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Core Elements of National Reports

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ABSTRACT

The UN Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol established reporting requirements for Parties. This has resulted in comprehensive and timely information on national greenhouse gas (GHG) emissions from Annex I Parties, periodic reporting of other information from Annex I Parties and irregular provision of GHG emissions and other information from non-Annex I Parties. Thus, the current reporting framework does not enable a complete or up-to-date assessment of current global GHG emissions, goals, projected future emission trends or mitigation actions and their effects.

This paper explores options for the functions, form, timing and content of future national reports under the UNFCCC, focusing on national communications. It suggests that reporting guidelines for future national communications could be “tiered”. This could allow countries to produce national communication “updates” on a frequent (e.g. biennial) basis – focusing the information in these updates on information of most relevance to the international community. “Full” national communications would also continue to be produced, but less frequently than “updates”. Different tiers could be established according to the type of country (e.g. Annex I or non-Annex I); type of mitigation pledge (e.g. nation-wide emissions limit, sectoral goal, mitigation action); and/or the frequency with which changes in particular parameters occur. Such a tiered approach could also provide flexibility for countries to improve the content and frequency of information that they report as their capacities allow. “Updates” to national communications, containing more targeted information on key elements, could be more user-friendly and could focus on the core elements in which national and international users are interested.

Streamlined “updates” to national communications could therefore focus on parameters that either change frequently and/or are not currently reported or systematically included in national communications or other climate reports under the UNFCCC. This includes: regular information on historical GHG emissions (including calculation methodology and transfers of units) for many countries, as well as on financial support from Annex I countries; short or medium-term mitigation goals and strategies (e.g. to 2020); progress in implementing such goals and strategies; and improved information on financial needs in terms of GHG mitigation and adaptation activities (by non-Annex I countries).

JEL Classification: F53, Q54, Q56, Q58

Keywords: Climate change; mitigation; greenhouse gas; measurement, reporting and verification

RÉSUMÉ

La Convention-cadre des Nations Unies sur les changements climatiques (CCNUCC) et son Protocole de Kyoto définissent les obligations des Parties en matière de déclaration. Ainsi, les Parties visées à l'annexe I sont tenues de fournir des inventaires exhaustifs et réguliers de leurs émissions de gaz à effet de serre (GES) ainsi que des rapports périodiques sur d'autres sujets. Pour les Parties non visées à l'annexe I, ces inventaires et autres rapports n'ont pas de caractère régulier. Le système actuel de déclaration ne permet donc pas une évaluation complète et actualisée des émissions mondiales de GES, des objectifs visés, des tendances anticipées ou des actions d'atténuation et de leurs effets.

Le présent document, qui traite des Communications nationales, étudie les possibilités envisageables quant aux fonctions, à la forme, au calendrier et au contenu des prochains rapports nationaux dans le cadre de la CCNUCC. Il propose de différencier plusieurs niveaux de déclaration dans les lignes directrices pour l'établissement des Communications nationales, de façon à permettre aux pays de produire des « mises à jour » fréquentes (tous les deux ans par exemple) contenant les informations les plus pertinentes pour la communauté internationale. Les Communications nationales « complètes » seront maintenues, mais publiées moins fréquemment que les « mises à jour ». Différents niveaux pourront être prévus selon le type de pays (visé ou non à l'annexe I), le type d'engagement pris en termes d'atténuation (limitation des émissions au niveau national, objectif sectoriel, mesures d'atténuation), et / ou la fréquence à laquelle certains paramètres se trouvent modifiés. Cette approche multi-niveaux aurait en outre l'avantage de permettre aux pays d'améliorer le contenu et la fréquence des informations fournies lorsqu'ils en ont la capacité. Les « mises à jour » des Communications nationales, qui contiendraient ainsi des informations plus ciblées sur des éléments clés, pourraient s'avérer plus facilement exploitables et privilégier les éléments fondamentaux qui intéressent les utilisateurs, nationaux et internationaux.

Ces « mises à jour » simplifiées des Communications nationales pourraient ainsi porter sur certains paramètres versatiles et/ou qui ne sont pas actuellement notifiés ou systématiquement inclus dans les Communications nationales ou autres rapports sur le climat fournis dans le cadre de la CCNUCC : informations régulières sur les émissions de GES passées (précisant la méthode de calcul et les transferts d'unités) pour de nombreux pays, ainsi que sur l'aide financière des pays de l'annexe I ; objectifs et stratégies d'atténuation à court et moyen terme (à l'horizon 2020 par exemple) ; progrès de la mise en œuvre de ces objectifs et stratégies ; informations plus précises sur les besoins financiers liés aux activités d'adaptation et d'atténuation des émissions de GES (pour les pays non visés à l'annexe I).

Classification JEL: F53, Q54, Q56, Q58

Keywords: Changement climatique; atténuation; gaz à effet de serre; mesure, notification, et vérification

FOREWORD

This document was prepared by the OECD and IEA Secretariats in Spring 2010 in response to a request from the Climate Change Expert Group on the United Nations Framework Convention on Climate Change (UNFCCC). The Climate Change Expert Group oversees development of analytical papers for the purpose of providing useful and timely input to the climate change negotiations. These papers may also be useful to national policy-makers and other decision-makers. In a collaborative effort, authors work with the Climate Change Expert Group to develop these papers. However, the papers do not necessarily represent the views of the OECD or the IEA, nor are they intended to prejudice the views of countries participating in the Climate Change Expert Group. Rather, they are Secretariat information papers intended to inform Member countries, as well as the UNFCCC audience.

Members of the Climate Change Expert Group are Annex I and OECD countries. The Annex I Parties or countries referred to in this document are those listed in Annex I of the UNFCCC (as amended at the 3rd Conference of the Parties in December 1997): Australia, Austria, Belarus, Belgium, Bulgaria, Canada, Croatia, Czech Republic, Denmark, the European Community, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Liechtenstein, Lithuania, Luxembourg, Monaco, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom of Great Britain and Northern Ireland, and United States of America. Korea, Mexico and Chile, as OECD member countries, are also members of the Climate Change Expert Group. Where this document refers to “countries” or “governments”, it is also intended to include “regional economic organisations”, if appropriate.

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Executive Summary

The UN Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol established reporting requirements for Parties. This has resulted in comprehensive and timely information on national greenhouse gas (GHG) emissions from Annex I Parties, periodic reporting of other information from Annex I Parties and irregular provision of GHG emissions and other information from non-Annex I Parties. Thus, the current reporting framework does not enable a complete or up-to-date assessment of current global GHG emissions, goals, projected future emission trends or mitigation actions and their effects.

COP15 outcomes included suggestions to strengthen the climate reporting framework, particularly for non-Annex I Parties. This includes a greater focus on forward-looking national strategies, as well as timely provision of information on GHG emissions and on the implementation and outcomes of mitigation actions. Indeed, both the Copenhagen Accord (CA) and other texts created at COP15 indicate that current reporting guidelines are to be revised and/or established in different areas.

These new guidelines, as well as other modalities and procedures of a future reporting framework, have yet to be established. This paper explores options for the functions, form, timing and content of future national reports under the UNFCCC, focusing on National Communications.

National reports under the UNFCCC – including National Communications - may serve both national and international stakeholders. Identifying the specific goals of different climate-related reports required under the UNFCCC is a useful first step in developing reporting guidelines that deliver timely, useful and action-oriented information. At a national level, the reporting process can provide a tool for national planning, monitoring and evaluation, inter-departmental co-ordination and communication. At the international level, national reports can provide a way to assess national and international progress towards the objectives of the Convention and to identify where such progress could be strengthened.

The CA stipulates that non-Annex I Parties shall report National Communications containing, *inter alia* “national inventory reports”, information on “mitigation actions taken and envisaged” and the result of domestic measurement, reporting and verification (MRV) of these mitigation actions every two years. Existing guidelines for non-Annex I National Communications indicate that they should also cover other aspects, including a national GHG inventory, vulnerability assessment and adaptation measures; as well as optional information on national circumstances; research and systematic observation (RSO); education, training and public awareness; capacity building; technology transfer; constraints and gaps associated with implementation.

Most Annex I Parties have to date produced National Communications every 3-5 years. These National Communications also include information on a variety of subjects (as above), with Annex I reports generally needing to report in more detail and to provide more quantifications, including emission projections and effects of mitigation measures.

Preparing National Communications on a two-year basis is therefore something that no Party does at present, although Annex I Parties do submit annual National Inventory Reports. Nevertheless, the need for more frequent and detailed information on some aspects currently included in National Communications – such as GHG emissions in non-Annex I countries – is widely recognised. However, it is unlikely that the international community will agree to a reporting framework in which the frequency of National Communications from non-Annex I Parties exceeds that from Annex I Parties. Further, different types of pledge have been made by non-Annex I Parties under the CA (UNFCCC, 2009a) regarding climate change mitigation, ranging from economy-wide emissions targets to project-level mitigation actions. Reporting on progress with implementing these different pledges may have different informational requirements.

This paper therefore suggests that reporting guidelines for future National Communications could be “tiered”. This could allow countries to produce National Communication “updates” on a frequent (e.g. biennial) basis – focusing the information in these updates on information of most relevance to the international community. “Full” National Communications would also continue to be produced, but less frequently than “updates”. Different tiers could be established according to the type of country (e.g. Annex I or non-Annex I); type of mitigation pledge (e.g. nation-wide emissions limit, sectoral goal, mitigation action); and/or the frequency with which changes in particular parameters occur. Such a tiered approach could also provide flexibility for countries to improve the content and frequency of information that they report as their capacities allow. “Updates” to National Communications, containing more targeted information on key elements, could be more user-friendly and could focus on the core elements in which national and international users are interested.

These streamlined “updates” to National Communications could therefore focus on parameters that either change frequently and/or are not currently reported or systematically included in National Communications or other climate reports under the UNFCCC. This includes:

- Regular information on historical GHG emissions (including calculation methodology and transfers of units) for many countries, as well as on financial support from Annex I countries;
- Short or medium-term mitigation goals and strategies (*e.g.* to 2020),
- Progress in implementing such goals and strategies. Information reported here could vary depending on the structure of the pledge. For example, non-Annex I countries who have pledged to undertake particular mitigation actions would report on these, and those who have pledged actions at a national or sectoral level would report on this basis.
- Improved information on financial needs in terms of GHG mitigation and adaptation activities (by non-Annex I countries).

Streamlined international reporting requirements based on the tiered structure outlined in this paper could lead to lighter national reports produced every two years interspersed with fuller National Communications every 4-8 years, depending on country circumstances. Regular reporting would help to build and maintain relevant capacity in countries whose current reporting requirements allow for a gap of several years between reports.

Information not necessarily needed in “updates”, but that would continue to be included in “full” National Communications includes information that:

- Does not frequently change (or does not change at all), such as countries’ geophysical national circumstances and policy-making process;
- May change, but not necessarily on a two-year timescale, such as long-term GHG targets, national or sub-national adaptation strategies, or specific mitigation actions;
- May also reported elsewhere, e.g. in an international registry for supported mitigation actions.

