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FOREST BIODIVERSITY: PROVIDING BENEFITS FOR GENERATIONS. CONSERVE IT

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OUTLINE OF THE PRESENTATION

- ➔ Definition and importance of Biodiversity
- ➔ Brief about the International Day for Biodiversity
- ➔ Meaning of Forest biodiversity and its importance
- ➔ Challenges to Forest Biodiversity
- ➔ Conclusions
- ➔ Way forward – What should we do to halt loss of forest biodiversity

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➔ DEFINITION OF BIODIVERSITY

- ➔ Biodiversity (the short word for biological diversity) is defined by the Convention on Biological Diversity (CBD) as the variability among living things from all sources including:
- ➔ terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part;
- ➔ this including diversity within species, between species and of ecosystems with actual or potential use or value for humanity
- ➔ In short biodiversity is categorized into 3 levels: Species diversity, genetic diversity and ecosystem diversity

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BRIEF ABOUT INTERNATIONAL BIODIVERSITY DAY

- ➔ The basis for IBD is UN General Assembly Declaration of December 2000 which declared **May 22 as the International Day for Biodiversity (IBD)**. This was after the adoption of the Convention on Biological Diversity (CBD) in 1992 which Uganda signed on 12th June 1992 and ratified on 8th September 1993.
- ➔ IBD is meant to increase understanding and awareness about biodiversity and the need to use biological resources sustainably for the benefit of the present and future generations.
- ➔ The Convention has three objectives: conservation of biodiversity, sustainable use of the components of biodiversity and the fair and equitable sharing of the benefits arising from the utilization of genetic resources.
- ➔ The National Focal Point for CBD is NEMA – coordinates implementation of the Convention on behalf of Government

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⇒ IBD CONTINUED

- ⇒ For each IBD, there is a global theme from which national themes are derived. *The global theme for this year's IBD is Forest Biodiversity: Earth's Living Treasure* which is in line with the International Year of Forest 2011 declared by the United Nations General Assembly.

- ⇒ The theme for this year's IBD is also closely linked with this year's global theme for World Environment Day which is *"Forests: Nature at Your Service"*. *The national theme is for IBD in Uganda is "Forest Biodiversity: Providing Benefits for Generations. Conserve it"*.

- ⇒ The national IBD theme relates well with the national theme for World Environment Day 2011 which is *"Plant a Tree: Save Life"*. Thus the importance of forest biodiversity will be featuring during WED celebrations.

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- ➔ **WHAT IS FOREST BIODIVERSITY?**
- ➔ Forest biological diversity (or forest biodiversity) is a broad term that refers to all life forms found within forested areas and the ecological roles they perform.
- ➔ As such, forest biological diversity encompasses not just trees but the multitude of plants, animals and micro-organisms that inhabit forest areas.
- ➔ Forests are more ecologically diverse than any other land-based ecosystem, and thus provide diverse goods and services that support human life on earth.

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➤ IMPORTANCE OF FOREST BIODIVERSITY

- Human beings have depended on biodiversity right from the beginning of creation to date and it is very difficult if not impossible for human being to exist on earth without biodiversity.
- All that is critical for human survival is provided by biodiversity for example food, medicine, energy, water, building materials among others.
- For the very poor ones in the rural areas, their day to day survival and fight against poverty depends on biodiversity.
- Biodiversity provides materials that support industries thus creating jobs for millions around the world contributing to national and global development.

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- **IMPORTANCE OF FOREST BIODIVERSITY**
- As the world's most biologically diverse ecosystems, forests harbor a diverse pool of genetic resources some of which are yet to be discovered
- The number of people in the world who rely on timber and non-timber forest products (like medicinal plants, honey, mushrooms, bush meat etc) is estimated at 1.6 billion.
- In 2005, the global sale of pharmaceuticals obtained from plants, animals or micro-organisms was US\$14 billion and this figure should much higher now.
- Globally 80% of the people in developing countries rely on traditional medicine, half of which originates from plants mainly found in tropical forests. The bark of *Prunus africana* is used for treating prostate cancer.

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➤ IMPORTANCE OF FOREST BIODIVERSITY

- The percentage of people using traditional medicine in Uganda may even be higher than the global one. There is also now the shift to natural products for treatment of diseases. **Forest biodiversity is basis for spiritual and cultural identity for local communities.**
- In Uganda it was estimated that apiculture contributed about \$17m (about sh15.5b) to the national economy in 2009. Apiculture involves keeping of bees to get honey and wax.
- Forest biodiversity is critical component of tourism in Uganda, the most famous being the gorilla tourism in Bwindi and Mgahinga National Parks. Foreign tourist pay USD500 per permit to view a gorilla.

