

INSTITUTIONAL ARRANGEMENTS FOR ADVANCING SUSTAINABLE, LOW CARBON GROWTH AND DEVELOPMENT

"You have agreements on commitments, *institutions* and money,
then you'll have a deal."

Yvo de Boer: Executive Secretary, UNFCCC

Version: 25022009

1. KEY DESIGN PARAMETERS AND OPTIONS

DESIGN PARAMETERS

Suitable institutional arrangements are a pre-requisite for a successful deal that can secure credible, sustained and effective actions based on commitments to mitigate carbon emissions, provide finance and support adaptation and technology transfer.

Significant institutional shortfalls will undermine the deal's effectiveness, irrespective of the commitments made or finance made available, and might actually damage nations' will and capacities to champion low carbon growth and development.

The core performance specifications of the institutional arrangements are to support:

- (a) *National championing of low carbon development pathways, without which mitigation initiatives will ultimately fail.*
- (b) *Effective resource allocation, to secure the maximum return to limited available international public finance.*
- (c) *Accountability for commitments, to secure the credibility of the deal, and to sustain commitments and performance.*

Design requirements to meet the performance specifications are for the institutional arrangements to be:

- (a) *Credible and acceptable to the parties.*
- (b) *Scalable and durable over sustained periods.*
- (c) *Practical and cost effective.*
- (d) *Flexible and dynamic in response to new data, experience and circumstances.*

Avoiding negative institutional features is critical to securing an effective deal:

- (a) *For developed countries, that mitigation and financing performance is transparent, with suitable incentives to encourage commitments to be met.*
- (b) *For developing countries, that international public finance does not undermine national leadership by encouraging gaming, rent-seeking, etc.*
- (c) *For all parties, to prevent bureaucratisation and political considerations hindering timely, effective decision-making and actions.*

DESIGN OPTIONS

Institutional design has been focused on three core areas: (a) strengthening meaningful national low carbon growth and development planning, (b) international public financing for mitigation, adaptation and technology, (c) governance and accountability. Secondary areas discussed in the main text include standards, scientific arrangements and trade issues.

A. Establishing meaningful, national low carbon growth and development plans requires new institutional arrangements underpinned by strong political and economic leadership.

National commitment to low carbon pathways cannot be 'agreed or bought', but can be nurtured and supported by providing enabling contexts, guidance and resources.

Whilst circumstances between countries will vary, key will be strong leadership and broad-based support underpinned and stabilised through appropriate institutional arrangements, providing the rationale for recommending or requiring parties to the agreement to establish:

- ✚ *National Designated Agencies (NDAs) as cross-ministerial/ departmental public agencies chaired by the premier (or equivalent or senior minister, responsible*

for developing and presenting National Action Plans and mandated to oversee implementation including financing arrangements.

- ✚ *National Action Plans* to be undertaken by all parties to the agreement:
 - *Developed* nationally through broad-based engagement, and agreed through parliamentary or equivalent processes.
 - *Assessed* internationally through ‘open hearings’ procedures that combine expert assessment with public engagement.
 - Assessments ultimately subject to *binding dispute resolution* for those elements linked to international public financing.

B. Financing is best achieved through multiple channels using existing financial institutions and pathways operating under the governance of the Conference of the Parties.

Financing will involve both funds and markets, and be channelled through both national governments linked to policy commitments and public programmes, and private and public actors engaged in energy efficiency measures, research, technology transfer, etc.

Multi-Channel Financing: Such diversity of needs combined with the advantages of smaller, specialised and in some instances competing institutions, strongly supports indicates a *multi-channel financing* approach, by source, type, pathway and recipient, rather than highly concentrated financing arrangements through one or a small number of institutions.

Focused development of a small number of focus areas, linked to specific financing mechanisms, could deliver a major part of mitigation and adaptation:

- ✚ *International grant funds*, for forestry, adaptation, technology research and accelerated adoption, and for National Action Plan commitments and outcomes, channelled through existing financial institutions and pathways, that could include, for example, national banks as well as international financial institutions.
- ✚ Access to *carbon markets for mitigation*, especially to support accelerated investments in specific sectors, notably power, either directly using an upgraded CDM framework, and/or through an intermediate fund (eg a ‘Carbon Bank’) established to optimize the use of available resources, and possibly also to stabilize offset price and volume.
- ✚ *Low-cost debt to support business and domestic energy efficiency measures*, using existing channels through international financial institutions to national commercial institutions and development banks, enabling rate differences between countries, applications and investees.

Governance: Ensuring credible and equitable governance of financing under the Conference of the Parties is consistent with multi-channel financing operated in the main by existing institutions under reviewable mandates, allowing a movement away from the unhelpful polarisation of options (e.g. CoP versus use of existing financial institutions).

C. Adequate accountability requires new institutional arrangements to secure the means of resolving disputes, imposing penalties, and establishing standards of financial probity.

Securing accountability in international agreements has particular challenges associated with the need to balance sovereign rights with a necessary degree of pooled risks and responsibilities. Achieving and sustaining trust between the parties requires:

- ✦ *Symmetrical accountabilities* involving all parties with defined responsibilities and commitments, exemplified by the requirement of all parties to the agreement to produce National Action Plans.
- ✦ *Progressive recourse* from ‘name and shame’ through to grievance, arbitration and penalties linked to binding dispute resolution is challenging between sovereign states, but its absence will trigger a vicious spiral of performance shortfalls in what is already a low trust environment.
- ✦ *Financial accountability* is a pre-requisite for a credible, sustainable agreement, cannot be secured purely through recourse to national mechanisms, but requires an international Accountability Office mandated to ensure implementation of agreed financial integrity of public and private bodies providing or in receipt of funds through the Convention.

D. Governance requires enhanced arrangements to secure inclusive, effective and efficient allocation of roles and responsibilities and decision-making.

Effective governance of the agreement will require many policy and resourcing decisions to be made, often rapidly, in response to changing circumstances, scientific data, experiences and needs. Furthermore, win-wins and compensation for decisions that disadvantage some parties will not always be possible, especially in cases of disputations or performance shortfalls.

In formulating suitable governing arrangements, more than for any other aspect of the institutional design, the parties need to agree means to allow for effective and timely decision-making, underpinned, but not overwhelmed by the spirit and practice of inclusivity. Anything less will result in costly delays, diluted decisions and actions and, ultimately, dangerous shortfalls in achieving transitions to a low carbon pathway.

It is an imperative that the *Conference of the Parties* be the supreme governing body. Making this governing arrangement work in practice, in addition to the elements described above, may require:

- ✦ That the CoP’s *direct scope of decision-making* focus on the terms of the Convention and its principles of application.
- ✦ The CoP to operate under *qualified majority voting* arrangements in all respects.
- ✦ That governance arrangements across all Convention bodies and instruments are *harmonized and balanced overall through the use of a ‘governance formula’* focused on principal parties by influence and impact and constituency representation.
- ✦ That an *Executive Committee*, acting on behalf of the CoP, oversees governance arrangements across Convention bodies, and acts as the forum for dispute resolution in matters excepting changes to the Convention and associated commitments.
- ✦ *Associated Parties*, notably non-sovereign organisations engaged through Convention instruments in carbon offsets and financing, to be registered and subject to principles-based commitments and financial integrity conditions.

