



WORLD
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ECOSYSTEM
GOVERNANCE

First World Forum on Ecosystem Governance

Beijing Declaration

Governing Ecosystems for Human Wellbeing

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Part 1: Beijing Declaration

During the 1st World Forum on Ecosystem Governance, one hundred fifty experts and specialists developed a broad understanding of the issues and the challenges preventing effective governance of ecosystems with broad acceptance that ecosystems and the services they provide serve a crucial role in meeting basic human needs (food, water, shelter) and wellbeing - the foundation to achieve sustainable development and respond to climate change. The participants provided several priority actions designed to promote more effective governance of the world's ecosystems.

Participants concluded that:

Ecosystem governance is essential to achieve the United Nations Sustainable Development Goals;

Nations are making efforts to integrate the Ecosystem Approach into their governance structure as a framework to respond effectively to the risks from climate change and the implementation of the Post-2015 Development Agenda;

Without healthy and diverse ecosystems, nations are at risk of losing the services that they provide, affecting livelihoods, cultures, health, and the economies of both men and women;

Nature-based solutions, such as restoration and reforestation, are critical to mitigate and adapt to climate change and to maintain biodiversity and the ecosystem services it provides, and thus help sustain those services to both urban and rural societies;

Stakeholders should value, conserve and sustainably use ecosystem services based on a shared vision of common goals in ecosystem governance; and

Nations should integrate nature-based solutions into their national economic development plans and national strategies to help facilitate the adequate allocation of funds from both public and private sources for implementing such strategies and associated actions, as China does with the "ecological civilization" approach, which has been incorporated into their 13th Five Year Plan;

And declare that:

Nations must acknowledge the importance of connecting aquatic, marine and terrestrial ecosystems, and, as appropriate, urban-rural-nature inter-dependence, and should consider the relevance of scale (local to global) in sustaining development and the essential role of ecosystems in mitigating and adapting to climate change;

Nations must recognize the importance of biodiversity and the ecosystem services they provide to maintain healthy and sustainable cities and that ecosystem management policies and planning must acknowledge urban dependence on essential services provided from rural ecosystems;

Nations, international funding agencies, and other sectors should be encouraged to work together to create innovative financial mechanisms and prioritize funding for sustainable development, and to mitigate and adapt to climate change, such as Intended Nationally Determined Contributions (INDCs), to address loss of biodiversity and ecosystem services;

Multilateral organizations and environmental agreements should address ecosystem fragmentation by improving local level governance, particularly in policy formulation and programme implementation;

Nations must support quality education and communication using traditional and innovative technologies to help connect people and build an inclusive knowledge community with respect to ecosystems and their governance;

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The World Forum on Ecosystem Governance is considered an essential regular event that convenes Future Leaders, experts in ecosystem governance, as well as policy makers, representatives of financial agencies, and businesses, to further advance the agenda of ecosystem governance; and

This Declaration is based on the key points noted in the Background that were highlighted in roundtable discussion reports (Part 1), the insightful and creative contributions suggested in the Future Leaders Vision (Part 2), and the Priority Actions forwarded from the Roundtable Discussions (Part 3). As such they are considered integral parts of this Declaration.

Part 2: Background

The first World Forum on Ecosystem Governance was convened 23-28 October 2015 at the Yunhu Lake Resort, Beijing China. The programme comprised a Future Leaders Academy and Technical Sessions. Two broad themes served to focus the Academy seminars and the Roundtable Discussions in the Technical Sessions:

- Governance of Ecosystems to Achieve the UN Sustainable Development Goals; and
- Governance of Ecosystems to Mitigate and Adapt to Climate Change

The Beijing Declaration is based on information that was developed through Roundtable Discussions that was shared during the Forum. The following key points were concluded from these discussions and provide the basis on which the Beijing Declaration was developed:

- ✓ Sustained provision of ecosystem services is critical for life on earth. Yet, with growing human populations, better health care, along with increased consumption of natural resources, burning of fossil fuels and other economic activities, the global climate is changing at a faster pace than has ever occurred during prior geological periods.
- ✓ Based on the conclusions of the Millennium Ecosystem Assessment (2005) approximately 60% of the World's ecosystem services were degraded or being used unsustainably;
- ✓ "Ecosystem governance" is defined as a component of environmental governance¹: "... the means by which society determines and acts on goals and priorities related to the management of ecosystems, ... [including] ... the rules, both formal and informal, that govern human behavior in decision-making processes as well as the decisions themselves."
- ✓ Ecosystems present a number of challenges when considering how to govern them: They are dynamic, comprising living and non-living components that deliver a wide array of products and services, through their interactions, on which people depend. At the same time ecosystems are constantly changing and evolving in response to external and internal conditions; and they may span sub-national, national and international jurisdictions and often involve multiple governmental departments within nations.
- ✓ China's commitment to integrate nature-based solutions into their national planning is reflected in their Eco-Civilization initiative under their recently approved 13th Five Year Plan, which ensures better management of its ecosystems as a prudent step to sustain delivery of ecosystem goods and services to meet human and environmental needs now and in future.
- ✓ Nations must acknowledge that without integrating ecosystem governance in all aspects of their development goals and climate change actions, the opportunities to move forward may either be short lived or fail due to the ever-increasing risks of ecosystem collapse.
- ✓ Effective ecosystem governance will require greater recognition and understanding of people's dependence on ecosystems for survival will require skills and input from a wide variety of specialists, including political and social scientists, economists, business owners, and environmental groups if ecosystems are going to be managed effectively.

¹ The International Union for Conservation of Nature (IUCN) Environmental Law Programme:
https://www.iucn.org/about/work/programmes/environmental_law/elp_work/elp_work_issues/elp_work_governance/

Part 3: Future Leaders Vision

Twenty Future Leaders, from eleven countries participated in, and contributed to, the First World Forum on Ecosystem Governance. Based on our experience in the Academy Seminars and participation in the Roundtable Discussions, we provide this Future Leaders Vision designed to complement the Declaration and provide a roadmap for action.

To build capacity Future Leaders recognize the need to:

- ✓ Appreciate the need for global engagement in heightening the awareness of the plight of species and ecosystems on a global basis;
- ✓ Promote implementable management techniques, rigorous conservation science and access to relevant training, especially in the developing world;
- ✓ Connect sectors of society to build capacity and implement conservation and instigate management change; and
- ✓ Create new methods to better recognize the valuable contributions of scientists and engineers to affecting real-world changes in conservation and management practice.

To promote more effective communications Future Leaders believe it important to:

- ✓ Explore new and innovative modes of effective communication to deliver targeted messages;
- ✓ Develop better mechanisms to communicate, engage, and inspire collaborative change across sectors; and
- ✓ Facilitate opportunities for scientists and conservationists to work with other sectors of society, foster dialogue, improve understanding, increase innovative cross-sectorial exchanges, transfer technologies, improve communication and a improve abilities to implement changes.

To foster more effective inter-disciplinary collaboration Future Leaders recommend:

- ✓ Develop mechanisms to facilitate exchanges and internships between academic and research institutions, policy, business and wider society to create networks, build trust and develop true understandings between sectors and individuals;
- ✓ Foster utilization of novel technologies that help build networks and provide support in developing a global network around ecological governance;
- ✓ Promote connections to nature, such as the inclusion of sustainability components in school curricula, and the integration of “natural learning points” into society to reconnect and remind people of their reliance on nature at opportune junctures;
- ✓ Holding more events like WFEG that play a key role in bringing together diverse individuals to discuss and challenge old paradigms and develop new approaches

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for the integration of sustainable ecosystem governance approaches into policy and management at all levels of society; and

- ✓ Recognize the value of emerging leaders and support intergenerational engagement between emerging and senior leaders to take action to engender change and disseminate success.

To increase understanding of the important role ecosystem governance plays Future Leaders recommend:

- ✓ Implement education at all ages and levels of society that are necessary to engender changes in attitudes and effect genuine and sustainable change, and stronger efforts are needed to provide information in appropriate and focused achievable changes;
- ✓ Promote valuation of ecosystem services as part of holistic approaches, and the impacts of environmental change on the future availability of these services and resources;
- ✓ Promote value, respect and integration of diverse knowledge bases across and within societies;
- ✓ Ensure and encourage protection of sustainable local and Indigenous societies; and
- ✓ Embrace both new and traditional knowledge and approaches in developing a sustainable future for societies globally.