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- **IMPORTANCE OF FOREST BIODIVERSITY**
- The gorilla tracking generates millions of dollars to Government covers very year. In 2007 global tourism was estimated to have generated US\$856 billion from biodiversity based tourism.
- The gorillas live in forests and depend on the forests for their survival. Without the forests, the gorillas will be there and there will be no gorilla tourism hence loss of revenue and jobs
- Protecting forest is not only important for biodiversity conservation, but also is also helps to ensure sustainability of our development effort. For the hydropower stations that have been constructed, the water catchments should be protected to ensure their sustainability of these hydropower power stations and agricultural production.

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➔ IMPORTANCE OF FOREST BIODIVERSITY

- ➔ Trees help to stabilize soil through their root systems which hold the soil firmly thus preventing soil erosion and landslides in hilly and mountainous areas as well as reducing siltation of water bodies
- ➔ **Forests provide cost-effective “insurance” against the impacts of climate change and global warming.** They absorb or sequester carbon dioxide one of the causes of global warming.

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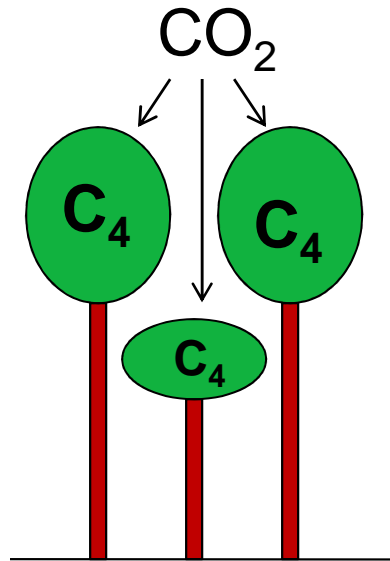




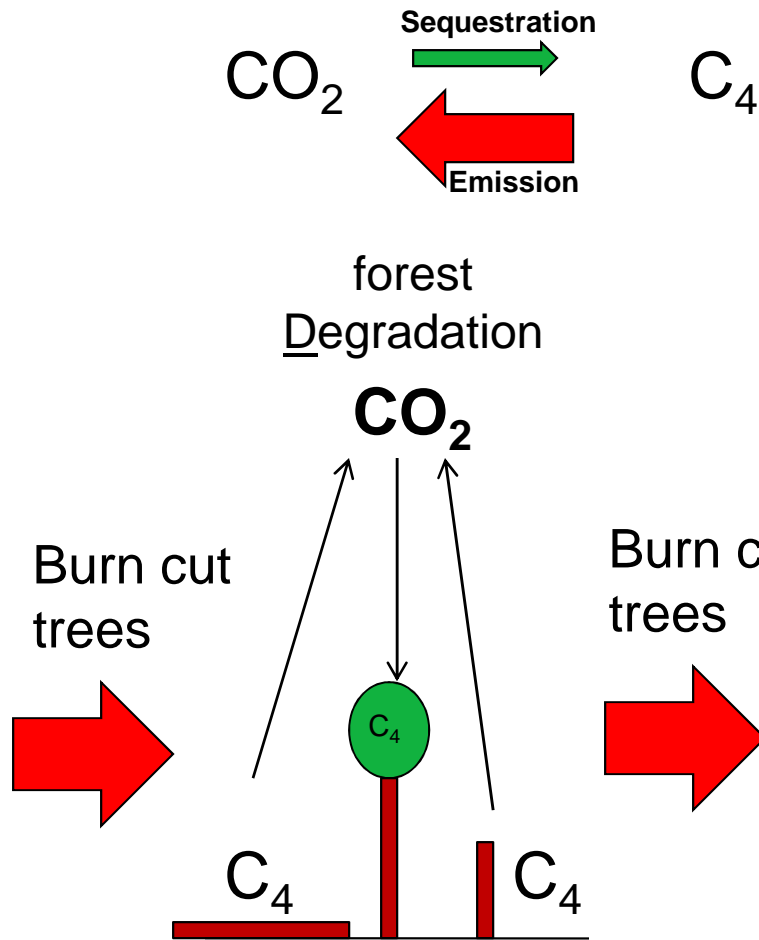
With less trees, more emission of green house gases