Future “full” National Communications could also usefully expand reporting in some areas. This could include adaptation measures and programmes taken or planned by countries, and increased information on the methods used to estimate GHG emissions.

Establishing or revising reporting guidelines under the UNFCCC provides an opportunity for the international community to increase the value of the national reporting process for both national and international stakeholders. As well helping to improve the national policy-making process, the process of

developing national reports could also usefully aim to provide relevant and timely information for the international community, such as a more comprehensive picture of current global emissions and expected trends. In addition, establishing clear guidelines and a process for frequent updates can support the development of reporting capacity and expertise.

1. Introduction

A key feature of the UNFCCC is the use of national reporting as a means of sharing information, assessing implementation and monitoring progress. The original function of these national reports was for each Party, to the extent its capacities permit, to communicate information to the Conference of the Parties concerning, *inter alia*, inventories of anthropogenic greenhouse gas (GHG) emissions and steps taken or envisaged to implement the Convention. National reports are hence primarily a means of assessing progress with implementation of commitments and achievement of the Convention's objectives.

Currently, experience with measurement, reporting and verification (MRV) of GHG mitigation has been focused in three areas: project-based reductions in non-Annex I countries through the clean development mechanism (CDM); entity-based emission levels in Annex I countries (*e.g.* through emission trading schemes); and national-level GHG accounting in Annex I countries. However, the reporting framework thus far has also led to gaps, with other information that is reported being patchy, out of date and not always comparable. These gaps are also focused in three areas: firstly, there is no global picture (from information submitted by countries themselves) of current GHG emissions or future trends. This is because although all countries are required to report GHG inventories, current guidelines allow for the frequency of reports by non-Annex I countries to vary, along with the year(s) and source(s) covered, while not requiring the reporting of calculation methodologies. Further, non-Annex I countries – which accounted for over 50% of global GHG emissions in 2005, and are expected to account for an increasing proportion in the future - are not required to provide emission projections. Secondly, there is a lack of timely information on mitigation (and adaptation) actions undertaken in developing countries. Thirdly, there is little information on the GHG effect of individual mitigation actions, particularly in developing countries. A detailed discussion of the current reporting framework and associated data gaps was prepared previously (Ellis and Larsen, 2008).

Under the FCCC, different countries are currently required to produce different types of national reports, and with varying frequency. The most comprehensive report, covering quantitative data such as GHG emissions and projections, as well as qualitative information such as descriptions of mitigation and adaptation actions, is called a “National Communication” (NC). Other reports also need to be provided to the UNFCCC. For example, Annex I countries are to provide annual National Inventory Reports (NIRs), certain groups of countries also produce thematic reports, such as National Adaptation Programmes of Action (NAPAs)¹. This paper uses the term “national report” to refer to future reports under the UNFCCC (either in the form of a National Communication or in another form).

Recent developments in the UNFCCC process suggest that the timing and content of National Communications could change post-2012, in order to provide more up-to-date and relevant information to the international community. Both the Copenhagen Accord (CA) (UNFCCC, 2009a) and other text agreed at COP15 (UNFCCC 2009c) provide for more frequent National Communications, particularly from non-Annex I Parties, and for mitigation actions requiring support (in terms of finance, technology or capacity building) to also be reported in a registry, along with the relevant support provided². There is also increasing interest in including a greater focus on forward-looking elements in future reports (UNFCCC, 2010a). Modifying the focus of countries' national reports could present an opportunity to increase their value, serve changing international demands for information, as well as facilitate national mitigation and adaptation actions.

¹ Annex A outlines the different types of climate-related reports that countries report to the UNFCCC as well as other bodies.

² The Copenhagen Accord specifies that National Communications are to be used by Non-Annex I Parties to share information with the international community regarding mitigation actions both taken and envisaged, together with a national inventory report and the results of domestic measurement, reporting and verification (MRV) procedures. It stipulates that these reports shall be submitted by Non-Annex I Parties every two years. The Copenhagen Accord contains no further guidance regarding the timing of submission of Annex I National Communications..

This paper conducts an appraisal of the core elements of UNFCCC national reports, focusing on what information is essential in a post-2012 framework (nationally and internationally). It provides insights for possible new guidelines for national reports. Revised guidelines for various national reports may be needed for several reasons:

- There is growing interest in the provision of more timely, complete and forward-looking information by all Parties;
- Current guidelines for National Communications are relatively old for both Annex I countries (last revision 1999) and non-Annex I countries (last revision 2002), and thus out of date in some respects;
- The reconstituted Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention (CGE) has a specific mandate to make recommendations for a future revision to the guidelines for National Communications of non-Annex I countries (UNFCCC 2009b);
- Information relevant to the international community is likely to continue to be reported by governments in a variety of different formats (paper, electronic) and forms (*e.g.* registry of supported actions, description of planned actions, quantitative data on GHG emissions or financial flows)³. Care will be needed to ensure that information is reported in the form that is most appropriate, most useful to both national and international stakeholders, and that minimises the reporting burden on countries.

The scope of this paper addresses national reports submitted to the FCCC, in particular National Communications⁴. The paper focuses on the measurement and reporting aspects of such reports, rather than on verification. Also, while the link between national reports and sub-national/city-level climate strategies and reporting is important, a discussion of this topic is beyond the scope of this paper. This report uses the country groupings outlined in the FCCC, namely “Annex I” and “non-Annex I”.

Section 2 looks at the possible functions of national reports for national and international stakeholders, describes the limited success with which the current reporting framework is serving those functions and how the focus of national reports post-2012 could shift following recent developments in climate negotiations. Section 3 explores the consequences for the timing and content of future national reports, and how new flexible structures could be used to provide guidance in this area. Section 4 concludes. It also considers the domestic process and information needs of an enhanced reporting regime

2. Goals of national reports

Reports on climate change mitigation and adaptation actions prepared by countries can serve national functions, such as identifying national priorities for such actions, in line with other sustainable development objectives. They can also serve international functions, such as assessing progress – collectively or by individual countries – towards any GHG or related mitigation goals.

The section below explores possible national and international functions of national reports. Some functions could apply to both communities, such as ensuring transparent, accurate and/or internationally-comparable reports. It is important that the international community identifies and agrees up-front on the function of such reports, as this will affect both the nature and frequency of information reported - and thus any associated reporting guidelines. Possible future provisions for the review of such information should

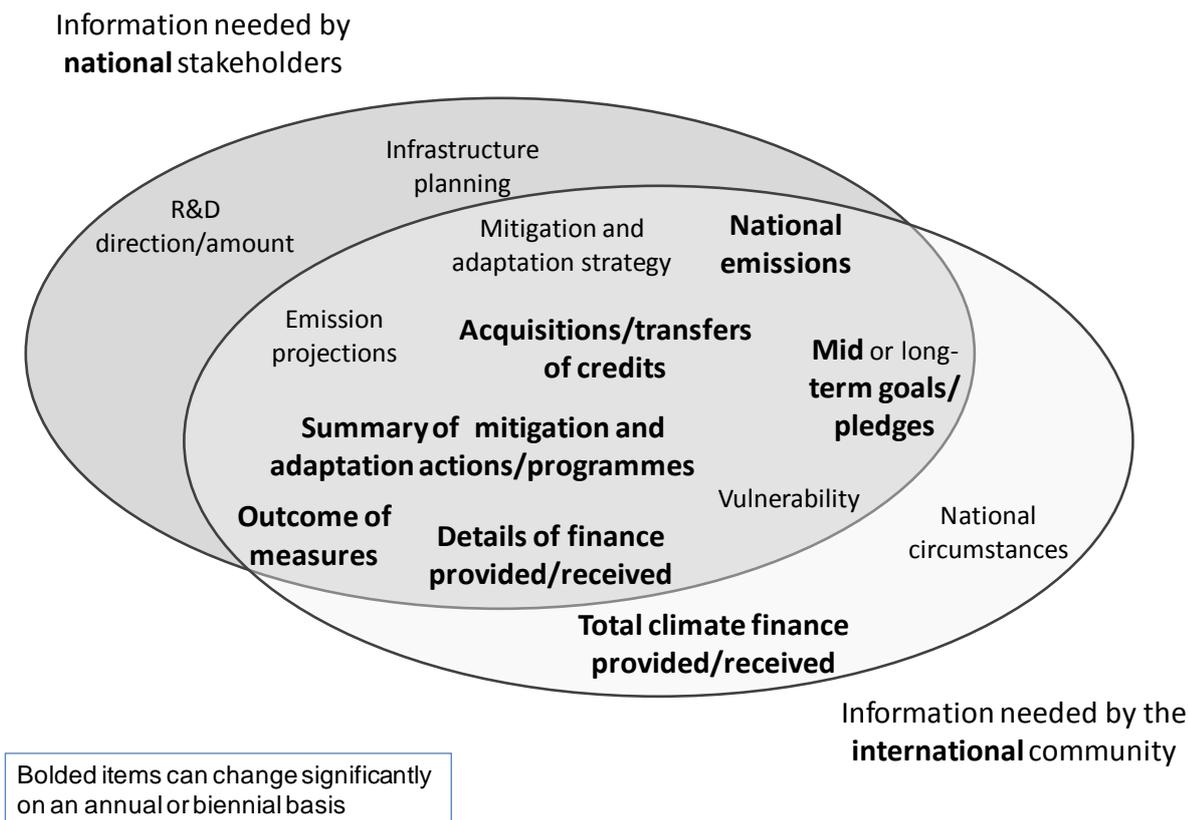
³ Relevant information could also be available from international sources.

⁴ The paper also briefly outlines other possible reports by countries under the UNFCCC, *e.g.* National Inventory Reports, registry of supported actions. .

also be taken into account, as these could in turn affect the nature of and manner in which information is reported.

While national and international data needs overlap considerably, they are not identical (Figure 1). For example, information on individual countries' GHG emissions, mid or long-term goals is needed by both the national and international community. In contrast, information on global climate-related financial flows and on individual countries' national circumstances is also useful internationally – although not needed nationally.

Figure 1: International and national needs for climate-related information



Reports are most useful when the information in them can be adapted to the needs of their users. There can be several different users of National Communications (and other national reports under the UNFCCC). Information in National Communications should ideally be useful to a range of different users. These include:

- National stakeholders – such as those wishing to demonstrate, learn about and/or share information on process, progress, priorities and climate-related actions within a country, and/or to facilitate policy-making and policy implementation within a country;
- Third countries, who may wish to review experience elsewhere in order to learn from it;
- External funding sources, who may use information in reports to identify/prioritise provision of support;
- International bodies, such as the UNFCCC, who may (as at present) be called on to synthesise information provided;

- Reviewers, such as expert review teams (e.g. as currently used in the review of Annex I National Communications), or for any future international consultation and analysis of non-Annex I National Communications.

