Capacity Building Systems for Inter-Linkages

Background Paper for
– Inter-Linkages –
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Glen Paoletto
Senior Research Fellow for Capacity Building
Institute for Global Environmental Strategies

I. Background

Since the 1970s, the world has witnessed an explosion in the numbers of multilateral environmental agreements (MEAs) and regimes concerning a broad range of regional and global environmental issues\(^1\). During the 1970s and 1980s, the trend was to go global and get big – new agreements, new institutions, and new approaches on a grand scale. The trend in the late 1990s, however, seems to be in the opposite direction: to go small and examine closely the inter-linkages among and between various MEAs and regimes. The purpose of doing so is obvious: to better utilize the resources that are available to the benefit of all involved, and to support better decision-making in that process.

By their nature, global environmental issues are cross-cutting, interdisciplinary and cross-boundary of a regional or global nature\(^2\). However, to date, the Nation State continues to maintain its presence as the main actor at the international level when solving environmental problems. The premise of international law is national sovereignty. National sovereignty concepts go to the very heart of MEA regimes as well as our economic and other systems. Consequently, in nations throughout the world, organizations, institutions, administrative arrangements and other implementing programs have been set up to better manage environmental problems. Yet, within and around newer forms of environmental governance, the more traditional national governance structures and ministries have worked to secure an administrative ‘place’ for the environment in many countries. Meanwhile, environmental issues pay no regard to geo- and in-nation politics. The result has been far from perfect, with regimes, laws, administrative guidances and negotiations continuing without a basic inter-linking or communication strategy.
II. The Power of Inter-linkages

On the verge of the new millennia, we are looking to redefine basic strategies to bring about win-win situations for present and future generations. By inter-linking, we not only theoretically use our human, financial and natural resources more effectively, but also bring about a situation where people learn more, where institutions can respond more effectively to the issues at hand, where economy is promoted, and ultimately, where environmental condition is kept in tact or improved. This is the power of inter-linking. Inter-linking involves a process whereby the key elements among and between various regimes are identified, analyzed, understood and then synthesized to bring about a result whereby much more can be gained for less. The process begins by sitting down and rethinking the basic strategies and approaches.

There are many facets and aspects to this process - policies, information, finances, management and administration, are among the more important. In this list, comes capacity building and education. Capacity building is the point where the theory becomes a reality – where education, learning and the use of practical tools are promoted so that people in their working lives can make better decisions that serve the interests of both environment and economy on a day-to-day basis. This is an important point - to be effective, capacity building must ultimately relate to the daily lives of those participating.

III. What is Capacity Building?

Capacity building could be defined as enhancing the ability of individuals, groups and organizations to mobilize and develop resources, skills and commitments needed to accomplish shared goals. The ultimate goal in considering inter-linkages and capacity building therefore, is sustainability. It is a goal that needs to be shared, and there needs to be commitment for its achievement. Cooperation is an obvious element in this light.

There is a strong relationship between and among individual, organization and community development. We need to constantly relate to these areas while working within any one of them, because each influences and is influenced by the others. For capacity building to truly achieve its potential, close attention must be paid to the web of connections affecting all the persons, organizations, groups and communities involved. In this regard, a re-thinking of the basic approaches with an inter-linkages premise sits well. Capacity building is changing, perhaps spurred by the impact of information technology and information access on the world’s economy, together with the globalization these are helping to promote. If successfully implemented, it should bring about ‘shifts’ in both capacity and perspectives (see Table 1).
### Table 1: Shifts brought about by Capacity Building

<table>
<thead>
<tr>
<th>From:</th>
<th>To:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus on deficits</td>
<td>Focus on capacities</td>
</tr>
<tr>
<td>View change as a problem to be fixed</td>
<td>View change as the norm</td>
</tr>
<tr>
<td>Power over</td>
<td>Power with and among</td>
</tr>
<tr>
<td>&quot;We&quot; choose for &quot;them&quot;</td>
<td>People choose for themselves</td>
</tr>
<tr>
<td>Give resources</td>
<td>Give means to access resources</td>
</tr>
<tr>
<td>One-size-fits-all approach</td>
<td>Approach honors unique cultures and traditions</td>
</tr>
<tr>
<td>View world as discrete segmented systems</td>
<td>View world as interdependent</td>
</tr>
<tr>
<td>Practitioner outside the process</td>
<td>Practitioner part of the process</td>
</tr>
</tbody>
</table>


### Why capacity building?

Capacity building is about people. At the end of the day, people make up the most important and valued resources for nations, corporations, organizations, institutions, community and other groups alike. It is the value of the human resources that make the real difference. Capacity building strongly relates, therefore, to education and life-long learning practices. Educational and learning processes of an individual are now recognized as needing to continue throughout one’s lifetime, both as a response to competition or threat, and as a means to self-fulfillment and satisfaction. The process also relates to the very heart of a country’s workforce and its ability to respond to market needs and trends, to globalization, and to the needs of socio-economic conditions. As part of this, globalization has seen to it that everything has become linked with everything else, in ways that we often do not understand fully. In this scenario, a process of inter-linking and re-thinking the basics becomes essential. However, the ‘teeth’ in that process is capacity building, professional development programs, education and training.