DESIGN QUESTIONS

Choices in designing complex institutional arrangements need to focus on the fundamentals, and in particular the minimum (‘floor conditions’) for enabling an effective deal. The following sections highlight for each area a key institutional challenge and one or more design options for addressing the challenge.

Several general questions usefully serve to frame some or all feedback, including:

1. *Coverage*: are the principal areas covered, and if any what areas are missing or inadequately covered?

2. *Institutional challenges*: are they specified correctly or can they be better focused and defined?

In addition, several more specific questions arise directly from the paper, including:

3. *National leadership*: how can national leadership be most effectively supported, and in particular what attributes should designated agencies have, and how should national action plans be subjected to quality criteria and international assessment?
4. *Financing*: should existing institutions operate the main financing channels, and if so, under what type of periodically renewed mandates from the Conference of the Parties?
5. *Recourse*: should nations with demonstrable performance shortfalls against core commitments be subject to binding financial and/or other penalties?
6. *Governance*: should all governing arrangements allow for qualified majority voting rather than relying on consensus?

Comments or queries can be sent to Simon Zadek (simon@accountability21.net).

2. THE INSTITUTIONAL IMPERATIVE

Commitments and money are key to an effective climate deal, but they are not enough. Equally important are the institutional arrangements that will turn commitments into practice, and apply scarce money into investments that will support national strategies and practices in pursuing low-carbon pathways.

The institutional challenge is significant and not confined to a climate deal per se. Today's institutional arrangements favour carbon-intensive development. The investment community, for example, are incentivized to achieve short-term returns that do not value carbon. Public policies in many countries explicitly subsidise fossil fuel use, or else indirectly encourage carbon-intensive activities in, for example, infrastructure development, public procurement, and through tax and national insurance policies.

Realigning institutional arrangements to our changing needs and context is a vital element of any effective climate management strategy. A first generation of carbon-sensitised institutional arrangements has emerged over the last decade. This includes the Kyoto Protocol itself and the UNFCCC, but also regional and national carbon trading schemes and energy efficiency policies and initiatives, voluntary sector-based public-private partnerships like the Cement Sustainability Initiative, carbon-focused special investment vehicles such as the World Bank's Climate Investment Fund, voluntary codes governing private investment such as those stewarded by the UNEP Finance Initiative, and a growing number of citizen-facing arrangements providing moral and financial incentives to move towards low-carbon consumption patterns.

Ramping up effective climate management in scale and pace necessitates a stepwise change in the associated institutional arrangements. Much has been learnt from this first generation of carbon-sensitised institutional arrangements. For example, the potential and limits of carbon trading schemes, the impacts and weaknesses of project-based clean development mechanisms, the challenges of building credible governance of innovative financing mechanisms, and the difficulties of securing additional funds for adaptation. Clear also from this initial experience is the need to leverage the alignment of non-carbon-focused institutional arrangements, notably across diverse government instruments, the private financial community, and international trade policy.

A second generation of aligned institutional arrangements is needed if ambitious commitments and money are to be secured and translated into change on the ground. Sustained, high levels of trust between nations and diverse communities are required if commitments and actions commensurate with the challenge are to be forthcoming in ways that put substance to the principle of common and differentiated responsibilities and indeed risks. Carbon abatement, whilst being a recognised matter of survival, will have to align in its consequences to the broader aspirations of sustainable development, especially amongst emerging and developing nations. Technology development and widespread and costly diffusion will be critical in achieving low-carbon development, often in advance of commercial viability. Adaptation, a minor instrument to date, has to be reframed by the widespread agreement that climate instabilities will escalate with associated risks for a growing portion of the global community.

An effective second generation requires today's institutional arrangements to be upgraded, augmented or replaced. Confidence in the effectiveness of carbon mitigating investments requires credible assurance to public and private investors at a hitherto unknown scale. Innovative means of combining public and private finance are required at scale to achieve the volume of finance required. Accelerating the development and diffusion of low-carbon technologies will require not only money but also a major uplift in the development and effective adoption of relevant, common standards and regulations. These and other equally critical needs require

institutional arrangements that are capable of operating at scale, both globally and across a multitude of diverse local circumstances, to be dynamically responsive to new opportunities and risks and, critically, to enable mutual accountabilities between participants whilst being sensitive to the widespread aversion to pooled sovereignty.

Existing institutional arrangements must be leveraged to the full without allowing backward-looking legacies to undermine the pursuit of forward-looking needs. Institutional realignment on this scale is a huge challenge, made all the greater by the high degree of unpredictability of many of the tasks required, and their relative importance and likely consequences. Step-by-step plans and actions are needed to achieve the required stepwise change. However, many incumbent institutional arrangements provide neither vision nor practical effectiveness, and are in many instances backward looking approaches to multilateralism, or more broadly international co-operation.

Exhibit 1: Myths and Realities		
Institutional Arrangements for a Low Carbon Growth and Development Strategy		
	Convenient Myths	Uncomfortable Truths
1	Low carbon pathways will be underpinned by effective mitigation with support for technology transfer and adaptation.	<i>Low carbon pathways will be underpinned by national leadership and effective governance of a transition that delivers accelerated economic growth.</i>
2	International public finance provides the key in encouraging nations' leadership to progress low carbon pathways.	<i>Current models of international public finance impose conditionalities that threaten to undermine nations' potential and will to advance low carbon pathways.</i>
3	Effective international oversight of nations' adherence to their commitments is the key to progressing low carbon pathways.	<i>Powerful, effective, and legitimate national authorising, co-ordinating and integrating institutions are the key to progressing low carbon pathways.</i>
4	International expert panels are the most effective basis for judging national plans and progress.	<i>Public debate, domestically and internationally, supported by expert witnesses, will encourage more robust plans and progress reports.</i>
5	Sanctions underpinned by legally binding commitments cannot be effective.	<i>Symmetrical and equivalent sanctions are essential to secure timely and adequate outcomes.</i>
6	Public financing commitments to mitigate carbon and support adaptation need to be for an indefinite period given the enormity of the challenge.	<i>Public financing commitments need to be strictly time-limited to enhance the incentive for accelerated change.</i>
7	Sovereign oversight is the only realistic means to securing financial integrity.	<i>International oversight of the financial integrity of parties to the Convention is essential for an effective deal.</i>
8	Consensus amongst sovereign states is a pre-requisite for an effective deal.	<i>An effective deal requires the option of qualified majority voting for all major decisions.</i>

Ultimately, it is implementation that counts. All too often, consensus on design is achieved only by fudging key decisions, which in turn allows for, or even encourages poor implementation. In most instances, well-specified second-best options are superior in practice to under-specified and poorly implemented first-best solutions. Conventional wisdoms about how things are done, such as the traditional roles of the private and public sectors, the nature of international governance, and the sanctity of sovereignty, need to be respected and drawn on, but also challenged where alternate arrangements can improve outcomes.

Defaulting to ineffective, traditional or compromised institutional arrangements is a danger in so complex and politicised a set of international negotiations. A number of 'myths' about 'how institutions should or have to be' underpin such a danger. Some of these have been set out in the Exhibit, alongside a set of corresponding 'truths', or more accurate statements about how institutions work best.