2.1 Facilitating the national policy-making process

The importance of enhanced national action on climate change was highlighted by the Bali Action Plan (UNFCCC, 2007b). This was further elaborated in the Copenhagen Accord, which calls for mitigation actions in non-Annex I Parties to be subject to domestic measurement, reporting and verification, and for these Parties to specifically report on the implementation of their actions.

The process of developing a national report has the potential to spur national-level action (Annex B) as well as facilitating the national policy-making process. For example, regular monitoring and reporting can help countries to identify successful policies as well as those that need strengthening. The development of regular national reports (e.g. if required to do so by the UNFCCC) can in itself also have benefits, as the capacity to measure and report relevant climate information is essential for policy formulation and evaluation. The process of developing a national report can also help to improve inter-ministerial communication: an important element in developing integrated national plans.

Depending on the goals of the national report, its informational requirements will vary. As was shown in section 1, international and national information needs can overlap in some cases. In order to minimise the future reporting burden on countries, and to maximise the utility of national reports, it may be useful to structure them to be able to serve both international and national aims. While it may not be possible for one report to fulfil the functions of all those currently produced (see Annex A), future national reports under the FCCC could serve both historical and forward-looking aims, such as strategic prioritisation and planning elements including mitigation goals. These are useful for national planning purposes – and have been developed unilaterally by several countries for this reason.

Information required or requested internationally could therefore also serve to encourage countries to more effectively develop and implement climate policies. Producing final reports summarising information required by the international community, such as the actions a country is taking or planning, progress with meeting mitigation goals, establishing national GHG inventories and/or inventory reports, etc. requires an underlying layer of processes and information that can in itself facilitate the identification and implementation of responses to climate change. The reporting process itself can therefore incentivise the formulation, implementation and updating of national climate programmes.

Table 1: Possible domestic functions of new national reports

Theme	Possible domestic functions of new national reports	Elements needed to support functions	Are informational elements currently reported in NCs?	
			AI	NAI
Mitigation	Identify mid- and long-term mitigation goal (<i>e.g.</i> to 2020 and 2050) Facilitate monitoring of data and/or trends at the appropriate level of aggregation, <i>e.g.</i> via development of secondary legislation.	National inventory report (including sectoral or sub-sectoral as required); mitigation potentials and costs; national development needs and priorities	Yes	Partly
Policy enabling environment	Identify country-driven priorities for short- to medium-term mitigation and adaptation actions in key sectors and report on achieving them Enhance regulatory certainty for investors by identifying mid- to long-term priorities Improve policy coherence via increased inter-departmental co-ordination of policy priorities and planning Enhance engagement and awareness: means of engaging a wide range of stakeholders, <i>e.g.</i> through consultations Identify barriers to implementing mitigation and adaptation actions	Legislative and policy planning process in place with clear distribution of responsibility and identification of actors needed for implementation	Partly	No
Implementation	Facilitate monitoring of progress (of both mitigation and adaptation actions and strategies), through tracking whether policies and measures are being successfully implemented, and whether their goals and targets are being met	Domestic MRV frameworks in place	Partly	No
Support needs	Identify support needs – either for whole country, or individual sectors/actions Ensuring mitigation actions are cost-effective; that their implementation is financially responsible	Provide estimates of the costs of possible future emission reductions – either in aggregate, groups of actions, or individual actions; Develop marginal abatement cost curves	N/A	Partly
Capacity building	Developing knowledge, research activities and implementation capacities	Engaging institutions (<i>e.g.</i> universities, research institutes) for input into national strategy documents and to support implementation (monitoring, testing facilities, etc.)	Partly	Partly

2.2 Communicating information to the international community

One of the key functions of national reports is to communicate information to international stakeholders that helps to provide a more complete picture of global GHG emissions and trends. Currently, different national reports are communicated to the FCCC, including National Communications and National Inventory Reports (NIRs).⁵ National Communications include information on different parameters such as countries' national circumstances; historical (and sometimes projected) GHG emissions; mitigation actions (and sometimes their estimated effect); adaptation programmes; finance needs and provisions; education and training; research and systematic observation; vulnerability assessments. National Inventory Reports from Annex I countries include a description of the methodologies used to estimate GHG emissions.

A report can serve various functions, including: ensuring that countries – individually and collectively - are meeting their emissions and/or financial obligations under the Convention and Kyoto Protocol; facilitating the implementation of these obligations; ensuring transparency; understanding global GHG emission trends; identifying areas where more could be done; highlighting successes, hence sharing good practice; and facilitating international support for climate actions in developing countries.

Parties' reporting obligations under the FCCC are articulated in Convention Articles 4 and 12 and supported by subsequent guidelines for National Communications adopted by the Conference of the Parties, and the Kyoto Protocol's Article 5. For Kyoto Protocol Parties listed under Annex B, this means reporting annually not only on GHG emissions and national inventory systems but also on holdings and market transactions of Kyoto Protocol units. In addition, the information submitted by Annex B parties under the Protocol, and Annex I National Communications, are subject to international review processes.

Current reporting guidelines thus require different types of information from Annex I and non-Annex I countries where these parties have differing obligations. For example, one of the objectives of non-Annex I National Communications is to “serve as policy guidance to the operating entity of the financial mechanism for the timely provision of financial support needed” (UNFCCC, 2002), while Annex I National Communications are to include detailed information on provision of financial resources and technology transfer. In line with countries' shared obligations, National Communications aim to provide sufficient information for the Conference of the Parties (COP) to assess whether Parties are implementing the Convention. National Communications also allow countries to be recognised for their contribution towards global goals to mitigate climate change. Certain countries, both Annex I and non-Annex I, have adopted ambitious GHG emission reduction or limitation targets, goals, or innovative policy measures; National Communications allow this information to be shared for the benefit of all Parties.

The functions of National Communications may also change over time to reflect changes in national and/or international contexts. For example, some non-Annex II Parties may provide financial and capacity-building support. Though current guidelines make no provision for reporting this information, National Communications allow recognition of countries that do so. Further, although there are currently no requirements to include medium (*e.g.* to 2020) or long-term (*e.g.* to 2050) mitigation goals in Annex I National Communications, several of the most recent National Communications and other national policy documents do so – reflecting country pledges, some of which are the result of domestic legislative processes.

The Copenhagen Accord also includes specific reference to national and international MRV provisions for supported actions, and the reporting of support needs and support provided in a separate registry. This suggests the need to establish a system that would allow reporting of support needs⁶, and tracking of

⁵ See Annex A for a detailed description.

⁶ The level of detail with which countries report on support needs could vary according to country capacity; some may quantify this in USD to a relatively disaggregated level, while others may simply point to specific projects or programmes for which financial, technology or capacity building support is needed.

support provided, including finance, capacity building and technology⁷. The registry mentioned in the Accord has not yet been defined, but appears to be primarily a “matching” mechanism, where mitigation actions seeking international support can be recorded, along with relevant support provided. The actions actually supported could also be reported elsewhere, *e.g.* in the Accord’s annex II and potentially in National Communications.

Table 2 below provides examples of possible functions of national reports (including, but not limited to National Communications) for the international community. It also highlights the kinds of information needed to fulfil these functions, and how they are currently differentiated between Parties.

⁷ Information on technology transfer may also be somehow included in the Technology Mechanism called for in the Copenhagen Accord. For more discussion of “matching” mechanisms, see Kim, Ellis and Moarif, 2009.

Table 2: Possible international functions of national reports⁸

Theme	Possible international functions of national reports	Informational elements needed to support functions	Do current NCs address this function?	
			AI	NAI
Emissions and trends	Assess progress towards the convention's ultimate objective and KP targets	National inventory reports, long-term GHG goals and/or projections	Yes	Partly
	Show how mitigation actions are affecting, or expected to affect, emissions within a country or sector	Projections showing anticipated impact of mitigation actions – those taken and those planned – vs. baseline emissions	Yes	No
	Produce transparent, accurate and comparable information	Methodology used to calculate emission inventories (e.g. NIR) and projections; QA/QC procedures	Partly	Partly
Mitigation	Demonstrate that countries are meeting their obligations to undertake mitigation actions (Convention Articles 4, 5, 6)	Implementation status of mitigation actions; information on specific activities (research, education, etc.)	Yes	Partly
	Indicate how countries intend to meet their mitigation obligations in the future – provide consistent information on policies and transparency about planned actions	Forward-looking strategic action plan, with emissions trajectory or other specified outcomes; shows the emissions trajectory a country intends to take, and the measures it will take to get on that trajectory	Partly	No
Support	Demonstrate that Annex II countries are providing support (financial, capacity building, technology transfer)	New and additional financial resources; technology transfer; capacity building	Partly	N/A
	Provide international donors with information on country priorities and needs for funding – help to steer donor policy	Funding needs, for capacity building, mitigation and adaptation actions	No	Partly
Vulnerability +adaptation	Identify expected impacts of climate change; assess and prioritise adaptation actions; demonstrate successful adaptation programmes/actions; highlight adaptation needs	Vulnerability assessment; adaptation measures taken and planned	Partly	Partly
Leadership and recognition	Demonstrate that Annex I countries are taking the lead in addressing climate change; Provide non-Annex I countries with international recognition for their climate change actions	Sufficiently detailed information on mitigation actions taken; estimated GHG impacts; emissions projections; support provided; lessons learned	Partly	Partly
Eligibility	Identifying the ability of countries/sectors to participate in market mechanisms	(Would depend on future decisions, but could include e.g. requirements to produce comparable national or sectoral emissions inventories).	Yes	No
Learning	Aid the design of future international policy frameworks and highlight areas in which greater international co-operation would help to achieve common objectives, and share lessons learned with other parties	Lessons learned in national mitigation and adaptation policy; national needs, priorities and challenges (e.g. for RD&D, scientific research, specific technologies or sectors)	No	Partly

2.2.1 Is this information being adequately reported?

Robust information on GHG emissions is necessary to fulfil many functions of international reporting. Currently, such information is fairly complete for Annex I countries under the FCCC and the Kyoto Protocol, in part due to their quantified emission limitations and reduction objectives and associated reporting requirements. Annex I countries report annually on inventories of GHG emissions and transfers in a common reporting format, and this report is subject to review. They also need to submit National

⁸ MRV of adaptation is also important but is not discussed in detail in this paper. The OECD DAC/EPOC Task Team on Climate Change, as well as the Climate Change Expert Group, has a mandate to undertake future work in this area.

Inventory Reports, which provide information on how the inventory is prepared and by whom, including on data sources and collection, quality assurance/quality control procedures, methodologies used and uncertainty levels. Parties to the Kyoto Protocol also report annually on acquisitions and transfers of AAUs, ERUs and CERs. It is thus relatively straightforward to determine whether a party is on-track to meet its GHG commitments under the Protocol or not. In contrast, provisions for non-Annex I countries allow for much more irregular and incomplete reporting of GHG emissions, and do not require reporting of estimation methods or data used as in National Inventory Reports (Ellis and Larsen, 2008).

