Forests with the people

The origin of forests

Some 430 million years ago, plants and arthropods began to live on land and to evolve, adapting to their new habitat while adapting their habitat at the same time. Larger and more varied types of plants – giant versions of what are classified by science today as lycopods, equisetums and ferns, reaching heights of up to 12 metres – spread across the swamps and lakeshores until forming the first terrestrial forests, which were occupied by the primitive ancestors of millipedes, centipedes, insects, mites and spiders.

Life forms continued to evolve, giving rise to seed-bearing woody vascular plants (gymnosperms), which dominated the planet's forests around 245 million years ago. Roughly 100 million years later came the first flowering plants (angiosperms), which produced a vast number of species, including herbaceous plants, shrubs, and the majority of tree species. Evolving alongside insects, birds and mammals, they spread quickly and occupied practically every possible ecological niche, exhibiting greater diversity in tropical and humid areas. Tropical forests dominated the surface of the planet, extending to the polar regions and reaching their peak around 38 million years ago.

But once again, the earth's landscape gradually changed during the last glacial period, which began approximately 100,000 years ago and ended 10,000 to 15,000 years ago, and resulted in the shrinking of the tropical forests. At the end of glacial period, temperate forests spread across the Northern hemisphere. Currently, all of the different types of forests occupy around one third of the planet's land area.

Forests, the source of life

This vital process that began millions of years ago up through its expression in today's forest ecosystems encompasses an enormous wealth of biological diversity. A forest is not simply a collection of trees and much less a mere source of wood, as it is often viewed from an industrial, Western or urban outsider's perspective. Forests teem with life, colour, sound and movement: up to 1,500 invertebrates can be found living in a single old-growth tree. And while trees predominate, forests are also home to a huge proliferation of plants of different species, sizes, ages and ways of living: vines, creepers, ferns, shrubs, young and old trees that could tell us stories dating back millions of years. This whole plant universe is also home to an infinite number of animal species, and for thousands of years it has provided shelter and sustenance even to the recently arrived species on the planet known as the human being.

There are two basic elements that are essential for organic life on earth: air and water. And forests share a vital link with both of them. Wherever there is a forest, there is water, but at the same time, forests develop and evolve in equilibrium with the amount of water available to them. When it rains in the forest, the crowns of the trees trap the water, which slides down their trunks or gently drips through their leaves towards the soil, gradually permeating it, preventing erosion, feeding aquifers, watersheds, streams and rivers. Forests not only capture the water but also filter and purify it as it

passes through their foliage and soil. At the same time, thick vegetation provides cooling shade which keeps the temperature down and prevents the water from evaporating. Forests also serve as a buffer against wind and storms. Mangroves – also called “saltwater forests” – are a strong barrier against the battering of storms and tsunamis. There are forests, such as the cloud forests in the upper reaches of tropical or subtropical mountain ranges exposed to ocean climates, that condense the water in the moisture-laden air and increase the normal availability of water by 5% to 20%.

Water also depends on forests. In a special issue of the WRM bulletin on forests, water and climate (1) Alejandra Parra wrote: “When a forest that had developed in equilibrium with local environmental conditions disappears, this equilibrium is seriously altered. The soils and slopes are exposed to erosion agents, of which water is the strongest. It is precisely what best demonstrates the relationship between these three factors. Without the forest, water and soil almost mutually repel each other in lands where the topography is not flat. However, with the presence of the forest, a natural web is generated, enabling water and soil to maintain a closer relationship, coming nearer and staying together much longer.”

In the forest-water connection there is another element that should be considered: climate. Climate largely determines the type of forest that develops, since it influences its flora, fauna and diversity. At the same time, forests have been crucial in the evolution of the world climate because of their role in trapping carbon dioxide and releasing oxygen. As we noted in the above-mentioned special bulletin (2): “An Oxford University study throws light on the relationship between rainfall and the atmospheric movement of the Congo Basin and the Amazon Basin, quoting satellite studies that show a natural see-saw oscillation across the whole Atlantic Ocean: floods in the Amazon basin tend to coincide with droughts over the Congo Basin and vice versa. In turn, the major variations in rain patterns in the Amazon and the Congo have repercussions on the hydrology and climate of other regions.

“The study, giving figures and scenarios, provides data on a legacy of apparently forgotten ancient knowledge: that life is interdependent, so what is done in one part of the world invariably has effects on other parts. For example, deforestation in the Congo Basin – with an approximate rate of destruction of a million and a half hectares of forest per year – has caused decreased rainfall in the United States Great Lake region by approximately 5-15% and also affects Ukraine and Russia (north of the Black Sea). For their part, the changes in land cover in the major basins in Africa and Asia have effects on the Asian monsoon. … This water-forest-climate connection has implications that go beyond local and directly verifiable facts.”