To achieve more effective ecosystem management Future Leaders recommend:

- ✓ Development of protocols to facilitate the uptake of tools and programs that achieve improved ecosystem management, protection, and more sustainable decision-making;
- ✓ Promotion of sustainability policies within the global economy that will be core to any international agreement or loan, and a duty of care in the implementation of development especially when that development impacts upon other countries or societies;
- ✓ Encouraging responsibility and accountability for implementation of environmental sustainability across sectors;
- ✓ Developing easily accessible mechanisms for financing improved ecosystem governance, conservation and sustainable management; and
- ✓ Encouraging further development of public-private partnerships in providing finance for sustainable activities.

Part 4: Call to Action

The following conveys the priority actions forwarded by the Roundtable Discussion groups. The Actions have been organized by discussion topic within the two broad themes. Editing has been limited to ensuring the core message of each Roundtable contribution is preserved.

Governing Ecosystems to Achieve the Sustainable Development Goals

SDG Group 1: Conservation and restoration of ecosystem functions for human wellbeing

This Discussion Group looked at conserving and restoring ecosystems and concluded that we need to have good baseline material about the current status of ecosystems, including the following:

- ✓ The state of the ecosystem and drivers of degradation;
- ✓ Social dimensions of ecosystem conservation, management and use, from both local to global scales, and short- to long- term time frames; and
- ✓ Interests of different user groups with respect to the goals of conservation and restoration.

There are multiple dimensions of trade-offs that vary with the interests of different social groups. These occur among ecosystems, among goals and across temporal, geographic and social scales.

Understanding the resilience and dynamism of ecological and social systems requires us to:

- ✓ Respect that ecosystems are not static (and a return to former states often not feasible/desirable);
- ✓ Understand the changing links between function, management, and restoration;
- ✓ Be aware of demographic change, e.g. rural to urban migration (with implications for rural labor to manage ecosystems); and
- ✓ Understand business/investment timelines.

Human activities have led to ecosystem degradation, as well as social degradation (e.g. nutrition, rural outmigration). Restoration may bring back ecological functions, but this is also likely to require socio-economic restoration where employment, health, and education in restoration zones are considered, together with the importance of stimulating business and investment. But the interests and involvement of local people **prior to** decision-making is critical to long-term success.

Managing tradeoffs requires multi-sectoral coordination (e.g. due to different interests that overlap spatially). But depending on system organization, resolution of conflicting interests may be more effective at one scale than another (local, national, global).

Roles vary among public and private sector actors. Government roles include law making and monitoring to ensure safeguards. So learning both within and across sectors is key. Adaptive approaches to achieving goals and balancing interests and roles are required over time.

Based on these considerations the following priority actions are recommended:

- ✓ Develop a common language that translates science to engage investors, farmers, politicians, etc.;
- ✓ Promote practicality and functionality in ecosystem management process and engage different actors;

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- ✓ Ecosystem managers should take stock of degradation, from loss towards greater resilience and this should include such issues as pollution, and habitat degradation
- ✓ Governments should promote policies that:
 - Reduce conflict between conservation, development, management of nature for benefits;
 - Promote negotiation among interest groups to defining goals for conservation and restorations; and
 - Provide incentives to encourage ecosystem management by the people associated with the ecosystems;
 - Delegate management responsibility and accountability to local people;
 - Provide incentives for private and/or public financing of ecosystem restoration; and
 - Promote and foster communication among scales targeting decision makers from local to global levels within government and outside of government.
- ✓ Recognize that multi-sectoral coordination is a challenge that must be addressed;
- ✓ That policy-makers understand that learning processes are key and the relationships between dimensions of conservation and restoration of ecosystem services and social benefits, as well as among actors involved in these processes at different scales from communities to global, are dynamic and moving; and
- ✓ Adaptive approaches to all of these action items are required.

SDG Group 2: Urban – Rural connections to develop sustainably

This Discussion Group, looking at Urban-Rural Connections, noted that there are positive energy flows from rural areas to urban areas, while there are negative energy flows from urban and rural areas, for example: People and resources flow to urban; toxic waste flows to rural area; rural areas do not produce sustainably and urban areas do not consume sustainably; and there is a lack of supportive policies that positively connect rural and urban areas. Key ideas about solutions include:

Development of environmental policies that promote:

- ✓ Investment in natural capital and green industries;
- ✓ Use of available technologies to minimize consumption and waste production;
- ✓ Re-use, recycling and means to recover resource flows inside urban areas, e.g., more appropriate waste separation and treatment systems to produce biogas and nutrients for agriculture;
- ✓ Development of diverse urban forestry and agriculture.