3. THE INSTITUTIONAL CHALLENGE

The core aim is to enable nations' transitions towards self-sustaining, low carbon growth and development pathways.

It is these *nation-led transitions that will ultimately sustained* carbon mitigation. In short, a 'money for carbon' strategy in itself will not work, irrespective of the amount of money involved or the efficiency of its use.

Institutional options therefore need to be judged according to their contribution to advancing the transition, and only secondarily in terms of their shorter-term success in reducing carbon emissions.

The **core institutional challenge** is to build leadership, trust and mutual accountability in advancing nations' transitions to low carbon growth and development pathways.

The ultimate *measure of success* will be the dismantling of the international agreement once domestic and international policies and markets have adequately adjusted, so obviating the need for international public subsidies.

For success, several basic categories of *institutional innovations will be required,* quickly, at scale and across many nations:

- ✚ *Negative-cost (left hand side of the cost curve) carbon abatement,* largely policy-driven, are in practice challenging to realise, requiring national consensus and leadership, and major institutional innovations to deliver the policies, behavioural modifications and compliance.
- ✚ *Positive-cost (right hand side of the cost curve) carbon abatement,* involving public subventions, requires an international institutional architecture that supports credibly-effective, large-scale, timely, cross-border investments in carbon abatement, and accelerated technology development linked to large-scale, pre-commercial adoption.
- ✚ *Adaptation,* to both mitigate and avoid negative impacts of climate change and contribute to the underlying transition to low carbon pathways, requires international and domestic institutional innovations that avoid the manifest weaknesses of the previous generation of official development assistance.

Institutional adaptability is a considerable challenge for such complex, international agreements, yet is a pre-condition of success over the medium and longer term, in response to inevitable changing circumstances and understanding, whether concerning the science, technologies, circumstances or climatic impacts.

Exhibit 2: Institutional Challenges

Institutional Arrangements for a Low Carbon Growth and Development Strategy

Section	Area	The Institutional Challenge...
3	Core Institutional Challenge	The core institutional challenge is to build leadership, trust and mutual accountability in advancing nations' transitions to low carbon growth and development pathways.
5	Governance and Accountability	To establish credible, inclusive and effective governance.
6	Designated National Agencies	To establish a common approach to establishing nation-level co-ordination functions with the appropriate domestic mandate and authority.
7	Measurement, Reporting and Verification	To establish the credibility of MRV activities grounded in assessor's autonomy and accountability, enabling technical qualities to be developed, cost-efficiently and effectively applied.
8	National Action Plans	To enable National Action Plans to provide a basis for both nation-led transitions to self-sustaining low carbon growth and development and a credible basis for assessing progress and making effective financing decisions.
9	Adaptation	To provide a basis for mobilising, leveraging and effectively allocating adequate financial resources in supporting defensive adaptation of vulnerable communities.
10	Forestry	To achieve credible, adequate and cost-effective forest and land-use-related mitigation.
11	Technology	To support the accelerated, widespread adoption of selected, currently sub-commercial, clean technologies.
12	Financing	To support a multi-channel approach that is coherent, adequate, effective, accountable and credible.
13	Standards	To establish a flexible, inclusive approach to developing generally-accepted standards that can support policy development, implementation and enforcement, and credible reporting on progress.
14	Scientific Arrangements	To establish a means of ensuring that the most credible scientific evidence is equitably available in a timely manner.
15	Trade	To establish a basis for leveraging trade-related benefits and opportunities, and effectively mitigating those that might disadvantage those pursuing a low carbon growth and development pathway.

Exhibit 3: What is Success ?

Success must be measured by the pace and degree of transition of the global economy and communities to a low carbon pathway. Carbon impacts, for example, are important reference points, but taken alone are not signals of ultimate success.

Four categories or levels of success can be distinguished:

- ✚ *From the outset*, (a) carbon emission levels and the carbon intensity of income and wealth, (b) indications of associated impacts on climatic conditions and, (c) cost-effectiveness of associated public and private expenditures.
- ✚ *From the medium term*, the above plus nations' transition within the international framework, marked by: (a) joining or establishing effective cap and trade and, (b) reduced requirements of cross-border public funding.
- ✚ *Ultimately*, success will be marked by the dismantling of the international agreement once policies and markets have fully or adequately adjusted so as not to necessitate international public subventions.

Across all of these stages is the need to measure success in terms of: (a) equalising carbon emissions between communities, (b) advancing prosperity of vulnerable communities, and (c) alleviating negative climatic impacts on these communities.

Failure to realise the longer-term goal of not requiring international public subventions would indicate failure in realising self-sustaining low carbon growth and development.

Success will *necessitate the engagement of many actors* including, notably, private commercial bodies but also local public institutions, labour and civil organisations. Institutional arrangements need to engage such actors to leverage their competencies, resources and interests.

Success will, finally, depend on overcoming prevailing mindsets and conventional wisdoms *dominated by distrust, out-moded institutional norms, and competing interests.*

4. THE AGREEMENT

Framing any institutional arrangements are the substantive terms of the deal, which at this stage need to be posited, and include:

- ✚ Binding carbon mitigation targets by all major developed countries.
- ✚ An international cap and trade system that can be augmented over time with more participants and subsidiary arrangements.
- ✚ Offset arrangements enabling private and public parties committed to cap and trade to finance carbon mitigation in countries not subject to such arrangements.
- ✚ Cross-border, public financing commitments by developed countries subject to agreed, verifiable outcomes linked to project, national and probably sector level policies, practices and outcomes.
- ✚ Agreement on terms and financing of technology development, transfer and adoption.

It is assumed in addition that there will be various associated arrangements between the parties that are not formally part of the deal, covering for example trade access.

Sovereign states are the principle parties to the agreement, but success will require their committed engagement and that of many actors, including private commercial and civil organisations.

There is neither a need nor practical means of controlling or directing all of such actors. However, there are considerable, and arguably necessary gains to enabling many non-sovereign state actors to be centrally engaged in knowledge creation and activities on the ground. In many instances, this does not require any formal association to the agreement, but if such actors for example are to be able to access some finance available under the agreement, such association would be required.

There are many precedents for such an association, including for example registered Observers to the Conference of the Parties, the rights of private bodies to access resources of the Global Environmental Facility, and the rights of parties to the Kyoto Protocol to designate national and local agents, for example in certifying CDMs, which in general have been public institutions.

Non-sovereign states that become Associated Parties to the agreement would have specific rights and responsibilities:

- ✚ *Participation rights* could include: (a) participation in annual Conference to the Parties as Observers, (b) to be nominated for, and where selected participate in specific expert and in some instances governing bodies; (c) to access grievance and potentially dispute resolution mechanisms established under the agreement.
- ✚ *Economic rights* could include: (a) to be party to transactions under the Clean Development Mechanism; (b) bid for resources to undertake carbon-related activities from specific funding sources established under the agreement, including actually establishing funding mechanisms.

Exhibit 4: The Agreement's Text

Preferably, the core Agreement would specify *the core goal*:

- ✚ To build leadership, trust and mutual accountability in advancing nations' transitions to low carbon growth and development pathways.

And some *basic principles* that should guide the institutional design:

- ✚ *Acceptability and credibility* in terms of: (i) governance and accountability, (ii) efficiency, (iii) effectiveness and, (iv) integrity.
- ✚ *Scalability and adaptability* given: (i) the magnitude of the task, (ii) its complexity and, (iii) levels of unpredictability.

