A Comparison of ISO 14064 Part 1 and the GHG Protocol Corporate Module

This paper attempts to identify similarities and differences between two influential global approaches to organizational (sometimes called "corporate" or "entity-level") greenhouse gas accounting. ISO 14064 Part 1, "Greenhouse gases: specification for the quantification, monitoring and reporting of organization emissions and removals", is under development within Working Group 5 of the International Organization for Standardisation's (ISO) Technical Committee 207, which expects to publish the standard in 2005. The Greenhouse Gas Protocol Corporate Module was developed by a consortium convened by the World Resources Initiative and the World Business Council on Sustainable Development, and will soon issue its second revision.

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The paper solely represents the views of the author. It looks at the second Working Draft of ISO 14064 and the draft revised version of the Greenhouse Gas Protocol (GHGP) as at December 2003.   The contents of the two documents are compared issue-by-issue in table format.

Summary
Overall the 2 approaches are very similar in content and intent.
There are no major or fundamental differences between the 2 documents.
The ISO document is shorter, blunter and less descriptive. The GHGP is longer, more descriptive, and contains motivational reasons for GHG reporting, reflecting its aspirational character.
A company reporting against ISO requirements could very well be informed by the GHGP guidance and context. In the majority of cases a company GHG report that meets ISO needs would also meet GHGP needs, and vice versa.
The primary remaining area of difference (as at late 2003) regards treatment of indirect emissions. A review of reporting requirements would also enable greater consistency between the 2 documents.

14064 Part 1 (Entity)	Revised GHG Protocol	Comments
Principles		
ISO covers the idea of boundary setting under 'completeness' principle	Includes the principle of 'Relevance' – primarily about boundary setting.	Principles of completeness, consistency, accuracy and transparency are in both ISO and GHGP, and have essentially the same meaning in each. Overall, the intent of the principles is the same for both.
Organisational boundaries		
Uses the 'facilities' building blocks approach, and includes a descriptive diagram. Adds 'financial boundaries' as an option for consolidating data.	Provides much greater guidance on consolidation.	Very similar in intent – using facilities or operations to consolidate up to a company level. GHGP provides considerably more guidance and examples.
GHG Emission and removal boundaries *or* Operational boundaries		
Specifies 6 Kyoto gases.	Specifies 6 Kyoto gases in Chapter 9 reporting section.	Same.
Classifies emissions as: Direct Energy indirect Other indirect	Classifies emissions as: Scope 1 Scope 2 Scope 3	Direct = Scope 1 (same) Energy indirect ~ Scope 2 – Scope 2 limited to electricity heat/cool or steam. ISO Energy indirect is this + 'fossil fuel derived energy products'. These would be the same in the vast majority of cases. In some cases it may introduce inter organisational discrimination, depending on the emission factors used. Other indirect = Scope 3 (except where differences from Scope 2 as above).
Direct = Shall (reporting is required)[1] Energy indirect = currently shall/should (undecided) Other indirect = should/may	Scope 1 = Shall Scope 2 = Shall/should, but likely to be shall Other indirect = should	Same Not clear if same or not, pending decision. Effectively the same – not high importance in either.

[1] Language stating that an organization "shall" do something indicates that the action is required in order to conform to the standard. "Should" indicates that the action is recommended, while "may" indicates that an action does not contradict the standard but is not recommended.

(undecided)		There is an issue of whether or not to specify Full-Fuel-cycle emissions factors to energy indirects, or to use only the emissions from upstream fuel use (eg burning of coal for electricity generation), or some point in between. GHGP spent several pages and an appendix trying to handle transmission and distribution losses – if Energy indirects/Scope 2 are a 'shall' it is likely necessary to define where upstream emission factor boundaries are drawn (this is not currently done in ISO). The definition of energy indirects in the GHGP would be more restrictive than the ISO approach if a partial or full fuel cycle emission factors were specified as it does not cover petroleum product or gas manufacturing and distribution related emissions.
Provides very little guidance on how to decide what to report – implicit assumption is that this will be guided by jurisdictional requirements.	Provides much more guidance on how & why to select which emissions.	Difference in style and format etc, but not fundamental difference in content.
Quantification approach *or* Chap7 Identifying and calculating GHG emissions		
6 step process from identification to consolidation.	5 step process from identification to consolidation.	Approaches are essentially the same. ISO is more explicit on selecting or developing calculation approaches, GHGP refers to calculation tools that WBCSD/WRI have also developed. ISO includes judgement on which methods of estimation are more accurate, GHGP provides much more guidance on identifying indirect emissions.
Handling projects		
Gives a set of rules as to how projects shall be handled relative to the inventory. Does	Discussed under emissions reductions chapter 5. Not as explicit as ISO, more focused	Approaches are essentially the same, though ISO is more explicit. Both require any imports/exports be clearly stated, and internal projects are optional (may) to

not specify how project reductions etc should be quantified. Includes instructive diagrams and tables. Does not allow 'net' inventories.	on transparent public reporting. Includes examples of project regimes (eg CDMs). Not as explicit as ISO, but must have imports etc reported under a separate section, implying no 'net' inventories.	report, as they are already accounted by changes to the inventory. Both approaches make it clear that any external projects must not confuse or detract from the clarity and transparency of the inventory.
Base year inventory adjustment *or* Tracking emissions over time		
Requires verifiable data and justification for base year selection.	Requires verifiable data and justification for base year selection.	Same.
Allows for a multi-year average to establish a base year.	Allows for multi-year average to establish a base year.	Same.
Requires a base year adjustment policy.	Requires a base year adjustment policy.	Same.
Provides guidance on adjusting base year when/if there is significant change in organisational boundaries, ownership, or methodologies.	Provides guidance on adjusting base year when/if there is significant change in organisational boundaries, ownership, or methodologies.	Same – but GHGP has concept of 'significant threshold', and gives more guidance as to the sorts of things that may lead to adjustments, and examples of how such adjustments should be made.
Accounting for emissions reductions		
Does not enter the debate. Refers to external and internal projects, removals, and changes in emissions over time, but does not describe estimation methods for reductions.	Does not specify a particular method for accounting reductions, but gives 3 page discussion of why you would calculate reductions, and some of the methods that may be applied (such as	Same in the sense that neither document sanctions a method for calculating reductions, though GHGP gives much more context and guidance on the issue.

