

Trade Regulations: Impacts on wildlife trade and local livelihoods in East Usambara Mountains

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The East Usambara mountains are among the Eastern Arc Mountains that are unique in their biological diversity and endemic species. Due to its biodiversity, the area experiences high levels of wildlife trade to local and international markets. Most of these mountains are located in northeast Tanzania, at Muheza District in Tanga Region. The East Usambara Mountains climate as in other Eastern Arc Mountains is monsoonal and has two wet seasons (long rains from March to May and short rains from October to December) in a year. The humidity is high and mist is common at higher altitudes during March and May rains. At higher altitudes the temperatures are low. Recent research revealed that there has been decreased annual rainfall since 1960's. There were dry years, which was caused by the deforestation of the area. Many people in the East Usambara Mountains in the study area said that the climate changed due to forest clearing for timber after independence.

Many studies have been conducted in the East Usambara Mountains, but none of them have looked at the impacts of wildlife trade regulations and to local livelihoods. Recent research conducted in East Usambara Mountains on the impacts of the wildlife trade regulations to the local livelihood is the first assessment.

Timber industry was not important before the 1960's. During the colonial time no logging was conducted in East Usambara Mountains. Clearing of the forest was done for the establishment of the tea estates. However, there were protected areas as forest reserves. These reserves were meant for as a climate protector, soils and water supplies in those days. There were, however, small saw mills on some of the estates in East Usambara during colonial period. After independence there was a low restriction in the use of the forest and forest products in East Usambara. People used to depend on the forest resources for their livelihood. Many forest products include timber, medicinal, live and dead animals and other wood products were collected with very low controls. Foreign people from Kenya and others from Southern Tanzania with big companies were involved in the severe logging of the forest. Local people were less involved in the activity due to lack of capital to invest in logging.

Moreover, there were increased expansion of small-scale agriculture that also resulted in the destruction and reduction of the forest area. These immediate exploitations of the forest resources of the East Usambara after the independence may have resulted in to climatic change as revealed from local perspective. Local people reported that rain changed its normal patterns to variable and unpredictable that created problems for the agricultural activities. However, people have seen some recent changes of the climate and rain patterns few years after the establishment of the Amani Nature Reserve. The recent study also revealed that the local communities believe that the rain and water they use come from the catchment forest in the area. They also believe that the logging that took place in the area after independence and ceased during 1980's affected the rain patterns in

East Usambara Mountains. Moreover, people used freely different other forest products such as poles for housing, fruits and vegetable, firewood medicinal plants and bushmeat. These resources were used both commercially and at subsistence levels.

In 1990's the East Usambara area turned into another chapter after the national and international interventions on the commercial utilization of natural resources. Both international and national regulations were an obstacle to the harvest and use of the forest products. Overall, regulations include the East Usambara Mountains harvest ban (1987); national hardwood export ban (1993); Amani Nature Reserve gazetted (1997); and increased permit and license fees (1999). These regulations affected both wildlife trade and local peoples' livelihoods. Access control to the forest is the most obviously regulation that the locals could recognize, although this is one way of implementing the other regulations. The impact of wildlife trade regulations affects both cash earnings and non-cash benefits from the trade.

Both national and international affects trade on wildlife / forest products from the East Usambara as many of the trade activities ceased due to these regulations. Timber which was the most predominate trade activity before the interventions by the trade regulations declined in volumes, availability, valued species and quality of planks. Many species of hard woods traded at higher volumes in 1980's include *Milicia excelsa*, *Khaya nyasica*, *Ocotea usambarensis*, *Newtonia buchananii*, *Beilschmiedia kweo* and *Azelia quanzensis*. However, on the implementation of the regulations most of these species are rarely or no longer in trade. New timber species advanced to the trade from late 1990's including *Allanblackia stuhlmannii*, *Maesopsis eminii*, *Albizia lebbbeck*, *Albizia gummifera*, *Bombax rhodognaphalon*, *Albizia schimperiana*, *Sclerocarya birrea*, *Sterculia appendiculata* and *Pterocarpus mildbraedii*.

The regulations affected the income to the communities in the East Usambara Mountains due to declined trade on timber. People involved in timber trade were negatively affected in term of financial earnings. Many people could not continue to trade on timber and village government income lowered.

Trade on wild animals and insects (both live and dead animals) that reaches its peak during mid 1990's to local communities raised financial earnings and in turn empowered people's livelihood. The regulations such as CITES recommendations, airline and importing countries' restrictions, national export quotas and the gazettelement of Amani Nature Reserve have impacts to wildlife trade. The regulations and restriction have caused decreased prices, reduced demand, and in generally affected wildlife trade in East Usambara Mountains. However, local people perceived that access restrictions to Amani Nature Reserve has had the greatest impact on the live/dead animal trade.

Collection of wild animals for trade from the public land is also not possible because most of the animals use the same as those found in the Reserve. Thus, it is difficult to segregate specise from the public land and the ones from Amani Nature Reserve. There it is also difficult to collect from the public land. Thus, the access restriction to Amani

Nature Reserve in East Usambara Mountains is another negative impact to peoples' livelihood.

Financial instability that these trade regulations or restrictions caused to timber and other wildlife trade have in turn affect many local peoples livelihood. Many families can afford to pay for school fees, build modern houses and even purchase some other basic services.

Non-financial impacts of the trade restrictions and regulations in the peoples' livelihood in the East Usambara Mountains include the change of climate, as local people perceived. The rain and water reliability has improved as the result productivity in the agriculture has going up. Moreover, educational programs on conservation of resources has been conducted in the East Usambara Mountains, such as the use of energy serving stoves, tree planting, etc. Since, locals involvement to the industrial logging during 1980's was not real, the ban of this activity seem to be positive to them.