



BIODIVERSITY & PEOPLE



WE HAVE A ROLE TO PLAY: MIRRORING THE
DIVERSITY OF NATURAL SYSTEMS IN
DECISION-MAKING PROCESSES

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Ariela Summit, Ecoagriculture Partners

Biodiversity conservation is impossible without the participation of everyone who impacts the **ecosystem** – from loggers who harvest forest timber, to consumers who buy food at the supermarket, to city governments who put restrictions on building in ecologically sensitive areas.

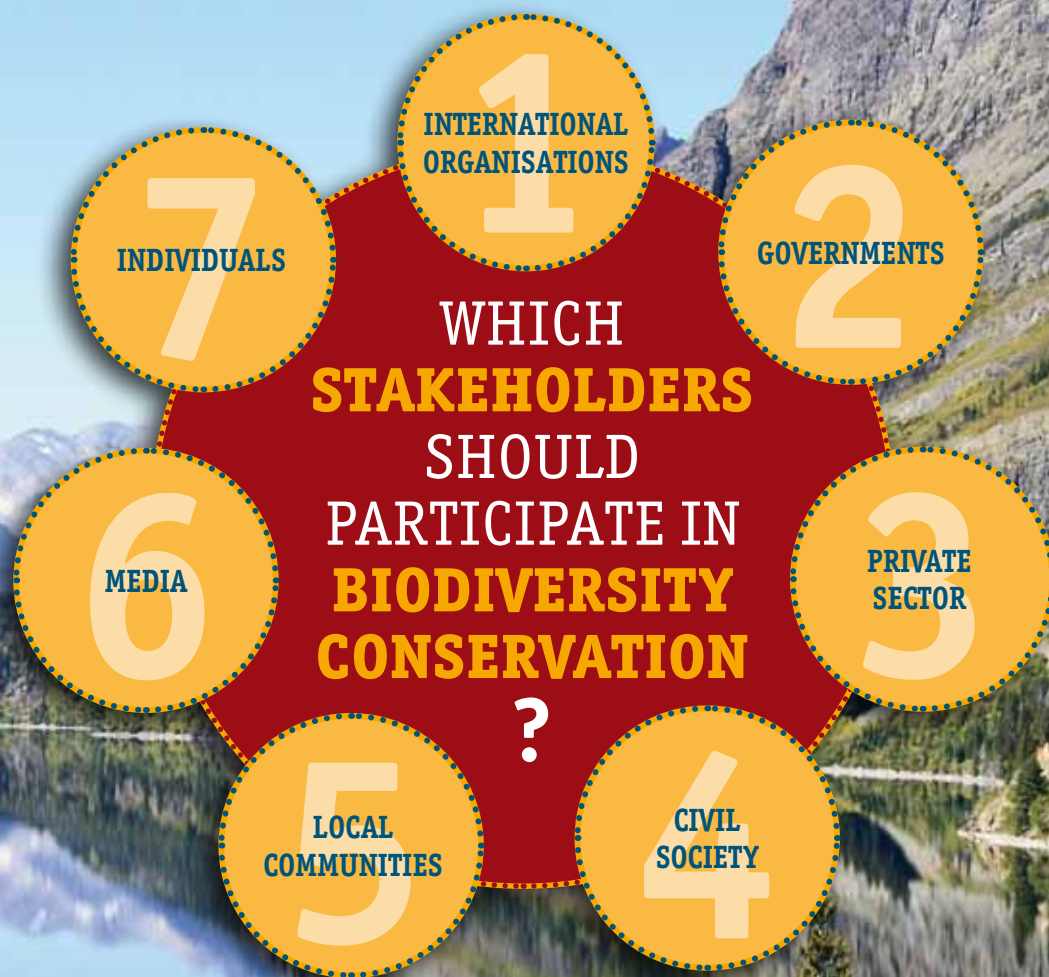


These **stakeholders** affect the diversity of the world around them, through conscious and unconscious choices they make (also see box: “Which Stakeholders Should Participate in Biodiversity Conservation?”).

