Anthropology of the Amazon – on-line open course resources
Module V:

**Industrial Development of the Amazon**

Indigenous inhabitants of the Amazon used the forest as a source of food as well as all materials needed for everyday life. The usage was never very intensive and nature had a chance to recover. This changed drastically during the colonization and later, during the industrial times when forest resources were in high demand in the Western world.

The Amazon rainforest offers a wide range of resources that are used in modern times. Wood was one of the first commodities that was extracted, later latex as well as gold were discovered, and finally crude oil. The land is also used for creating fields and pastures to fulfil the constantly growing agricultural needs.

Extracting any of the Amazon resources is connected to deforestation. Logging occurs not only in order to extract and sell wood but also to clear land in order to extract oil, to build roads, to find gold or to create pastures. Till the seventies of the twentieth century one third of the Amazon rainforest was already cut down and the land was put to some other use. Some wood we use today and call "exotic" (for example popular masaranduba wood) still comes from the Amazon. It is worth to make the effort and find out its origin. Does it come from plantations or from the pristine forest? If it is the latter, we might want to rethink giving our money to a company that threatens not only the Amazonian environment but also the lives of the people who live in it.

And this happens more often that you think – companies cut down trees in order to build roads to oil extraction sites, to set up new pipelines as you can see in the picture, to prepare land for farming and so on.

Building roads sounds pretty harmless. One might think: "could one small strip in the forest threat it in any way? Maybe only at the beginning, when the heavy machines cut through it but later the environment will not be bothered". Well, it turns out the case is more complicated and cutting a road through the forest is only the beginning. Deforestation that you can see in the picture started with just a road to the oil site. The workers, equipment, food and so on have to be transported to the site so a road was needed. Soon followed the settlers looking for the new places to live. Also some companies that searched for new possibilities for development set in the area now easily accessible by road. All of them can settle along the road and cut down new patches of the forest. Throughout just a few years the area can be almost completely deforested as people need the land for their subsistence. What is more, roads also serve as a barrier during the migrations of the different species of animals thus the natural balance of the forest is affected. Consequently every activity of modern industries in the Amazon should be discussed in relation to deforestation.

In the Amazon region, gold was mined since pre-Columbian times but never as intensively as in the twentieth century. The gold rush started in the eighties due to an increase in the price of gold as well as

construction of roads enabling wider exploration of the area. The deposits of alluvial and vein gold were extracted leaving the rivers and its environment devastated. In order to get to the deposits, whole riverbanks were practically turned over. What is more, the process of recovering fine gold, uses mercury. In effect mercury contamination became a severe issue in the rainforest – the element entered the aquatic environment and then became a part of the food chain and thus poisoned animals as well as humans.

As you can see in the picture, activity undertaken by gold miners leave the areas stripped of forest - this particular mine is in Peru and the devastation is clearly visible.

The rubber boom is a term referring to extensive rubber-tree sap collection that took place in the nineteenth and the beginning of the twentieth century.

Long before that time the indigenous people of the Amazon used rubber-tree sap to make for example "soles" on their feet – they put their feet into the sap and then dried it by the fire. The colonists knew about the possible uses of the sap, but it did not have much market value. This changed after 1839 when Charles Goodyear discovered the vulcanization process. The demand for rubber-tree sap increased 80 times in just 30 years.

The rubber boom was very hard on the indigenous people. Land owners were forcing the Indians to work in their forests and collect the rubber. The work was very harsh and people tried to refuse but disobedience was silenced by threatening the lives of the workers' families. Many indigenous people died during that time. In the meantime, transferring rubber-tree seeds in order to cultivate the plant in other parts of the world was attempted. The first successful trip of rubber-tree saplings to Europe occurred in 1876. Soon the young trees were transported to South-East Asia where huge plantations were created. Since that time the main supply of rubber comes from South-East Asia and the demand for Amazon rubber ceased.

As mentioned before, the rubber boom left the indigenous people depopulated and in poverty. They were forced to unpaid labor in very difficult conditions. One of the Columbian groups that counted over 30000 in the beginning of nineteenth century was left with only 8000 people by the end of the rubber boom. None of the profits from selling the rubber gathered by the Indians reached indigenous hands.

A similar scenario took place in the twentieth century during oil extraction. Oil in the Amazon was discovered in the nineteen thirties, but at that time the deposits were considered too small to be worth extracting. Later, in the sixties, research confirmed the presence of excessive amounts of crude oil underneath the forest, and large scale oil extraction began.

The main problem connected with oil extraction in the Amazon were the operations of many international oil companies that did not follow safety regulations. In effect post production waste as well as oil spills polluted the forest. Even nowadays, in areas where oil companies undertook their operations, oil contamination is obvious. The oil is still present in soil just centimeters below the surface. For years some companies were spraying roads with crude oil in order to keep the dust down. The gas extracted along with the oil was burnt away into the atmosphere and post production waste was kept in open pits allowing it to sink into the soil. Indigenous people used the contaminated soil to grow fruits and vegetables,

and they drank and bathed in the contaminated water. Many of them still heavily rely on local rivers for everyday existence and the pollution had a strong impact on them.

