



**Remarks on the Release of Capital Natural de México
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I am sincerely honored to have been invited to attend this event and to provide remarks on the release of the report *Capital Natural de México*.

For the past decade, I have been deeply involved in international, regional, and national projects to assess the condition of biodiversity and ecosystems and the consequences of ecosystem change for human well-being. I directed the Millennium Ecosystem Assessment and I've seen, read, and contributed to dozens of reports and assessments on these issues. But without hesitation, I can say that this report, *Capital Natural de México*, is the most comprehensive, rigorous, and policy-relevant assessment of ecosystems and human well-being that has been carried out by any country in the world. It is an outstanding body of work and truly a model for other countries to follow.

The quality of this report is not surprising given the extraordinary scientific expertise that exists within Mexico, the extensive data that are available, and the presence of institutions like CONABIO that have played such an important role over the years in building and mobilizing knowledge about Mexico's biodiversity. But having directed the Millennium Ecosystem Assessment, I'm also keenly aware of the challenges involved in preparing a report like this, the

need for outstanding leadership, and the personal sacrifice required to overcome the challenges. The utility and impact of a report like this rests fundamentally on the credibility and authority of the science that it contains. The only way to achieve that credibility is to involve the very best experts in preparing the report and to carry out a rigorous peer review of the findings. I know how challenging it is to organize the scientific community to do something of this magnitude, and I congratulate the leaders of this process and their staff for this achievement. Just as important, I congratulate the scientific community here in Mexico and the many many authors and reviewers that contributed their data, expertise, and knowledge to this effort.

I know that a major reason why the contributors to this study devoted so much time and care to its preparation is that they realize that this is a truly defining moment in the history of Mexico and of the world with respect to the future of biodiversity, ecosystems and social and economic development. This report presents a rigorously documented case for a profound and fundamental shift in how Mexico should view and manage its ecosystems. In my view, *Capital Natural de Mexico* is the most important report on Mexico's biodiversity and ecosystems that has ever been written. And, I would suggest that it is likely to be viewed in the future as the most important report that will ever be written on this topic.

Mexico (and the entire planet for that matter), is at a watershed moment. It can on the one hand continue 'business as usual' and treat its ecosystems as something to be exploited for short term development needs. Or, on the other hand, it can change course and treat its ecosystems as fundamental assets for development and human well-being. It can begin to invest in its natural capital, just as it invests in social capital through education, and just as it invests in its economic capital through investments in technology and infrastructure. This report clearly documents the costs and risks of proceeding down the path of "business as usual," it explains what the benefits will be of taking a new path, and it shows what steps can be taken to pursue that new path. This report, combined with strong leadership, can be the catalyst that is needed to change the way that Mexico's ecosystems and biodiversity are viewed from being "resources to be consumed" to being "assets to be protected."

The issues Mexico is confronting with respect to its ecosystems and environment are by no means unique. This is not just a defining moment in history for Mexico; it is a defining moment for the world. The Millennium Ecosystem Assessment, which was released in 2005, provides a global overview of the trends and conditions that *Capital Natural de Mexico* has provided for Mexico.

Throughout history, people have treated ecosystems and biodiversity as resources to be exploited for food and fiber, often unsustainably, and have viewed conservation as a barrier to development. We have taken for granted the 'free' services that ecosystems provide such as storm protection, protection of water supplies, water purification, pollination, and so forth. When our populations were small and ecosystems were vast, this was an economically rational approach to resource management – biological resources and ecosystem services were so

abundant that there really wasn't that much reason to be concerned and far more benefit to be gained from exploiting the resources.

But over the last 50 years, we've seen dramatic changes in the world's ecosystems that seemed gradual at the time but are truly stunning in retrospect. During that brief span of time we basically re-engineered the planet as a result of the combination of significant growth in global population and economic activity. Population more than doubled in the last fifty years, and the economy grew even more rapidly, nearly six-fold.

The impact of this growing pressure on global ecosystems has been profound

- More land was converted to cropland in just 30 years near the end of the 1900s, than during the entire agricultural revolution of the 1700s and 1800s.
- In the last two decades, 40% of the world's coral reefs were destroyed or degraded.
- We've now built so many dams that five times as much water is held in reservoirs as is held in the rivers themselves.
- Since 1985, we've added more nitrogen to the environment, largely in the form of fertilizers, than in the entire history of humanity.
- The rate of species extinction is now possibly as much as 1,000 times greater than background rates of extinction.
- And, greenhouse gases in the atmosphere are now at higher levels than they've been in the last 400,000 years

For centuries, the benefits of these changes to our ecosystems, such as the expansion of agriculture, greatly outweighed the costs. That changed in the last century. Given the scale of the transformation of the planet we find now that the costs of environmental degradation have been growing and now often outweigh the benefits.

At a global scale, the Millennium Ecosystem Assessment examined the status of twenty four of the planet's ecosystem services, and found that nearly two thirds are being degraded at a global scale. These include the degradation of marine and freshwater fisheries, diminished ability for ecosystem to purify water, protect us from storms and floods, regulate air quality, regulate the climate, and regulate pests. We are also losing the cultural values of ecosystems including spiritual, religious, and aesthetic values. And, within individual countries we see significant threats to agricultural production and timber production and growing water scarcity.

It is clearly time to re-think the role of ecosystems in development:

- For too long we've assumed that our ecosystems could provide inexhaustible resources for our use.
- For too long we've assumed that "free" ecosystem services like pollination, water purification and climate regulation were also inexhaustible.
- For too long we've assumed that efforts to protect our ecosystems posed barriers to economic development.

Capital Natural de Mexico shows how wrong these assumptions are. The degradation of Mexico's natural resources and ecosystem services is a growing cost to the nation's development. The report shows that investing in the conservation and enhancement of ecosystem services is by no means a barrier to development – indeed it is as important for Mexico's future as investing in education, health, and infrastructure.

It will not be easy for any country to make the fundamental changes needed in the management of its ecosystems. The policies and institutions that exist in Mexico, like those in all other countries, were established for a different era, when resources were abundant and the government sought to promote exploitation, not to invest in conservation. But *Capital Natural de Mexico* documents the impressive set of policies that are already in place or being tested in Mexico that could provide a roadmap for reforms. Mexico has been a pioneer in efforts to establish payments for environmental services. It has been at the forefront of steps to reform forest governance. And, Mexico could be one of the earliest beneficiaries of international programs to reduce emissions from deforestation and degradation (REDD) under a new climate agreement if one is achieved in Copenhagen this December.

Jose Sarukhán and I, and many others in this room, were involved in the Millennium Ecosystem Assessment and I think it is fair to say that we came away from that effort convinced of the need for basic changes in how we view and manage the planet's ecosystems, but without a clear understanding of how those changes might come about. What *Capital Natural de Mexico* has done is to provide, for one of the most biologically important countries on the planet, a detailed assessment of the status of Mexico's natural capital, the impact of changes in that capital on the nation's development prospects, and the steps that can be taken to halt the degradation of these assets and begin to invest in their enhancement. The implications of this report for Mexico's future are profound. It will also provide a model for other countries to follow if they too are to take the actions needed to fundamental change how they view and manage their ecosystems.