

ENVIRONMENT

Wildlife, birds, plants and animals-our biodiversity

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THE 22nd day of May is declared by the United Nations to be the International Day for Biological Diversity. The decision to start this celebration was taken at the second committee of the United Nations General Assembly in 1993.

Originally this day was celebrated on the 29th of December as it was the date of entry into the Convention of Biological Diversity. However, in the year 2000, it was moved to the 22nd May since in many countries, many holidays occurred around the end of the year that make it difficult for them to participate or devote enough time to celebrate this year on biological diversity. Like other environmental celebrations, the goal of this day is to raise public and political awareness of biodiversity and understanding of issues dealing with biodiversity at both the local and international level. The theme for this year's celebration is "Biodiversity, Development and Poverty Alleviation".

First I would like to elaborate a bit on the use of the terms "development" with respect to their use in this theme. Development refers to the opportunity for people to have a good standard of life with the absence of hunger, illness, danger and illiteracy, but when it comes to development in this sense it refers to sustainable development. So biodiversity helps us achieve this goal of development, for instance in the area of good health, many

plants have medicinal value. Another example would be in terms of nutrition, certain plants will provide more fibre to aid in digestion, while others like carrots provide beta-carotene which is essential for good eyesight. To take this a step further, biodiversity helps to eradicate hunger by the planting of food crops. Different plants will produce crops with different tastes, textures and nutrients, so that it provides a well balanced diet to many people with differing tastes. However, planting crops is not all there is to it, but where these crops are planted is also very important.

According to the Convention on Biological Diversity, over three billion people depend on marine and coastal biodiversity while 1.6 billion people rely on terrestrial biodiversity in forests, and agriculture for a livelihood. Therefore, development can lead to poverty alleviation and biodiversity has a big role to play in this goal. Biodiversity is important to alleviating poverty as many people depend on agriculture, fisheries, forestry and ecotourism for employment. Biodiversity also provide resources that are vital to other related industries, like natural fibres for textiles and natural sources of antibiotics, hormones and vaccines for the pharmaceutical industry. However, it must be understood that through biodiversity, poverty cannot be eliminated but can be reduced.

Examples of sustainable management of our natural resources includes, monitoring aquatic species that are used for food, as well as sustainable harvesting of these resources, for instance, harvesting mature individuals and not juveniles which have not had the opportunity to reproduce. Also,

during the breeding season, for example with crabs, out of the adults captured, those that have not released their eggs and sperm should be released. By doing this one thing we ensure that there is a stock of animals and plants that are capable of reproducing and maintaining the food supply that we depend on.

Another practise would be for fishermen to throw back by-catch, which is simply the other marine species that get caught in the nets but are not edible or not of commercial value. These species are food for the species that we depend on for food. So by removing them we are limiting the population of our marine food stocks.

Without biodiversity the jobs and other industries that depend on them directly and indirectly will cease to exist, for example in ecotourism, the tour guides depend on our great wildlife and birds to show their customers. Other industries like the handicraft and souvenir vendors, hotels, restaurants and their staff depend on these customers and their business. Indirectly related industries include the fabric companies that supply sheets, curtains, napkins and fabric for uniforms, and farmers which supply food to the hotels and restaurants. So we can see how complete and far reaching the effects of biodiversity on employment and in turn poverty alleviation.

In addition to a lot of species, biodiversity also provides ecosystem services, such as, erosion control, water purification, and nutrient cycling and climate regulation. So that the well-being of humans and economic development is dependent to a great deal on how we use biodiversity and ecosystem services. For example, in an area that is

prone to erosion because of the type of soil present, a livestock farmer would rotate the patches that his livestock graze in to prevent total removal of the vegetation cover and over compaction of the soil which result in surface run-off when it rains carrying the soil with it. In terms of crops, a farmer would rotate the crops in the field to let nutrients regenerate in the soil or use mixed cropping techniques where different crops are planted in the same field rather than just one crop, so that not all of one nutrient is used up. These techniques are developed through greater understanding of nutrient cycling.

The value of these ecosystem services is in reality priceless, as without them life as we know it and the species that we know and depend on might cease to exist. However, to attract attention to those services in terms of public awareness and appreciation especially when it comes to policy making, it is suggested that a monetary value be put on these services.

Therefore we see that, biodiversity is not simply the amount of species in an area but also includes knowledge of the life cycles and ecology of the species themselves. It can also be seen that sustainable use of resources and knowledge of ecosystem services leads to the maintenance of jobs. Finally, the network of direct and indirectly industries related to biodiversity is vast and complex.

Let us celebrate this year 2010, with the intention of conserving our wildlife, birds, fishes, turtles, plants and the areas they live in, with a true appreciation for the immense diversity that Tobago is blessed with.