmental management standards to climate change, and*
- *the Ad Hoc Group on Climate Change. This is an ad hoc group of ISO’s Technical Management Board (TMB) which oversees the work of the organization’s standards-developing technical committees. The mandate of this group is to explore the potential application, adaptation and development of ISO standards in relation to climate change.*

The authors, who are, respectively Chair and Secretary of the Ad Hoc Group, report that ISO’s actions include the following:

- *ISO has developed an inventory of relevant existing ISO standards;*
- *ISO is identifying the potential application or adaptation of existing standards, and*
- *ISO is considering the need to develop new standards.*

Background and international response

Climate change is one of the most significant issues facing the world community as it seeks to embrace sustainable development. “The overwhelming majority of scientific experts, whilst recognizing that scientific uncertainties exist, nonetheless believe that human-induced climate change

is inevitable.”¹⁾ Climate change has implications for a number of the earth’s systems:

□ *Water resources*

Climate change could intensify water stress in arid and semi-arid areas and increase flooding in most regions of the world.

□ *Agricultural productivity and food security*

Agricultural productivity is projected to decrease in many tropical and sub-tropical countries.

□ *Natural ecosystems*

Climate change is projected to alter the structure and functioning of ecological systems and decrease biological diversity. Forests and coral reefs are particularly vulnerable to changes in climate.

□ *Human health*

Human health is sensitive to changes in food security, water supply and quality and the functioning and range of ecological systems.

□ *Sea level rise*

Climate change induced sea level rise is projected to have negative impacts on human set-

1) Robert Watson, Chair, Intergovernmental Panel on Climate Change, Presentation at the 6th Conference of the Parties to the United Nations Framework Convention on Climate Change, 13 November 2000.



Figure 1: ISO AHGCC's activities and deliverables.

lements, tourism, freshwater supplies, fisheries, exposed infrastructure, agricultural lands and wetlands, causing loss of land, economic losses and the displacement of tens of millions of people.

Climate change is caused by increasing concentrations of "greenhouse gases" in the earth's atmosphere, largely resulting from economic and demographic growth since the industrial revolution. In response, the United Nations Framework Convention on Climate Change (UNFCCC) was opened for signature at the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro, Brazil in June 1992 and came into force in March 1994.

Some 184 countries are signatories to the Convention that sets an ultimate objective of stabilizing greenhouse gases at "safe levels". The Convention, however, does not quantify such levels, but commits all Parties to implement policies and measures that mitigate climate change.

In December 1997, the Kyoto Protocol to the UNFCCC was adopted by the Parties to the Convention. The Kyoto Protocol commits so-called Annex I Parties (these include OECD – Organization for Economic Cooperation and Development – countries and

countries with economies in transition) to individual, legally binding targets (i.e. assigned amounts) to limit or reduce their greenhouse gas emissions, adding up to a total cut of at least 5 % from 1990 levels in the period 2008 to 2012. The Kyoto Protocol establishes three "flexibility mechanisms" designed to allow Annex I Parties to reduce the cost of meeting emission reductions targets by allowing them geographic flexibility:

1. Joint Implementation (JI)

JI involves projects to be undertaken in Annex I countries. The "Emission Reduction Units" (ERU's) generated from each project can be deducted from the Annex I host country's assigned amount and added to the investing country's assigned amount, with the overall Annex I assigned amount remaining unaffected.

2. Clean Development Mechanism (CDM)

CDM refers to projects undertaken in non-Annex I Party countries. CDM projects must assist non-Annex I Parties in reducing emissions and in achieving sustainable development. "Certified Emission Reductions" (CER's) credits resulting from CDM projects can be acquired by An-

nex I Parties and added to their assigned amounts.

3. International Emissions Trading (IET)

IET enables the buying and selling of assigned amounts between Annex I countries.

While the Kyoto Protocol's flexibility mechanisms were agreed to in principle in 1997, their operational details continue to be fleshed out. The recent 6th Conference of the Parties to the UNFCCC held in The Hague, Netherlands, failed to reach consensus in establishing the rules and procedures for the Protocol's mechanisms.

ISO's response

Since 1998, ISO has been exploring the potential role of voluntary standards in facilitating implementation of the United Nations Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol. To this end, ISO has established two groups:

- ISO/TC 207 Climate Change Task Force

This was established in 1998 with a mandate to explore the potential application of the ISO 14000 series of environmental management standards to climate change. ISO/TC 207 is the ISO

technical committee responsible for the ISO 14000 series.