The existence of forests, meanwhile, makes life on earth as we know it possible. Through photosynthesis, the plants of the forest absorb carbon dioxide and release oxygen, which many living beings, including human beings, need to breathe. A vital balance is thus maintained between the species, like us, that exhale carbon dioxide and take in oxygen, and the species that take in carbon dioxide and give off oxygen.

Forests also play an important role in the physical stabilization of soil, particularly in watersheds at high altitudes where rainfall is abundant and the terrain is steep and prone to land movements. The roots of trees reduce the risk of landslides by absorbing water and reducing the moisture content of the soil, while serving as a physical structure that helps keep the soil in place.

In addition to being the terrestrial ecosystem that contains the greatest diversity of species of flora and fauna, forests have adapted to different environments – high and low altitudes, humid valleys, arid mountain regions, freshwater and saltwater surroundings – and have thereby given rise to numerous different types of forests. The simplest means of classification distinguishes between

tropical forests (all those located between the Tropic of Cancer and Tropic of Capricorn) and temperate and boreal forests (the rest).

Tropical forests

Tropical forests are places of exuberant growth, rocked by the warm winds of the area that stretches between the Tropics of Cancer and Capricorn and fed by the abundant rainfall and intense sunlight of the equatorial region. A lush green belt runs across the world's continents, uniting in their diversity the Amazon rainforest, which encompasses almost eight million square kilometres spanning Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname and Venezuela; the Congo Basin rainforest, a contiguous block of rainforests shared by six Central African countries: Equatorial Guinea, the Republic of Congo (Congo-Brazzaville), the Democratic Republic of Congo (formerly Zaire), Cameroon and the Central African Republic; the monsoon forests of southeast Asia, which stretch from southern India to the Philippines and Sunda Islands and also encompass small islands in the Indian and Pacific Oceans; and the tropical rainforests of Australia and New Guinea.

Forest peoples

This world of shadows and dazzling sunlight, of mist, murmurs and song, splashing and croaking, gave shelter to human beings and made them its children. And those first peoples occupied the forest and made it their home. Over the course of hundreds and thousands of years they uncovered many of its secrets, preserved others, and wove their histories there. They venerated its soil, where they buried their ancestors. They became deeply tied to the forest, interconnected, speaking in songs and legends, which is the only way to speak of the sublime.

For centuries, indigenous peoples and communities who depend on forests have lived in them and coexisted with them, satisfying their material and spiritual needs through expert management. Tropical forests cover approximately 12% of the planet and almost all of them are inhabited. They have provided their inhabitants not only with the means of survival, but also an identity, forming an integral part of their lives, a life of celebration and learning, and usually prodigious, with few possessions and few needs.

Hunting, gathering, fishing and shifting cultivation in the forest provided food for the forest peoples. Even before the concept was recognized, the forest gave them food sovereignty. Honey, fruit, seeds, nuts, roots, tubers, insects and wild animals have been an important additional source of nutrition. Resins, rattan, bamboo, tannins, natural dyes, leaves, straw and animal hides have satisfied other needs, along with forage plants, of particular importance for raising cows, sheep, goats, donkeys and camels.

In a publication on land rights and the forest peoples of Africa (3) Christopher Kidd and Justin Kenrick describe the way in which indigenous peoples perceive the forest, "something which they are able to interact with on a daily basis, so that there is not a fundamental differentiation between relations with human and non-human constituents of the environment. As [the anthropologist Tom] Ingold remarks, 'one gets to know the forest, and the plants and animals that dwell therein, in just the same way that one becomes familiar with other people, by spending time with them, investing in one's relations with them the same qualities of care, feeling and attention.'" They note a similar situation "with regard to Baka forest peoples' relationships with elephants, so that for all of these groups 'hunting' itself comes to be regarded not as a technical manipulation of the natural world but as a kind of interpersonal dialogue, integral to the total process of social life wherein both human and animal persons are constituted with their identities and purposes."

In this interconnection with their habitat, forest peoples have found elements essential to their physical integrity. Beyond the fact that the forest constitutes a pharmacy that supplies them with a wide range of medicinal plants, communities live and die within a specific cultural and ecological context, and derive from these contexts the meaning of their lives, a key component of human well-being and therefore of human health. In 1999, the representatives of indigenous communities, nations, peoples and organizations who participated in the International Consultation on the Health of Indigenous Peoples defined indigenous peoples' concept of health as “a collective and individual intergenerational continuum encompassing a holistic perspective incorporating four distinct shared dimensions of life. These dimensions are the spiritual, intellectual, physical and emotional. Linking these four fundamental dimensions, health and survival manifests itself on multiple levels where the past, present and future coexist simultaneously. For indigenous peoples, health and survival is a dynamic equilibrium, encompassing interaction with life processes and the natural laws that govern the planet, all life forms, and spiritual understanding.”