Inevitably, we change the ecosystems we are a part of through our presence – but we can make choices that either affirm diversity or devalue it.

For example, logging companies can choose to harvest timber in ways that sustainably thin forest cover, mimicking the actions of forest fire and making way for old growth trees.

As consumers, we can select local produce in the grocery store, supporting regionally appropriate varieties of fruits and vegetables. Local, national and international government structures that mirror the diversity of their populations are more likely to create lasting solutions to issues of food security, climate change and environmental degradation.





WHICH STAKEHOLDERS SHOULD PARTICIPATE IN BIODIVERSITY CONSERVATION?

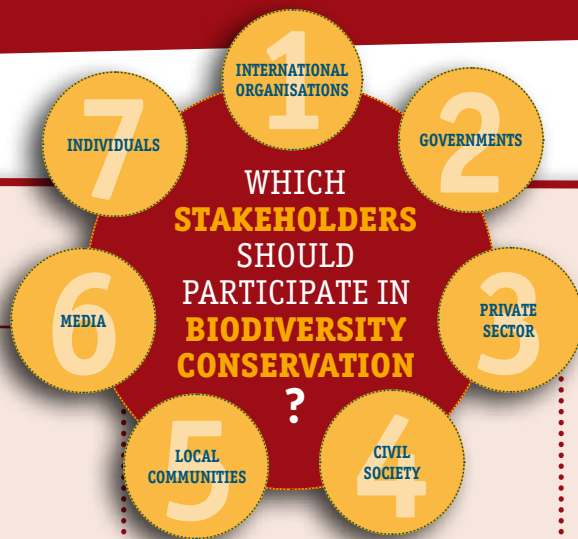
Stakeholders are either individuals, or representatives of a group, that have an interest, can influence or are influenced by a particular decision or action. To achieve sustainable development, the conservation of biodiversity requires the collaboration of various stakeholders including individuals, governments, private businesses, civil society, media, local communities and international organisations. Each group has an important role to play. None of these groups can stop poverty, achieve social equity, or reverse biodiversity loss alone. It is only when the groups work together that they can tackle these enormous challenges.

1 International organisations keep biodiversity and development on the global agenda, and determine conservation plans based on global emergencies and priorities. The United Nations (UN) works closely with governments and civil society to ensure that principles are negotiated and agreed upon, and that funding and support are provided to those who need it most.

2 Governments can regulate their economies so that they consider economic impacts on people and the planet. Governments develop management tools and regulations, create and

implement conservation policies, and designate **protected areas** (e.g. national parks, community reserves, forest reserves, zoological reserves and hunting reserves).

3 The private sector can produce goods and services that serve people and the planet. It can provide “patient capital”, a type of long-term funding available to start or grow a business with no expectation of turning a quick profit. Unlike standard business funding that often expects short- to medium-term profitability, patient capital recognises that the benefits to people and the planet can take much longer.



WHICH
STAKEHOLDERS
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CONSERVATION
?

4 Civil society comprises ordinary people, citizens' groups and includes children and young people. Civil society organisations are generally non-governmental, non-profit oriented, non-military and non-individualist. They vary from large-scale professional international organisations, like the World Wide Fund for Nature/World Wildlife Fund (WWF) and the International Union for Conservation of Nature (IUCN) to local community groups like indigenous groups or your neighbourhood association.

Civil society organisations represent the interests of different groups, from people using natural resources, to local communities dependent on ecosystem services, to flora and fauna and their habitats.

5 Local communities living in and around protected areas contribute to decision-making, and ensure that benefits arising from the use of biodiversity are equitably shared.

6 The media are the "mediators" between the people, governments, private sector and other actors. The media transfer information, raise awareness, and sometimes lobby for or against government or private sector decisions.

Some media companies specialise in conservation issues such as the National Geographic Society in USA and the British Broadcasting Corporation (BBC) in the United Kingdom.

7 Individual consumer choices affect the market. Individuals should be conscious of their choices about clothing, housing, travelling, eating and other things.

If you think you don't impact the planet, think again!