Promotion of greater regional and national collaboration and sharing of information by:

- ✓ Developing mechanisms for cross-boundary collaboration to manage shared natural capital, such as rivers, air and terrestrial and marine ecosystems.
- ✓ Promoting greater equity in “power relations” between rural and urban areas and also between different levels of governance;

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- ✓ By providing platforms for rural civil society to share their knowledge and to foster collaboration with others and sharing of information and knowledge between rural and urban areas, and the sharing of information with decision-makers and people who live in rural and urban areas; and
- ✓ Establish a monitoring system and collect more information and data that would be made available to decision-makers and local people;

Urban areas should:

- ✓ Consume less natural resources: fresh water, food and energy through heightened efficiencies and waste reduction;
- ✓ Share more with rural areas that require more support and more positive flows, for example to provide technology to the rural areas such as solar energy, internet (education);
- ✓ People should be encouraged to pay more for a better environment, through education campaigns that champion and justify sustainable decision-making;

Based on the issues identified and the array of solutions proposed, the following three key actions are considered top priorities;

- ✓ Develop policies for green cities and green rural development;
- ✓ Establish interregional and inter-sectoral committees to develop and force mechanisms for implementing the aforementioned rural and urban policies; and
- ✓ Encourage education and information exchange between rural and urban areas.

SDG Group 3: Nature-based solutions to sustain development

The Roundtable Discussion Group noted that the concept of nature-based solutions to societal challenges can facilitate wider scale application of ecosystem governance for sustainable development. Past and ongoing examples of nature-based solutions can be instrumental in identifying the enabling and disabling factors of implementation, enhancing resilience in cities and understanding how technology and nature can complement each other.

Both land degradation and the existing built environment pose significant challenges for sustainable development. Land degradation has largely occurred in rural areas and includes, for example, loss of soil function from such activities as deforestation and abandonment of agricultural land. Urban areas are often susceptible to risks such as flooding because of the loss of natural buffers with increasing infrastructure (e.g., buildings, roads, sidewalks). Moreover, the dependence of urban areas on ecosystem services and products (e.g., food, water, fiber) from rural areas requires an integrated approach to ecosystem governance. Some of the issues raised include the needs for increasing awareness that nature-based solutions are often the most cost-effective, developing better communication in managing and monitoring ecosystems that may span across governmental jurisdictions or departments, engaging private and public stakeholders, recognizing that some technological solutions can assist in better management of both ecosystems and cities, and encouraging innovative management through reward and recognition mechanisms.

Based on this understanding, the Discussion Group recommended the following priority actions:

- ✓ Development of nature-based solutions including ecosystem restoration, agroforestry, greenbelts, and other strategies that address land degradation,

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protect people and environment from natural risks, and provide ecosystem services and cultural value in support of the SDGs;

- ✓ Local and regional governments are encouraged to develop joint review mechanisms across departments to facilitate understanding, monitoring, and assessment of progress towards implementing nature-based solutions to sustainable development;
- ✓ The business community, including real estate and private water sectors, is encouraged to use the innovative nature-based solutions embedded in their business practice;
- ✓ Communication, awareness raising and education should be an important component to promote nature based solutions. Instead of introducing “nature-based solutions” as a new concept, link ongoing good practices at ground level to nature-based solutions practices by documenting, sharing, social marketing campaigns, perhaps even setting up an ecosystem improvement award programme, and involving young leaders;
- ✓ Nature-based solutions must be a driving force for promoting sustainable life in cities. The critical linkage between relevant issues such as food, water, and disaster management must be considered under the rubric of nature-based solutions; and
- ✓ Governance of nature-based solutions is context-specific; therefore, partnerships of urban-rural, in line ministries, intergovernmental, and cross-sectoral organizations must be fostered towards appropriate mechanisms of governance at different levels.