In this article we would like to talk about forests and everything they offer, their history, intertwined with the history of the creatures they shelter, conscious of the fact that this is not a romantic vision of a lost past, but rather a perspective aimed at focusing on what is essential, to glean the best of this experience and learn from it. Above all, it is a perspective that challenges the dominant paradigm of linear, progressive development exclusively limited to material elements. But it is difficult to talk about forests and their children without talking about the tragedy they have suffered since the forests were invaded by colonizing and later industrial and mercantile society. Kariuki Thuku, born and raised on the edge of the Karima Sacred Forest, in what is now Kenya, recounts in his book “The Sacred Footprint: A Story of Karima Sacred Forest” that in 1910, “British white settlers were annexing vast portions of our sacred land. They did so without any respect for the ceremony of mutual adoption. Elders of the Peace and Reconciliation Council sat with them for many days, trying to help them understand the meaning of land to us. But they could not hear, for they possessed the guns. They considered our peace traditions to be irrelevant. They installed wire fences and gates on our land. We freely gave the missionaries a place to pitch their tents. Like true colonialists, they likewise grabbed and fenced off the land, in this case, land offered to them. They currently own thousands of acres in Mathari, at the foot of Muhoya Hill. For all that land, they paid only one blanket. Today, many people in Mathari are poor and landless.” He goes on to stress: “Grabbing our territory was no different from ripping out our hearts. We lost both our land and our sky. We lost our sun which dispenses the energy of fertility to our land. We lost our full moon which symbolizes the cycle of seasons. Our ancestral cosmology, constructed over millions of years, was subjugated and lost. Our entire ecological calendar was vanquished. We lost all sense of communal living because our primary connection to our land was severed. Many other communities within what is now the country of Kenya endured similar crises.”

In an article on Amazonian communities, Hildebrando Vélez (4) speaks of the importance of territory for indigenous peoples, and stressed the need “to establish the difference between land and territory, because when referring to the right to land ownership, this does not necessary include the right to recognition of territory as a cultural and social space. The lives of communities are intertwined with the land they occupy, which is why it is important to ensure ownership and the rights to legal title and distribution of the land alongside territorial rights. The recognition of collective territories is therefore a demand.” He goes on to warn, however, that “in this context, granting ownership in the sense of private ownership for the generation of land markets will not resolve the exclusion of those who have occupied the territory for generations and will be pressured by legal conflicts where there was formerly coexistence.”

This harassment and fencing in of indigenous peoples, stripping them of their lands, destroying their

forests, pushing them towards other lifestyles in which they end up marginalized and excluded, has met with determined resistance by some communities. Indigenous peoples in voluntary isolation seek not only geographic isolation but also historic isolation. Survival International has identified more than 100 tribes around the world who have chosen to reject all contact with outsiders. Most of them live on the run, fleeing from the invasion of settlers, loggers, oil operations and large landholders. Often they are decimated by massacres or epidemics. According to Marcus Colchester of the Forest Peoples Programme (FPP), “For many indigenous peoples in the Amazon and also in other parts of the world, the search for isolation has been an informed choice – the logical response of peoples who have realized that contact with the outside world brings them ruin not benefits. Life in the forests without trade may have its hardships, not just because the absence of the metal goods like axes, machetes, fishhooks and cooking pots makes subsistence harder work, but also because customary trade, barter and exchange between indigenous peoples were also once ways of making life more varied and richer. But it is these peoples’ choice.” (5)

Within life in the forest, it would certainly be worthwhile to consider a gender analysis, given that, due to the roles assigned in every society, in every community, in every culture, men and women have access to knowledge about different things, acquire different knowledge about the same things, organize their knowledge in different ways, and transmit it by different means. Without a doubt, the women of the forests are deeply influenced by their role as mothers. But above all, when forests are degraded or destroyed, it is women who bear the responsibility of staying behind and caring for their children, while in many cases men emigrate elsewhere to look for work. Women must therefore take over tasks that were formerly carried out by men, and confront by themselves the scarcity of water, firewood, medicinal plants, and other basic resources that the forests once provided to meet their needs.

The forest, a threatened community

Forests have a great deal to teach us. They are not a mere collection of species, but rather a community where many diverse species establish ties of interdependence that give rise to a network of non-linear relationships through which matter and energy circulate in cyclical flows, and are recycled. All of these processes reflect optimal use, integration, cooperation and flexibility. This is how they have achieved sustainability.