There is nothing new with capacity building as an idea. It has been promoted since the 1970s together with the coming to the fore of environmental and other issues. Capacity building has related to it a number of concepts, varying with the times and the priorities that countries have placed on the spectrum of issues - ‘enabling’, ‘empowerment’, ‘partnerships’, ‘decentralisation’, ‘devolution’, ‘deregulation’ and ‘privatization’ are some of the concepts that have come up over time. Among these, the common factor is that they require an educational and institutional-change process. The approach of how one builds capacity (what to focus on) varies also according to the subject matter and working environments. For instance, for

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**Box 1: Awareness Raising**

In Thailand, five training workshops trained 150 women in the safe handling and use of toxic substances. The 150 women, in turn, conducted their own local training sessions and trained 27,018 other Thai women about the dangers, use and management of toxic substances in their work-places and homes, and on how to disseminate this information to their families and communities. This is an easy model to replicate. Master training manuals and guidelines for conducting training workshops, together with instructional posters, were published in the respective languages and distributed. The project relied greatly on NGO's, youth organizations and national authorities. The project was financed by UNEP at a cost of US$20,000. (Source: UNCSD, 1997.)
cities, capacity building for the governance of cities and settlements is very often related to handing down authority. There are also issues not directly related to capacity building, yet vital if the fruits of the learning process are to realize. Good human resources need incentives and rewards, opportunities for continuous training and re-training, clearly recognizable career opportunities, and competitive pay scales. For these, an organization needs to be dynamic and responsive.

Organizational development – of a central government ministry, a local authority department, a private sector enterprise, a non-governmental organization (NGO) or community group - is an inherent part of the capacity building process. Organizational development is concerned with the *how* and the *why* of actions. At its heart are the rules and regulations, management practices and procedures, hierarchies, job descriptions and salary scales. These are concerned with *why* things get done. Regulations controlling financial management, trading capacity of government agencies, practices promoting public-private cooperation, conditions of employment, salaries and career structures, and land use are examples of regulatory systems applicable. As to *how* things get done, matters such as working relationships, shared goals and values, team-work, dependencies and supports become important. While an approach of inter-linking and finding synergies may be appealing, for an inter-linkages approach to be successful, relationships between different organizations will need to change – ever so slowly – and become more flexible. This feeds the need to re-think approaches. However, to bring about changes in organizations, individual capacity is required, bringing us back full circle to the learning process raised earlier.

**Box 2: Cleaner Production in China**

Cleaner production is being introduced to over 3000 companies over the next five years and especially to the top 100 polluters in China. Some 690 no- or low-investment cleaner production options were identified in 29 cleaner production assessments carried out. The success of the project has been mainly due to: manuals in Chinese, early emphasis on plant training, focus on simple options capable of implementation, and involvement of all employees. The combination of practical work and theoretical studies was effective, as well as case studies for option-raising. The project is funded by the World Bank and UNEP. (Source: UNCSD, 1997)

**IV. Some Lessons**

As a result of numerous capacity building programs by international and other organizations, a large number of lessons can be learned from the past. Many large capacity building organizations, such as the World Bank, have undertaken reviews as to the effectiveness of their programs and how they could be improved. These reviews and self-assessments provide invaluable materials for a reflection on the kind of capacity building approach that may be called for, need to be referred to and kept in mind.
In terms of capacity building for inter-linkages, some of the more important features are likely to be information flows, information and data systems, communication and cooperation. Particularly with regard to communication, there are some points that can be noted.

1. There is a growing awareness of the importance of communication. However, communication activities are often granted low priority due to lack of broader, governmental awareness of the importance of effective communication. As a result, existing structures for communication are largely inadequate and actions are often uncoordinated.

2. In most countries, traditions of communication and sharing in government are few, and the cultural climate for it is not very favorable. Communication is often considered a "luxury", afforded in times of crisis.

3. The flow of information is inhibited by poor facilities, communication and agreed-to processes and practices. This is also a problem relating to infrastructure. Further, there is often a tendency to retain information. Often, the concept of communication is reduced to media relations, public relations or publicity.

