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GREENHOUSE
GAS PROTOCOL

Questionnaire on GHG Mitigation Action/Policy Accounting & Mitigation Goals Accounting

Summary of Results from Online Questionnaire

October 2011

Introduction

In early 2011, the World Resources Institute began investigating whether to develop new greenhouse gas (GHG) accounting guidance for GHG mitigation actions and policies and national GHG reduction goals.

As a first step, WRI invited over 300 international experts and stakeholders to participate in an online questionnaire to assist WRI in establishing the need and content of new guidance. The questionnaire ran from February to September 2011 and included two parts:

- **Mitigation action/policy accounting:** how to quantify and report GHG reductions from climate change mitigation actions (e.g., increased energy efficiency, increased renewable energy generation, reduced deforestation) and mitigation policies (e.g., performance standards, efficiency standards, emissions trading programs, taxes, incentives).¹
- **Mitigation goals accounting:** how to track and report progress toward national and sub-national GHG reduction goals (e.g., goals stated in terms of carbon neutrality, emissions intensity, deviations from business-as-usual, absolute reductions from a base year)

109 participants responded to Part 1 and 70 responded to Part 2. This document provides a summary of the responses received. See the appendix for a list of organizations that responded.

In addition to the online questionnaire of international experts, WRI is separately conducting in-person interviews in selected countries such as Brazil, Colombia, Costa Rica, Ethiopia, India, South Africa, and the United States to gain broader feedback.

Supported by:



Federal Ministry for the
Environment, Nature Conservation
and Nuclear Safety

based on a decision of the Parliament
of the Federal Republic of Germany

¹ The guidelines will not focus on individual GHG mitigation projects, since these are addressed by the GHG Protocol for Project Accounting (2005).

Part 1: Mitigation Action/Policy Accounting

Background Information

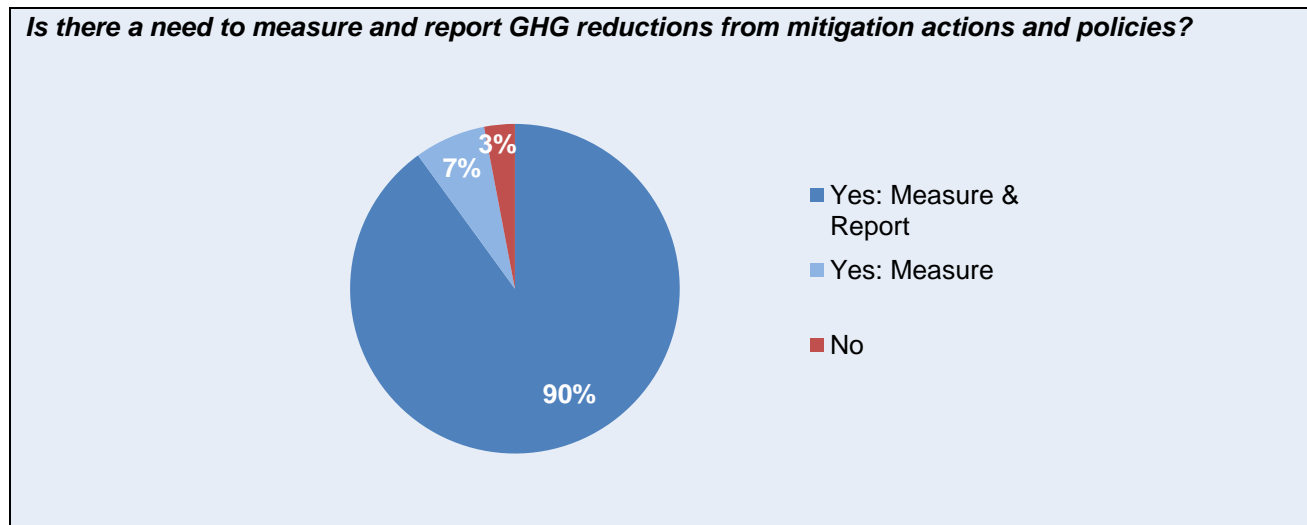
WRI is considering whether to develop new guidance for quantifying the GHG effects of policies. New guidance would be voluntary, policy-neutral, internationally applicable, and intended to assist government agencies and civil society organizations evaluate and communicate the effectiveness of low carbon policies. New guidance is expected to include methods for projecting future GHG impacts of policies, as well as monitoring the GHG impact of policies over time, according to a consistent, credible, and transparent approach.