Society is made of individual acts.



MULTI-STAKEHOLDER PROCESSES

Multistakeholder processes are an important tool for creating lasting solutions for biodiversity conservation. Essentially, they are a process by which different interest groups – whether they be governments, businesses, agriculturalists or real estate developers – consult to create a plan to achieve a particular objective. Though multistakeholder processes may vary widely in scope and scale, they have certain elements in common. Typically, they are based on the democratic principles of transparency and participation.

Transparency, as used in a social science context, means that all negotiations and dialogue take place openly, information is freely shared, and participants are held responsible for their actions before, during and after the process.

The ethic of participation recognises that without all stakeholders present, solutions will not accurately address real-life pressures, and thus may not succeed.

Rural people, and particularly those who are native to the land where they live (**indigenous or aboriginal people**), are important stewards of biodiversity (see box: “Indigenous Peoples, Local Communities and Biodiversity”). Unfortunately, very often it is precisely these people who are left out of the conversation over land rights and resource management. Stakeholders who have more capital (business) or prominence (government) frequently overshadow the voices of the rural poor.

The people who have lived on the land for many generations hold invaluable storehouses of information about native varieties of plants and animals, microclimates for growing specific crops and uses of medicinal herbs. Often these same people are dependent upon these resources for survival, and have developed complex systems for maintaining the biodiversity that benefits their day-to-day lives.

Increasingly, however, rural indigenous people are tied into larger systems that profit from the large-scale destruction of these ecosystems.

When old-growth rainforest in the Amazon is burnt to make way for the cattle production to feed a growing global market for cheap beef, people who live on the land may benefit in the short term from payments for land rights or jobs. In the long term, however, they are left with the ecological consequences of land conversion, which often include polluted water, degraded fertility of the land and destruction of both plant and animal diversity. Successful strategies for biodiversity conservation must include methods of growing or gathering food in ways that do not harm, and may even benefit local biodiversity and the livelihoods of people who depend directly on the land for survival. Crafting these solutions must involve both local people, and the larger globalised markets and power structures that affect them.

Indigenous people are any ethnic group who inhabit a geographic region with which they have the earliest known historical connection.



NORTH AMERICAN INDIGENOUS CHILD.
© Esperanza Sanchez Espitia



INDIGENOUS PEOPLES, LOCAL COMMUNITIES AND BIODIVERSITY

John Scott, CBD

Indigenous peoples and local communities (ILCs) have a special relationship with nature in general and local plants and animals in particular, which makes them important partners of the Convention on Biological Diversity. Indigenous peoples and local communities have lived in harmony with nature and looked after the Earth's biological diversity for a long time. Their diverse cultures and languages represent much of humanity's cultural diversity. Respect for, and promotion of, the knowledge, innovations and practices of ILCs will be central to our efforts to save life on Earth.

An interesting example to illustrate the important role of indigenous peoples in maintaining biodiversity can be found in the wet tropics of far northeastern Australia. The traditional Aboriginal people of the rain forests, called the Yalanji, have practised fire management in the wet tropics for thousands of years. As a direct result of creating clearings in the jungle, grazing animals such as the kangaroo and wallaby moved into the forests from the western plain. The fire management practices of the Yalanji also encouraged the re-growth of different **species** of plants and fungi in these clearings.

One particular mushroom species, the main food source of a small marsupial called the bettong, grows only on the edge of such clearings.

After colonisation, many of the traditional Aboriginal peoples, including the Yalanji, were removed to church missions or government reserves, and could no longer manage their traditional lands or practise their culture. This abrupt interruption of fire management led to a decline in grazing animals found in the forest and the near **extinction** of the bettong. Plants living in and around the jungle clearings also fell



into sharp decline because many local seeds must be exposed to fire before they can germinate.

In recent years, the Yalanji have returned to their traditional lands.

They are working with national park management to reintroduce fire management and the biodiversity that traditional fire management practices bring.