In addition, *the Agreement* could emphasise specific *design parameters*:

- ✚ *Governing* by qualified majority not consensus.
- ✚ *Accountability* for performance against commitments and financial probity.
- ✚ *Recourse* for performance failures for all parties.

Two further general *practical design principles* could be emphasised:

- ✚ *Build on existing institutions* where possible, both those explicitly focused on climate related issues and other institutions.
- ✚ *Enabling private actors*, as well as local and international public institutions, to engage in climate management.

- ✚ *Responsibilities* could include: (a) established as a legal entity that is subject to civil law; (b) adhere to agreed accountability framework regarding ownership, governance, financial matters and related interests, including annual reporting on carbon footprint and broader sustainability performance.

Requirement for Associated Party status could become an effective instrument for improving the carbon-related impacts of public or indeed private procurement.

The core Agreement, it is assumed, will need to set out a broad framework for the associated institutional arrangements. At its core, this framework will reaffirm the Conference of the Parties (COP) as the principle governing body and the UNFCCC as the on-going Secretariat.

Beyond that, the deal text will not go much further than specifying the need for institutional arrangements that enable: (a) commitments and targets to be effectively realised, (b) progress to be monitored and reported on, and, (c) reviews and amendments to the deal to be made.

Almost certainly, this text will provide in effect the mandate to establish, and a brief for, a mechanism to design, agree, commission and review over time a set of enabling institutional arrangements.

5. GOVERNANCE AND ACCOUNTABILITY

Sovereign states will underpin any governing authority, which has to be operationalized effectively through decision-making arrangements and accountability.

Multilateralism rooted in inter-sovereign state governing arrangements have breadth and legitimacy, but suffer from painfully slow decision-making, high leakage of secondary issues effecting voting behaviour, and in the main rather poor decisions that are often difficult to implement. Consensual decision-making as an added layer exacerbates these weaknesses, and can lead to complete stasis, exemplified by the ultimately unhelpful consensual decision-making framework of the World Trade Organisation in its failed efforts to agree a Doha Trade Round.

*The **institutional challenge** is to establish credible, inclusive and effective governance.*

Core to addressing the institutional challenge is for the COP to establish the basis for differentiated decision-making by consensus, qualified majorities and delegated decision-making.

- ✚ *Voted decisions* are already enshrined in the COP for amendments to the Protocol, but have not been, and need to be agreed for other realms of decision-making.
- ✚ *Delegated decision-making* is required to enable more effective decision-making by the COP, which can be achieved by establishing an Executive Committee, equivalent to the Board proposed by the G77. In addition, governing groups will be required to oversee various bodies established under the agreement, responsible to the COP and with agreed delegated decision-making.
- ✚ *A formula for representation* for the various governing bodies (except the COP itself) could be established along the principle of equitable and balanced representation, both individually and collectively. Such a formula would enable each governing body to have a distinct group of country representatives, whilst adhering to an underlying formula, thus avoiding the

governing arrangements for each and every body being uniquely negotiated. This might follow such a formula as including representatives from major recipient, funding and impacted nations, and representative nations (all criteria applied as relevant to the topic) as the primary four selection criteria, with secondary criteria including distributed representation across the various governing bodies.

- ✚ *Advisory panels and committees* will also be established, including possibly to advise the COP as a whole, as proposed by the European Commission. These bodies, with no decision making rights save the authority to publish its opinions on mandated topics, could usefully include representatives from the business community, and civil and labour organisations with relevant expertise.

Sovereign states have rights commensurate with their chosen level of responsibilities under the agreement. Common but differentiated responsibilities go beyond the differences between developed and developing countries, and establish a means by which nations can choose to engage differentially according to their interests as well as their stage of development and associated capacities. For example, one or more developing countries may choose over time to establish domestic cap and trade schemes, linked to an international trading system, which would imply differing opportunities, rights and responsibilities. Similarly, sovereign parties to the agreement may elect not to advance their National Action Plans to internationally agreed standards and conditions for financing, which should exclude them from either responsibilities or rights in determining their design or the basis of assessment.

Differential governance rights and responsibilities in this sense is consistent with basic tenets of effective governance, and could be achieved:

- ✚ Whilst in no way diminishing the overall authority of the Conference of the Parties.
- ✚ By delegating governance and decision-making to sovereign states (following the 'representation formula') involved in this specific issue or domain.

Required is an over-arching Accountability Framework governing the financial probity of activities and institutions party to the agreement. Failure to agree, design and effectively implement such a framework would certainly lead to the whole agreement falling into disrepute and ultimately disrepair because of the misdemeanours of a

Exhibit 5: Accountability Framework

- ✚ *Financial accounting, auditing and reporting:* a common framework would be required despite differing legal norms for financial probity, with strong anti-corruption measures in place, possibly overseen by a coalition of actors including such organisations as Transparency International.
- ✚ *Sustainability performance:* carbon emissions, at a minimum, and potentially a wider range of sustainability criteria need to be reported regularly, suitably audited, by all bodies party to the agreement.
- ✚ *Open-book decision-making:* all official documents, including minutes of governing and finance-related bodies and groupings, should be publicly available, following and exceeding best practice amongst international organisations and aligned to the recommendations concerning governance made by the G77.
- ✚ *Grievance mechanisms:* such mechanisms are increasingly the norm for international organisations and many national public institutions and larger businesses, and should be required, at the minimum, for Designated Agencies and funds established under the agreement.

few actors.

Institutions party to the agreement will include, centrally, sovereign states, but also potentially Associated Parties operating across diverse environments. Despite, or perhaps because of this, a commonly agreed Accountability Framework will be required to ensure basic financial probity, reasonable norms of performance against broader measures of sustainability, and terms of public scrutiny and citizen engagement and recourse through appropriate grievance mechanisms.

An *Accountability Organisation* should be established to develop and implement the Accountability Framework, essentially positioned as an independent oversight body.

6. NATIONAL DESIGNATED AGENCIES

Central to an effective deal are national institutional arrangements that support the development of self-sustaining, low carbon growth and development pathways.

Nations are and will going forward adopt diverse pathways towards low-carbon growth and development, depending largely on their starting points. National enabling institutional arrangements will also vary considerably, both in their stage of development and capabilities, and in what is appropriate in context. Clearly specific and identical national institutional arrangements cannot and should not be mandated through the agreement. Nevertheless, being party to the agreement will require each nation to achieve key commitments made under the agreement and to engage internationally, consistently and credibility. Furthermore, locating co-ordinating functions, for example, in a weak or marginal institution, is unlikely to be effective.

*The **institutional challenge** is to establish a common approach to establishing nation-level co-ordination functions with the appropriate domestic mandate and authority, relevant and adequate capabilities, and an agreed basis of accountability, both domestically and internationally*

Each party to the agreement will select or establish a Designated Agency, which will take executive responsibility for the government's actions as they relate to the agreement, including:

- ✚ Development of the National Actions Plans, and their representation nationally and internationally.*
- ✚ Securing, consolidating, allocating, tracking and reporting on funds secured under the agreement and associated resource flows and impacts.*
- ✚ Co-ordinating the nation's public bodies in the implementation of the National Action Plans.*

Designated Agencies will be public institutions, but would benefit from having autonomy from existing, specialised line-Ministries, and where possible being vested with relevant authorities regarding financial matters and policy development. The leading role of China's National Development Reform Commission is a case in point, as is the Mexican Inter-Sectoral Commission on Climate Change.