	CDMs, JI etc). Also discusses 'targets' (below).	
Assessing and reducing uncertainty or Inventory quality and inventory uncertainty (in Chap8)		
Recommends (should) an uncertainty assessment and management and reduction of uncertainties. Refers to separate document (ISO 1995) for further guidance.	Does not explicitly recommend undertaking uncertainty assessment, but spends nearly 3 pages explaining why it is a good thing to do. Refers to separate document (within GHG Protocol initiative) for further guidance.	Effectively the same in the sense that both documents recognise that this is important, but both also recognise the limitations of uncertainty usage in a highly uncertain field. * Note – we have not assessed the ISO uncertainty guidance against the GHG Protocol initiative guidance.
GHG inventory quality management or Managing inventory quality (Chap8)		
States explicitly that the organisation shall establish and maintain quality management procedures. Provides a list of elements of the system that 'shall be considered' Provides requirements for document retention etc	Does not explicitly require but recommends in tone of "…some type of quality management system is a necessity". Provides list of things that should be considered. Provides strong recommendation "…is essential" for documentation.	GHGP is not as mandatory as ISO, but provides far greater compelling reasoning and encouragement for quality management, and provides greater guidance. The overall thrust of intent of the 2 documents is in effect the same, though ISO is more mandatory.
GHG reporting or Reporting GHG emissions (Chap 9)		
Focuses reporting on needs of users – either schemes participated in, or public reporting. Contains 9 required steps for consideration in planning a	Has focus of reporting on public disclosure and transparency, and provides guidance on intent of information to the audience. Contains discussion of 'why' to report, but no list of	Reference back to principles, and the need for transparency are in both.

report. Contains 19 'shall' elements for a report, of these, 5 are not included in GHGP: a) description of organisation; b) authorship of report; f) separate quantification of removals (though this is implied in earlier chapters) j) reporting of quantified internal projects r) declaration prepared in accordance with ISO14064 && 1 element that is a 'should' in GHGP: s) statement on whether emissions have been verified. Contains 10 'should' elements for a report, of these, 5 are not included in GHGP: a) company mission statement c) description of scheme requirements d) report planning information h) description of monitoring procedures i) statement from CEO	required steps in planning. Contains 18 'shall' elements, 5 of these not included in ISO: ~ Subdivide emissions inventories where this provides greater transparency ~ Report emissions attributable to fixed asset investments ~ Report emissions from sale of energy (that will be Scope 2 for someone else) ~ Report Scope 2 emissions imported and then exported ~ Report emissions from burning biomass/biofuels Contains 9 'should' elements for a report, of these, 3 are not included in ISO: ~ performance against a target (though this could be part of company policy or scheme requirement) ~ Report non-Kyoto greenhouse gases ~ provide contact person	Of a total of 37 'shall' elements (from both), 27 of these are effectively the same. Of a total of 19 'should' elements (from both), 11 are effectively the same. Of a total of 56 reporting elements (from both), 38 are effectively the same. Further, if closer examination of the elements is undertaken, the most important aspects – which gases to report and how etc. – are almost identical, and the actual similarity between reporting requirements is even closer than the numbers above suggest. A company GHG report that met ISO requirements, would for the majority of cases also meet GHGP requirements. The main difference would appear to be shall/should on energy indirects.
Verification *or* Verification of GHG emissions (Chap10)		
Recommends (should) undertaking verification.	Largely silent on whether or not verification should be undertaken, but talks about benefits of verification, and the need for reliable	ISO assumes verification is likely to be undertaken – GHGP does not. ISO is very matter-of-fact and dry, GHGP describes the need, use and basic concepts of verification – ISO has

Provides guidance on 1st party verification.	information – infers that verification is a good thing, without explicitly recommending it. Discusses verification in context of integrating the need for verification into planning systems for information reporting.	the benefit of a separate standard devoted to verification, whereas the GHGP needs to provide more context in this part.

While the approach to verification is quite different, there are not fundamental disagreements between the 2 documents. |
Provides some guidance on preparation for 3rd party verification.	Provides some guidance on preparation for 3rd party verification.	
Voluntary greenhouse targets (ChapX)		
ISO does not address voluntary targets at all.	GHGP dedicates several pages to describing why and how to set a target, types of targets, and how to report against a target.	This is a major difference between the 2 documents, and reflects the 'aspirational' nature of GHGP against the 'standardisation' of ISO. There are no elements of the GHGP chapter on targets that substantively disagrees with other sections in the ISO document - there is some high level overlap with the discussion of internal and external projects.
Guidance on accounting of indirect emissions from purchase sale and consumption of electricity (AppX)		
No guidance on this is provided in ISO – decision on providing such guidance would need to be taken in light of the should/shall decision on energy indirects.	4 pages dedicated to guidance here.	This is a difference arising from the difference noted above in handling of energy indirect emissions. If ISO decides to take a 'shall' for energy indirects, it will need to provide some guidance on boundaries (upstream) of indirect emissions, but it is unlikely ISO would seek as much text as provided in this Annex.