SDG Group 4: Multi-stakeholder management of ecosystems to sustain development

The Discussion Group looking at multi-stakeholder management of ecosystems concluded with the following action points:

Legislation: We need to develop model legislation and guidance that provide and enable multi-stakeholder involvement in natural resource management and sustainable development that also ensures transparency. Such an enabling environment will not happen without a legal basis that empowers all stakeholders, and obliges government to engage all stakeholders. We should try and advance this cause that should also focus on appropriate and transparent allocation of rights and interests. This action should be supported by all participants engaging in political processes at all governance levels. IUCN and other participating organizations and individuals at WFEG can help take this action forward. However commitment is needed among those individuals and organizations. The IUCN Commissions should take the lead globally, and this needs to start as soon as possible.

Education: We must inform the public and raise awareness that can then lead to changes of behavior. Poor decisions that are not sensitive to environmental issues have been made at many levels in the past. This work needs to be undertaken by local people, scientists, civil societies, NGOs, volunteers, and the private sector. This will be done through creating learning platforms to share and to contribute, and training courses need to be developed in local languages to be implemented widely and with different sectors.

Coordination mechanisms are needed so we should adopt a process that encourages the participation of multiple stakeholders. This will help build trust and mutual understanding, accountability, awareness, and be able to bring added value into the process. This should be

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carried out by local people and scientists, civil societies, NGOs, volunteers, and the private sector. This will be done through encouraging bottom-up and top-down participation, and also by using the media.

SDG Group 5: Investments in ecosystems to sustain development

This Discussion Group, looking at investing in ecosystems to sustain development, recommended four packages of action, all of which need to be taken into account:

- ✓ Numerous good practices exist across the world, including in China; and
- ✓ States have already made commitments across the world, notably – CBD Aichi targets (14 & 15 are particularly relevant for the ecosystem context), the Rio Principles and the SDGs. Commitments made include clearly defined targets, timeframes and responsibilities.

The following represent the priorities and recommended actions in order to make the case for investments in nature:

Regarding knowledge and Information sharing

- ✓ Stock take – identify existing methodologies, approaches, tools², existing investment mechanisms (e.g. water/Payment for Ecosystem Services (PES)) etc.;
- ✓ Compile case studies and best practices;
- ✓ Develop practical tool-kits and investment packages;
- ✓ Carry out studies on markets and consumers; and
- ✓ Develop communities-of-practice/global knowledge-sharing platforms.

Regarding advocacy and Influence:

- ✓ Engage with existing platforms such as the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES), Ecosystems Services Partnership (EPS), World Business Council for Sustainable Development (WBCSD) and the Global Compact;
- ✓ Dialogue with global leaders and influential actors at multiple levels (CEOs, Presidents, etc.) (Note: IUCN is currently developing an initiative that would respond to this, to mobilize conservation finance); and
- ✓ Reach out to non-environmental sectors and financing institutions.

Practical priority actions:

- ✓ **Regarding national and sub-regional planning and investment frameworks** are to Support countries to assess, map and prioritize ecosystems goods and services (drawing on the experiences of countries such as China, Costa Rica, and South Africa) and utilize such assessment for evidence based investment, decision making and planning processes, and mobilize investments and influence financing modalities.
- ✓ **Regarding governance ethics and safeguards** develop enforceable mechanisms to safeguard the rights of both humans and ecosystems that also protect nature from the volatility of markets and ensure that investments increase opportunities and reduce inequalities. Specific, with these safeguards are in place, suggested actions include:
 - Establish globally accepted principles and investment criteria;

² For example: TEEB, System of Environmental Economic Accounting (SEEA) and Experimental Ecosystem Accounting (EEA), GEP China, WAVES

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- Establish legal instruments (with incentives and enforceable penalties);
- Increase awareness of stakeholders of their rights *vis a vis* ecosystem goods and services; and
- Explore ways in which to reduce the gap between producers and end users of goods and services (e.g., learning from the experience of carbon markets).

Governing ecosystems to Address climate change

CLC Group 1 Adapting to changes in climate

This Roundtable Discussion Group looking at adapting to changes in climate concluded that the loss of ecosystems and the services they provide is affecting the livelihoods of people, their cultures and economies. Actions we need to undertake to improve this situation include:

- ✓ We need to mainstream nature base solutions as a means of reducing impacts in short and mid term;
- ✓ We need to increase the level of ambition for mitigation, and hope to have stronger mitigation where mitigation comes before adaption; and
- ✓ We need to create financial mechanisms for addressing loss of ecosystems and their services.