Designated Agency will comply with norms of oversight and transparency established as part of the agreement. For existing institutions, these norms will only apply to activities specific to the agreement.

7. MEASUREMENT, REPORTING AND VERIFICATION (MRV)

Credible monitoring, reporting and verification of progress against commitments and targets are integral to the operational governance of the agreement, and its success in practice.

Effective MRV requires the robust application of appropriate metrics and their effective application across a huge range of activities, from investments in clean coal in China to adaptation of fisheries livelihoods in Chile, from the level of National Action Plans, to technology-driven oversight of the preservation commitments of forests, to localised, project-based mitigation.

Robust technical specification of MRV is necessary but not sufficient to deliver effective MRV, exemplified by high-profile failures in conventional financial auditing and reporting, undoubtedly the most sophisticated and mature MRV in existence today. Institutional arrangements are key, notably those that determine assurers' autonomy and accountability over extended periods of time, in this case in the face of inevitable and significant commercial, bureaucratic and political pressures.

*The **institutional challenge** is to establish the credibility of MRV activities grounded in assessor's autonomy and accountability, enabling technical qualities to be developed, cost-efficiently and effectively applied.*

The Accountability Organisation (see above) could be the most useful vehicle to establish, as a part of its mandate, guidance on effective MRV by:

- ✚ Developing and specifying suitable MRV methodologies.
- ✚ Specification of individual and institutional competencies required to apply them under the agreement.
- ✚ Establishing with suitable national and international bodies (e.g. national standards bodies, ISO, International Register for Certified Auditors) a basis for certifying auditors
- ✚ Supporting Designated Agencies and their associated bodies, through financial and technical assistance, in improved MRV, especially as it relates to National Action Plans and the impacts of carbon offset investments.
- ✚ Ensuring the design and adoption of grievance mechanisms integral to effective MRV.
- ✚ Providing the COP an Annual Report on the effectiveness of MRV based on commissioned sample audits across all aspects of the agreement.
- ✚ Establishing a register of MRV experts suitable to participate in relevant Expert.

Crucially, MRV is only relevant if it underpins practical and effective consequences, a major challenge in practice where it concerns the actions of: (a) sovereign states, exemplified by the lack of consequences for European states that failed to comply, repeatedly, with legally-binding commitments resulting from their membership of the Eurozone, (b) Hundreds of thousands of private actors operating across hundreds of different local, national and international jurisdictions.

Sovereign states: in essence a spectrum of penalty options exist, each of which are either not likely to be effective (such as 'name and shame' performance reporting) or are fraught with political challenges (such as imposing enforceable financial penalties):

- ✚ *Financial penalties*, most obvious is to withhold payment to recipients or levy charges on donors. However, it is unlikely that such actions would be

Exhibit 6: Meaningful MRV - Beyond Accuracy and Credibility

Effective penalties for performance shortfalls against commitments, challenging to design and implement, are essential for a meaningful deal.

condoned by a sovereign-state based decision-making process, certainly not without much hand-wringing and opportunities for the deviant country to recant and recommit. As a result, sovereign states are unlikely to be deterred from non-compliance by these possible sanctions.

- ✚ *Pooled risk* between groups of sovereign states with commensurate liabilities might create more peer pressure to comply, but again is unlikely to make much difference if the application of pooled liabilities is unlikely in practice.
- ✚ *Unilateral action following a multilateral ruling*, the essence of the WTO Disputes Resolution procedures, would allow for penalties to be imposed unilaterally once a ruling had been made.
- ✚ *Economic sanctions*: linkages to direct economic sanctions, such as trade access, are likely to be resisted on all sides, but in practice might be the only way in which to bring a truly unwilling party back to the table.
- ✚ *Suspension from the agreement*: is unlikely to happen and would be counter-productive except in exceptional circumstances, such as clear indications of systematic financial misappropriation of funds secured under the agreement.
- ✚ *Private actors*: this might concern their failure to use solicited funds effectively, whether as an actor in a carbon credit trade, or the direct recipient of funds through other means (see below), where sanctions include:
 - ✚ *Buyer liability* of carbon credits will reduce the price of future credits that in practice did not deliver its face carbon value, but as Koehane and others argue, this only has an upward shift in the quality of the offset credit market if valuation is nation, not project-based, creating an expensive pooled risk dilemma for selling countries that encourages enforcement.
 - ✚ *Suspension*: exclusion from rights to apply for funding under the agreement, or exclusion from the carbon markets (which might well not have much impact if they are one-time traders, hence the argument above).

8. NATIONAL ACTION PLANS

National Action Plans will be the core instrument in developing, prioritising, allocating resources and communicating performance in nations' progress in transitioning to a low carbon growth and development pathway.

Specifically, National Action Plans will have three functions:

- ✚ Building national consensus and strategic and institutional coherence.
- ✚ Tracking and communicating progress.
- ✚ Securing finances from public and private, domestic and international sources.

Growing numbers of National Action Plans are already in existence or development (e.g. Guyana, Mexico, South Africa), and proposals have already been tabled to establish a registry of 'eligible' plans for funding under the agreement.

The **institutional challenge** is to enable National Action Plans to provide a basis for both nation-led transitions to self-sustaining low carbon growth and development and a credible basis for assessing progress and making effective financing decisions.

National Action Plans will have at their core four common elements, despite their variation in scope and technical quality, and the different circumstances of nations and governments:

- ✚ Analytic approach to establishing low carbon development potential and options.
- ✚ Policy enablers of transition to low carbon growth and development pathways.
- ✚ Resourcing requirements and sourcing.
- ✚ Impacts and progress.

National Action Plans would be periodically produced by all parties to the agreement, represented internationally by Designated Agencies.

National Action Plans developed for inclusion in the international registry should be assessed against the three core principles underpinning much of today's leading sustainability reporting: (a) *completeness* (including accuracy), (b) *materiality* (focus on what counts) and, (c) *responsiveness* (progress and appropriate policy and resource focus).

Exhibit 7: Assessment of National Action Plans

Could include one or more of the following five tiers, although the relative significance of the national elements may vary:

- ✚ Designated Agencies' voluntary use of *stakeholder panels and individual expert* or interested party contributions.
- ✚ Designated Agencies' use of *independent third party assurers* certified under the agreement.
- ✚ *Open public commentary* period once the Plan is placed in the international registry.
- ✚ *International Expert Panel* established under the agreement.
- ✚ *Disputes* would be subject to binding decisions through the Dispute Resolution Mechanism.

To ensure the integrity of the arrangement, assurers and panel members could only serve a limited number of terms, probably a maximum of three, for any given country assessment, in line with existing best practice recommendations covering traditional financial auditing.