- *ISO/TMB Ad Hoc Group on Climate Change (AHGCC)*

This is an ad hoc group of ISO's Technical Management Board (TMB) which oversees the work of the organization's standards-developing technical committees. Set up in 2000, the AHGCC has a mandate to explore the potential application, adaptation and development of ISO standards in relation to climate change.

The secretariat of both groups is held by the Standards Council of Canada (SCC), which contracts out their actual operation to the Canadian Standards Association (CSA) International.

ISO/TMB Resolution 30/2000 defines the scope of the Ad Hoc Group on Climate Change's (AHGCC) as being to:

- Coordinate and report on ISO activities relevant to climate change. To provide a focal point for ISO's relations with the Secretariat of the UNFCCC, the Climate Technology Initiative (CTI) launched by the Organization for Economic Cooperation and Development (OECD) and the International Energy Agency (IEA), and other relevant bodies to further the aims and objectives of the UNFCCC and any underlying legal and policy instruments (e.g. the Kyoto Protocol).
- Establish and maintain an inventory of ISO standards relevant to climate change.
- Report and provide strategic advice to the Technical Management Board.
- Identify the potential application/adaptation of existing ISO standards to the implementation of the UNFCCC and any underlying legal and policy instruments (e.g. the Kyoto Protocol).
- Consider the need for any new work items within ISO which may facilitate the implementation of the UNFCCC and any underlying legal and policy instruments (e.g. the Kyoto Protocol).

The activities and deliverables of the ISO AHGCC activities are represented in Figure 1.

The ISO AHGCC is comprised of representative members of TMB member bodies: Chair, Standards Council of Canada (SCC). Secretary, SCC. Members: AFNOR (France), JISC (Japan), ANSI (USA), SABS (South Africa), BSI (United Kingdom), SAI (Australia), DIN (Germany), SCC (Canada), DSM (Malaysia), SIS (Sweden), ICONTEC (Columbia), SNV (Switzerland), Clean Technology Initiative (CTI – a multilateral initiative of the OECD, International Energy Agency and the European Commission), UNFCCC Secretariat.

Since its inception in early-2000, primary AHGCC activities have included:

- Liaison with the UNFCCC Secretariat, Parties to the Convention, CTI and other relevant bodies,

- Analysis of market demand for any new ISO products, and
- Holding of AHGCC meetings in GB-London (March), SE-Stockholm (June), FR-Lyon (September) and NL-The Hague (November).

Potential use of existing ISO products

Two primary areas where the use of existing ISO products may facilitate the implementation of the UNFCCC and its Kyoto Protocol have emerged:

- *Product/performance standards*

The AHGCC has developed a database of ISO technical committee standards and work programmes potentially relevant to government and business in designing and implementing climate change policies and measures.

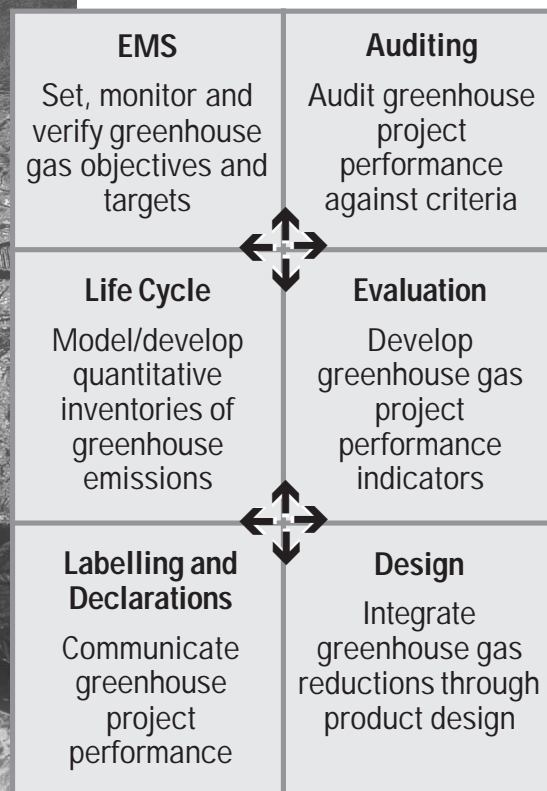


Figure 2: Potential application of the ISO 14000 series to climate change projects

- Participation in UNFCCC Subsidiary Body (SB) and Conference of the Parties (COP) events,
- Development of an inventory of potentially relevant ISO standards,
- Analysis of the potential application of existing ISO accreditation/conformity assessment frameworks and/or standards to climate change,

- *Environmental management standards*

The AHGCC and CCTF have developed specific guidance on how the existing ISO 14000 series of standards may be used to manage greenhouse gas mitigation projects (Figure 2).