There is an urgency to improve communication and raise awareness on the climate change effects in communities and promote action-oriented training and drive innovation across all aspects of climate change. Such actions include:

- ✓ Building networks to enhance learning among communities of practice that employ nature based approaches (REDD+, NRM, ILM)³.
- ✓ Building and reinforcing social connections among civil society; and
- ✓ Developing and using mechanisms for positive and beneficial innovation transfer.

We need to change current consumption patterns and reduce the footprint of global trade. To support this we need:

- ✓ To include ecosystem footprint and dependencies in global trade (commodity supply chains)— e.g. eco-certification schemes;
- ✓ To recycle food waste and enhance food management; and
- ✓ More campaigns on personal, individual behavior, in terms of food waste, recycling of food waste and food management.

Flexible, transparent and accountable financing mechanisms that include the private sector, development partners and other innovative sources is needed as this will:

- ✓ Enable the more effective use of nature based solutions in multilateral and bilateral (e.g. GCF) mandates'
- ✓ Promote innovative nature-based sector funds; and
- ✓ Include adaptation in safeguards (e.g., IFC performance standard 6)

³ UN Programme: Reducing Emissions from Deforestation and Forest Degradation (REDD), Natural Resource Management (NRM), Integrated Land Management (ILM).

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The Policies on climate change need to better promote integration so as to

- ✓ Improve cross-sectoral policy integration;
- ✓ Integrate nature based solutions within cross sectoral planning, including ensuring the integrity of ecosystems; and
- ✓ Foster a clearer definition of roles and responsibilities among ministries and beyond.

CLC Group 2: Mitigating human causes of climate change

This roundtable discussion addressing mitigation of Climate Change concluded that policy decision-makers urgently needed to consider immediate actions to:

- ✓ Ensure that policy reform and development processes effectively value environmental costs and benefits;
- ✓ Ensure incentivized policies and an enabling environment that promote “Ecosystem Based Solutions” and sustainable consumption promoting ecological integrity and social wellbeing through for example, innovative mechanisms for sustainable financing, and pricing of Carbon;
- ✓ Create legal reform and regulatory mechanisms that provides incentives for public-private partnerships and disincentives for polluters to enable sustainable actions for climate change mitigation; and
- ✓ Develop and implement innovative and effective communication strategies and products to convey the importance of ecosystem based mitigation solutions such as REDD+ and Green Cities.

They also felt there was need to prioritize enabling mechanisms so as to:

- ✓ Ensure decision making is based on the best available scientific and traditional knowledge, capacity and tools;
- ✓ Develop compliance and monitoring mechanisms that are standardized and knowledge based; and
- ✓ Ensure inclusiveness and broad participation, for instance dynamic multi-stakeholder and intergenerational approaches that are inclusive of perspectives of young professionals and other stakeholders.

CLC Group 3: Managing risk in ecosystems in relation to climate change

This Roundtable Discussion Group considered the risk of ecosystem collapse in relation to climate change and SDG goals, all of three of which interact in complex ways with potentially grave consequences for human livelihood and wellbeing. Ecosystem governance, which is a feature of all 12 of the principles of the CBDs ecosystems approach, is one way in which risk of ecosystem collapse can be reduced substantially. Apart from addressing the need for tools to assess ecosystem risk, the group felt that reconnecting people with nature so that there were fully aware of the consequences of the decisions they made, would be a substantial improvement in ecosystem governance. The group recognized that this would require major changes to in all levels of society from national government to local communities and that change was a process, not something that could be accomplished quickly. The group agreed on the following priority actions to assess risk and start a process of change in governance:

This Roundtable Discussion group addressing Risk agreed on the following priority actions:

- ✓ Create an online reference system that lists tools according to their characteristics, purpose and utility so that ecosystem managers can find the risk assessment tools that best suit their purpose;

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- ✓ Identify actors, entry points and relevant modes of communication among government, industry and NGOs to begin a dialogue that creates change in practice and policy at whatever level might be appropriate (local to global) for a particular set of governance issues. For example in dialogue with the Ministers of Finance on the risks associated with development that affects wetlands so as to seek outcomes that avoid the need for costly wetland restoration after the wetland has been degraded by inappropriate development;
- ✓ Develop materials to influence behavioral change that can be incorporated into school syllabuses/curricula and other points of influence to effect behavioral changes, and changes in people's values with regard to the over-consumption of ecosystem services. Training approaches will be interactive with the aim of developing capacity for change;
- ✓ Identify and raise the profile of particularly deleterious environmental issues such as hydropower generation and mining that have a high risk of undesirable consequences which are being implemented without due consideration of the rights of people and nature;
- ✓ Seek bi- and multi-lateral agreements with regard to protecting the rights of people and nature against irresponsible development; and
- ✓ Emphasize the benefits of maintaining the functions and services of existing ecosystems over the high cost of restoring collapsed or oversimplified systems that cannot provide adequate risk protection against climate change.