Governments in both developed and developing countries are planning and implementing a variety of climate change policies and facing new pressures to account for the emissions reductions they achieve, in order to support both policy evaluation and communications. While national inventories allow governments to track GHG performance at a national level, guidance on quantifying the GHG effects of individual policies and actions would assist governments in making informed policy choices that move their countries toward low carbon development, and tracking the performance of these policies and actions. An internationally consistent approach would assist governments in communicating GHG reductions from nationally appropriate mitigation actions (NAMAs) and policy and measures (PAMs) in national communications under the UNFCCC, in addition to meeting other domestic or international communication needs.

Note: The term “policy” is used broadly in this section to refer to any type of mitigation policy, action, or program implemented by any country, including nationally appropriate mitigation actions (NAMAs), policies and measures (PAMs), and others.

Need to Measure GHG Reductions from Mitigation Actions and Policies

97% of respondents said there was a need to measure GHG reductions from mitigation actions and policies. 90% said there was a need to both measure and report GHG reductions.



Applications of this type of accounting include:

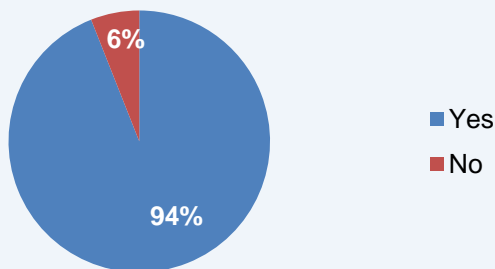
- Decision making: to help design low carbon policies to meet GHG reduction goals and understand which policies and actions are effective
- Performance tracking: to evaluate the effectiveness of mitigation actions after implementation and determine whether global progress is being made to reduce emissions
- Reporting: to ensure transparency in reporting the GHG effects of mitigation actions and share best practices
- To facilitate climate finance for mitigation actions (e.g., NAMAs), track effectiveness of climate finance, and enable NAMAs-based financing or crediting

One respondent said: “Currently there is no tool available and approved at the international level that can help countries measure and report their mitigation actions and policies...In the transport sector, the lack of robust GHG emissions accounting of transportation projects is one of the key barriers in supporting sustainable low-carbon transport globally.”

Need for New Guidance on Accounting for the GHG Effects of Policies

94% of respondents said there was a need for new guidance to promote international consistency and transparency.

Is there a need for new guidance on accounting for the GHG impact of policies to promote international consistency and transparency?



Reasons given include:

- To allow governments (across national, state, city levels) and other users (e.g., development banks, industry, NGOs) to quantify GHG reductions and assess the potential of policies, based on an ex-ante estimation of GHG impact
- To support domestic decision making (by enabling the evaluation and comparison of actions/policies)
- To promote more consistency and transparency in reported results
- To enable the comparison of policy effectiveness between countries
- To enable better understanding of global best practices on the basis of a common accounting approach

Respondents suggested that the guidance should:

- Provide a user-friendly, simple and objective method
- Build off existing practices
- Aim to harmonize/standardize approaches and build a common framework
- Recommend the metrics and data collection methods needed for effective policy evaluation

One respondent said: “Climate change is a global problem, so global consistency in estimating the impacts of efforts to address it is crucial. Government bodies and think tanks that analyze policy could [also] use such guidance to quantify and compare potential GHG reduction efforts.”

Another respondent said: “Guidance and good practice methods would help with comparison of policy effectiveness between countries and different policy initiatives. It would help the formation of evidence-based policies and programs. It is unrealistic to produce a very rigid framework but some clear guidance on metrics and approaches would certainly be helpful.”

Another said: “Eventually all countries will face the necessity to mitigate GHG emissions, and in some cases (developing countries) will need financial help from the outside to achieve that mitigation; therefore there will be a need [for] a way to account for their emission reduction, and the donor/lender will need a way to track the progress of the actions proposed by the governments. An international guideline will make the accountability and tracking task much easier.”

