



Issue Brief: Taking Quality Assurance Seriously in Carbon Markets

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The Greenhouse Gas Management Institute was founded to develop the essential human capital that will ensure that data underpinning GHG mitigation projects, carbon markets and domestic or international policies are both effective and credible.

GHG Verification Issues for Policymakers

The Greenhouse Gas Management Institute strongly recommends that, in the design of climate change policies and programs, policymakers formally address the following quality assurance issues:

1. Individual verifiers (i.e., auditors) and compliance reviewers, especially those working on carbon offset projects, should be required to complete rigorous training programs, leading to a professional certification. Personnel requirements such as these have already been established as best practice by the Regional Greenhouse Gas Initiative (RGGI) and the national greenhouse gas (GHG) emissions inventory review process under the Kyoto Protocol. Other existing and future GHG programs should follow and expand upon this best practice.
2. Training programs for individual verifiers and reviewers of GHG emission reports and data must be improved in their depth, rigor, and availability if GHG emission markets and other climate change policies are to avoid the problems seen in the accounting and financial industries.
3. Governments, the United Nations, the private sector, and NGOs must work together to develop robust oversight structures for GHG emission markets and other programs. These institutional structures should include rigorous and continuous monitoring of both the accreditation of auditing organizations and the certification of individuals involved in reporting and assuring GHG emissions data.
4. Professional codes and policies should be developed that address issues of competency, professional ethics, and conflict of interest for GHG management professionals.

Background on the Issue of GHG Verification

Auditing and other quality assurance systems are essential features of a complex marketplace, providing confidence to stakeholders that the quality of assets, as well as associated investment risks, are well understood by buyers, sellers, regulators, and other stakeholders. Recent tumult in global financial and corporate accounting systems has provided ample evidence of the importance of government oversight and regulation, quality assurance processes, institutions, professional competency, and ethics. As greenhouse gas (GHG) emission markets depend on the political process for both their creation and continued existence, they are particularly sensitive to public confidence and are unlikely to survive a crisis similar to the financial accounting scandals of the Enron or more recent crediting rating agency eras.



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GHG emission markets are not immune from these problems. In fact, there is widespread acknowledgement that environmental markets are likely to be more susceptible to quality assurance failures than traditional financial markets because the underlying asset is actually a public good, corresponding to a ton of an invisible gas. In the case of GHG emission markets, the commodity traded is a permit to pollute or a credit for a reduction in pollution to the atmosphere. Verification of claims in environmental markets make it possible to convert what is naturally a public good into something that can be traded like a privately held asset. In environmental markets without rigorous oversight, there is no incentive for buyers and sellers to assure the quality of the assets they are trading because the only victim of poor quality is the public good. Buyers get a cheaper price and sellers incur fewer pollution reduction costs when an environmental asset does not accurately represent real emissions or emission reductions. The environment loses when both buyers and sellers let quality slip. Therefore, it is the duty of quality assurance professionals (e.g., verifiers and regulators) to safeguard the marketplace by assuring that environmental assets represent real public goods.

Insufficient attention has been given to this issue, even though GHG emission markets are now several years old. The model that has been used to date is that of the independent financial or quality standard auditor. Yet, verifying GHG emissions is technically more complex than financial data, requiring a range of engineering and other scientific skills.

International standards address the subject of GHG verification (e.g., ISO 14064, 14065, 14066, and ISAE 3000); however, these are highly general “process” standards that lack the detail and specificity necessary to provide sufficient quality assurance even if they are explicitly followed.

GHG emissions are poised to become the largest traded commodity in the world.¹ Confidence in these markets will rely on systems for verification and accreditation of verifiers. These functions can be performed by government regulators, private sector parties, or through a coordinated combination of the two.

As we have seen in the financial world, without rigorous quality assurance requirements, independent auditing and verification will not safeguard markets from running afoul. Specifically, there must be oversight through institutions and rigorous standards that ensure the competency and professional ethics of individual verifiers. Yet, in regulated and voluntary GHG emission markets, little if any oversight is taking place and the responsibility for verification and accreditation of verification organizations is often outsourced entirely. Currently, where accreditation systems for verification organizations exist, they focus on the organization as a whole versus the competency of individuals doing the work. Typically, no standardized or rigorous training or certification is required for individual verifiers.

¹ “The Most Important Thing,” Speech Commissioner Bart Chilton of the Commodity Futures Trading Commission before the Finance IQ, Second Carbon Trading Conference, New York, NY. June 25, 2008



Greenhouse Gas Management Institute's Experience with the Issue

Over 80% of people surveyed by the Institute believe that there is currently a shortage of qualified GHG staff and experts, while the same number expected carbon markets to at least double.