CLC Group 4: Land and Sea use effects on climate changes

This Roundtable Discussion Group addressing land and sea effects from Climate Change concluded at a planetary scale, ecosystems and nature-based solutions are critical for mitigating and adapting to climate change in particular for the ecosystem services provided by our global oceans, forests and other ecosystems have a central role. We need to secure, manage and restore primary and ecologically significant forests and other ecosystems. We also need to support the establishment of large-scale marine areas and coastal zones for management and preservation. The Group recognized that to achieve this requires mechanisms for financing, international cooperation and regulation and strong leadership:

In relation to finance:

- ✓ We need to recognize the need to foster innovative funding mechanisms that address the linkages between mitigation, adaptation and the ecosystem services that our global oceans, forests and other ecosystems provide;
- ✓ Call on all nations, the Green Climate Fund and other multilateral funds to place special emphasis on the funding of mitigation, adaptation and payment for ecosystem services provided by our forests and oceans; and
- ✓ For forests and other ecosystems in particular, there is an urgent need to establish a special fund to secure and manage primary and ecologically significant ecosystems at risk of imminent exploitation.

In relation to international regulation and cooperation:

- ✓ Call for a convention against international trade that endangers ecosystem services of our globally significant land and ocean ecosystems and avoids maladaptation.

In relation to development of leadership for primary and ecologically significant forests:

- ✓ Call for our hosts and the WFEG partners to convene national forest ministers at the 2016 World Conservation Congress in Hawaii to formulate and agree on appropriate actions to secure, manage and restore globally significant forests.

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- ✓ Establish a Responsible Cities Standard, where we recognize that a growing global population and urbanization is the major challenge in the maintenance of global ecosystem services and a significant driver of global climate change. The future for a sustainable planet will rely on cities taking responsibility for their overall impact on ecosystems within and beyond city boundaries. This will require:
 - Establishing criteria for a responsible city that recognizes sustainability within and beyond the city boundaries. The criteria to include the following:
 - Ecological footprint both on temporal and spatial scale – what resources they use and where they come from;
 - Recognize and invest in the ecosystems that sustain that city; and
 - Participate in a global reporting mechanism; and
 - Call for our hosts and WFEG partners to convene a summit for responsible cities at the WCC in Hawaii in 2016.

CLC Group 5: Financial and economic consequences of climate change

This Roundtable Discussion identified the following issues:

- ✓ Current national economic policies and practice (irrespective of ideological underpinnings) are increasingly ill-equipped to respond to the uncertainties, shocks and extremes of climate change;
- ✓ The continued course of action will not only exacerbate the impacts of climate change but will also limit future economic policy options; and
- ✓ These conditions will have significant implications for both public sector policy-making and private sector investments. Delayed action foregoes the potential of jointly capitalizing on innovative policy and investment.

Based on these issues a strong case is called for:

- ✓ Taking steps towards economy-wide resilience now will strengthen financial and economic flexibility, improve governance arrangements, provide competitive advantage and fulfill global leadership; and
- ✓ Emphasizing “nature-based solutions”, by keeping future options open while providing some of the most cost-effective and low risk interventions that can be integrated into economic policies and programmes, most notably Intended Nationally Determined Contributions (INDCs).

The Group concluded that the following priority actions would go a long way to respond to the issues identified:

- ✓ Establish a portfolio of case studies, new approaches and options that document known innovative policies and practices that could be scaled to national action;
- ✓ Cultivate global political and corporate champions to embrace and advance new policies and investments that incorporate nature-based solutions;
- ✓ Equip established leaders to incentivize policy, practice and financial mechanisms at the national and sub-national scale that advance the mainstreaming of nature-based solutions; and
- ✓ Foster pathways to scaled-up action that should include testing and refreshing in sub-national jurisdictions and disseminate success stories.