Information on mitigation actions and their impacts contained in National Communications is more limited. Both Annex I and non-Annex I Parties are required to report on implemented (and potentially also planned) mitigation, and to a more limited extent adaptation, actions. Reporting requirements are less stringent for non-Annex I countries (Ellis and Larsen, 2008). In their NCs, Annex I countries need to estimate the overall impact their mitigation actions will have on GHG emissions, the “with measures” scenario. They are also encouraged, but not required, to produce “without measures” (baseline or reference) and “with additional measures” (including planned actions) scenarios with sectoral detail when possible. In addition, Annex I countries are encouraged to report on the quantitative impact of policies and measures, though this is done less often and inconsistently (*e.g.* some countries do not report this, while others report on the impact of anywhere ranging from a few to most of their policies and measures).

Further, there is no centralised guidance on how to estimate emission reductions from mitigation actions, which means that information reported is not necessarily comparable. In addition, sectoral projections undertaken for Annex I countries do not always match the sectoral classification applied to mitigation policies and measures. Reporting guidelines recommend that policies and measures be classified by energy, transport, industry, agriculture, forestry and waste management, to make these consistent with GHG inventories. In practice, however, countries often classify policies and measures differently, so it can be difficult to compare current and projected data for the same country; projections more often follow IPCC reporting categories rather than the more country-specific sector classification of policies and measures. However, much progress has been made in this area and most Annex I Parties in their 5th national communication (NC5) have provided information on models, assumptions and methodologies for projections. Clarity on methodologies is important to ensure comparability and accuracy of information. Non-Annex I countries are not required to provide information on projected emissions or on estimated effects of mitigation programmes. Nevertheless, as described in Annex A, some non-Annex I countries have undertaken such analyses for national purposes.

Overall, the international community currently has no official, recent “snapshot” – either of global GHG emissions, or of national actions being undertaken to mitigate climate change (Ellis, Moarif and Kim, 2009). These information gaps are particularly wide for non-Annex I countries, due to weaker reporting guidelines, such as the lack of requirement to report emission time series, and the infrequency of national reports. Various international and national climate-related reports and data outside the UNFCCC provide additional information on actions and emissions (see Annex A). While there may be sufficient information to determine that current emission trends are inconsistent with achieving the Convention’s objective of stabilising GHG concentrations, a global view of whether actions currently being taken or planned could modify current GHG emissions pathways is difficult to obtain.

Annex II countries are to report on support provided in their National Communications, covering finance, technology transfer and capacity building. However, countries report different kinds of information and taken together this does not provide a cohesive idea on amounts of support, nor on their trends or patterns (Corfee-Morlot, Guay and Larsen, 2009). The most complete measurement and reporting system to date is

that of bilateral Official Development Assistance (ODA) through “Rio” climate markers, but this is limited to the 23 donors of the OECD Development Assistance Committee (OECD DAC, 2010)⁹.

Non-Annex I countries are encouraged to describe support needs in their National Communications. However, the information currently reported is not sufficiently detailed to determine what kind of support is needed and where (UNFCCC, 2007a). Some information on support needs is provided in other types of reports, for more specific projects in certain areas (*e.g.* Technology Needs Assessments, NAPAs, etc. – see Annex A). Non-annex I countries may also prepare documents identifying support needs within certain sectors as part of specific financing programmes, such as the UN-REDD programme or the World Bank Clean Technology Fund or Strategic Climate Fund programmes (Kim, Ellis and Moarif, 2009). Information sufficiently detailed to guide the provision of support is not currently included in National Communications. Rather, it is spread across several reports that focus on specific areas and are produced by a limited number of non-Annex I countries.

Information on financial support is thus currently inadequate and patchy, both in terms of support provided as well as on where support is needed. For example, although some non-Annex I countries do report financial needs in their National Communication, the time gap between producing the initial and second National Communication can be so long that such information is out of date. This could potentially change in the future if, as outlined in the Copenhagen Accord, there is to be a registry of actions requesting support (and associated support)¹⁰. Weaknesses in reporting on support needs and support provided means national reports are currently not helping guide the provision of support by identifying support needs, or clearly demonstrating whether Annex II parties are meeting their commitment to provide support¹¹.

More comprehensive and timely information on financial provisions by developed countries for mitigation and adaptation activities in developing countries will be crucial in order to assess whether developed countries have achieved their collective goals with respect to delivery of climate change finance in the short and medium term. The Copenhagen Accord indicated that this commitment is for “new and additional resources ... approaching USD 30 billion for the period 2010-2012”. The Copenhagen Accord also outlines longer-term financial commitments, in particular that “developed countries commit to a goal of mobilising jointly USD 100 billion dollars a year by 2020 to address the needs of developing countries. This funding will come from a wide variety of sources, public and private, bilateral and multilateral, including alternative sources of finance”. Improved measurement, reporting and verification (MRV) of financial flows will also be important to track financial flows to 2020 – particularly as these flows will include private sources (where monitoring is currently more patchy) as well as public sources.

The current reporting guidelines for inclusion of information on adaptation in National Communications are cursory – both for Annex I and non-Annex I countries. For example, Annex I guidelines for the vulnerability assessment, climate change impacts and adaptation measures chapter consist of a single paragraph, and indicate that countries “shall include ... an outline” of information on measures to facilitate adequate adaptation. The number of pages and level of detail of reporting on adaptation measures was greater in NC5 than NC4 for many Annex I countries, including France, Germany, Italy, Japan and the UK. However, the focus of reporting on vulnerability and adaptation in most cases remains largely on

⁹ This database also includes information on World Bank funding for climate change mitigation activities for the period 2000-2008.

¹⁰ Care would be needed to avoid double-reporting of similar information in future National Communications and any registry for supported actions.

¹¹ This is in part due to the lack of agreed definition of what is considered as new and additional funding, and to the lack of an agreed method to identify climate-related funding in the overall ODA. These issues will therefore also need to be addressed in other forums, *e.g.* within national governments and with multilateral agencies.

vulnerability assessments and the results of climate change impact studies, rather than on outlining adaptation programmes¹².

Many non-Annex I countries have not yet finished their second National Communication. Most initial National Communications did include some information on adaptation options, although many Parties did not provide a clear indication of the methods used in assessing and analyzing adaptation options, measures and strategies (UNFCCC 2005b). This means that for some of them, more recent information on adaptation programmes or measures is not included in their initial National Communication, but rather in adaptation-specific reports submitted under the UNFCCC (*i.e.* National Adaptation Programmes of Action, produced by LDCs only) or in reports developed for other purposes *e.g.* Belize has produced a National Adaptation Strategy for its water sector (BEST 2009), and adaptation is part of Bangladesh's strategy on climate change (MoEF 2008).

In the lead-up to COP 15, there was significant interest in extending the scope of information reported internationally. Much information that could be useful to the international community (*e.g.* global emission levels and future trends) cannot be calculated as relevant data is not being sufficiently reported by countries. The international community can therefore not accurately assess current and expected future global emission levels. Without this information, it is difficult to assess the adequacy of the global response to climate change and therefore whether countries will meet the Convention's ultimate objective. In addition, information on provision of financial support is inadequate and patchy, making it difficult to assess whether Annex II countries are meeting their commitments. Information is either reported in the OECD DAC yearly, but not by all donors, or officially to the UNFCCC via National Communications but every 3-5 years, and often does not fully comply with the reporting guidelines¹³.

2.2.2 Enabling access to market-based mechanisms

International reports under the UNFCCC can also be used as an eligibility requirement to participate in certain activities. For example, under the Kyoto Protocol, there are several reporting-related participation requirements for the CDM. These include that Annex I Parties are only eligible to use credits from the CDM if they have *i.a.* submitted their most recent national inventory (including a National Inventory Report), and have a national registry in place. There are similar reporting requirements in place for Annex I Kyoto Protocol Parties wishing to participate in international emissions trading. International review procedures for national inventories are thus more robust and compliance-oriented than those for Annex I National Communications.

There are also reporting-related requirements under the Kyoto Protocol in order to participate in Joint Implementation (JI) – both as a potential buyer and seller of credits. In particular, the international oversight of JI projects for host Parties is lower if countries meet the specified reporting requirements.

Requiring certain minimum levels of activity relating to measuring, monitoring and reporting certain types of information could continue to be used as a participation requirement for post-2012 market and/or fund-based mechanisms. Robust MRV provisions are particularly important in the carbon market, as they help to ensure that any offsets from market-based mechanisms are environmentally credible. Robust MRV provisions are also likely to be needed where other incentives or support are provided, *e.g.* for activities in REDD+.

¹² Gagnon-Lebrun and Agrawala (2006) assess how adaptation has been reported in the National Communications of developed countries.

¹³ For example, Parties do not often “clarify how they have determined such resources as being ‘new and additional’”, even though required by the guidelines (is something they “shall” do).

3. International reporting: options to “tier” guidelines

Experience with current FCCC national climate reports indicates that these require significant time and resources to prepare and that capacity may be lacking in some countries, particularly non-Annex I countries. Producing National Communications every two years, as called for in the Copenhagen Accord for non-Annex I countries, would be an onerous task if these reports comprised all the elements included in Annex I National Communications submitted to date. This section explores tiered options for the timing of national reports by identifying which elements could be reported less frequently, in “full” National Communications *e.g.* every 4-6 years, and which “core elements” could be reported more frequently in “lighter” updates to National Communications, or in a registry..

The Copenhagen Accord also contains a variety of pledged mitigation actions and targets from over 70 countries, several of which have clearly outlined the actions they are taking and plan to take. The diversity of pledges highlights the difficulty of standardised reporting on mitigation actions given the variety of parties’ national contexts. Information needed to track progress with pledged actions and targets could be tiered in different ways, including according to the nature of such actions or targets. This section outlines ideas for such tiered information and also discusses the possible streamlining of National Communications that are produced on a biennial basis.

3.1 Which elements could be reported less frequently?

Some information requested in current National Communications (both for Annex I and non-Annex I countries), while important, may change infrequently and therefore not need to be reported every two years. National Communications reported on a biennial basis could therefore exclude information on parameters that do not change significantly in this time frame, such as national circumstances¹⁴, vulnerability assessments, mitigation and adaptation strategies and climate change impact assessments¹⁵. This would result in streamlined, easier-to-read reports. While this information would not need to be included in biennial updates to National Communications, it would still be important to report it in “full” National Communications. The timing of producing such “full” National Communications could vary according to the type of country, and its capacity. For example, Annex I countries currently report National Communications on a 3-5 year cycle, it should be feasible for these countries to continue to produce full reports every 4 years. In contrast, limited capacity in some non-Annex I countries would make it difficult for all to produce full reports on a four-year cycle. Guidelines could therefore indicate a minimum frequency for full reports from non-Annex I countries, with countries encouraged to report more often if possible.