Available Methods, Guidance, Models, or Tools

Respondents shared several methods, reports, models, or tools that are relevant to quantifying the GHG effects of mitigation actions and policies. Selected examples include:

- AEA, Ecofys, Fraunhofer ISI: Quantification of the effects on greenhouse gas emissions of policies and measures
- CDM methodologies, especially Programme of Activities
- Efficiency Valuation Organization: International Performance Measurement and Verification Protocol: Concepts for Determining Energy and Water Savings
- European Environment Agency: Database on climate change policies and measures in Europe
- Food and Agriculture Organization of the United Nations: Ex Ante Appraisal Carbon Balance Tool
- Global Environment Facility: Manual for Calculating GHG Benefits for GEF Transportation Projects (including TEEMP, the Transport Emissions Evaluation Model for Projects) and Manual for Calculating GHG Benefits of Energy Efficiency and Renewable Energy Projects
- IEA: Evaluating Energy Efficiency Policy and Demand-Side Management Programmes – Evaluation Guidebook
- KfW Entwicklungsbank: SWM – GHG Calculator: Tool for Calculating Greenhouse Gases (GHG) in Solid Waste Management (SWM)
- Lawrence Berkeley National Laboratory: Guidance for Mitigation Assessments: Version 2.0, U.S. Support for Country Studies to Address Climate Change
- Netherlands Ministry of Housing, Spatial Planning and Environment: Manual for Monitoring and Evaluating Climate Change Policy Instruments
- UK Department of Energy and Climate Change: Valuation of energy use and greenhouse gas emissions for appraisal and evaluation
- UK Treasury: Magenta Book: Guidance for Evaluation
- US Environmental Protection Agency: Model Energy Efficiency Program Impact Evaluation Guide
- Verified Carbon Standard (VCS): Jurisdictional and Nested REDD Initiative
- WRI/WBCSD: GHG Protocol for Project Accounting
- Wuppertal Institute for Climate, Environment and Energy: Evaluation and Monitoring for the EU Directive on Energy End-Use Efficiency and Energy Services (EMEEES)
- Various economic and energy models

More than half of the respondents have estimated the GHG effects of mitigation actions and policies, including for the following applications:

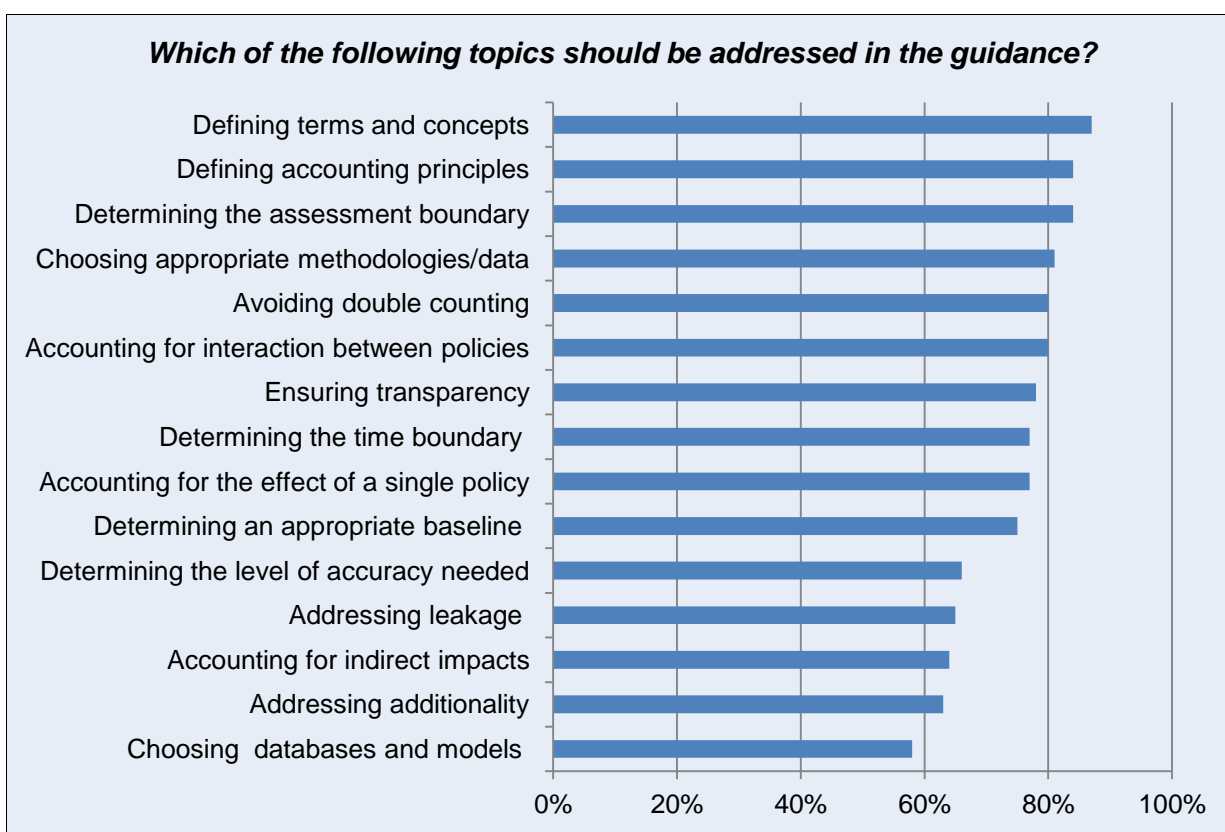
- Emissions trading
- Low carbon finance support
- Transportation policies
- Renewable energy subsidies
- Waste management policies
- Municipal policies and programs