The GHG Management Institute is a nonprofit organization focused on training and professionalization of GHG practitioners, including GHG verifiers. The GHG Management Institute was established based on the recognition that a “professional infrastructure” consisting of training, apprenticeship, membership services (e.g., cost effective group insurance coverage), professional certification, and codes of professional conduct is necessary for high quality verification. This model of professionalization mirrors the evolution of established professions, such as law, accounting, and engineering where quality assurance and clear competency standards are paramount.

The Institute believes that poor oversight and transparency, insufficient levels of competency, and misaligned incentives are problems within verification and accreditation systems for current carbon offset markets. Our opinion is based on experience across programs such as UNFCCC CDM/JI, VCS, Alberta, RGGI, CCX, NSW GGAS, and voluntary markets.

The Institute supports the training and testing of Kyoto Protocol Expert Review Teams for the UNFCCC Secretariat. These are the teams that perform national inventory reviews, which serve as the core of the treaty compliance process.

The GHG Management Institute is also developing the verifier accreditation system for RGGI in the U.S. Northeast, as well as RGGI's training program for verifiers. The latter will be mandatory for individuals working as verifiers for RGGI and will require practitioners to pass a qualifying exam. This process is modeled on programs used for years by the UNFCCC.

The GHG Management Institute is also developing the world's first training program for accreditation assessment teams for GHG verification bodies. This program is being developed for the Joint Implementation offset program under contract to the UNFCCC. The Institute has also trained the accreditation team of the Standards Council of Canada for their ISO 14065 accreditation program for verification bodies.



The Institute was founded on the belief that the green jobs of the future require an army of skilled professionals tasked with ensuring the data supporting emissions trading markets and other GHG policies are reliable and transparent.

Since its establishment in November 2007 the Institute has delivered over 1,000 courses, training more than 500 individuals from more than 40 countries.

About the Greenhouse Gas Management Institute

The success of any effort to address climate change relies on the availability of highly skilled and qualified professionals tasked with ensuring the reliability of emissions data for markets as well as other GHG mitigation policies. Just as engineering and financial accounting rely on certified professionals, there is a need for professionals charged with measuring, accounting, auditing, and managing GHG emissions with high levels of competency and ethical standards.

Recognizing the importance of competency and ethics, the Greenhouse Gas Management Institute was established to train and support a global community of qualified professionals to work on GHG measurement, accounting, auditing and management.

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Curriculum

The Greenhouse Gas Management Institute, a registered nonprofit organization, was founded in 2007 by ClimateCHECK and the Greenhouse Gas Experts Network with the support of Govida e-Learning. The Institute hosts a robust climate change course catalogue with a specific focus on the technical and practical aspects of GHG accounting, verification and management.

The Institute maintains a core faculty of world-class GHG experts, and has been the benefactor of industry-leading course development partnerships with top climate organizations including the World Resources Institute, the Carbon Disclosure Project, Point Carbon, the World Bank and ICF International.

In the interest of reaching a diverse global audience, Institute curriculum is primarily delivered online by means of instructed e-learning courses. The Institute also offers blended learning options to complement online instruction, featuring an increasing number of specialized onsite simulation workshops around the world.

Further expanding the diversity of its content delivery options, in September 2009 the Institute commenced a course partnership with the Harvard University Extension School. The Institute continues to grow its curriculum and delivery options through course development collaborations, delivery partnerships and translation of course content into different languages.

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In keeping with its mission, the Institute devotes significant institutional resources to its financial aid program, which offers partial and full scholarships to qualified applicants from developing countries and those working for non-profit organizations.

Program Support

In addition to its publicly available curriculum, the Institute works directly with leading climate change institutions in support of back-end training, accreditation and capacity building programs. Specifically, the Institute is host to:

The Institute trains the international experts working under the auspices of the UNFCCC to review the national GHG inventories of Parties to the Convention and its Kyoto Protocol.

- United Nations Framework Convention on Climate Change (UNFCCC) Experts Review Training Programme – this program trains the international experts working under the auspices of the UNFCCC to review the national GHG inventories of Parties to the Convention and its Kyoto Protocol.
- Verification training for the Regional Greenhouse Gas Initiative (RGGI) – this program trains independent verifiers under RGGI, a regional initiative of ten eastern US states.
- UNFCCC Joint Implementation Accreditation Panel (JI-AP) – this program trains the technical panel responsible for reviewing the accreditation of applicant independent entities to Joint Implementation among Annex I Parties of the Kyoto Protocol.
- World Bank Clean Development Mechanism/Joint Implementation training – this program is designed to build the technical capacity of project developers and associated stakeholders who work with the World Bank Carbon Finance Group.

Membership

The Institute, now host to the GHG Experts Network, connects the largest global community of greenhouse gas and climate change experts in the world. In November 2009, the Institute launched a new professional membership program, for the first time allowing technical GHG practitioners to utilize cutting edge collaborative web tools to interact and enhance their professional development.