Financing National Action Plans will require public and private finance from domestic and international sources, with the balance between these sources varying between nations and over time. International financing requests associated with eligible National Action Plans lodged in the Registry could be funded as follows:

- ✦ *Eligibility:* all financing that counts against a nation's financing commitments has to pass through the UNFCCC framework, but allowing for this to include financing arrangements involving Associated Parties.
- ✦ *Consolidated, primary funding:* the core, eligible requirements need to be funded from a consolidated (i.e. multilateral), publicly-resourced fund, since a bilateral 'matching' approach will encourage secondary factors diluting financing decisions.
- ✦ *Secondary funding:* non-core aspects of the National Action Plan unfunded through consolidated, multilateral sources can be funded through Category B channels (see above), which allows for bilateral arrangements eligible under the agreement.
- ✦ *Tertiary funding:* other non-core aspects of the National Action Plans or mitigation and adaptation activities not specified in the Plans can be funded through Category C funds (see above) where the proposals cover relevant activities under competitive funding arrangements eligible under the agreement.

9. ADAPTATION

Adaptation lies at the heart of an acceptable and effective transition to a self-sustaining, low-carbon growth and development pathway, globally, nationally and locally.

Adaptation requirements will vary in scope and timing between nations and communities, but are projected as being significant at best, and very considerable for some nations even with predicted success in containing global temperature rises to under +2°C. Temperature rises beyond this could lead to defensive adaptation becoming the single most important element of any climate deal.

Adaptation spans many possible activities from climate research to institution building to water and health management, livelihood security and agricultural adaptation to infrastructure development and ensuring responsive capacity to 'major risks', essentially, climate-linked disasters. Adaptation is and should be closely aligned to underlying development processes, and must therefore be not only defensive but also an active enabler of low carbon growth and development.

Finally, contextually, finance for adaptation has proved a lightning rod in policy debate, its amount and additionality to other financial flows, its status and terms of disbursement, and so the governance of associated decision-making. Equally, however, the volumes actually mobilised have been very small indeed, highlighting the importance of leveraging both private resources and official development assistance for adaptation in addition to specific adaptation-allocated funds.

*The **institutional challenge** is to provide a basis for mobilising, leveraging and effectively allocating adequate financial resources in an equitable manner in supporting both defensive adaptation of vulnerable communities and adaptation as a means to achieving the transition to low cost growth and development pathway.*

Adaptation priorities and plans, with associated resource requirements, need to be specified within National Action Plans (see above), and so also be subject to public debate and scrutiny and expert assessment, and also credible progress reporting.

An Adaptation Co-ordination function will be required under the UNFCCC to oversee planning, resource mobilisation and the principles of allocation, and progress reporting. This function could be located within the UNFCCC Secretariat, or its activities might be contracted out in part or whole to other agencies whilst remaining subject to the Conference of the Parties or its delegated authority.

Adaptation-related public financing must be tracked to determine their value, application and effectiveness, an activity that can be delegated to an international body accountable to the Adaptation Co-ordination function.

- ✚ Tracking for accounting purposes will be focused on adaptation-specific funds.
- ✚ Understanding the overall scope of financing and its effectiveness, however, it will be important to track and assess adaptation-related financing embedded in other financing flows, including official development assistance, but also linked to export guarantees, public support of foreign direct investment, etc.

Exhibit 8: Against Donor Clubs

Centrally, there are significant weaknesses in a financing model that recreated old-style ‘donor forums’ or investor clubs which consider each individual NAP on its (assessed) merits. Such an approach, which relies on aggregated bilateral decisions, is both inefficient and would quickly become politicised and so subject to dilution through side agreements and secondary considerations.

The existing Adaptation Fund could be extended, and act as both a retail and wholesale fund:

- ✚ *Funding global knowledge functions*, including the Adaptation Co-ordination function itself, climatic research and adaptation-related technology development and learning,
- ✚ *Funding public support element of major risk insurance.*
- ✚ Supporting resources allocated *directly through National Action Plan-linked financing*, especially for countries designated as especially vulnerable to climatic change.
- ✚ Channelling resources to *international and national public funds* for on-financing, including for example providing top-up or counterpart funds established by other international agencies (e.g. World Bank funds).
- ✚ Financing Associated Parties, especially private bodies and public-private partnerships, with registered funds through competitive bidding.

10. FORESTRY & LAND USE

Carbon mitigation through support for forestry and related land use management will be core to the deal.

Generally accepted is that a credible and effective deal will involve considerable, largely publicly-funded, finances flowing from developed to rainforest nations as part of an offset arrangement. However, there is no precedent for, and little practical likelihood of, such transfers continuing for an indefinite period. That is, forest and land-used related mitigation will have to both diminish considerably in importance over time from an international climate management perspective, and become embedded in nation-level, self-sustaining development pathways.

Self-sustaining, low carbon growth and development pathways that embed effective forest conservation, reforestation and broader carbon-mitigating land-use practices requires a broader set of economic outcomes and institutional arrangements covering for example food security and community security and livelihoods, and land tenure rights and related enforcement.

*The **institutional challenge** is to achieve short and medium-term, credible, adequate and cost-effective forest and land-use-related mitigation, whilst rapidly advancing the conditions under which such outcomes are integral to the rainforest nations' self-sustaining, low carbon growth and development pathways.*

Various mechanisms could be used to finance forest-related mitigation, including pure carbon markets, reverse auctions, mixed market and administered funds, and bilateral arrangements outside of the agreement.

Most likely in realising success are national-level agreements for the major rainforest nations underpinning internationally-financed, forestry-related mitigation, linked to national MRV using available satellite technology.

In this instance, the institutional arrangements would be relatively straightforward:

- ✚ *Nation-level administered funds* would need to be built into its National Action Plan with credible indications of how the funds would be spent in pursuit of a country's underlying low carbon development strategy, including clear measures of success in reducing (and reduced dependence on) international subventions over time.
- ✚ *Public funding* should arguably be pooled since a competitive approach may well leave key mitigation investments under-funded as the marginal returns fall once the best programmes are funded. Avoiding this possibility may override gains from the competitive approach in terms of improved programme design to enhance attractiveness.
- ✚ *Carbon offset market-based approaches* would be very difficult to run effectively alongside administered funds in the same countries. One possible route is to operate market-based approach in those countries where an administered funding approach has not been agreed, perhaps more suited to with significant forests but not vital to the overall mitigation numbers, or nations that have not yet graduated to a secure, administered approach.
- ✚ There are considerable *MRV advantages to simplifying the arrangements* down to single, national-level, administered funds for the main forest nations, for example reducing monitoring costs, disputed data interpretations and intra-nation leakage problems. Running market-based approaches side by side in the same countries would make MRV far more difficult and expensive.

11. TECHNOLOGY

Accelerating the development and deployment of key clean technologies, especially for mitigation in the power sector, will be a significant success driver of the agreement.

Technology is widely accepted to be key in achieving success in mitigation, and also in adaptation. Technology development is progressing, but in critical instances not quickly enough. Similarly, diffusion of clean technology such as solar will in any case happen eventually, but on current trends too slowly and unevenly and often less than optimally across developed and developing countries. Intellectual property rights may in some instances be a real constraint to deployment, but the property-related constraint is more often about resistance to licensing and collaborative, accelerated development. Finally, enabling institutional factors are prevalent in technology diffusion, including weaknesses in public regulation and standards, and in private business, installation and maintenance capabilities.

The key **institutional challenge** is to support the accelerated, widespread adoption of selected, currently sub-commercial, clean technologies.