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Communication associated with both themes

Better communications are needed along with a common language about nature based solutions, and to use the language to promote human behavioral change at all levels from local to national to international.

In order to promote change there is need to:

- ✓ Support actors and change agents at all level;
- ✓ Facilitate the development of message takers (entrepreneurs?). And the message is: “Nature is the solution for development”;
- ✓ Break down silos by fostering multi-modal methods of communication and other boundary crossings;
- ✓ Transfer of knowledge beyond the conservation community;
- ✓ Form cross-sectoral teams to promote the ecosystem approach that can accelerate the uptake of nature based solutions; and
- ✓ Realize the importance of leaders, mentoring and preparing them to realize their potential.

In order to do communicate more effectively we should:

- ✓ Use technology wisely and creatively;
- ✓ Recognize that technical solutions are not enough;
- ✓ Include more on nature based solutions;
- ✓ Systems need to be more inclusive for biodiversity and people;
- ✓ Understand that we can learn from failures to breed success and thus failures should also be highlighted in best practice guidelines;
- ✓ Manage risk as a key element to successful implementation using nature based solutions; and
- ✓ Remember that context is everything

Examples of things that have worked or could work include:

- ✓ FMER – Farmer mediated ecosystem restoration;
- ✓ Agroforestry in Kenya;
- ✓ Reverse engineering of canalizing rivers in Netherlands, UK and other countries;
- ✓ Use of wetlands, natural or constructed to manage black water and produce grey or blue waters and wetlands
- ✓ Rockefeller 100 resilient cities;
- ✓ Biosphere reserves
- ✓ Creation of “Defender of the Biosphere” awards for leading political figures to encourage adoption of National Biosphere Strategies.
- ✓ Water funds throughout Latin America and recently Africa

From a communications perspective elements for better governance of ecosystems include:

- ✓ The Ecosystem Approach and Integrated Ecosystem Management, which both have key elements, including ensuring bottom–up management approaches;

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- ✓ Higher levels framework policies and legal mechanisms that empower levels of responsibility and accountability;
- ✓ Governance frameworks that are aligned to the level of ecological complexity, realize importance of societal benefits, and temporal stability;
- ✓ Creation of systems that are within scale, and inherently adaptive; and
- ✓ Apply the cultural imperative in analyzing socio-ecological systems, for example the Society on Ecological Restoration work on the importance of culture.

Part 5: Participant quotes

- ✓ **“Good ecosystem governance is extremely important because ...**
 - ... the whole world can be benefit from a good ecosystem governance of a country and *vice versa*.” (CAO Zijing)
 - ... to maintain functional ecosystems and biodiversity involves engaging people at all levels and sectors of society.” (Alice Hughes)
 - ... ecosystems are the fundamental basis for human survival and development. Ecosystems are the sources of human happiness.” (ZHU Chunquan)
 - ... it can accommodate multi-stakeholder’s needs and concerns forming a cooperative mechanism for improving ecological functions. (Chunfeng WANG)

- ✓ **“WFEG is a timely initiative because ...**
 - ... China's economic development has reached a stable stage, now it is time to "stop" and think about environmental issues and learn from advanced systems and concepts of foreign countries.” (CAO Zijing)
 - ... there is need to communicate with policy makers and management and shift former paradigms and processes to translate research to action.” (Alice Hughes)
 - ... the world civilization is at a critical turning point and it is the right time to facilitate the transformational change of the ways of thinking.” (Zhu Chunquan)
 - ... it is time for the international community to adopt new SDGs and support the Climate Change agreement after 2020. (Chunfeng WANG)

- ✓ **“This Forum opened my eyes with regard to ...**
 - ... an important reminder that all change processes begin with small steps to address a large goal.” (Mike Jones)
 - ... the ecosystems governance concept and its contributions to achieve SDGs and address Climate Change.” (ZHU Chunquan)
 - ... ecosystem-based adaption and mitigation through communication with experts presently this forum.” (Chunfeng WANG)
 - ... the approaches available and actions currently being developed and implemented in other regions of the globe.” (Alice Hughes)

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International Union for Conservation of Nature (IUCN)/Commission on Ecosystem Management
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The State Forestry Administration of the Peoples Republic of China (SFA)
The Peoples Government of Beijing Municipality
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