Source: Hill, 2004

TASMANIAN BETTONG (*BETTONGIA GAIMARDI*),
TASMANIA, AUSTRALIA.
© Noodle Snacks/Wikipedia



GENDER AND BIODIVERSITY CONSERVATION

In their role in the domestic sphere, and often as the primary caregiver in one-parent families, women have a central role in conserving plant genetic resources. Often, the work they do in this area is undervalued because no money changes hands in domestic transactions. Kitchen gardens maintained by wives, mothers and daughters provide an important source of micronutrients through leafy vegetables and herbs. In lean years, wild plants can be an important supplemental source of calories.

Women also hold much of the knowledge about which varieties of native species can be used for medicinal purposes, and how to prepare them safely and effectively. Lastly, women in sub-Saharan Africa, as well as indigenous societies in Latin America and the Pacific, are often directly responsible for crop production, and in this role also manage seed storage, preservation and exchange. Conserving and sustainably using biodiversity and sharing its benefits requires an understanding of and consideration for the connections between **gender**

and biodiversity (see box: “Connections between Gender and Biodiversity”). Successful strategies for biodiversity conservation must make a special effort to include women and indigenous people. Because

men and urban populations tend to have more power, education and outreach about biodiversity must be specifically targeted at those who traditionally have less of a voice and control over natural resources. To make sure that these groups are included in planning, a



A WOMAN HARVESTS PALM NUTS ON HER FARM IN AYAKOMASO, GHANA.
© Christine Gibb



ASSISTED NATURAL REGENERATION (ANR) APPROACH TO FOREST RESTORATION IN THE PHILIPPINES.
© Noel Celis

certain number of spots can be reserved for them on political committees or biodiversity project boards. If women cannot attend because of their responsibilities in the home, arrangements must be made for childcare. To include those who cannot read, educational material can be made available

in other formats. In many ways, indigenous people and women have the greatest stake in preserving biodiversity, because their **livelihoods** directly depend on it. Thus, efforts at biodiversity conservation that also improve livelihoods have the strongest chances of success.

A livelihood is the means by which a person supports him or herself – whether through business, agriculture, hunting or other means.



CONNECTIONS BETWEEN GENDER AND BIODIVERSITY

Marie Aminata Khan, CBD



EDUCATING BOTH GIRLS AND BOYS ABOUT BIODIVERSITY IS IMPORTANT. STUDENTS IN PERU LEARNING ABOUT CROP PLANTS.
© FAO/Jamie Razuri

The importance of biodiversity to individuals varies by gender. Gender refers to the social roles that men and women play and the power relations between them, which usually have a profound effect on the

use and management of natural resources. Gender is not based on biological differences between women and men. Gender is shaped by culture, social relations and natural environments. Thus, depending on values,

norms, customs and laws, men and women in different parts of the world take on different gender roles.

Gender roles affect economic, political, social and ecological opportunities and constraints faced by both men and women. Recognising women's roles as land and resource managers is central to the success of biodiversity policy. For example, women farmers currently account for up to 60 to 80 percent of all food production in developing countries, but gender often remains overlooked in

decision-making on access to, and use of, biodiversity resources.

Just as the impact of biodiversity loss is disproportionately felt by poorer communities, there are also disparities along gender lines. Biodiversity loss affects access to education and gender equality by increasing the time spent by women and children in performing certain tasks, like collecting valuable resources such as fuel, food and water.

To conserve biodiversity, we need to understand and expose gender-differentiated biodiversity practices

and gendered knowledge acquisition and usage. Various studies demonstrate that projects integrating gender dimensions generate superior results to those that don't. Gender considerations are not solely women's issues; instead, this outlook could yield advantages for whole communities and benefit both sexes.

The Millennium Development Goals emphasise clear linkages between gender equality, poverty alleviation, biodiversity conservation and sustainable development.

Such insights should be included in our outlook and

approach to reversing biodiversity loss, reducing poverty and improving human well-being.

The Convention on Biological Diversity (CBD) recognises such linkages. It has developed a Gender Plan of Action that defines the CBD Secretariat's role in stimulating and facilitating efforts on national, regional and global levels to promote gender equality and to mainstream a gender perspective.