Significant elements of the international infrastructure needed to advance technology diffusion is embedded within already described institutional arrangements, such as national action plans, financing, and standards (see above). Distinct, however, is that technology-related decisions and associated financing are often 'cost positive'. In addition, often they have multi-national implications as they relate for example to incremental research, licensing, reducing costs through economies of scale, as well as nationally-specific implications as it relates for example to subsidy-levels, national regulatory norms, and institution strengthening.

A *Technology Council*, or what the G77 calls an Executive Body, is required to support coherent technology policy development and practice across varied bodies, funds and other instruments established under the agreement. This Council, in some respects similarly to the proposed Council on Applied Climate Science (see above), would have *inter alia* the following roles:

- ✚ Development of *Technology Action Plans* for selected technologies, targeted for accelerated development and diffusion. These plans would need to consider options under the agreement to target a very small number of clean technologies in which to invest heavily and rapidly to enable accelerated diffusion, for example Solar PV, with associated subsidy arrangements, such as through underwriting part or all of the public incremental costs of feed-in tariffs.
- ✚ Guidance to national and international research funding agencies on areas of under-funded, climate-related, technology research, possibly with oversight over a fund for actual investment in collaborative research in key areas.
- ✚ Provide inputs or guide the appropriate expertise to assist in the development of key technology-based standards (see above).
- ✚ Overseeing a small fund to support the availability of technology expertise in developing countries for programme and institutional design, development and assessment (not research).
- ✚ Designing and maintaining a registry of technology experts eligible to serve on Expert Panels assessing National Action Plans and other bodies established under the agreement.

On the surface, the case for a major technology fund is unproven, since funding would ultimately arise from requests articulated in National Action Plans and be funded if at all, accordingly. However, it is possible, certainly, that an internationally-co-ordinated programme focused on specific technologies would be advanced, requiring non-nation-specific funding to enable a coherent international approach to development and diffusion to be pursued. In such instances, a specific fund could be established, rather than relying on a permanent, generic 'technology' fund.

Intellectual property rights is likely to remain a disputed issue in general, and only be practically solvable in the specific, although the case of the Global Fund for HIV, Aids and Malaria suggests that general approaches can be developed and adopted. That is, Technology Action Plans for specific technologies will need to identify potential barriers to diffusion and make recommendations focused on the particular technology and associated property rights issues.

12. FINANCING LOW CARBON GROWTH AND DEVELOPMENT

Adequate and effective financing for low carbon growth and development will be core to the deal.

The deal needs to provide a framework for effectively mobilizing, leveraging, and allocating diverse sources and types of finance, almost certainly a blend of grants and low-cost debt. Financing will be multi-channel (source, pathway, and recipient) and be associated with diverse interests and associated conditions. This diversity is already apparent in the numerous financing mechanisms and pathways that have already emerged, ranging from local and national public subsidies and investment schemes, private-to-private, project-based CDM, climate-related, international public funds for adaptation and mitigation, and private, clean technology venture funds.

International public finance will be critical but ultimately a small element of the total finance required. Whilst much focus is understandably on the volume of developed countries' public funding commitments to developing countries, this element will ultimately be a small part of the total finance required. In addition, it carries the joint dangers of: (a) catalyzing distrust between the parties through tensions associated with mutually unacceptable or impractical conditionalities, and, (b) corrosive impacts on recipients' leadership, institutions and economies, as amply demonstrated in the experience of earlier generation's of such finance.

Institutional arrangements need to handle pooled, bilateral and secondary multilateral public funding arrangements. Some public finances will flow into pooled funds (e.g. to support the development and implementation of National Action Plans), and some bilateral or secondary multilateral arrangements (e.g. funds tagged specifically for adaptation, linked to transfers of specific technologies, or associated with arrangements outside of the formal agreement, such as on trade).

*The **institutional challenge** is to support a multi-channel approach that is coherent, adequate, effective, accountable and, ultimately, credible.*

Institutional arrangements are required to (a) co-ordinate publicly-funded, cross-border finance, (b) manage assets, and (c) design and assess instruments.

- ✚ Co-ordination involves: (a) consolidated for key centralised funding, notably for National Action Plans, (b) channelled for non-centralised funding to avoid overlap, maximise synergies and ensure consistency of criteria and quality of application, (c) counted against the source and recipient country commitments.*
- ✚ Mobilising and managing equity and debt, both commercial and potentially sovereign debt and equity and, at a second-order level, handle treasury functions.*
- ✚ Designing and assessing eligibility of financing instruments: (a) design: at the international and national levels (e.g. a fund to support solar technology roll-out through subsidies to feed-in tariffs), (b) assessing instrument eligibility: over time and with experience, governments and associated parties will make proposals for innovative financing instruments that will need to be assessed against agreed criteria.*

Exhibit 9: Financing Pathways – Real Options of Unhelpful Polarities

Over-arching co-ordination (not allocation), asset management and design functions are essentially technical functions required for the smooth running of the deal, but must ultimately be overseen by the Conference of the Parties or its delegated authorities. Institutional options include:

- ✚ *A single international institution, which would either have to be a new-build or the World Bank, the latter being the only existing international institution capable of operating across all three areas.*
- ✚ *Distributed across international institutions, for example the OECD is currently tasked with tracking Official Development Assistance, and the World Bank has asset management and treasury functions.*
- ✚ *Partly or entirely out-sourced to one or more private, specialist institutions, for example asset management could be located in a commercial banking institution, and co-ordination and tracking could be contracted for fixed, renewable periods to one or a consortium of universities, research institutes or consultancies.*

Critically, these activities are distinct from mobilising finance, actual financing decisions, and monitoring, reporting and verification.

On balance a favoured option is to allow multi-channel financing operated by existing financial institutions under renewable mandates by the Conference of the Parties. Such a financing architecture could operate at the following levels:

- ✚ *International public funding through the NAP process for policy and performance, and through sectoral agreements such as for forests.*
- ✚ *International carbon markets, through an upgraded CDM framework that might have sectoral focus, such as for power, either by enabling direct (private-to-private) access to the carbon market, or through intermediary offset funds that provided discounted pricing in return for stability in price and volume.*
- ✚ *National and sub-national public financing, through government funds (retailing from international funds or blending with domestic national public finance), and through commercial channels and development banks, for example where international public funds are being made available through low cost debt windows for energy efficiency measures.*

Exhibit 10: Governing Finance

Fund is a critical issue, and needs to be addressed in a systematic manner to avoid ad hoc arrangements and problematic quality variations:

- ✚ *Fund registration and on-going eligibility is determined by the Conference of the Parties or its delegated authorities.*
- ✚ *Governance of specific funds will be established using a common principled framework that privileges: (a) impacted parties, (b) enabling parties (e.g. investors), (c) recipient and implementing parties, as well as the principles of (d) equitable rights, (e) parties' third party accountabilities (e.g. to indigenous communities or tax-payers).*
- ✚ *Registered funds will have demonstrated and be subject without exception to the same international levels of transparency, public scrutiny and accountability.*
- ✚ *Grievance, and where relevant dispute resolution, mechanisms following an agreed framework will be required for all registered funds.*

- ✚ *Public-private, co-financing and associated innovations*, providing opportunities for private actors to access public funds for knowledge transfer, capacity building, innovative business models for mitigation and adaptation, etc.