V. Which MEAs and Regimes?

We have by now over 900 multilateral environmental agreements in existence, most negotiated after 1972. The world community of diplomats and government officials has become proficient at negotiating agreements, ranging from the simple to the complex, in a short period of time. The process of negotiating these agreements is relatively clear, while the vital issues of implementation and capacity building are usually considered at a later stage. However, beyond the agreements, there are also institutions and organizations that play a significant role in the sustainable development process, but can play an equally significant role in the inter-linkages process as well. In order to highlight the regimes and organizations that relate to this paper, a brief list is provided:

- Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal
- Convention on Biological Diversity
- United Nations Convention to Combat Desertification
- United Nations Framework Convention on Climate Change
- Convention on the Conservation of Migratory Species of Wild Animals
- Convention on Long-Range Transboundary Air Pollution

Box 3: Save Trees – Cook Solar
In Kenya and Honduras, U.S. Rotary Clubs began introducing solar cooking technology to villagers who rely on wood burning fires for cooking in 1991. In addition to stripping area forests, villagers cooking in poorly ventilated homes were at risk for burns, eye and respiratory diseases. Where solar technology was introduced and villagers trained, benefits were fast obvious. Results include decreased deforestation rates; sterilization of medical instruments; and reduction in diseases. The project became “locally-owned” which made it sustainable. (Source UNCSD, 1998)
- Vienna Convention and the Montreal Protocol on Substances that Deplete the Ozone Layer  
- Convention on Wetlands of International Importance  
- Convention on the Law of the Sea

Other important organizations include:

- Asian Development Bank  
- European Bank for Reconstruction and Development  
- International Labour Organization  
- International Telecommunications Union  
- Organization for Economic Co-operation and Development  
- United Nations Development Programme  
- United Nations Environment Programme  
- UN Department of Economic and Social Affairs  
- United Nations Commission on Sustainable Development  
- The World Bank Group  
- World Health Organization  
- World Meteorological Organization  
- World Trade Organization

**VI. What are some Inter-linkages?**

In 1997, UNDP produced a report entitled Synergies in National Implementation: The Rio Agreements. The report is useful in that it represents an effort of looking at inter-linkages and where synergies may exist (as well as related problems). It focuses on four agreements: the Convention on Biological Diversity, United Nations Convention to Combat Desertification, United Nations Framework Convention on Climate Change, and the Forestry Principles. Among these MEAs, a number of overlapping legal provisions were evident (See Table 2).

**Compliance**

The UNDP report points out that the Rio instruments contain a number of common requirements at the national, regional, and local levels that Parties are required to fulfill. To comply with these is a question of compliance with the obligations of the agreements. Compliance – or a lack thereof – with the provisions of MEAs by Parties has become an issue of serious concern to various international communities. At least among the Rio conventions, and most likely among other sustainable development instruments, common requirements are as follows.

- Policy development and reform of legal frameworks
- Impact assessment
- Science and Research
- Inventories and monitoring
- Reporting
- Information and data management
- Education and public awareness
- Training
<table>
<thead>
<tr>
<th>National Inventories</th>
<th>Climate Change</th>
<th>Biological Diversity</th>
<th>Desertification</th>
<th>Forestry Principles</th>
</tr>
</thead>
<tbody>
<tr>
<td>National &amp; Regional Action Plans</td>
<td>Article 4(b)</td>
<td>“strategies” Article 6(a), (b)</td>
<td>Articles 9, 10</td>
<td>Principles 3(a), 5(a), 6(b), 8(d &amp; h), 9© Article 4(b) and IPF Proposals for Action</td>
</tr>
<tr>
<td>Identification &amp; Monitoring</td>
<td></td>
<td></td>
<td></td>
<td>Article 8 Article 16 Principle 12(a)</td>
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<tr>
<td>Develop Protected Areas</td>
<td></td>
<td></td>
<td></td>
<td>Article 8 Principle 7(b), 8(f)</td>
</tr>
<tr>
<td>Legislation</td>
<td>Preamble</td>
<td>Article 8(k)</td>
<td>Article 5(e),</td>
<td>Principles 8(f), 13(d &amp; 3) Principle 12(a)</td>
</tr>
<tr>
<td>Research</td>
<td>Article 5</td>
<td>Article 12(b)</td>
<td>Articles 17, 19(b)</td>
<td></td>
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<tr>
<td>Public Education</td>
<td>Article 6</td>
<td>Article 13</td>
<td>Articles 5(d), 19, 6</td>
<td>Principle 12(d)</td>
</tr>
<tr>
<td>Environmental Assessment</td>
<td>Impact Article 4(i)(d)</td>
<td>Article 14</td>
<td></td>
<td>Principle 8(h)</td>
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<tr>
<td>Clearinghouse for technical information</td>
<td></td>
<td></td>
<td></td>
<td>Article 18 Article 18</td>
</tr>
<tr>
<td>Public Participation</td>
<td>Article 6(i)(a)(iii) Article 7</td>
<td>Article 9</td>
<td>Article 19(4)</td>
<td>Principle 2(d)</td>
</tr>
<tr>
<td>Conference of Parties (COP) / regular reviews</td>
<td></td>
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<tr>
<td>Exchange Information</td>
<td>Article 7</td>
<td>Article 17</td>
<td>Article 16</td>
<td>Principles 2(c), 11, 12(c)</td>
</tr>
<tr>
<td>Training</td>
<td>Article 6</td>
<td>Article 12(a)</td>
<td>Article 19</td>
<td>Principles 3(a), 11, 12(b)</td>
</tr>
<tr>
<td>Reports</td>
<td>Article 12</td>
<td>Article 26</td>
<td></td>
<td></td>
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<tr>
<td>Data Collection</td>
<td></td>
<td>Article 16</td>
<td></td>
<td>Principle 12(a)</td>
</tr>
<tr>
<td>Examine obligations-Assess implementation</td>
<td>Article 7(e)</td>
<td>Article 23</td>
<td></td>
<td>Principle 12(a)</td>
</tr>
<tr>
<td>Report Steps to COP</td>
<td>Article 12</td>
<td>Article 26</td>
<td>Article 26</td>
<td></td>
</tr>
<tr>
<td>Compatible Data/Standards</td>
<td></td>
<td></td>
<td></td>
<td>Article 16</td>
</tr>
</tbody>
</table>