Functions of reports can also change over time. For example, when the FCCC was agreed in 1992, the extent of knowledge about climate change and its potential impact was often low amongst key stakeholders and the public. In that context, it was appropriate to include a separate Article in the Convention about “Education, Training and Public Awareness”, and to require specific reporting on this item. The expansion of climate science research activities may also mean that frequent international reporting on “Research and Systematic Observation” is not needed. Though important inputs into the assessment of climate change impacts globally, including for IPCC assessment reports, it would be resource-intensive and unnecessary to report such information every two years. These elements could therefore be reported in “full” National Communications, or be included, where relevant, in reporting on measures taken to mitigate and adapt to climate change.

¹⁴ With perhaps the exception of economic (such as GDP, GDP per capita and GDP by sector) and energy-related (such as production, consumption and prices) information.

¹⁵ Information on adaptation measures may continue to be reported in full National Communications, but in greater detail.

Information currently reported elsewhere, such as inventories and transfers/acquisitions of credits, could continue to be reported separately by Annex I countries. It is also possible that some data, particularly numerical data such as estimates of GHG emissions or updates to projections, could be reported separately in electronic format using standard templates¹⁶. This would allow for more frequent reporting, possibly quicker approval from relevant domestic authorities, and would have lower translational requirements than other text-based formats.

3.2 Which elements could be reported more frequently?

Recent international discussions call for enhanced reporting on GHG mitigation actions underway and planned, the provision of support and support needs. Spurred by the IPCC's Fourth Assessment Report, parties have recognised the urgency of addressing climate change and making deep cuts in global emissions (UNFCCC, 2007a). Hence the current emphasis on information that is most pertinent in terms of facilitating mitigation actions and reaching the Convention's primary objectives. This "first tier" of information that could usefully be reported more frequently than at present includes:

- Robust information on emission trends to date, *i.e.* more complete and regular national inventories (and associated methodology descriptions)¹⁷;
- Information to better assess projected global emissions trends in future: , *i.e.* countries' GHG emission goals/targets, and GHG emission projections¹⁸;
- More complete information on unilateral and supported actions that Parties are taking, or are planning, to mitigate GHG emissions and their effects;
- How much support (including finance, capacity building and technology transfer) has been provided and to whom;
- Whether support provided has been effective, *i.e.* led to emission reductions or other intended aims.

As the timing and content of National Communications evolve in the future, it will be important to maintain coherence between them and other reporting channels described in Annex A. This means that National Communications and other reports should contain consistent messages concerning the action governments are planning to take on climate change. Also, efforts should be made to minimise the reporting burden wherever possible, particularly for developing countries with limited institutional capacities. Streamlining information in more frequent National Communication updates, as well as trying to make this information useable in or useful for other national reports, be they international or domestic, could facilitate this.

¹⁶ In order for such reports to be transparent and comparable, methodological information on how calculations were made would also need to be submitted. This could be done in a separate report, as is currently the case for Annex I countries who submit GHG inventory information in a set of tables known as the "Common Reporting Format", with details on methodologies, data and systems in the separate National Inventory Report.

¹⁷ Although this is reported on an annual basis by Annex I countries, it is currently reported much less frequently for non-Annex I countries. Non-Annex I countries account for an increasing share of global GHG emissions.

¹⁸ These are not consistently required in countries' National Communications, but some of this information has been reported by countries in their submissions under the Copenhagen Accord.

3.3 Tiered reporting on progress with meeting commitments and pledges

Several non-Annex I and nearly all Annex-I Parties¹⁹, have pledged to take mitigation actions, mid-term sectoral or other goals, or national-level emission reduction or limitation targets. Several Annex II Parties have also pledged financial support. Regular reporting on progress with meeting the Accord's financing commitments are likely to be important, and may occur within biennial reports and/or a registry. Progress with meeting commitments and pledges related to mitigation actions could be reported in a tiered manner²⁰ - both in terms of time, and in terms of content (particularly for non-Annex I Parties).

The wide variety in the manner country mitigation goals are framed, from national GHG targets to implementation of specific projects, could be reflected in a reporting format that allows countries with different types of goals to report on progress with achieving them as part of biennial national reports²¹.

Table 3: Information needed to report progress to mitigation targets/pledges

Information needed to assess progress with pledge	Type of pledge			
	Absolute quantified emission limit	Relative quantified emissions limit	Sectoral targets, goals or actions	Mitigation actions
National inventory report	✓	✓	--	--
Sector-specific inventory*	--	--	✓	--
Transfers/acquisition of credits	✓	✓	✓	#
National projections to pledge date (or beyond)	✓	✓	--	--
Numerator and denominator**	--	✓	--	--
Sector projections to pledge date (or beyond)	--	--	✓	--
List of pledged actions and timeframe	--	--	--	✓
Information on action status/outcome	--	--	--	✓

This may also be needed in the case of NAMA crediting.

* Reports will need to make clear what the sector definitions are.

** For example, both emissions and GDP for an emissions intensity target.

Table 3 highlights that countries with different types of pledges on climate action will need to report different types of information to demonstrate that they are meeting their pledges. It could therefore be

¹⁹ 41 Annex I and developed country parties (including EU member states) and 35 Non-Annex I Parties have submitted their proposed GHG targets and actions.

²⁰ The notion of tiers is not new in UNFCCC-related reporting: the IPCC inventory methodologies contain different tiers that can be used to calculate GHG emissions. The tiers range in complexity, with countries able to choose that which are believed to “produce the most accurate estimates, depending on national circumstances and the availability of data” (UNFCCC 2002). However, in the IPCC context, tiers refer to *how* something is calculated rather than *what* is reported. Even with tiered reporting on progress with meeting pledges, reports will also be needed on other issues, such as adaptation programmes, national circumstances, etc. However, the focus of this section is on emission levels and mitigation actions.

²¹ For some countries information may be reported more often than biennially, such as Annex I annual GHG inventories and reports. If monitoring of targets occurs more frequently within countries, this could also be communicated internationally at similar time frames.

appropriate for future reporting guidelines to also request different information based on the type of target or goal proposed by a particular country.

3.3.1 Tiered reporting according to country grouping and national circumstances

The potential to “tier” future National Communications reporting guidelines, in terms of frequency and content, could also allow flexibility in the type of information reported according to countries’ different national circumstances. This would allow countries to initially report according to certain minimum requirements, and build on this by enhancing reporting over time. A requirement for more frequent international reporting of national climate-related information may contribute to retaining the capacity required to do so.

Examples of different elements on which countries can build reporting capacity are provided in Figure 4. The same country may have different capacity to report different elements. For example, a country’s GHG inventory it may use Tier 1 reporting for certain sectors or gases and Tier 3 for others. Regarding reporting on mitigation actions, reports here could vary, starting from the less-complex reporting on progress with the implementation of mitigation actions (*e.g.* number of planned hydropower projects completed; the completion of a renewable energy action plan and designation of responsibility for implementation). Alternatively, countries – many of whom may already have a domestic process in place for tracking progress on implementation - could report on the direct outcomes of their mitigation actions (*e.g.* MW installed capacity), and could also describe their domestic MRV provisions. The highest “tier” of reporting on mitigation actions would be to indicate the GHG impacts of a particular action. Similarly for support needs; lower-tier information could include that support is needed for particular mitigation actions and/or enabling activities, and higher-tier information could quantify and/or detail such requirements.

Table 4: Possible tiers in reporting information on GHG emissions, mitigation actions and support needs²²

Theme	Sub-theme	Highest tier reporting
Inventories	Sources and gases	All key sources, 6 gases
	Methodology	Full NIR
	IPCC methods	Tier 3
Mitigation actions, programmes and plans	Strategic action plans	Economy-wide
	Policies, actions, programmes	All major policies, actions and/or programmes; implemented or planned
	Outcomes	Status and GHG outcome
	Projections (emissions, costs)	Sector/programme-specific, all sectors
	Methodology	Explanation of projections, quantified outcomes of policies and measures
Support needs (finance, technology, capacity building)	Finance	Specific amounts for designated projects, bodies, programmes
	Technology	Specific amounts for given needs identified
	Capacity building	Specific needs for given programmes, projects etc as identified

Allowing the level of complexity and completeness of reporting to vary according to national circumstances and capacity has several benefits. This includes identifying “best practice” in reporting, while providing flexibility for countries to improve their reporting as their capacity permits.

²² Tiered reporting could also be established for other aspects, such as vulnerability assessments and adaptation measures.

Figures 2 and 3 summarises the potential changes to countries' National Reports under the UNFCCC discussed above. These are presented for Annex I and non-Annex I countries separately. For each country grouping, an outline is given of information that could be included in the "full" National Communication, as well as information that could be included in "updates", and a registry of supported actions. For Annex I Parties, this could include more frequent reporting to the UNFCCC on progress with meeting mitigation targets, as well as – for Annex II countries and others who provide support - on the extent of support provided to developing countries. For non-Annex I Parties, this could include more frequent "full" National Communications (the exact frequency itself being flexible, to take country circumstances into account), with information in these Communications tiered according to the type of mitigation goal/pledge. It would also include biennial "updates", including information on a country's GHG inventory, and mitigation measures taken and planned.

Figure 2: Potential changes to the timing and content of Annex I national reports

Present: Annex I

Every 3-5 years

National Communication

- National circumstances
- GHG inventory information*
- Mitigation policies and measures*
- Projections and the total effect of PAMs*
- Vulnerability assessment, climate change impacts and adaptation measures
- Financial resources, technology and capacity building provided (Annex II)*
- Research and systematic observation (RSO)
- Education, training and public awareness

* Additional information is required in these sections by KP Parties.