LIFESTYLE CHOICES

Both rising population levels and increasing levels of consumption in the developed and developing world are responsible, to a large degree, for biodiversity loss worldwide. In the “population versus consumption” debate, some people set up a situation of extremes where they blame biodiversity loss either on rising population levels in the developing world, or on developed (mostly Western) nations who use a disproportionate share of water, fossil fuels and other natural resources.

In reality, we need to improve in both areas to save threatened plants and animals. Tools, such as the **environmental footprint analysis**, can address issues on the consumption side of the debate. This analysis is a useful tool for examining the impact that individuals have on the world around them, in terms of the resources they consume.

Choices such as eating a locally based, vegetarian diet and limiting energy usage through efficient heating and cooling systems can substantially reduce this footprint. Eating local food reduces the energy spent in transporting, processing and packaging. Eating lower on the food chain (more vegetables, legumes and grains, less meat) uses substantially less water,

and also limits the amount of nutrient contamination of waterways and pollution released by livestock through methane, a gas that contributes to global warming. Energy-efficient buildings, industrial processes and transportation could also reduce the world’s energy needs in 2050 by one third, according to the International Energy Agency.



TOOLS FOR BIODIVERSITY CONSERVATION

Movements such as Slow Food International encourage a more sustainable lifestyle by celebrating regionally based cuisine and local food traditions. These foods include Reblochon cheese, which comes from the Haute Savoie region in France, or the more than 17 varieties of corn used for foods ranging from atole to tamales in Mexico.

Certification of biodiversity-friendly food informs consumers of the impacts of their food choices and provides a way to pay farmers more by producing food that also protects the environment. Biodiversity-friendly coffee, for instance, is grown in the shade under a cover of native trees, and provides habitat for birds and other wildlife.

In developing countries, ecotourism has become an important tool to preserve natural habitats while supporting local economies. Ecotourism, similar to regular tourism, involves visitors travelling to foreign countries, but is based on an ethic of environmental conservation. For instance, a tourist might stay in an energy-efficient hotel, take a safari tour to see local wildlife, and go hiking in a national park. These activities both build environmental awareness and appreciation among foreign visitors, and provide a way for local people to make a living while protecting the nature that sustains them.

Some movements to protect biodiversity are political in nature. The movements for **national sovereignty** emphasise the value of local governance, or ensuring people from the area decide what happens with the biological resources within that area. Often, questions about who has the rights to profit from biodiversity are complicated by **land tenure** issues, where it is unclear who actually owns the land where the resources in question are located. These issues are negotiated at a local basis, and may be influenced by international bodies such as the Convention on Biological Diversity.

Biodiversity education is an essential tool to cultivate an awareness of the value of biodiversity from an early age. This education can happen at a formal level, as integrated through school curricula, or in guides such as *The Youth Guide to Biodiversity*. See the box: “Mainstreaming Biodiversity into Education” to further explore biodiversity in formal education.

Education also happens on an informal level, though exposure to a variety of foods, cultures and environments. Such exposure tends to stimulate an awareness of diversity, and instil a creative interest in preserving it, especially when combined with larger awareness-building campaigns.

Organisations and youth groups, such as Guides and Scouts, play an important role in educating children and young people on many environmental and social issues, including biodiversity. In addition, the media can have a strong influence in raising awareness and promoting positive changes in behaviour (see the box: “Bringing the Forest to the People: The RESPECT Journey” for an example of an artistic approach to biodiversity conservation).



MAINSTREAMING BIODIVERSITY INTO EDUCATION

Leslie Ann Jose-Castillo, ASEAN Centre for Biodiversity

With plant and animal extinction rates up to 100 to 1 000 times faster than the normal **background rate**, people can no longer afford to do nothing for biodiversity. Simply watching while the world loses key species one by one is like slowly cutting the lifeline biodiversity provides for humans – the source of food, medicine, shelter and livelihoods.

The fact that biodiversity remains unclear and intangible to many worsens the problem. People simply do not recognise the relationship between biodiversity and their well-being. It is, therefore, crucial to mainstream biodiversity into formal and non-formal learning processes.