It would appear that the dominant model of globalized society does not follow this pattern. On the contrary. Viewed through the lens of commercial interests, forests ceased to be a home and a common good, the diversity of life they encompass and the inspiration they spark ceased to be seen, and they became, instead, merely logs and wood chips, a source of contaminating oil, diamonds and minerals of war. And as a result, the entire planet changed. The lush green began to disappear, along with the animal and plant species. The rivers and streams shrunk or dried up completely, entire areas were silenced, depopulated. Barbed wire and fences moved in to pave the way for vast stretches of monoculture crops, from cacao and tea to sugar cane, soy beans, oil palms, eucalyptus and pine trees. Roads and highways were built, like scars cut into the forests, open veins for the extraction of their wealth and the injection of fragmentation, degradation and destruction. The mega-projects of so-called “development” required huge amounts of energy, leading to the building of mega-dams that have flooded vast stretches of forest. Networks were torn apart, the forest peoples were expelled, degraded, exterminated, their sanctuaries desecrated, their tombs scattered. This history has repeated itself time and again and continues to be repeated in the forests of the Americas, Asia, Africa and Oceania.

Official figures on deforestation have been alarming for a long time. As noted in this month’s

editorial, according to FAO, more than 13 million hectares of the world's forests were lost every year between 2000 and 2010. However, this figure is distorted by FAO's definition of forests, which is based on tree cover and includes tree plantations, which are totally lacking in the biodiversity and dynamics of a forest ecosystem. Other agencies follow FAO's criteria, and as a result, the two main categories in which the UNDP classifies the world's forests – temperate/boreal and tropical – include not only tree plantations but even exotic tree plantations. This practice of disguising industrial monoculture tree plantations as forests has had dramatic repercussions for many communities as well as for the protection of the world's forests. That is why we insist on the importance of formulating a definition of forests from the people's point of view, from an ecological perspective, to recover the true meaning of the word forest.

Recently, the importance of forests has taken on new significance in the context of the climate crisis, for which business solutions are being sought in official circles. One of these so-called solutions is the REDD (Reducing Emissions from Deforestation and Forest Degradation) mechanism, which will mobilize millions of dollars in funds from corporations and governments. The danger of REDD is that it is presented as a solution for forests, but it looks at forests without seeing them, because it converts them into mere carbon reservoirs with a price tag attached, emptied of their peoples, managed by companies, traded on the carbon market. Another step in the wrong direction. It is estimated that between 10 and 30 billion dollars a year will be made available for maintaining certain forests untouched – even by the people who depend on them for survival – through the sale of carbon credits to industries that can use them to "offset" their carbon emissions, the cause of the climate disaster, and thus evade their responsibility to reduce those emissions.

While false solutions like these are promoted, emissions from the burning of fossil fuels (oil, gas and coal) continue to rise. Global warming and other climate change phenomena are already affecting forests, and there is every indication that they will continue to affect them to an ever greater degree, endangering the very survival of forests and their constituent parts: plants, trees, microorganisms, animals, insects and also the forest and forest dependen peoples. And in the long run, the survival of all human beings.

For a long time now, the world's governments have been caught up in lengthy, drawn-out negotiations to protect the forests and biodiversity and to halt climate change. Forums and summits are organized, agreements are signed. Without a doubt, major changes are urgently needed. But the kind of real changes necessary are nowhere in sight. The external threats that currently endanger the survival of forests and the peoples who inhabit them – gas and oil operations, logging, mining, shrimp farms, dams, monoculture plantations of agricultural crops and trees, to name a few – are the result of a model of production, marketing and consumption shaped by the corporate hunger for profits, which is leading the planet to the brink of its ability to recover. The ultimate manifestation of these threats is climate change, one of the most devastating dangers facing the planet.

If governments were genuinely concerned about the conservation of forests, the best contribution they could make would be to dare to consider other models of production, trade and commerce. To take a leadership role in order to bring about a change in direction along the paths of integration, cooperation and solidarity. To learn from the forests would be the best way to ensure the survival and future of the forests and the planet as a whole.

(1) "Forests and water", WRM Bulletin Nº 128,http://www.wrm.org.uy/bulletin/128/Bulletin128.pdf
(2) "The water-forest-climate connection", WRM Bulletin
Nº 128,http://www.wrm.org.uy/bulletin/128/Bulletin128.pdf
(3) "The forest peoples of Africa: land rights in context", in Forest Peoples Programme, "Land Rights

and the Forest Peoples of Africa: Historical, Legal and Anthropological Perspectives", http://www.forestpeoples.org/sites/fpp/files/publication/2010/05/overviewlandrightsstudy09eng.pdf)

(4) "La Amazonía, otra quimera", in Censat, "Amazonía: Selva y Bosques diez años después de Río", http://www.wrm.org.uy/paises/Amazonia/Velez.html

(5) "After the Rubber Boom", WRM Bulletin Nº 87,http://www.wrm.org.uy/bulletin/87/Colchester.html