Copenhagen Accord - Appendix I

Quantified economy-wide emissions targets for 2020
(Parties listed in chapeau of CA)

Annual

National Inventory Report

- Institutional arrangements and QA/QC*
- Methodologies and data sources used*
- Trends in GHG emissions*
- GHG emissions by sector (common reporting format)
- KP-LULUCF (KP Parties)
- Holdings and transactions of Kyoto units (KP Parties)
- Changes to national systems and registries (KP Parties)



Future: Annex I

Suggested minimum frequency: every 4 years

National Communication (full)

- National circumstances
- GHG inventory information
- Mitigation targets (mid- to long-term)
- Mitigation actions and programmes (including education and public awareness)
- Projections and the effect of key mitigation actions
- Vulnerability assessment, climate change impacts and adaptation actions and programmes
- Summary of financial, technology and capacity building support provided (developed countries providing support)
- Research and systematic observation

Suggested minimum frequency: every 2 years

National Communication (update)

- GHG inventory information
- Progress with implementing mitigation targets
- Summary of financial resources, transfer of technology and capacity building provided (developed countries providing support)
- Optional updates
 - Key new mitigation actions and programmes
 - Projections
 - Key new adaptation actions and programmes

Annual

National Inventory Report

- Institutional arrangements and QA/QC
- Methodologies and data sources used
- Trends in GHG emissions
- GHG emissions by sector (CRF)
- KP-LULUCF (KP Parties until 2012)
- Holdings and transactions of Kyoto units (KP Parties until 2012)
- Holding and transactions of units for any post-2012 mechanisms

Frequency to be determined

Registry of mitigation actions seeking support

- Could potentially provide detailed information on finance, technology and capacity building support provided (developed countries providing support)

Figure 3: Potential changes to the timing and content of non-Annex I national reports

Present: Non-Annex I

Irregular reporting timetable

National Communication

- National circumstances
- National GHG inventory
- Steps taken or envisaged towards formulating, implementing, publishing and updating mitigation and adaptation programmes
- Vulnerability assessment and adaptation measures
- Mitigation programmes and measures
- Other relevant information, e.g. TT activities, RSO, education, training and public awareness
- Financial, technical and capacity needs

Copenhagen Accord - Appendix II
Mitigation actions (Parties listed in chapeau of CA)



Future: Non-Annex I*

Suggested minimum frequency: every 4-6 years

National Communication (full)
Common elements (all non-Annex I Parties)

- National circumstances
- National GHG inventory or national inventory report**
- Vulnerability assessment and adaptation actions
- Mitigation actions taken and envisaged
- Other relevant information, e.g. TT activities, RSO, education, training and public awareness (encouraged)
- Summary of financial resources, technology and capacity building needed/received/provided

Tiered elements (by type of pledge) – see Table 3

Parties with pledged mitigation actions Status and/or outcome of the pledged actions
Parties with sectoral quantified emissions goal(s) Relevant sectoral level information, e.g. inventories
Parties with a relative quantified economy-wide emissions goal Information relevant to goal type, e.g. BAU emissions projections
Parties with an absolute quantified economy-wide emissions goal Relevant information (e.g. holdings and transactions of credits/units)

Suggested minimum frequency: every 2 years

National Communication (update)

- National GHG inventory or national inventory report**
- Progress with implementing mitigation goals (tiered information – see Table 3)
- Outcomes of mitigation actions (e.g. results of domestic MRV)
- Summary of financial resources, technology and capacity building needed/received/provided
- Optional updates
 - Mitigation actions taken and envisaged (supported and unilateral)
 - Projections
 - Key new adaptation actions

Frequency to be determined

Registry of mitigation actions seeking support

- Could potentially provide detailed information on mitigation actions seeking support
- Could potentially provide detailed information on financial resources, technology and capacity building needed/received/provided

* LDCs and SIDS, due to their limited resources and capacity for reporting, could be invited to follow these timing and content guidelines to the extent that their capacities permit, e.g. full National Communications every 6-8 years.

** A national inventory report containing additional information on methodologies should be provided by Parties listed in the chapeau of the CA and other non-Annex I Parties with sufficient reporting capacity. Coverage of inventories in key sources may differ between Parties. The scope of a national inventory report for non-Annex I Parties has not yet been determined.

4. Conclusions

International climate negotiations up to and at COP 15 have considered revising the content and frequency of information reported by Parties under the UNFCCC. Reporting requirements currently envisaged (for both Annex I and non-Annex I countries) include National Communications, national greenhouse gas inventory reports, as well as new types of reports, such as low-emission development plans or a registry to match actions with support. More frequent reporting of information is also envisaged, particularly for non-Annex I countries.

Different types of climate-related reports can have both national and international functions. At a national level, they can help countries identify mitigation options and adaptation needs, establish a growth path that is low GHG and climate resilient, improve communication and co-ordination between actors who develop and implement policy, and instigate processes that facilitate effective responses to climate change. These reports also serve several international functions. These can include: ensuring that countries – individually and collectively - are meeting their emissions and/or financial obligations under the Convention and Kyoto Protocol; facilitating the implementation of these obligations; ensuring transparency and building trust; understanding global GHG emission trends; identifying areas where more could be done; highlighting successes, as this provides a means for parties to learn from each other; and facilitating international support for climate actions in developing countries. The goal of a national report will affect its contents. The first step is for countries to agree on the purpose of different sorts of climate-relevant reports: once the function of national reports has been identified, the international community can work towards reporting guidelines that deliver timely, useful and action-oriented information.

There is a potential for overlap in the content of different national reports under the UNFCCC. There is also overlap in the data and information needed to develop and implement national climate strategic plans, and that needed to inform the international community of both collective and individual progress towards particular climate policy goals. Revising and/or developing new reporting guidelines, as outlined by texts from COP15, including the Copenhagen Accord, presents the international community with an opportunity to focus national reports on key areas, and to ensure that their preparation can enhance national action on climate change.

Countries already produce different types of reports under the UNFCCC and this is expected to continue in the future. This paper suggests that reporting requirements for future National Communications could be “tiered” in the future, both in terms of frequency and content. This would:

- Allow for more frequent reporting (via “updates” to National Communications) of items where significant changes routinely occur on an annual or biennial basis (*e.g.* GHG emissions and transfers, financial flows for climate action);
- Enable countries to focus these “updates” on parameters of most relevance to their GHG goals and of most interest to the international community (*e.g.* medium-term goals, progress with meeting targets);
- Provide flexibility for countries to improve the content and frequency of reported information, as their capacities allow.

“Full” National Communications could continue to be reported, but on a less frequent basis than the biennial reports. As well as information included in “updates” the “full” reports could include information that changes less frequently (*e.g.* national circumstances), and/or is perhaps not as immediately relevant to the international community in assessing progress towards quantified mitigation or financing targets or goals (*e.g.* adaptation measures, research and systematic observations). The minimum frequency of the “full” reports could vary according to country, in order to reflect differing responsibilities and capabilities.

This would allow Annex I countries to continue to report on e.g. a 4-yearly basis, and non-Annex I countries on a less frequent basis (perhaps based on their capacity to report).

When considering what items to report in future full National Communications, it may be useful to assess what items not currently required, or only to a limited extent, could add value in future reports. This could include mid or long-term mitigation goals or pledges, as well as progress in meeting such pledges. It may also be useful to expand reporting in some areas, including on adaptation measures taken or planned by countries, or (for non-Annex I countries) on the methodologies used to estimate GHG emissions.

Countries' pledges for mitigation to 2020 vary considerably in terms of both type (*e.g.* fixed GHG emission levels, GHG emission levels per GDP or compared to business-as-usual) and scope (*e.g.* national, sectoral or action-based). Assessing progress towards these different pledges will require different information. The frequency with which different parameters change also varies, as does the capacity of countries to report. For all these reasons, it may be appropriate to develop "tiered" reporting guidelines for National Communications.

In addition to information reported via National Communications, some frequently-changing information could continue to be reported separately. This could include Annex I national inventory reports and credit transactions. It could also include detailed information of support needs and support provided.

In order to ensure that future national reports fulfill their intended functions it will be necessary to continue to build reporting capacity, particularly in developing countries. To achieve this, support for enhancing MRV capacity in developing countries may need to be significantly scaled up in the future.

Reporting on GHG mitigation actions and emissions is key to helping the international community identify global greenhouse gas emission trends and work to modify them as needed. More comprehensive and reliable data on and increased frequency of international reporting on financial support and needs can also help to direct climate-related financial flows more efficiently, and to build trust that such support is being delivered at the appropriate scale. Current plans to revise and extend existing reporting guidelines offers the international community a chance to assess how climate-related reports under the UNFCCC can be made more useful both nationally and internationally in helping parties collectively move towards the Convention's ultimate objective.

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Glossary

AI	Annex I
AWG-LCA	Ad Hoc Working Group on Long-term Cooperative Action under the Convention
BAP	Bali Action Plan
CDM	Clean Development Mechanism
COP	Conference of the Parties
CRF	Common Reporting Format
DAC	Development Assistance Committee (of the OECD)
ESMAP	Energy Sector Management Assistance Program
GDP	Gross Domestic Product
GHG	Greenhouse Gas
KP	Kyoto Protocol
LDC	Least Developed Country
LDCF	Least Developed Country Fund
LEDs	Low Emissions Development Strategy
MRV	Measurable, Reportable and Verifiable
NAI	Non-Annex I
NAMA	Nationally Appropriate Mitigation Action
NAPA	National Adaptation Programme of Action
NC	National Communication
NIR	National Inventory Report
NSDS	National Sustainable Development Strategy
ODA	Official Development Assistance
PAMs	Policies and Measures
SIDS	Small Island Developing States
TNA	Technology Needs Assessment
UNCED	United Nations Conference on Environment and Development
UN DESA	United Nations Department of Economic and Social Affairs
UN DSD	United Nations Division for Sustainable Development
UNFCCC	United Nations Framework Convention on Climate Change

Annex A: Climate-related reports and data

As well as National Communications, many countries have already prepared several other climate-related strategies and reports. Some are reported internationally (or regionally in the case of the EU), *e.g.* as part of specific reporting obligations. Other reports that are developed nationally (and not required internationally) may also be available publicly to the national and potentially international community. Reports may contain historical and current information, and/or also contain future plans. Brief descriptions of some of these other reporting channels are presented below.

Official reports and data reported internationally

The reporting of information relevant to climate change takes place in different frameworks. First, several different types of reports occur under the FCCC and Kyoto Protocol. These include:

Greenhouse Gas Inventories (All Parties)

In accordance with Article 12 of the Convention, all Parties shall submit a national inventory of greenhouse gases. The FCCC lays out differentiated reporting requirements on inventories for Annex I and non-Annex I Parties. In particular, the frequency and completeness of inventories varies between Annex I and non-Annex I Parties, as does the form in which they are reported.

Annex I Parties need to submit a national inventory of greenhouse gas emissions and sinks on an annual basis, via a web-based interface. The submission consists of two parts: (1) the National Inventory Report (NIR), which contains, *inter alia*, a written description of emission trends, the institutional arrangement for inventory preparation, and the methodology and data sources used for inventory preparation in each sector, and (2) the Common Reporting Format (CRF), a series of standardised data tables containing numerical information (UNFCCC, 2006a). A summary of the inventory is to be included in Annex I National Communications.

Non-Annex I Parties need to report GHG inventory data in their national communications. Complete coverage and an inclusive time series from 1990 are not required, nor is information on methodologies and data sources (UNFCCC, 2002).

Greenhouse Gas Projections (Annex I Parties)

Convention Article 12.2 requires Annex I Parties to report “a specific estimate of the effects” of policies and measures. The National Communications of these Parties therefore includes projections of national GHG emissions including the measures currently in place.

Supplementary Information provided by Parties to the Kyoto Protocol (Annex B only)

In accordance with Article 7 of the Kyoto Protocol (UNFCCC, 1998), Annex I Parties to the Protocol are required to submit supplementary information necessary to demonstrate compliance with the Protocol in their Greenhouse Gas Inventories and National Communications. This includes information on holdings and transactions of Kyoto Protocol units such as Assigned Amount Units (AAUs), Certified Emission Reductions (CERs), Emission Reduction Units (ERUs) and Removal Units (RMUs) generated by LULUCF activities. This accounting information is reported to the UNFCCC Secretariat annually in a standard electronic format (UNFCCC, 2006b).