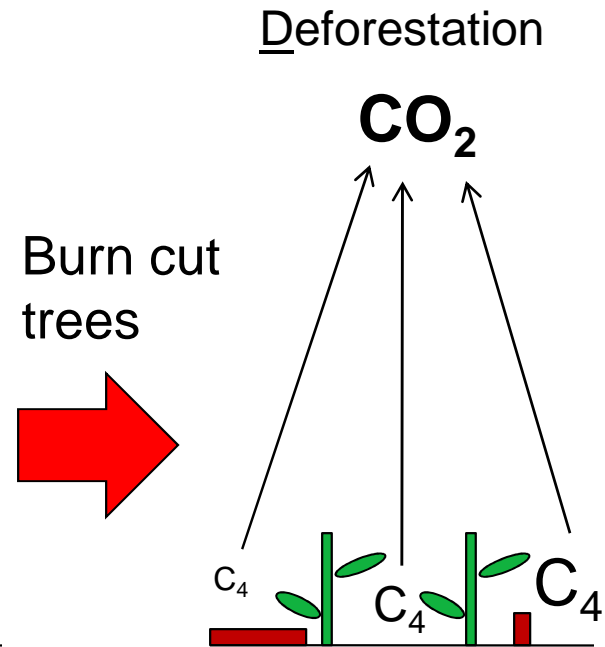
Reducing
Emissions from
Deforestation
and
Degradation



Tropical high forest



forest depleted



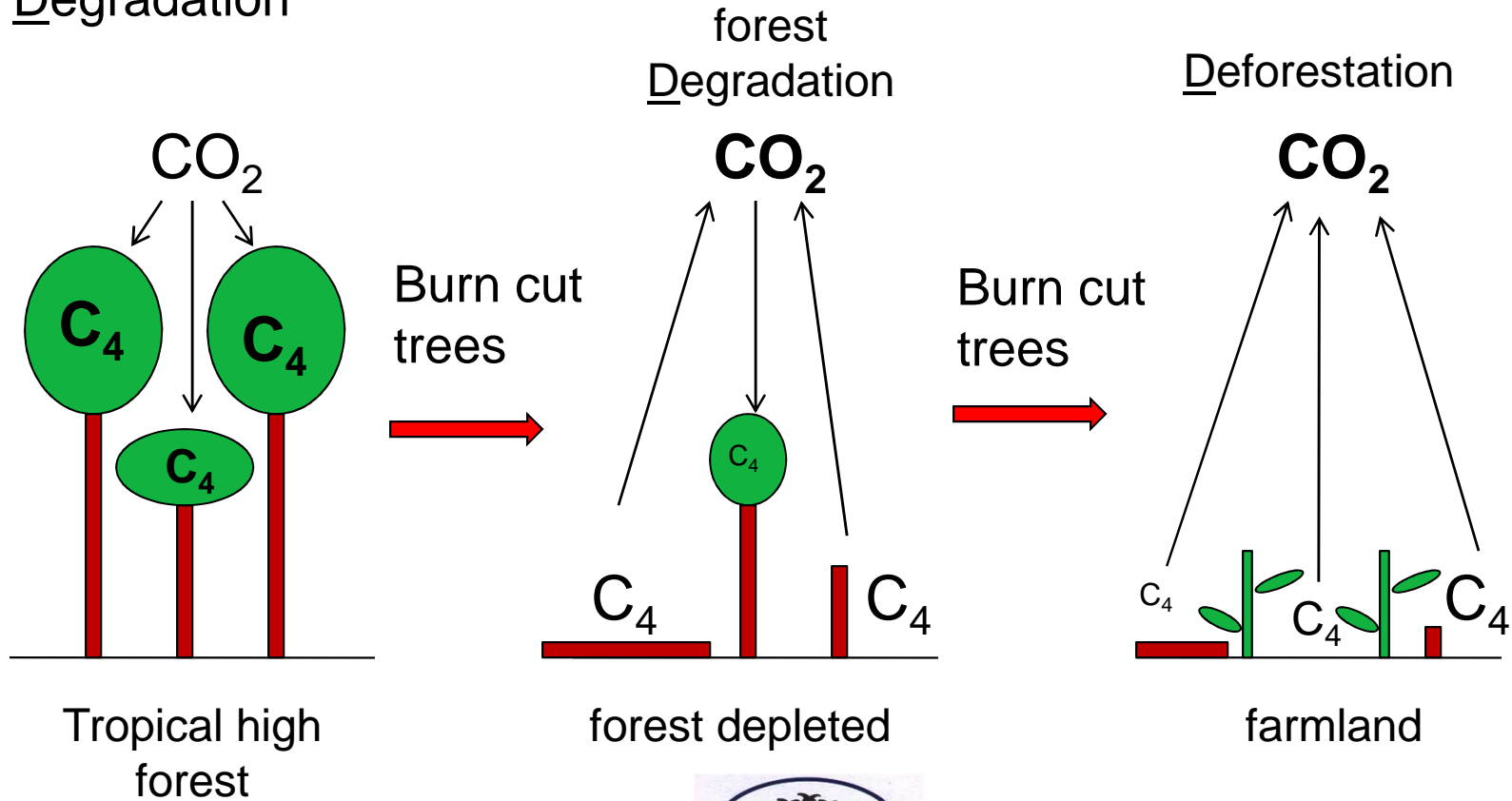
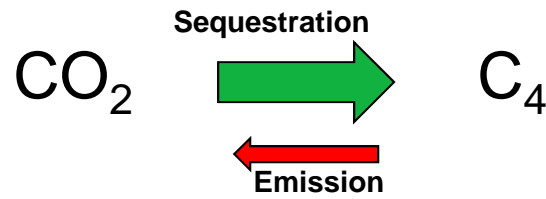
farmland