Potential adaptation of existing ISO products

The Kyoto Protocol's CDM requires independent third party certification at two stages of the project cycle:

- *Project validation*

Third party "operational entity" validates project design in accordance with, *inter alia*, eligibility, baseline and monitoring/verification plan requirements.

- *Project verification/certification*

Third Party "operational entity" verifies/certifies project performance against validated design.

The Kyoto Protocol's negotiating text outlines the architecture, rules and procedures for a CDM accreditation and conformity assessment system. The AHGCC continues to discuss the potential utility of adapting existing ISO/IEC Guides on conformity assessment (Figure 3) to meet the needs of the Parties to the UNFCCC.

Potential development of new ISO products

The AHGCC has been mandated "to consider the need for any new work items within ISO which may facilitate the implementation of the UNFCCC and any underlying legal and policy instruments (e.g. the Kyoto Protocol)".

The AHGCC continues to discuss market needs with national standards bodies and relevant organizations and has not drawn any

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conclusions with regard to the need for new ISO products. Potential areas where standardization – including the harmonization of best practice – may facilitate implementation of the UNFCCC and its Kyoto Protocol includes:

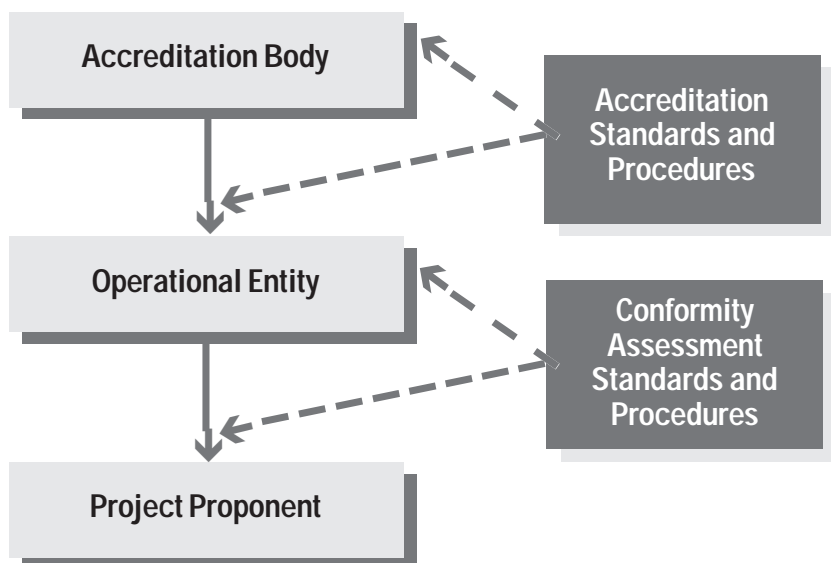
- Greenhouse gas project monitoring and verification/certification protocols,
- Guidelines for assessing greenhouse gas project baseline methodologies,
- Emissions trading transfer/acquisition contracts,
- Guidelines for greenhouse gas accounting inventories and registries, and
- Guidelines for assessing/designing environmentally sound technologies.

Summary

"The time has come to accept that global warming is a credible enough threat to require a public policy response."²⁾ The international community continues to develop the rules and procedures enabling implementation of a coordinated international response to climate change under the UNFCCC and its Kyoto Protocol.

The ISO AHGCC, in close coordination with relevant stakeholders, continues to identify, analyze and strategize on how ISO products can best facilitate this process. The AHGCC plans to formally present findings to the TMB in early 2001. 

²⁾ *The Economist*, 18-24 November 2000, p. 19.



- General requirements for assessment and accreditation of certification/registration bodies (ISO/IEC Guide 61:1996)
- General requirements for bodies providing accreditation of inspection bodies (ISO/IEC TR 17010:1998)
- Code of good practice for conformity assessment (ISO/IEC Guide 60:1994)
- General requirements for bodies operating assessment and certification/registration of quality systems (ISO/IEC Guide 62:1996)
- General requirements for bodies operating assessment and certification/registration of environmental management systems (EMS) (ISO/IEC Guide 66:2000)

Figure 3: ISO/IEC conformity assessment Guides potentially adaptable for use in the CDM.