13. STANDARDS

Standards will be the backbone of an effective deal and an imperative for advancing the transition to a low carbon development pathway.

Without generally accepted standards, assessing options, investing, ex-post verification of impact and basic regulatory compliance are all more or less impossible to sustain. Failure to develop and agree standards will mean that National Action Plans, especially those elements focused on policy development and implementation, will fail to provide either credible plans or measures of progress.

Standards will be required across a very broad landscape of activities, from building standards, to widely applicable carbon accounting, and to standards governing the regulation of appropriate technologies. Some of these standards will be relatively static (carbon counting), whilst others will change rapidly over relatively short periods of time (e.g. vis technologies). Harmonisation internationally has clear merit, but equally localised variations are likely to be relevant, and attempts to marginalise them in favour of international harmonisation, if history is our guide, could be a long and hard road.

*The **institutional challenge** is to establish a flexible, inclusive approach to developing generally-accepted standards that can be used in underpinning commitments so as to enable policy development, implementation and enforcement, and credible reporting on progress.*

Many standards organisations already exist, including: (a) an over-arching tier of international, often multi-standard bodies (e.g. ISO, IAASB); (b) a raft of, often UN-linked, topic-specific, inter-governmental bodies (e.g. World Health Organisation, International Air Transport Association) (c) many national, often public standards bodies (e.g. FDA, BSI) and; (d) a huge and rapidly growing number of private standards initiatives, including a growing number governed by multi-stakeholder processes that deal with issues directly or indirectly related to climate management (e.g. Equator Principles, Forest Stewardship Council).

Needed is a Standards Council, established under the agreement, with the purpose of accelerating the development and widespread adoption of a framework of standards to enable effective climate management. Roles will include:

- ✚ Convening key standards bodies and interested parties in order to identify and target priority areas for standards development and means of accelerating their adoption.
- ✚ Catalyzing and co-ordinating initiatives to develop and harmonize priority standards.
- ✚ Guide the Conference of the Parties, and more so the subsidiary governing bodies in the matter of standards, including for example standards contained within the base Treaty and related instruments such as National Carbon Reports.

The Council will not be a standards body, and so will not develop or steward specific standards, with one, notable exception (see below).

The Council will lead the establishment of specific standards required directly to enable the implementation of the agreement, notably for: (a) monitoring and verification of commitments made and the impact of instruments and investments,

(b) establishing terms of accountability for Designated Agencies and other parties to the agreement. Council will champion and where necessary develop such standards through the use of Standing Committees and wider engagement with interested parties. Resulting standards will wherever possible be adopted and subsequently stewarded by existing national and international standards bodies.

14. SCIENTIFIC ARRANGEMENTS

Credible science is the essential underpinning of the agreement as a whole and its constituent commitments, in the initiating deal, and its subsequent evolution in the light of future scientific evidence.

The science of what is happening, and in particular to what extent and how it can be impacted by human endeavour is likely to become more, not less controversial. As considerable funding becomes available for carbon mitigation and climate adaptation, the economic consequences of diverse scientific opinions will become more significant. So for reasons only partly to do with the science itself, scientific contestation will become more pronounced. Decisions made on the basis of scientific opinion will, however, become more numerous and the need to make them quickly, consistently and as credibly as possible will increase dramatically.

The IPCC is the world's most important source and pathway for building a credible picture of the science of climate change and its impacts. In its current form, however, it might not be suited to meeting all needs in these changing circumstances. In particular, means are required that enable scientific opinion relevant to investment decisions to be drawn upon far more frequently in a non-partisan, systematic manner. For example, calls for resources to fund adaptation (see below), whether through National Action Plans or other means, will often rest on predictive scientific argumentation. Similarly, claims to cover either the insurance costs or indeed the consequences of natural catastrophes will often rely on explanatory scientific arguments. Ultimately, overall targets for emission reduction or financial subventions will be subject to scientific review in the light of changing circumstances and our understanding thereof.

Furthermore, equitable access to the scientific community will be crucial for developing countries, and more generally engaged and impacted communities, for the agreement to be responsive and accountable to their interests and needs.

*The **institutional challenge** is to establish a means of ensuring that the most credible scientific evidence is equitably available in a timely manner.*

A Council on Applied Climate Science will be required to be established with the specific purpose of bringing scientific opinion to bear on relevant decision-making under the agreement. Roles could include:

- ✚ Providing an annual review of the science to the Conference of the Parties.
- ✚ Guidance to national and international research funding agencies on areas of under-funded, climate-related research.
- ✚ Provide inputs or guide the appropriate expertise to assist in the development of key science-based standards (see above).
- ✚ Overseeing a small fund to support the availability of scientific expertise in developing countries for programme and institutional design, development and assessment (not research).
- ✚ Designing and maintaining a registry of scientists eligible to serve on Expert Panels assessing National Action Plans and other bodies established under the agreement.

- ✦ Overseeing an arbitration mechanism to resolve science based disputes in assessments and decision-making under the agreement, notably where they concern National Action Plans and more generally resource allocation.

15. TRADE AND CLIMATE CHANGE

International trade symbolises, and is in part a measure of, the economic consequences of climate management, and so a key policy issue for advancing low carbon growth and development pathways.

Trade impacts of policy measures to mitigate carbon could be significant through leakage and competitiveness effects. Moreover, defensive policy measures such as border carbon taxes designed to prevent leakage and negative competitiveness impacts would, if implemented, impact on trade patterns but also the potential of reaching an agreement, or implementing it in practice. Enabling trade in so-called environmental goods has for some time been a mandated task of the World Trade Organisation, but with little real progress having been made. Ultimately, of course, nation's adoption of low carbon growth and development pathways should impact positively on their trade record.

*The **institutional challenge** is to establish a basis for leveraging trade-related benefits and opportunities, and effectively mitigating those that might disadvantage those pursuing a low carbon growth and development pathway.*

Providing exceptional tariff treatment in the trade of environmental goods has proved difficult, in the first instance because of the difficulties in reaching consensus on a workable definition, let alone its relevance in trade policy and practice. Whilst one option is to abandon the exercise as misconceived, an alternative is to vest the authority to establish such definitions, and associated standards, in the proposed Standards Council to be established under the agreement.

More problematic is the matter of border carbon taxes, and the implications this might have for reaching an effective climate agreement. As a trade-related issue, any formal dispute would take place under the auspices of the WTO. Indications are that such arrangements could be made WTO-compliant, but would nevertheless disrupt, perhaps significantly, the climate agreement in design and in practice. It is unlikely that border carbon taxes would become subject to the agreement, but if this were an option, it might, for example, involve sector-specific exemptions based on an agreed level of demonstrable progress in advancing sector-specific mitigation set out in National Action Plans. That is, such tax regimes might provide a distinct and significant economic incentive that effectively establishes a carbon-based preferential aspect to the global trade regime. Interestingly, this might be one instrument, together with the planned for 'environmental goods' approach, for establishing MRV consequences (see above).

A forum is now urgently required to advance multilateral policy debate on these and other trade-related options and their consequences, and the Conference of the Parties could usefully establish such a *Forum on Trade-Related Issues*. Such a Forum would not be a decision-making body, and might comprise experts and representatives of key institutions (e.g. WTO, ISO).