The rationale is that learning and understanding biodiversity issues will provide people of all ages the basis for attitude change and eventual positive action conserving biodiversity.

The *Dalaw-Turo* (Visit and Teach) Programme in the Philippines illustrates how biodiversity education works in the non-formal setting.

Launched in 1989 by the Philippines' Protected Areas and Wildlife Bureau – Department of Environment and Natural Resources (PAWB-DENR) as an information, education and communication (IEC) tool for biodiversity, *Dalaw-Turo* teaches various stakeholders, particularly upland dwellers about the need to conserve biodiversity.



The programme uses street theatre, creative workshops, exhibits, games and ecological tours to stimulate creative thought and to motivate learners to act on environmental issues. Trainers from PAWB-DENR conduct school and community extension activities, train other prospective trainers, distribute IEC materials to forest occupants, local leaders, youth and school teachers. To date, *Dalaw-Turo* has trained 543 regional counterparts and brought the IEC campaign to 55 839 students in at least 460 schools in the Philippines.

In Laos, the Watershed Management and Protection Authority (WMPA) conducts the Community Outreach



ABOVE AND OPPOSITE: PAWB-DENR STAFF TEACH FILIPINO STUDENTS ABOUT THE IMPORTANCE OF BIODIVERSITY CONSERVATION.
© PAWB-DENR

and Conservation Awareness programme at the Nakai Nam Theun National Protected Area. Designated WMPA staff, with the help of the village headmen, discuss with people living in the village ways to improve conservation methods in the **protected area**. To make the learning process interactive and informative, the teachers use games, demonstrations and role playing. Colourful and easy-to-understand posters and brochures are distributed to teach people about key

species found in the area and the importance of conserving them. There is also a school education programme to teach primary students about animals, their habitats and food webs.

Children are encouraged to learn about biodiversity at an early age so that they can grow up to be protectors of the environment. These are the types of activities that must be replicated to mainstream biodiversity in education.



BRINGING THE FOREST TO THE PEOPLE: THE RESPECT JOURNEY

Christine Gibb, CBD and FAO

Images tell stories that might otherwise not be heard. Cameras record life's moments, both momentous and mundane; photos evoke emotions, questions and answers. The power of photography to tell a story is central to RESPECT, a modern-day odyssey that brings the boreal forest to the people. It is one example of the creativity and passion people bring to raising awareness about the beauty, fragility and even brutality of biodiversity.

For more information about RESPECT, visit the Boreal Communications Web site at www.borealcommunications.com

BOREAL
Communications

The RESPECT journey began in Quebec, Canada and took the team of photojournalists through Ontario, Manitoba, Saskatchewan, Alberta, British Columbia and the Yukon in a small Cessna plane between 2006 and 2009. The going was tough – from turbulent weather and adverse flying conditions to unexpected interruptions and delays for equipment repair. Throughout the crossing, the team was constantly awed by the majestic landscapes of the boreal forest and its fragility; they took in breathtaking views few have had the privilege to see.

The aerial photography, however, has been viewed by millions of urbanites and tourists at several major outdoor cultural centres across Canada.



RESPECT EXHIBIT AT HARBOURFRONT CENTRE IN TORONTO, CANADA.
© Boreal Communications

ONTARIO, CANADA IN THE WINTER.
© Jim Ross/Boreal Communications

RESPECT TEAM MEMBERS: CHRIS YOUNG (PHOTOJOURNALIST), LOUISE LARIVIÈRE (CHEF-DE-MISSION) AND TOMI GRGICEVIC (VIDEOGRAPHER).
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ONTARIO LAKE AND FORESTED SHORELINE.
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CONCLUSION

As we've seen in this and in earlier chapters, humans are closely linked to biodiversity, through our use of biological resources and our impact on the natural world. The choices we make can have a huge impact on the current and future state of biodiversity. The next chapter takes a closer look at the decisions taken at the international level and the outcomes of these actions.

LEARN MORE

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