A. Overview

In many cases, countries lack the capacity to conduct these activities. Infrastructure is a problem, impinging on reporting and data collections. Interestingly, data often exists in developing countries, but it is often not collated or thought about in a systematic way. Nor is it resultantly presented as such. However, much can be done to use existing resources to enhance inter-linkages so that national obligations can be fulfilled, while real benefit is being achieved as part of a development strategy. Existing national and regional centers (such as regional centers for data management) are obvious starting points for coordination and collaboration. These centers would likely best be employed for courses on technical issues with targeted groups on matters relevant to a number of MEAs and other sustainable development agreements. Examples include collection of baseline data on forests, calculation of carbon sinks, calculation of emissions of noxious gases, patterns and sources of deforestation and desertification, technology and management options for GHG mitigation, and sustainable forestry practices and certification principles. Modules can be relatively easily developed for these and other courses, where the approach would be one of ‘training the trainer’ should capacity to implement these programs be low. However, again, even the best capacity building program isn’t worthwhile if incentives that encourage trainers to train are not in place. One model available is the Climate Change Convention Training and Capacity Building Programme, or CC:TRAIN\textsuperscript{11}.

While international agencies identify coordination and cooperation as key elements of any inter-linkages capacity building strategy, the field remains wide open. There have been efforts to promote cooperation and coordination within national governments, but most have been unsuccessful. For instance, United Nations agencies have encouraged governments to establish “multidisciplinary” or “cross-sectoral” committees or forums, but without success. Difficulties arise from definitions of key terms, as well as the fact that the international, academic and other communities have not yet fully agreed to the real meaning of “multidisciplinary” or “cross-sectoral” and other like terms. Similarly, calls for self-audits by governments to check their accountability against obligations often land on deaf ears. It is not so common that a government will voluntarily audit itself on environmental grounds, or where it does, credibility issues may be at stake.

Box 4: Education

In Canada, an Environmental Education and Training Program (EETP) launched in 1996 was introduced to address environmental degradation with indigenous peoples of Canada in mind. A Needs Assessment showed that technical specialists skilled in environmental audits and assessments were needed, as well as in monitoring and modeling systems. It was thought that indigenous youth could fill these needs. Aboriginal knowledge of the environment acted as the basis for instruction. The program enabled access to Elders for the youth, over 90% of whom had little or no contact. 40 Elders from 11 major tribal groups were brought together to instruct. Some 83% of youth graduates from the course were employed within two months by government, consulting firms, environmental and educational organisations, and resource development corporations. The remaining 17% of first year graduates are enrolled in University of Manitoba to complete an Environmental Science degree.

Information, on the other hand, and improved use and sharing of information, can go a long way to support effective and real inter-linkages. Infrastructure is required, but most important are the accompanying human resources that are needed. Information and data systems that share information need to be maintained, and there are very often problems of maintenance and continuation of these systems in developing countries. The situation can be exacerbated by the system of rotating government officials practiced in many governments. Capacity building with regard to information systems, therefore, calls for a mix of:
- technical training in information management and systems creation;
- improved infrastructure;
- a commitment by government to ensure that any system (including software) will be maintained and upgraded; and
- continual professional development programs in the use of computers and information management (at various levels).

B. Scientific Capacity

Often national governments will call on the same scientific base within a country to answer scientific questions arising from environmental concerns. At the base of any good policy reform based on an inter-linkages approach remains scientific capacity. The IPCC, START, IHDP, IGBP, and other global networks are a positive force in that they have a direct and indirect effect of promoting capacity building at national and local levels. These programs definitely have a role, need to continue and strengthened. At national and local levels, however, more efforts are needed to enhance the quality of scientific capacity in a country to understand how issues affect its territory, and from there, what types of decisions are needed to minimize, mitigate or avoid anticipated ill effects. Technical training will need to involve scientists first, and then scientists, government officials and others on integrated assessment techniques (or issue-oriented approaches). International personnel exchange programs can support this process.