With more forests/trees planted, more carbon is absorbed

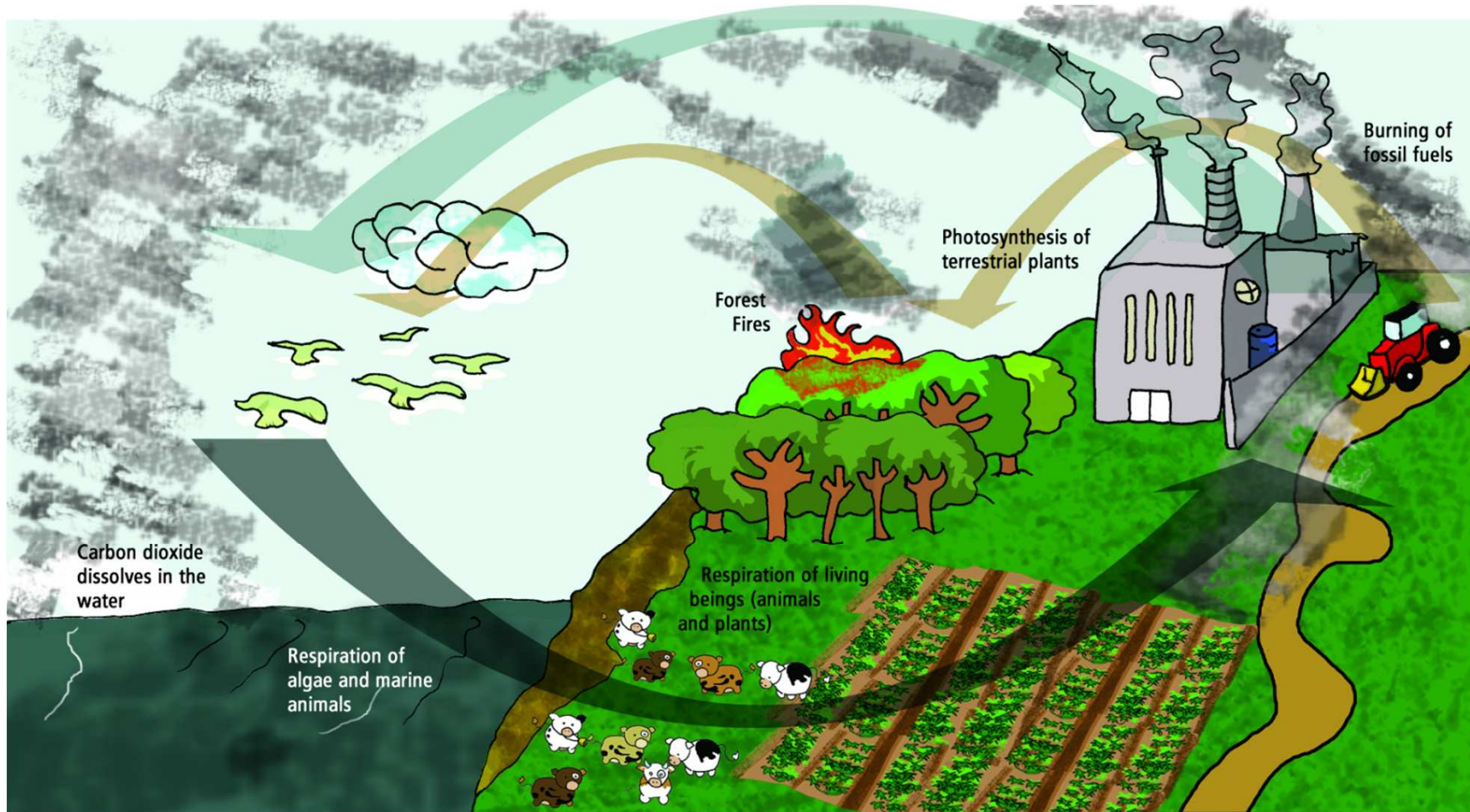
Reducing
Emissions from
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Carbon Sequestration