Technology Needs Assessments (non-Annex I only)

At COP 4 non-Annex I Parties were invited to produce Technology Needs Assessments (TNAs), the objective of which was to provide a process for non-Annex I Parties to clearly identify barriers to the uptake of mitigation and adaptation technologies and priority measures needed to address these barriers (UNFCCC, 1999a). As well as physical technology transfer from developed to developing countries, TNAs may also address areas such as regulatory options or fiscal and financial incentives to stimulate the uptake of technologies. As of March 2010, 69 TNAs had been reported. Non-Annex I Parties are encouraged to include information from their TNAs in their National Communications.

National Adaptation Programmes of Action (LDCs only)

The objective of National Adaptation Programmes of Action (NAPAs) is to provide a process for Least Developed Countries (LDCs) to identify priority activities that respond to their most urgent needs with regard to adaptation to climate change. NAPAs were introduced at COP 7 in Marrakesh in 2001 in order to provide a faster and simpler tool than National Communications for reporting urgent funding needs for adaptation. Once a NAPA has been submitted by a country, it becomes eligible for funding from the Least Developed Country Fund (LDCF), which is operated by the Global Environment Facility (GEF). As of March 2010, 44 out of 48 LDCs had submitted NAPAs and nine of those had been endorsed by the GEF (UNFCCC, 2010b).

As climate change is a cross-cutting area, it is not surprising that climate-related information is also required outside the FCCC. Selected reporting needs are outlined below.

National Sustainable Development Strategies (All countries)

At the 1992 UN Conference on Environment and Development (UNCED), all governments undertook to establish and implement National Sustainable Development Strategies (NSDS). However, progress on this front has been slow. In 1997 the Special Session of the UN General Assembly set a target date of 2002 for implementing the strategies. In 2002 the World Summit on Sustainable Development urged countries to begin their implementation by 2005. By 2008, 96 countries had reported that they were implementing or developing an NSDS (UN CSD, 2008).

Energy Efficiency and Renewable Energy Action Plans (EU Member States)

EU Member States are required to prepare National Energy Efficiency Action Plans (NEEAPs) in accordance with the 2006 EU Energy Services Directive (European Parliament, 2006). These strategies are to be prepared three times – in 2007, 2011 and 2014 – and each plan has different reporting requirements. By 2009, all 27 Member States had submitted their first NEEAP (European Commission, 2009). Member States are also required to produce National Renewable Energy Action Plans by June 2010, in accordance with the 2009 EU Renewable Energy Directive, that set out how they intend to achieve their renewable energy targets for 2020 (European Parliament, 2009)²³.

Official climate reports and data not reported internationally

In addition to submissions to the international community, many developed and developing countries have prepared national climate-related plans or strategies (see Tables 4 and 5). These strategies are often available to the international community, but have been developed for domestic purposes rather than for international reporting purposes. Because such plans do not necessarily serve an international purpose, they can vary widely in terms of time-frame, content and coverage. For example, China's National Climate Change Program described actions that China would take on mitigation and adaptation for the period 2007-

²³ These reports are submitted regionally, but not to the UNFCCC.

2010 in line with its 11th Five-Year Plan (NDRC, 2007), while Mexico's Special Programme on Climate Change sets out an aspirational mitigation goal for 2050 together with mitigation scenarios for 2020, 2030 and 2050 and planned actions on mitigation and adaptation for the period 2009-2012 (SEMARNAT, 2009).

National climate-related strategies may discuss what action the government plans to take at the international, national or sectoral level to tackle climate change, and may cover mitigation, adaptation, or both. The objective of these strategies can be generalised as (1) to identify some form of national goal regarding climate change, and (2) to put in place a system that ensures that policy, planning and investment decisions made at a national level are consistent with this goal. The level of detail provided and the types of targets, goals or actions discussed varies considerably between countries.

In terms of documentation, this information has been presented in a wide variety of ways. Tables 4 and 5 present a list of national climate-related plans, strategies and/or proposals produced by Annex I and non-Annex I countries. Some countries have produced a strategy document for one sector (*e.g.* Guyana's Low Carbon Development Strategy, which focuses on mitigation in the forestry sector). Others have produced a strategy document containing information on several or all major emitting sectors (*e.g.* the Norwegian Climate Policy document from the Norwegian Ministry of the Environment). Some countries have produced both (*e.g.* the UK Low Carbon Transition Plan, UK Low Carbon Industrial Strategy and UK Low Carbon Transport Strategy). Some countries have posted information about the government's climate change strategy on their website, but have not published a national strategy document as such (*e.g.* Australia). A further option is to present the climate-related information in a broader environmental strategy document (*e.g.* the Korea Green Growth Strategy).

Other information

In addition to the reports outlined above, countries may produce other information that can be used directly or indirectly to inform the international community about climate change. For example, countries often monitor and report information on energy statistics, agricultural production and forest cover.

Such data can represent the majority of information on which GHG emissions inventories are calculated. It can therefore allow national inventory reports to be established for a particular country or set of countries, even if such an inventory is not an "official" submission by the country concerned. Further, there are some international organisations that collate comparable statistics in particular areas. For example, the IEA publishes energy statistics that have either been officially submitted to them by governments, or have been drawn from official government sources. The IEA then uses these data to calculate associated CO₂ emissions. International sources of country-specific GHG data are also available elsewhere, *e.g.* via the World Resources Institute's CAIT tool²⁴.

²⁴ See <http://cait.wri.org/>

Table 5: National climate-related plans, strategies and/or proposals in Annex I countries

Country	Name of document	Date
Australia	Australia's Action on Climate Change	-
Austria	Climate Strategy 2007 (German)	2007
Belarus	National Program for Climate Change Mitigation Measures in 2008-2012	Pending
Belgium	The Flemish Climate Policy Plan 2006-2012 Walloon Sustainable Development Plan to 2020 (PMDE)	2006 2009
Bulgaria	National Action Plan on Climate Change 2005-2008	2004
Canada	Turning the Corner: Regulatory Framework for Industrial Greenhouse Gas Emissions	2008
Czech Republic	National Program to Abate the Climate Change Impacts in the Czech Republic	2004
Denmark	Green Growth Plan (for agriculture)	2009
EU	Climate and Energy Package	2008
Finland	National Climate and Energy Strategy	2008
France	Actualisation 2006 du Plan Climat 2004-2012 (French)	2006
Germany	Integrated Energy and Climate Program	2007
Hungary	National Strategy on Climate Change	2008
Iceland	Climate Change Strategy	2007
Ireland	National Climate Change Strategy 2007-2012	2007
Italy	Climate Change Action Plan	Pending
Japan	Action Plan for Achieving A Low-Carbon Society (proposal)	2008
Latvia	Climate Change Mitigation Programme for 2005-2010	2005
Luxembourg	CO ₂ Reduction Action Plan	2006
Netherlands	Clean and Efficient: New Energy for Climate Policy	2007
New Zealand	Climate Change Solutions: An Overview	2007
Norway	Norwegian Climate Policy	2008
Poland	Poland's National Climate Strategy	2006
Portugal	National Climate Change Programme	2004
Romania	National Action Plan on Climate Change of Romania 2005-2007	2005
Russia	Emissions Target Scheme	2009
Slovenia	Operational Programme for Limiting Greenhouse Gas Emissions	2006
Spain	Spanish Climate Change and Clean Energy Strategy	2007
Sweden	Towards a Low Carbon Society	2009
Turkey	National Climate Change Action Plan	Pending
UK	The UK Low Carbon Transition Plan	2009

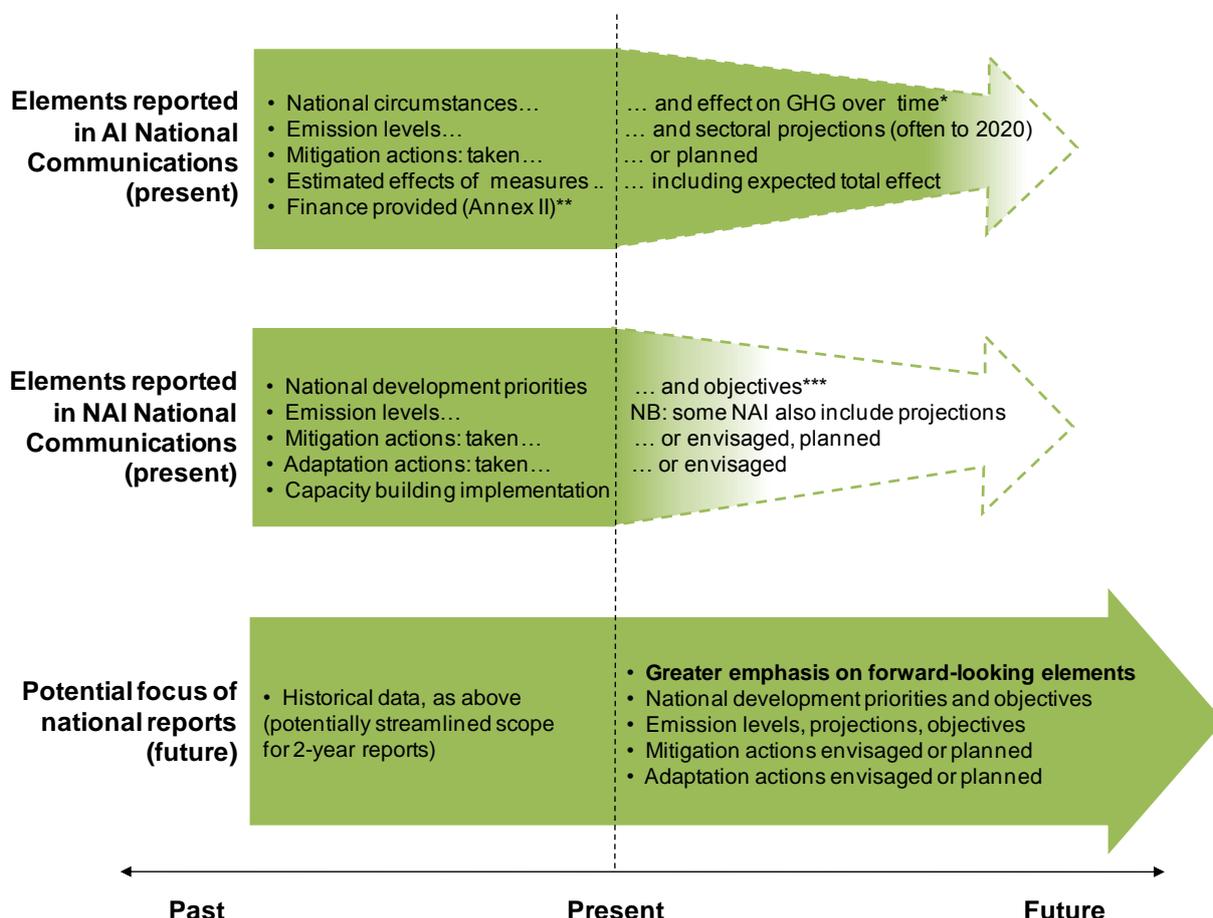
Table 6: National climate-related plans, strategies and/or proposals in non-Annex I countries

Country	Name of document	Date
Bangladesh	Climate Change Strategy and Action Plan	2008
Brazil	National Plan on Climate Change	2008
Chile	National Climate Change Plan	2008
China	National Climate Change Program	2007
Guyana	Low Carbon Development Strategy (Draft)	2009
India	National Action Plan on Climate Change	2008
Indonesia	National Action Plan Addressing Climate Change	2007
Mexico	Special Program on Climate Change (PECC)	2009
Peru	National Strategy on Climate Change	2008
South Africa	Long Term Mitigation Scenarios	2008
South Korea	Green Growth Strategy	2008

Possible changes to National Communications

If a greater emphasis is placed on including medium and long-term goals, as well as projections, in future National Communications, the scope of these documents could change as outlined in the figure below.