C. Policy and Management

Any strategy for inter-linkages capacity building will need to extend to professional development programs in management skills for mid- to high-level government officials. At this level, the issues become more philosophical in their nature, in terms of better understanding effective management techniques and approaches, and the concepts and benefits of cooperation, coordination and partnerships. The traditional centralized structures of government which continue to remain in most countries make progress difficult in these regards. Programs such as CC:TRAIN have a place, but the incentive for an official to coordinate and take action is virtually non-existent at the moment. To change that structure and to provide a reason for a government official to take action remains a perplexing challenge. Nevertheless, putting in place information systems and encouraging the transparency that that process can bring, is one major step in this direction.

Through its actions, the international community – knowingly or otherwise – calls for a change at the conceptual level: one founded in philosophy, and how we think about and approach cooperation and partnership. Considering inter-linkages in this setting is appropriate. Organizing leadership seminars, courses and promoting dialogue seminars and workshops among key actors
within countries and regions are important steps in this process. Such a process would be continuous, so that eventually full support and commitment from countries (developed, developing or in transition) would be required to sustain the activities. They would come to make up a part of a country’s educational activities. However, the investment would be comparatively small when compared to the returns that can be expected over a period of 5 years. International organizations and institutes with expertise in these areas can assist.

The objective of these professional development programs would be to support the development of leaders who can in turn support the development of national strategies that can effectively ‘inter-link’ the regimes. However, in that process, it becomes vital that any strategy proposed link strongly with a country’s development strategy and education strategy. (For example, the promotion of improved information collection and sharing can be planned to support a country’s participation in the digital economy. An emphasis on cooperation can be planned to support the development of human resources that can enable more effective participation in the global economy. Or alternatively to support the formation of partnerships with the private sector so as to reduce burdens on government expenditure). If an inter-linkages strategy is not linked with educational and development strategies, then it will fail.

D. Education

Much of this ultimately relates to education. In this light, education is another key area where countries need to rethink curricula. Most curricula do not incorporate elements related to development and environment issues, yet Parties to MEAs are obliged to do so. The phenomena is not by any means isolated to developing countries. Many developed countries can pay more attention to issues of sustainability in education. In this regard, there are key areas that will need to be looked at with a view to incorporation into existing school curricula. Based on international experiences, these areas have been identified as:
1. Insights to the future (developing long-range thinking);
2. Stewardship of natural resources;
3. Designing sustainable communities (social, physical dimensions);
4. Economics; and
5. Globalization.

E. Information Capacity

The capacity of a country to organize, collate, coordinate and share information lies at the heart of any inter-linkages capacity building strategy.

(a) Linking Actors, Programs, Schemes

There are a number of ways information comes to play a pivotal role. Identifying actors, programmes and schemes for coordination and cooperation at the national is an obvious role for information in an inter-linkages scenario. If this can be taken in a broader context, using and sharing information to link up schemes – such as AIJ, CDM – with other existing or future
programs and information requirements would make sense. However, with regard to these schemes, countries have pointed to several deficiencies, including a lack of:

- human capacity to design the necessary policies and to implement agreed programs and procedures (linking back to the leadership/dialogue needs noted above)
- a policy and legal framework for AIJ/JI/CDM activities consistent with development priorities (including familiarity with and use of indicators for sustainable development) (linking back to the comments that any inter-linkages capacity building strategy needs to link to development strategy)
- transparent and efficient administrative and decision-making procedures (these latter points relate to notes on information systems below)\(^{15}\).

(b) Reporting and data

Reporting requirements and data collection systems under various MEAs and other sustainable development agreements are equally obvious as areas calling for coordination and streamlining (see Table 3). In its report, the UNDP points out a distinction between data integration and analysis. Managers of data sources can manage decentralized datasets and control them for quality, but need an analytical lab to do integrated analysis. Each nation will eventually require the infrastructure/human resources to undertake strategic studies, as well as access data over the Internet\(^{16}\). (Australia’s ERIN is cited as a useful model)\(^{17}\).

Information product design can be streamlined or at least harmonized (rather than standardized). These areas could call for technical professional development workshops for a targeted audience. The reason for doing so lies in efficiency – that attention to design saves a great deal of time, effort and money in later stages. There are also issues of reduced value and application of information if design is ignored.