Respondents identified the following key challenges:

- How to determine the effects of single policies when there are overlapping policies within a sector
- How to determine the effects of a specific policy or program when there are many possible causes for changes in emissions (i.e., exogenous factors)
- How to obtain an on-the-ground picture on how well policies are being implemented
- How to apply consistent quantification methods across a broad range of policies/measures and multiple country contexts
- Lack of necessary activity data
- Lack of necessary data for calculating baseline and base year emissions
- Human and financial resource requirements
- Quantifying rebound effects

Accounting Topics

The questionnaire provided a list of possible accounting topics and asked which should be addressed by new guidance. The following graph shows the percentage of respondents that said each accounting topic should be addressed:



Additional suggestions for accounting topics to cover included:

- How to reduce transaction costs (i.e., avoid expensive data collection requirements)
- How to account for co-benefits (e.g., how policies address congestion, air pollution, road safety)
- How to overcome the barriers of CDM definitions and the current framework of additionality
- How to deal with different types of additionality
- Provision of local and regional emissions factors
- How to integrate policy accounting guidance with other GHG accounting standards
- How to calculate cost-effectiveness

One respondents said “additionality may not be a relevant concern, unless the objective were offset crediting (e.g., for national/sub-national REDD). Crediting of quantified reductions could/should be addressed at a later stage.”

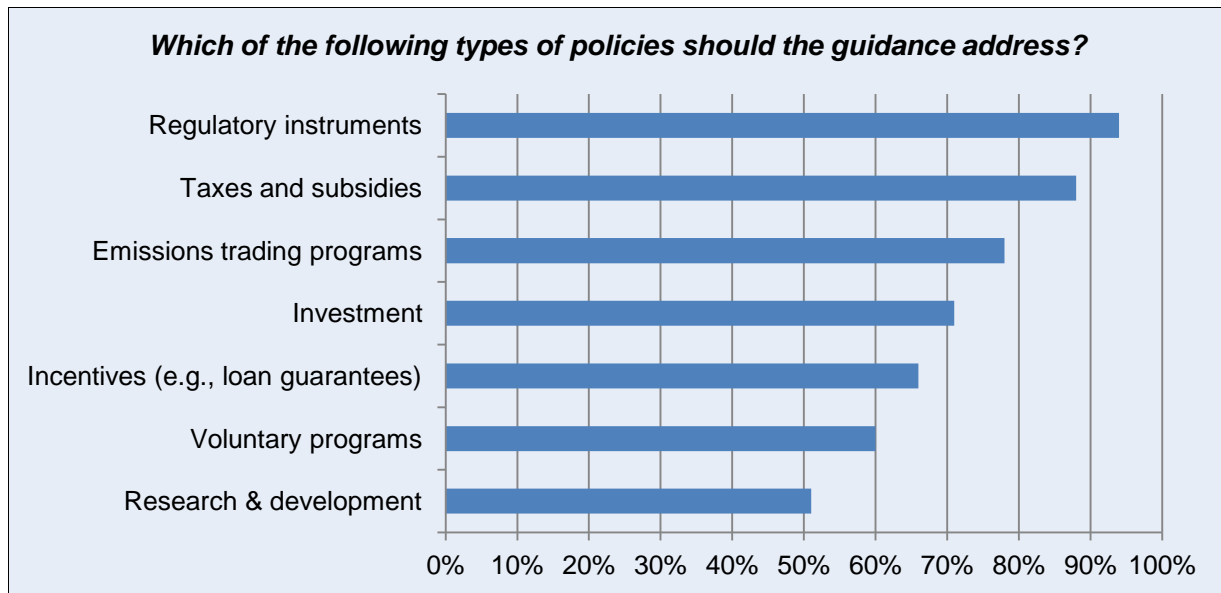
Another respondent said: “While most or all [of the above] 'issues' must be addressed, the guidance should strive to allow countries maximum possible flexibility in developing their own mitigation instruments and in determining appropriate methodological frameworks. In other words, requirements need not be overly specific or prescriptive.”