Figure 4: Potential changes to the focus of national reports



* According to the guidelines in FCCC/CP/1999/7

** Annex II countries (but not EITs) are required to report on financial resources provided.

*** According to the guidelines agreed at COP8: FCCC/CP/2002/7/Add.2

Source: Authors

Annex B: Developing and implementing national climate programmes and strategies

Besides more frequent inventories and National Communications for most non-Annex I parties, COP 15 outcomes including the Copenhagen Accord emphasise the role of LEDS, domestic MRV frameworks and specific reporting on support needs. Over the last year, several countries have put forward medium and long-term actions, goals and targets (sometimes as part of their submissions under the Copenhagen Accord), against which progress can be monitored and reported.

Substantial domestic processes, information and capacity needs can be needed to develop climate pledges – even if little detail is reported. Capacity requirements can be particularly marked given the potential changes in the content and frequency of national climate-related reports requested internationally. Delivering frequent climate reports (and in a UN language) can be challenging, especially for developing countries with limited technical and personnel capacity. Such countries will need support in order to build domestic capacity to meet enhanced reporting needs.

However, while capacity may need to be enhanced to deliver more frequent climate reports, countries are not starting from scratch. Many countries now have a considerable body of experience on developing climate policies, as well as climate-related strategies (*e.g.* National Sustainable Development Strategies, LEDS, National Adaptation Strategies) or reports (*e.g.* National Communications). However, there may be a significant delay in agreeing to develop a strategy and actually doing so. Such delays can be due to “technical” reasons, such as a lack of data or other information on which to base the strategy. There can be a significant time lag and/or capacity-building requirements in obtaining some types of information, *e.g.* activity data or GHG projections. Delays can also be caused for “political” reasons, such as generating widespread agreement amongst stakeholders on the appropriate way forward.

This section assesses experience to date with developing and implementing climate policies and/or climate-related strategies to highlight:

- What processes are needed in order to develop, and to implement, plans; and
- What information is needed in order to do so.

Information required or requested internationally could therefore also serve to encourage the processes and information for countries to more effectively formulate, implement and update climate policies.

Process and institutional needs

Developing and implementing forward-looking plans in a cross-cutting area such as climate change requires institutional capacity. Those countries that have already developed and implemented medium or long-term strategies on climate change or related issues have begun to address these challenges. It is therefore worthwhile looking at what experience has already been gained in related areas, in order to learn from this in the future.

There is a large body of literature on lessons learned and/or guidance outlining the different steps that are needed in order to establish and implement an effective long-term environmental strategy (OECD, 2001; UN DESA, 2002; DG ENV, 2006; OECD, 2006; ESMAP and Carbon Finance Assist Program, 2009). These can be summarised as:

- Ensure broad participation of, and communication with, different stakeholders during the plan’s development and implementation. This will help to integrate environmental concerns within sectoral policies, and will also help to engage local and regional actors – including sub-national governments;

- Build consensus and commitment for the plan and its goals – at the highest political levels. This is needed to build broad support for implementation;
- Define clear responsibilities and objectives for the co-ordinating body as well as different implementing bodies. Indicators and targets can help to monitor progress of the plan's implementation;
- Identify and prioritise action areas, *e.g.* GHG mitigation options;
- Develop capacity to implement the plan (including provisions for review and updating, as necessary);
- Focus on the outcome and means of implementation. This will need an enabling policy environment, co-ordinated institutions within government, and identification of finance needed to implement the plan.

Some or all of these steps are already being implemented by some countries, both in Annex I and non-Annex I. For example, Guyana's draft Low Carbon Development Strategy (see Table 6 in Annex A) indicates that it will develop institutions to bring together and align current efforts, to drive key projects, and to manage payments. Canada's Sustainable Development Strategy 2007-2009 (Environment Canada, 2006) includes provisions for review, and identification of lessons learned (which included the need to take a broader perspective). The UK has developed legally-binding carbon budgets, and identified the level of anticipated emissions cuts in individual sectors (Thomas, 2009). Indonesia and Mexico have identified priority areas for GHG mitigation (Triastuti, 2009; Fernandez, 2009).

However, experience to date has also highlighted some challenges in developing an integrated national climate plan. For example, economies reliant on domestic fossil fuels, and/or whose income is linked to the production of fossil fuels may have powerful interest groups that can make developing consensus around a low-carbon plan difficult. In such cases, it might be more politically feasible to establish low-carbon scenarios (and/or individual actions), rather than a plan as such. Agreeing on who has control/receipt of international sources of climate funding can also be challenging, and was one of the reasons for delay in establishing the CDM approval procedures in some countries.

Information and other needs

It is important to assess up-front the information needs of a climate-related national report. These will depend on:

- What the function of these reports is meant to be nationally (as well as internationally), *e.g.* whether national actions focus on mitigation and/or adaptation actions;
- What level of aggregation a country's GHG mitigation actions are taken at (*e.g.* national goals, sectoral or sub-sectoral goals or actions, individual programmes or actions): identifying, implementing and financing project or sector-level actions will require data at this level of aggregation²⁵;
- How GHG targets and/or strategies are developed within individual countries (*e.g.* bottom-up or top-down).

²⁵ Information may also need to be provided at a more disaggregated level than the goal in order to assess progress towards it.

The following sections outline what information could be needed to formulate, implement, publish (*i.e.* report) and update national climate programmes, as required under UNFCCC Article 4.1.

Formulating and/or updating climate programmes

Developed in 1992, the UNFCCC referred to the need to both formulate and update national and regional mitigation programmes. By 2010, the majority of countries have already formulated such programmes – either national, sectoral, or at the level of individual actions or programmes. The current focus in many countries is therefore to update such plans.

Formulating climate programmes or goals can be done in a top-down or bottom-up manner. Formulating goals in a top-down manner was done in Kyoto, where certain countries were allocated GHG reduction targets, and then established how they were going to meet such targets. Political declarations on GHG emissions or goals have also been made more recently, *e.g.* with some countries (such as Norway and the Maldives) indicating that they will work towards becoming carbon-neutral.

Establishing climate programmes in a bottom-up manner would involve a disaggregated assessment of what can be done. This approach is therefore likely to need more information than a top-down approach to setting targets.

The first step in establishing a bottom-up strategy would be to identify GHG emissions and recent trends. This would require a time series of national GHG inventories (and associated reports outlining the methodologies used to calculate the inventory).

Other information that could be gathered or calculated subsequently could include:

- Emission projections – useful to identify what expected future emissions would be, and in which sectors this is expected to occur;
- Estimates of mitigation potential (and associated costs) for different measures – needed to cost, and to prioritise, actions;
- Evaluations of the progress in previous GHG programmes, and an assessment of the reasons behind associated successes and/or challenges.

The third step would involve identifying both possible GHG-mitigation programmes and agreeing on country priorities. This will involve some of the processes identified in section 4.1, including broad stakeholder consultation and intra-government co-ordination. It is important to note that some programmes that mitigate GHG emissions may not actually be formulated in GHG terms, but as intermediate outcomes (Ellis and Moarif, 2009). Recent examples of this include submissions by Morocco and Ethiopia under the Copenhagen Accord.

There could also be a third step involved in formulating climate programmes: identifying specific GHG-related goals (short or longer-term; country-wide or at a lower disaggregation level; absolute or relative) associated with the programmes.

Implementing mitigation programmes

Specific steps may also be needed to implement mitigation programmes at the national level. This can include preparatory steps (such as capacity building) as well as steps needed for the direct implementation of programmes. These are both important and necessary at the national level. Reporting on such steps at the international level can help disseminate lessons learned to a wider community.

Preparatory steps to implement could include:

- Legislative or regulatory requirements, *e.g.* establishing national and/or sectoral “carbon budgets” (as in the UK Low-Carbon Transition Plan, Thomas 2009), requiring certain types of data or information to be monitored and reported; establishing the regulatory framework for independent power producers (often needed to promote renewable electricity); developing rules on waste management; identifying protected forest areas etc.
- Capacity building, *e.g.* to develop national inventory reports and projections, to establish appliance or other standards, assess monitored data/results of policy evaluations etc.
- Building consensus and commitment amongst relevant stakeholders, *e.g.* via consultations with the public and stakeholders, public awareness campaigns.

Direct implementation-related steps include:

- Designating responsibilities for programme implementation amongst relevant stakeholders;
- Developing monitoring and evaluation frameworks, including legislation and regulations to impose reporting obligations on relevant entities and sanctions in case of non-compliance;
- Establishing indicators to monitor, assess and report on progress, along with systems to collect and analyse the indicators.

Publishing (or reporting) information

Steps needed to publish or report information have previously been described elsewhere (Ellis, Moarif and Kim, 2009) and include agreeing on how information is collected and collated at a national level. This can cover what the data and other information is used for at a national level, *e.g.* to assess progress of policies, or to demonstrate cost-effectiveness of publicly funded measures. In addition, agreement is needed at a national level on the form in which such information will be reported. Future reporting requirements may also involve two or more tracks, such as electronic reporting for supported actions, financial needs/provisions, national inventory reports and text-based reporting for a wider suite of climate-related actions.

Beyond international reporting requirements, developing and implementing climate-related national programmes – as required by the Convention – involves processes and information that can be resource and capacity-intensive. This is important to consider given the call for more frequent National Communications, as many non-Annex I parties have determined that they lack the technical and institutional capacities to meet existing reporting guidelines (UNFCCC, 2005). While the ideas for streamlining and tiering the content of National Communications presented below can be a way to reduce the reporting burden for these countries, additional support needs for a new national reporting framework may be necessary.

www.oecd.org/env/cc/ccxg.htm

www.iea.org



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