F. Financial Capacity

Regarding the role of external donors and technical assistance agencies, the approach needs to be based on the concept of ‘partners in development’\(^{18}\). This approach implies consultation and dialogue between donor and recipient on all aspects of a project. Since the mid-1990s, technical assistance schemes and foreign aid has desperately needed to incorporate “softer” aspects into their programs. By “soft”, issues of human resources development (education, learning, information systems, information management, management philosophy, leadership) come to the fore. Much aid, for example, still remains focused on large heavy infrastructure. Furthermore, assistance provided by external donors should be directed towards building capacity for promoting regional economic cooperation and integration\(^{19}\).
Table 3: Illustrative comparison of data needs across the Rio instruments

<table>
<thead>
<tr>
<th>Core Data Set Needs</th>
<th>BD</th>
<th>For</th>
<th>Des</th>
<th>CC</th>
</tr>
</thead>
<tbody>
<tr>
<td>land use (by type)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>vegetation (by type)</td>
<td>●</td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>forests (by type, condition, density)</td>
<td>●</td>
<td>●</td>
<td></td>
<td>●</td>
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<tr>
<td>forest production and export information</td>
<td>●</td>
<td>●</td>
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<td>●</td>
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<td>forest tenure / land tenure</td>
<td>●</td>
<td>●</td>
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<td>●</td>
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<td>soils (by type)</td>
<td>●</td>
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<td>●</td>
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<tr>
<td>agriculture (by type)</td>
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<tr>
<td>rice cultivation</td>
<td>●</td>
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<tr>
<td>fertilizer use</td>
<td>●</td>
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<td>●</td>
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<tr>
<td>livestock census</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<tr>
<td>Wetlands</td>
<td>●</td>
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<td>●</td>
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<tr>
<td>Oceans</td>
<td>●</td>
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<td>●</td>
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<tr>
<td>Climate (temperature, precipitation, etc.)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<tr>
<td>Topography (elevation, slope, aspect)</td>
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<td>●</td>
<td>●</td>
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<tr>
<td>Surface hydrology (lakes, rivers, streams)</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<tr>
<td>Estimate of areas’ risk of desertification</td>
<td>●</td>
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<tr>
<td>Flora and fauna (species type and density info)</td>
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</tr>
<tr>
<td>Endangered species habitat</td>
<td>●</td>
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<tr>
<td>Protected areas (by type and condition)</td>
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<td>indigenous peoples homelands</td>
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<td>population (count and density)</td>
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<td>other infrastructure (transmission lines, etc.)</td>
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<td>Industrial activities</td>
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<td>Power generation facilities (by type, capacity)</td>
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G. The Banks

A brief word is needed here in relation to the role that development banks have to play in this process. As controllers of financial resources, they are in a prime position to assist in capacity building. Development banks are by nature information collectors and, with the support of the country in question, can also be information providers and capacity builders. For instance, countries have cited a lack of local institutions to perform independent verification of greenhouse gas reductions achieved by AIJ/II/CDM projects. EBRD, with its close relations to industry in countries with economies in transition, can play a significant role in monitoring and supporting reporting requirements of countries under MEAs. They can also work with countries to synthesize data and reporting, train in basic data collection and collation, as is being done by ADB.

VII. Problems Commonly Faced

In considering capacity building, it is important to consider some of the problems faced by countries in complying with MEAs, and supporting an inter-linkages approach by extension. Problems include the following.

- Centralized structures and sectorally divided responsibility is a hindrance to integration and inter-linking. Further, responsible institutions for MEA implementation vary greatly from country to country in position, authority and resources. They have severe problems in coordinating information and activities – or even in simply communicating – with others. Often, there are real disincentives not to effectively coordinate (institutional rivalries, turf/resource control).
- After attending professional development courses, government officials can and do get promoted without fully implementing learnt skills on the job or training others. These courses are currently informally linked to career development, which poses a ‘brain drain’ effect.
- Trained developing country experts on MEA mechanisms often do not have the opportunity to participate in the international debate. Reasons range from a lack of information and networking to poor English skills and a lack of resources for participation.
- In terms of data management, definitions are a major obstacle to inter-linkages at present. Common definitions of terms are essential for synergy, but almost non-existent. Sustained technical training and dialogue sessions among scientists, officials and others will be needed over the mid-term to bring about a consensus.
- Official “focal points” can promote over-centralization of control and power over sustainable development policies and programs, while the nature of sustainability and inter-linking calls for decentralization and diversity of participation (cooperation).
- Terminology of capacity building components is a problem. Officials or other persons the target of training and capacity building do not appreciate being “trained”. Therefore, a ‘re-packaging’ of capacity building is required.
- Communication between stakeholders and government at local levels is generally inadequate. Local people are often insufficiently involved in the development of national
policies; however, there are cultural factors involved here that need to be considered in any capacity building program.