Types of Policies

Many respondents said the guidance should be applicable to all types of policies. 94% of respondents said regulatory instruments should be addressed by the guidance and 88% said taxes and subsidies should also be addressed.

86% of respondents said that in addition to addressing GHG mitigation policies, the guidance should also address policies that could increase GHG emissions (e.g., energy policy, transportation policy, land use policy, etc.).

The following graph shows the percentage of respondents that said each types of policy should be addressed in new guidance.



Additional suggestions for types of policies to cover included:

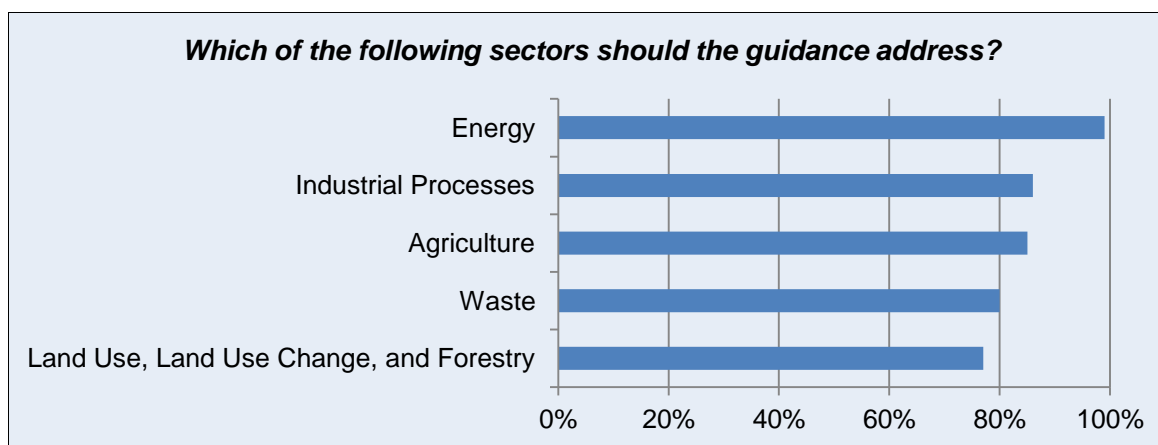
- Land-use policy and zoning reforms
- Infrastructure investment/development
- Sectoral policies supporting programs of activities across metropolitan areas and larger regions
- Sustainable transport and urban development policies
- Both energy supply side and demand side policies
- Grant programs

One respondent said: “The guidance should be as general as possible so that it can be applied to as many policy types as possible.”

Sectors

Most of the respondents said guidance should be applicable to all sectors and policies by identifying underlying principles and concepts. Some said the guidance should be limited to a subset of policies or sectors to be most manageable and have the most practical value, which requires sector-specific detail.

Nearly all of the respondents said the energy sector should be addressed in new guidance at a minimum. Most said the guidance should also address industrial processes, agriculture, waste, and LULUCF. The following graph shows the percentage of respondents that said each sector should be addressed in new guidance.



Additional suggestions for sectors to cover included:

- Transportation as a sector itself, not as a subsector of energy
- Buildings as a separate sector, not as a subsector of energy
- Climate change policy more broadly
- Mining and construction