For more than twenty years now the indigenous people along with various NGO-s are fighting to clean up the forest and the waters. There were many obstacles to overcome but there also were some victories. The most spectacular one was the trial against Chevron Texaco, an American oil company responsible for contaminating a large part of Ecuadorian rainforest. It was decided that the company should pay nine billion dollars in order to clean the forest and save the indigenous people. Chevron never admitted to the crime and is still fighting the sentence (for further detail please refer to the clip "The True story of Chevron's Disaster in Ecuador" attached to this module).

Rearing cattle also played a big part in the industrialization of the Amazon. The forest was cut down in order to make more pastures. As you can see on the map, huge areas of the forest had been cleared to make place for cattle ranches.

Beef production per hectare on Amazonian soils is less than twenty percent of the levels elsewhere but cheap land and labor make cattle ranching profitable for large landowners.

Fields of soybean are also characteristic for the Amazon, especially in Brazil. The industry is specialized and highly sophisticated. Apart from the deforestation it causes, soybean farming also involves heavy use of pesticides with no regard to near-by rivers. These chemicals can have a detrimental effect on aquatic ecosystems.

The electric industry causes waters to disrupt their natural flow and endangers many migrating species of animals. The dams that are built on the Amazonian rivers are one of the biggest ones in the world. The Amazon Basin has the greatest hydroelectric potential in the world, but damming it was not seriously considered for years. The twentieth century brought new technologies that made the ideas possible and many new dams were constructed. Dams radically alter river habitats, both upstream and downstream. Regulating them influences the ecosystem as well as people living in the forest. One of the biggest projects is the Belo Monte dam in Brazil, that is currently being built in Brazil amidst protests of indigenous people as well as many NGOs (for details please refer to the clip "Protecting the Rivers of the Amazon with Sigourney Weaver" attached to this topic).

The last few decades brought a growing demand for palm oil and many plantations were created in the Amazon region. There are several problems associated with the cultivation of oil palm in the Amazon. The plant was brought to South America from Africa thus its cultivation presents many complications.

First, it grows in monoculture plantations causing biodiversity loss. Also, oil palms easily get tropical diseases and pests which leads to heavy usage of pesticides to keep the plantations healthy. The Amazonian environment lacks insects that could pollinate the oil palm flowers thus it has to be pollinated by hand. Despite all this, the oil plantations are profitable for landowners as the price of palm oil is quite satisfactory. As for indigenous people living in the area, oil palm cultivation does not bring them any profit and takes up more and more of their land. Creating new plantations causes forests to be converted

to fields, biodiversity loss as well as soil and water erosion. For indigenous people whose main concern for last decades was fighting for a clean forest, the oil palm plantations are yet another reason to be opposed to the activities of international corporations.

Palm oil is used mainly in the food and cosmetic industries. Most of the products we use every day contain palm oil and the demand for it is constantly growing.

The issues with industrial development of the Amazon are based on a misunderstanding between the indigenous people and the international corporations as the idea of development has a different meaning for both of them. As you can see on the cartoon, the indigenous people say "For us development means solidarity, equality and balanced resource management" while the man on the bulldozer says "Ignorants! Development means extracting oil and cutting down the forest to produce ethanol".

One of the examples of polarized ideas on development is the fight for the Yasuni National Park that has been going on for the last ten years. As you can see on the map, the park is in the Ecuadorian part of the Amazon.

The park is considered to be the most biologically diverse place on Earth and it is a part of UNESCO World Biosphere Reserve. Oil was discovered underneath the forest and the plans for its extraction followed. As the impacts of the oil companies' activities in the rainforest are known, there was a strong opposition towards oil extraction in Yasuni.

Ecuador's economy has been centered around oil for the last few decades. Since the beginning of the oil boom in the sixties the country development relied on oil extraction. The conflict of interests became obvious, so in 2007 the OilWatch organization prepared a project that soon made media headlines. All of the crude oil was supposed to be kept in the ground and as a reimbursement, Ecuador was to be paid one third of the value of the oil left there. The money was supposed to come from the various governments, non-profit organizations as well as private donations.

The project was adopted by the Ecuadorian government as the official solution for saving the forest and the country's economy as well. Nevertheless the deadline for raising funds set for 2011 was not met. In September 2013, the Ecuadorian government approved plans to drill in the Yasuní National Park. In 2014 the rights to extract oil on the oil blocks in Yasuni were auctioned and international oil companies started their operations in the region. However the fight for keeping the oil underground is still ongoing.

Indigenous peoples of the Amazon still rely on the forest in their everyday lives. The development of various industries in the Amazonian countries is inevitable as they take part in the world economy. Further economic progress does not necessarily have to be in conflict with the interests of the indigenous groups– they want to live in modern countries however they do not want to compromise their cultural values in order to do so. We should look for solutions that would not overlook the interests of the first inhabitants of the Amazon so they can live in their own way on their lands.