VIII. Process over Content

There has been a major change in the potential and character of capacity building since the mid-1990s: the advent of the Internet. The Internet has revolutionized and rejuvenated human relationships, and has supported capacity building to shift away from an emphasis on the *what* (contents) to an emphasis on the *how* (process). The upside of this process is that capacity building is now able to be totally customized according to the user’s needs. Many models of implementation, for example, have mostly been tried and tested, and the Internet works to share these experiences with relative ease. It is now a matter for the planner to select the most appropriate model with the user in mind, or a mix of models, together with the contents, so that the user can benefit most from the resources spent. Capacity building on inter-linkages need no longer and should not offer a prescribed medicine, but rather a multitude of options and access to information to promote the flexibility and adaptability that is needed.

Therefore, capacity building is becoming much more a question of *how*. How we implement programs will be key to their success. How we use the tools, materials, courses and models that are now available to us, how we structure information, and how we encourage thought, cooperation, networking and partnerships is becoming of much greater importance than contents. The process of identifying inter-linkages between and among both environmental and economic regimes is a part of this process. Issue management, effective information systems, effective financing issues, and philosophical dimensions – these are all part of the ‘how’ of capacity building.

Issues of culture, more general education, poverty alleviation and, very importantly, providing access by people to information and education are among factors that capacity building planners will have to consider in order to customize efforts for optimal results. The planner will need to be armed with information on inter-linkages between and among MEA regimes, local development and educational strategies, and be aware of the impacts of globalization.

IX. Future Perspectives

Capacity building for inter-linkages has a number of needs. It needs to be a continuous process and founded in long-term commitment. It needs to instill flexibility, cooperation skills and incentives into the development process. Further, it needs to involve all stakeholders – governments, NGOs, businesses. It is not a process that centers around a one-off event, as is often the case at present. Consequently, our thinking and approach to capacity building needs to change, and with that change, the tools and approaches we employ.

Training centers, institutions, agencies and departments, play the dominant role in capacity building and will continue to do so. But there are major constraints with current practices that need to be recognized and discussed before the situation can be improved. Many of capacity building organizations have developed an inability to respond to current and future conditions of globalization, a global economy, a global inter-linked environment, and the rapid change that
accompanies these major forces in our lives. ‘Fixed menu’ training courses are unable to respond to real-time and future demands. Above all, capacity building needs to respond to the present while keeping a close eye on the future.

A new generation of capacity building is therefore called for. While fundamental changes are a part of the process, the most important changes come in our way of thinking – our philosophy. Further, we have at our disposal a whole new set of tools and a tremendous potential for their application. Below are some of the options in terms of considering the future perspectives of capacity building in an inter-linkages setting.

1. Capacity building needs to specifically link with development and educational strategies of a country, region or locality. The systems related to capacity building need to be such that they can be customized according to needs that are considered and defined before a long-term capacity building process begins.

2. Accordingly, there needs to be commitment by governments to support this process. Resources do exist – it is more a question of how they are applied. This ultimately calls for a change in mindset. As part of this process, dialogue and leadership seminars between a range of groups should be offered. Examples of target groups include those negotiating policy at the international level and those with the technical expertise to implement projects; and those implementing and drafting policy at national levels and scientists, related government departments, NGOs and religious organizations. The key to successful dialogue sessions lies in the diversity of participants so that a range of opinions can be viewed. No recommendations need be forthcoming, no agreement is presupposed, and no conclusions need be reached – which again calls for a different mindset when considering capacity building programs for inter-linkages. The results, however, would be seen through enhanced cooperation and communication over the mid-term.

3. Bottom-up approaches to capacity building will be needed for inter-linkages. In particular, most smaller and less developed countries lack the indigenous scientific capacities to effectively participate in the international scientific programs. These countries therefore lack a cadre of fully informed scientists to advise their policy makers on their participation in international negotiations. They are then forced to rely on “outside” advice, the worth of which is difficult to judge. Even when scientific capacity exists, these may not be linked to the international research community and lack access to the latest findings, or may not be linked to national policy-making processes. Therefore, one useful approach would be the development of national “teams” comprised of (a) physical, biological and social scientists concerned with the environment; (b) representatives of the engineering and technological community; and (c) policy makers. These teams could serve many purposes such as ensuring that policy makers receive unbiased science advice from national scientists; designing national research programs helpful to the policy community; and undertaking technology and other assessments. Most of the training needed would be face-to-face, and dialogue/leadership sessions would necessarily comprise a substantial part of that needed.

4. Face-to-face workshops are required, but in addition to technical training, they should be used as forums for stimulating thought, promoting networking, and raising and discussing
options. Face-to-face training, however, is very expensive, and therefore needs to be coupled and supported by new forms of learning and professional development programs to reduce costs and increase leverage. These new forms of learning come in the guise of new information technologies. So-called Web-based learning is a new phenomenon, but can support and play a major role in any capacity building strategy for inter-linkages. Further, there are other clear advantages. Web-based learning can offer:

- self-paced, relevant instruction;
- a job-based focus;
- relevant, current and realistic information and instruction;
- motivational and measurable qualities and quantities;
- thematic or issue based layers
- contextual learning utilizing observe/practice/apply approaches; and
- benchmarks for comparison to allow for assessment and evaluation of benefits.