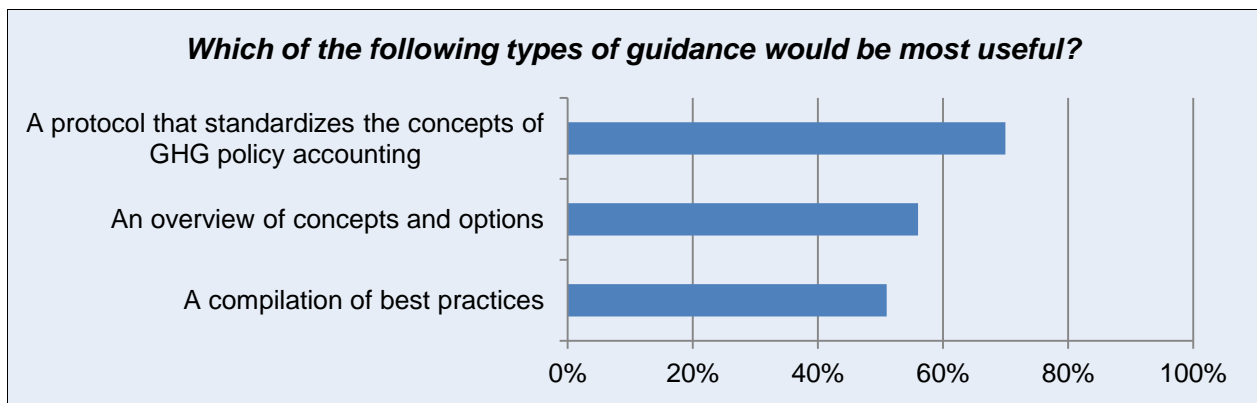
A few respondents said the following sectors should not be addressed in new guidance:

- LULUCF, which should be addressed separately
- Good governance and social sectors (health, education, etc.)
- Waste could be optional
- Sectors whose GHG impact is low

Types of Guidance

Respondents were asked which type of guidance would be most useful. 70% of respondents favored a protocol that standardizes the concepts and principles of GHG policy accounting and provides detailed guidance. 56% favored guidance that provides an overview of principles, concepts, and options, without being prescriptive. 51% favored a compilation of best practices in quantifying the GHG impacts of policies.

The following graph shows the percentage of respondents that said each type of guidance would be helpful.



Possible Approaches

Respondents suggested the following possible ways to quantify the GHG impact of policies:

- Transportation policies have impacts on the activity patterns (length and distance of travel), the modes selected (non-motorized, transit, individual vehicles), and the emission factors of each mode (energy efficiency). It is possible to quantify GHG and co-benefits by modeling activity, modal share, and emissions factors, from a set of policies (demand management, infrastructure, emission/energy standards, etc.).
- First information on emissions is needed (inventories) in order to produce a national baseline or a sector baseline of GHG emissions. Then the mitigation potential of the proposed interventions could be modeled in order to have an approximation of the reductions that can be achieved by each of them. In order to confirm the reductions on emissions, you would need to monitor the project through surveys (depending on the sector, these surveys could be expensive).
- City-wide or region-wide sectoral accounting (e.g., buildings and transportation), by evaluating dynamic BAU baselines versus alternative investments and policies, with city-wide or region-wide measurement, monitoring, and validation
- Economic modeling specific to the sector(s) and measures being evaluated.
- Methods should be similar to those used in the GHG Protocol for Project Accounting. The basic framework would be to quantify two scenarios, baseline emissions and a 'with policy', and then calculate the difference in emissions between them.

Additional Feedback

- This is an important and timely initiative
- The effort should take advantage of the volumes of work already done
- There is a need to strike a balance between making the guidance too simple (potentially ineffective) and too complex in order to ensure that the guidance is adopted and used
- Accounting has to be pragmatic, or too many resources will be tied up with measuring and reporting rather than driving the reductions the planet needs so badly
- GHG emissions are only one element of the larger picture of sustainability and the management of the environment and natural resources. It is important for WRI to convey that GHG policies alone may be inadequate to address the larger issue of sustainability.

Part 2: Mitigation Goals Accounting

Background Information

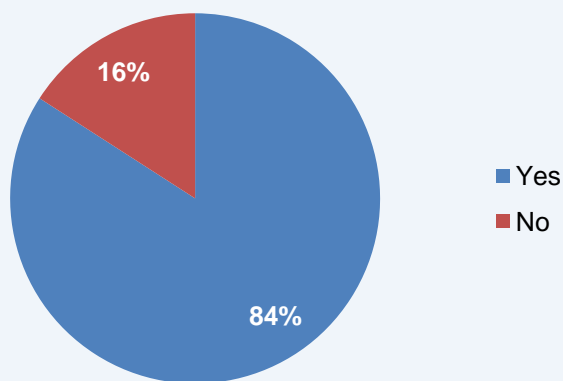
Under the UNFCCC, developed and developing countries have committed to pursuing targets and actions to reduce GHG emissions after 2012, when the first commitment period of the Kyoto Protocol ends. Developed countries have adopted quantifiable emission reduction targets and developing countries have adopted nationally appropriate mitigation actions (NAMAs). NAMAs vary in terms of scope (economy-wide vs. sector; national vs. local) and metrics (intensity target, carbon neutrality, etc). For example, Costa Rica has submitted a NAMA in Appendix II of the Copenhagen Accord to implement long-term economy-wide transformational effort to enable carbon neutrality. India has pledged to reduce its emissions intensity by 20-25% from 2005 to 2020. South Africa has committed to reducing business-as-usual emissions growth by 34% by 2020 and 42% by 2025.