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➤ THE CHALLENGES

- Deforestation is the biggest threat to forest biodiversity. At the global level, is estimated that the annual rate of deforestation is 13 million ha/year.
- The cost of failure to halt biodiversity loss on land (terrestrial biodiversity) alone in the last 10 years is estimated at US\$500 billion.
- The global annual losses as a result of deforestation and forest degradation is estimated at US\$ 2.5 – 4.5 trillion. About US\$45 billion is needed for mitigating global deforestation and forests degradation.
- In Uganda 72,000 ha of forest meaning 6,000 ha of forest were being lost every month in 2006. The current estimate is at 80,000 ha/year. It is predicted that if this trend continues, Uganda may have no forest by 2050

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Some illustrations of destruction of forests/trees resources



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➤ THE CHALLENGES CONTINUED

- In Uganda, it is estimated that between 16-18 million tonnes of firewood are consumed annually as domestic firewood while another 4 million tonnes of charcoal are consumed annually. These are derived from cutting trees and forests
- The annual economic value of soil nutrient loss in Uganda is estimated at US \$ 625million. Loss of soil fertility affects agricultural productivity and bearing in mind that over 80% of Ugandans (population currently estimated at about 32 million people) depend on farming for their livelihood, poverty indices is likely to increase.
- Another threat to forest biodiversity is the invasion and spread of invasive alien species for example *Lantana camara*, *Cassia (Senna Spectabilis)*, *Omutete (Cymbopogon nardus)*.

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➤ THE CHALLENGES CONTINUED

- Invasive alien species are species that becomes established in a new environment, multiplies and spreads in ways that are destructive to the environment, human health and ultimately human well being.
- Invasive species usually spread and colonize new sites because the natural controls that keep them in check in their original habitat such as disease and predators do not exist where they are introduced in a new habitat
- The spread of invasive alien species is now recognized as one of the greatest threats to the ecosystems and economic development. Invasive Alien Species and habitat destruction are among the major causes of loss of biodiversity worldwide

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- **Matiri Forest Reserve,**
threatened by *Senna spectabilis*



- ***Cymbopogon nardus* in Mbarara- Tussocky unpalatable grass mainly found in the cattle corridors**

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CONCLUSIONS

1. Mother Earth has provided for us since the beginning of creation. In order for Mother Earth to continue providing the goods and services that we need, we must nurture it.
2. The environment can live without us but we can not live without the environment. That is why we must conserve forest biodiversity in order for it to continue providing benefits for us now and the generations to come

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- ➔ **WAY FORWARD - WHAT SHOULD BE DONE TO HALT LOSS OF FOREST BIODIVERSITY?**
- ➔ Each and every one of us has the responsibility to protect the environment because we all benefit from it.
- ➔ Investment in tree planting for poverty eradication and environmental restoration.
- ➔ Government has gazetted national tree planting days, namely ***World Forestry Day on 21 March, Labour Day on 1st May and National Youth Day on 12th August.*** Let us mobilize communities, schools and universities to commemorate these by planting trees.
- ➔ Schools, universities, local communities and individuals should begin planting their own woodlot for supply of poles, firewood, timber and other wood products. The practice of on depending on natural woodlands or forests for poles, firewood and timber etc is not sustainable

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- **WHAT SHOULD BE DONE TO HALT LOSS OF FOREST BIODIVERSITY**
- A degraded environment affects business. No business can continue to function if the environment up which they depend for raw materials is being degraded. **The private sector should therefore contribute to the restoration of the environment by supporting tree planting.**
- Promote sustainable use of trees and forest resources in your area for example bee keeping or eco-tourism can provide economic benefit while at the same time ensuring that the environment is not degraded.
- Management of invasive alien species to minimize it impacts on forest biodiversity and human wellbeing.



END

THANK YOU

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