5. Topics

In an inter-linkages scenario, the range of topics offered will be necessarily broader and more complex than ever offered before. The range of topics would include the following.

- Basic instruction and introduction of the Kyoto and other MEA mechanisms targeting local experts (consultants, academics, government agencies, subnational authorities, private sector, NGOs)
- Information and data management
- Data collection techniques
- Definition skills
- Networking, partnership building and negotiating skills
- Courses related to environmental expertise in the private sector
- Management and evaluation skills/capacity
- Experience sharing with economic instruments and/or international cooperation
- Monitoring and verification of emissions reductions achieved by AIJ/JI/CDM projects
- Methodologies and tools to evaluate offset markets in international markets.
- MEAs and Business Opportunities
- Voluntary Agreements and Trends in Corporate Management
- Managing Change at the Corporate Level
- Knowledge Management
- Information Reporting Systems, both for corporations and governments
- Corporate Governance
- ISO 9000 and 14000
- Life Cycle Analysis
- Eco-labeling and International Trade
- Green Markets and Future Trends
- Innovation and Corporate Management Techniques
- Environmental Accounting Techniques
• Integrated decision-making and assessments
• Effective Decision-making and Delegation
• Organizational Leadership
• Forest Certification Principles
• Zero emission approaches
• Hierarchy versus Networks: Alternative Strategies for Organizational Capacity
• Centralization versus Decentralization: Options and Experiences

Again, Web-based learning offers tremendous opportunity for effectiveness. The range of topics that can be offered in Web-based learning can be much more comprehensive than those offered in any face-to-face scenario. Further, they can be made interactive, and can be used to support face-to-face training as required. If put on the Web, the above topics would likely be no longer than 2 hours in length each, anticipating the busy schedules of those learning. However, the Web provides for great flexibility, so that any one of these topics could entail a course of one year or more, as the needs require.

6. Access to information, education and new forms of capacity building is among the more serious of issues and challenges. The issue of access has strong potential to become the most potent of barriers between the rich and the poor. However, actions needed to support the introduction of the Web-based learning for inter-linkages capacity building can be linked to national development strategies. Where the Internet is not available, then materials can be offered on CD Rom. If computers are not available, then materials can be printed, but in those cases, commitment needs to be sought from interested governments so that infrastructure and access is put in place. In under-developed countries, Centers of Excellence can be targeted to act as learning hubs in an inter-linkages capacity building effort.

7. Scientific capacity also calls for attention at the undergraduate levels. In this regard, virtual universities have become sophisticated enough to offer the networks and accompanying expertise that are desperately needed to build capacity quickly\textsuperscript{22}. Again utilizing the Internet, virtual universities are comparatively inexpensive to establish and can offer an unprecedented use of resources for the benefits to be gained\textsuperscript{23}. Courses relating to inter-linkages can be specifically offered and tailored to needs (for example, to conduct quantitative modeling studies for post-graduate students).

8. Linking capacity building to certified qualifications of varying increments could be an important consideration. Qualifications provide a powerful incentive for individuals to take up life-long learning and professional development programs. Depending on the needs and courses, these could be approved by various organizations of the United Nations, who could then in turn support national systems that promote the linking of these qualifications to improve salaries and status. This process need not have any fast and fixed rules. Qualifications can be simply offered, with a view to recognizing that professional development courses in a capacity building strategy can work to enhance a person’s (official’s) status within an organization. That process of enhancement needs to be recognized and built upon so that trained individuals can participate in the process, improve conditions as well as instruct others, and share the benefits\textsuperscript{24}.
Graph 1: Schematic Outline of Capacity Building Systems for Inter-linkages

Hard/Soft Infrastructure
- Maintenance, Support
- Access
- Education

Dialogue Seminars
- Leadership Seminars

Technical Issues Training
- Reporting
- Topical courses
- Information and data management

Face-to-Face Seminars

Web-based Learning

Related Networks
- Virtual Universities
Endnotes:

3 See materials of the Amhersy H. Wilder Foundation relating to capacity building in relation to definitions of capacity building: http://www.wilder.org/suc/capbuild.html
7 See the Bellanet homepage. Bellanet is an organization that is concerned with promoting inter-linkages. See: http://www.bellanet.org/partners/adea/en_cotexec.html
11 See the Internet sites of UNITAR or GEIC (www.unitar.org; www.geic.or.jp/cctrain)
12 See www.start.org
13 IGES (in the Asia-Pacific), the Aspen Institute, and LEAD International are examples.
14 For an example of a successful program that is incorporating these elements in school curricula, see the Center for Sustainable Development: http://csf.concord.org/
22 A good example is the International Management Center, UK. See: http://www.imc.org.uk/imc/