It remains unclear whether there will be internationally consistent and transparent guidance for how countries track progress towards targets (for developed countries) and actions (for developing countries). The consequences of un-harmonized rules for tracking performance could be significant, with the potential for double counting of offsets, use of accounting rules that fail to properly reflect changes in emissions and sinks, omissions of sources and sectors, and other challenges that could compromise environmental integrity.

Need For New Guidance For Tracking Progress Towards Internationally-Submitted National Actions

84% of respondents said there was a need for new guidance for tracking progress towards countries' internationally-submitted national targets and actions.

Is there a need for new guidance that provides an internationally consistent and transparent approach for how Parties to the UNFCCC track progress (i.e., account for the emissions reductions and enhanced sinks) towards meeting internationally-submitted national actions?



Among the 84% that said there is a need for new guidance, reasons given include:

- If guidance is not created, there is a risk of loss in environmental integrity, lack of transparency, and challenges to comparability in evaluating emissions reductions
- There is a need to promote comparability and consistency and avoid double counting
- There is a need for accurate accounting of global, sectoral and sub-sectoral emissions
- No guidance exists on the structure, characteristics, content, monitoring, reporting and verification, of the new defined instruments such as nationally appropriate mitigation actions (NAMAs)
- To enable international negotiators to understand and compare national efforts
- It is crucial for a binding international framework

- To enable countries to state their goals clearly and quantify and track for themselves their progress towards these goals
- To hold governments accountable when they do not meet their reduction commitments

Among the 16% that said there is not a need for new guidance, reasons given include:

- Respective countries should be in charge for developing their own measurement and accounting methods
- The UNFCCC process is already getting bogged down by accounting details, without making real progress on reducing emissions. Therefore, why add an additional negotiating topic?
- It is sufficient to rely on national inventories to track progress towards national emission reduction goals
- It is unlikely that any such guidance would be accepted internationally within a useful timeframe

Who Should Provide Guidance

80% of respondents said that the UNFCCC should provide guidance for tracking progress towards internationally-submitted national targets and actions.

77% of respondents said that WRI should develop this guidance in the event that such guidance is not developed by the UNFCCC – and that guidance developed by WRI could be voluntarily adopted by countries and could be used as the basis for international guidance by the UNFCCC.

Respondents said there is value in WRI taking this up in the near term since guidance could be developed more quickly by WRI than within the UNFCCC.

Types of Targets and Actions

The questionnaire asked participants whether the guidance should apply to all internationally-submitted national actions and targets (both Annex I and non-Annex I), or whether the guidance should be limited to a subset of actions and/or targets. Most respondents said the guidance should be applicable to all targets and actions. Some reasons given include:

- International consistency
- Equity between Parties
- Comparability

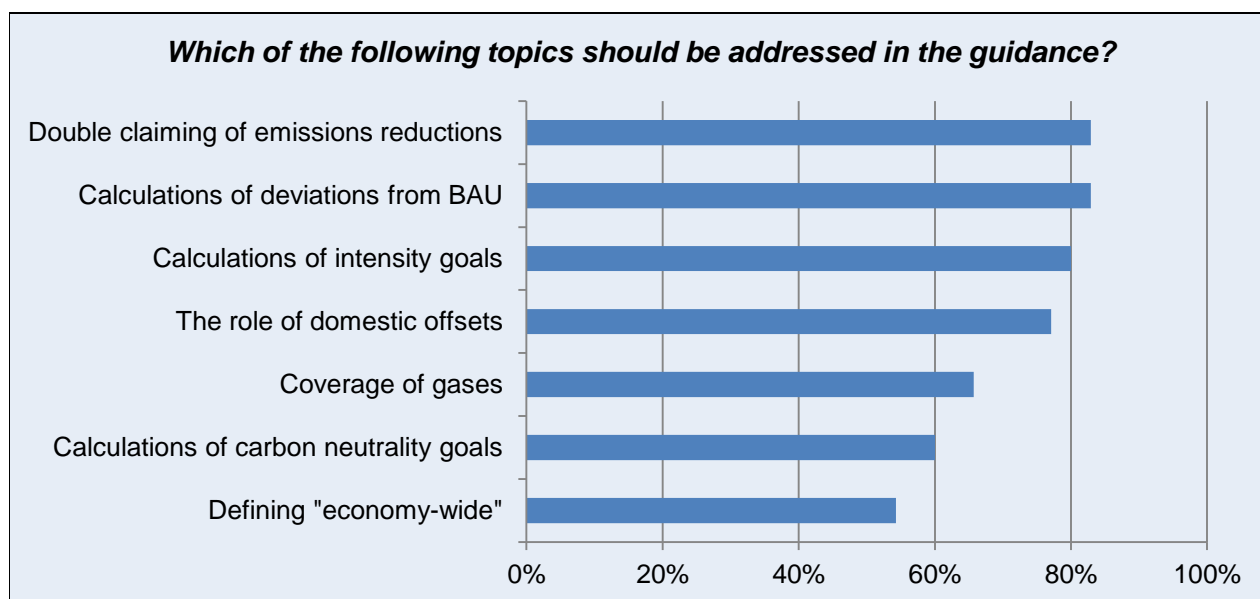
Less than half said the guidance should be limited to a subset of actions or targets. Some reasons given include:

- Feasibility
- The need to prioritize targets and actions for critical sectors
- The need for governments implementing NAMAs to voluntarily choose their guidance

One respondent favoring universal guidance said: “International consistency means that all parties work from the same guidelines. If they don't, there will be no consistency.”

Accounting Topics

The questionnaire provided a list of possible accounting topics and asked which should be addressed by new guidance. The following graph shows the percentage of respondents that said each accounting topic should be addressed.



Additional topics suggested for inclusion were:

- Ensuring transparency in use of offsets
- Role of different institutions and how to coordinate them
- Guidance on establishing baselines (distinct from BAU)
- Specific guidance for mitigation actions in the transportation and buildings sectors

Types of Guidance

Respondents were asked which type of guidance would be most useful. 81% of respondents favored guidance that explains the concepts and principles of tracking performance towards meeting internationally-submitted national targets and actions and provides detailed guidance. 32% favored a compilation of best practices in tracking performance towards meeting internationally-submitted national targets and actions.

Additional Feedback

- Either a compilation of best practice or more detailed guidance would be welcome
- Guidance should focus on mechanisms to deviate from business-as-usual emissions trajectories beyond offsetting
- Ideally this guidance will be developed by UNFCCC
- Guidance should be applied on a voluntary basis
- Guidance should acknowledge the importance of reducing not only emissions but also advancing sustainable development

Appendix: List of participating organizations

Of the 109 organizations that responded to the questionnaire, the following 48 organizations agreed to be recognized by name.

- Aalborg University, Denmark (Department of Planning)
- AEA Group
- Alcoa Inc.
- Arup
- Artequim.com
- Center for Sustainable Transport Mexico
- CLIMACT
- Climate Action Reserve
- Climate Policy Initiative
- The Climate Group
- The Climate Registry
- The Dow Chemical Company
- Ecometrica
- EMBARQ (the WRI Center for Sustainable Transport)
- Environmental Defense Fund
- ENWORKS
- European Commission
- European Environment Agency
- Fondazione Eni Enrico Mattei (FEEM)
- Food and Agriculture Organization of the United Nations
- Footprints4Food Ltd.
- G4S Secure Solutions (PNG) Ltd.
- Greenhouse Gas Management Institute
- Indian Institute of Management
- Institut de Recherche pour le Development (IRD)
- Inter-American Development Bank
- International Emissions Trading Association
- Institute for Transportation and Development Policy
- KfW Entwicklungsbank
- KfW Carbon Fund
- LMI
- McKinsey & Company
- myclimate
- Osaka Gas Co., Ltd.
- Partnership for Sustainable Low Carbon Transport
- Pembina Institute
- Policy Solutions
- Scottish Government
- Stockholm Environment Institute
- Suncor Energy
- Tokyo Gas Co., Ltd
- Uganda Carbon Bureau Limited
- University of Bangladesh, Dhaka
- UK Home Office
- US Environmental Protection Agency
- University of Zurich
- Verified Carbon Standard
- Weyerhaeuser