



Position paper

OIL PALM EXPANSION IN SRI LANKA

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Centre for Environmental Justice | Friends of the Earth Sri Lanka

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Introduction

Oil palm cultivation is not new to Sri Lanka. This plant has been brought to Sri Lanka in 1968 and planted in Nakiyadeniya. The expansion began in 1996 in the Kalutara district, but abandoned due to the public opposition and economic reasons. However, the current government has decided to plant 20,000 Ha in the Kegalla district. This decision erupted public protests in that area. Large plantation companies have started uprooting rubber and planting oil palm. They started destroying the forest patches within the rubber plantations and the riverine forest areas. They also started killing wild animals that destroy the oil palm plants. There was no proper feasibility or the social, environmental assessment done before this decision.

The positive impacts

In 2015, Sri Lanka's annual edible oil requirement was around 160,000 Metric Tonnes (MT). However Sri Lanka only produce a total of 53,000 MT of coconut oil and 18,000 MT of palm oil. The balance 89,000 MT in the island's edible oil requirement now comes from Indonesia and Malaysia. In 2015, Sri Lanka spent Rs. 20.8 billion on oil and fats imports with a significant majority of those imports being for palm oil. Collectively, palm kernel, palm olein, palm stearin and crude palm oil accounted for 164,835 MT or nearly 30% of all edible oil and fats imported into Sri Lanka.

The proponents of Oil palm plantations argue that this money would have been saved in the country, if Sri Lanka can produce its palm oil.

The negative impacts

However, Oil palm cultivation has number of negative impacts. Some are due to the plant itself and many others due to the mismanagement of the industry. Unlike Malaysia and Indonesia where Oil palm is responsible for massive forest destruction, Sri Lanka doesn't have forests for Oil palm cultivation. The remaining forest are very critical and they are mostly under the Forest and Wildlife Departments. Even the remaining lands under the Land Reform Commission are very critical wildlife habitats and are in the slopes. So the plantations started uprooting the Rubber and planting oil palm in Matara, Galle, Kalutara, Kegalle and Rathnapura districts.

Destroying the rubber industry

The oil palm promoters in Sri Lanka own the rubber plantations. Due to the mismanagement and the lack of focus by the government of Sri Lanka Rubber is becoming uneconomic for the plantations companies. There is no proper market value for the rubber latex and they import required latex from Malaysia. The plantations also have hard time finding labour.

Rubber Total land area

Year	Small holders(ha)	Estate sector(ha)	Total (ha)
1982	59,437	111689	171,126
2010	75,119	50,526	125,645

Rubber production in Sri Lanka was 133,200 MT in 1980 however, it has been reduced to 79,100 Mt in 2016. At present Sri Lanka imports nearly 55,000 Mt of raw rubber and latex annually . Rubber planters now prefer to convert the rubber plantations to the oil palm plantations which is more economic commodity. However, natural rubber is still a much important commodity. But this situation has arises due to failure of the policies of the national government.

Destroying the coconut industry

Coconut is an important ingredient for indigenous cooking in Sri Lanka. Coconut occupies about 20 percent of the arable lands in Sri Lanka, almost 400,000 hectares. (Dpt of C &S ,2002) However, Sri Lanka's coconut production

dropped 18.6 percent i.e 3 million/year in 2017 and 2.449 million nuts in 2018. The number of holdings under coconut cultivation is more than 2,175,000. Estimated 6.5 million people in Coconut industry (Ministry of Plantation Industries, 2007).

Unfortunately the Presidential Secretariat has tasked the Coconut Research Institute to promote oil palm in Sri Lanka. They have developed the guidelines to promote oil palm in Kalutara, Rathnapura and Kegalle District. However, there is no monitoring of the implementation of these guidelines.

Destroying the water system

According to the research Oil palm plantations are degrading water quality [Journal of Geophysical Research: Biogeosciences]. The research, conducted by scientists in the U.S. and Indonesia, compared the properties of streams draining mature and immature oil palm plantations, agroforestry areas, and logged and old-growth forests. It found that streams flowing through oil palm plantations were hotter, dirtier and consumed more oxygen compared to other areas. The effects were exacerbated in drought years.

The research report state that "Our results suggest that oil palm land use may have greater effects on stream temperature and sediment than mixed shifting agriculture and agroforest," explained Carlson. "Our findings suggest that converting logged forests and diverse smallholder agricultural lands to oil palm plantations may be almost as harmful to stream ecosystems as clearing intact forests." This situation effects the biodiversity in the streams.

High water foot print

High water consumption by oil palm trees. Oil palm is highly effect on the ground water due to high evapotranspiration rate (500 to 600 liters / plant/ day) in during the drought condition and normal day the average is 400 liters. (International Case studies)(CEA report). The water footprint (WF) vary from Climatic conditions, soil characteristics, and the characteristics of oil palm growth etc. The oil palm plantations in Thailand required smaller amounts of indirect blue water. The average WF for producing a ton of CPO of seven mills was 5083 m³.

The following impacts of plantations to the local ecology of water cycle may lead to the reduced availability of water, discontinuity in the flow of watercourses in low periods, increased impacts of droughts and the modification or destruction of natural ecosystems like wetlands.

1. ***Changes in the ratio between the amount of water intercepted by the foliage and the amount of water reaching the ground*** - The foliage of a plantation differs from that of a natural forest in biomass, height, form of cover and shape and distribution of leaves and branches. In addition, plantations also lack undergrowth.
2. ***Changes in the ratio between the amount of water which runs off the surface and the amount of water which infiltrates the soil***- This is affected by the type of humus generated by the plantation and the quantity of accumulated leaf litter, which may facilitate or complicate the absorption and infiltration of water which reaches the surface.
3. ***Changes in the ratio between the amount of water evapotranspired and the amount of water which infiltrates through to the subsoil water supply***- This ratio depends largely on how water is used by the species planted. Growth rate is directly related to water consumption. In plantations that use the fastest-growing genotypes of fast-growing species, water consumption tends to be extremely high.

Killing the forests and biodiversity (Flora and fauna)

Rubber plantations still had forest patches, reverine forests and some biodiversity. The oil palm cultivation has cleared all these forests and the created of monoculture oil palm plantations. They also hired poachers to kill porcupine and etc. paid some 5000 Rs. to each.

There is a potential that local community land also converted into palm oil small-holder plots similar to Indonesia and Malaysia which might cause more problems including Human rights abuses and violent conflict are commonly associated with land theft.

Loss of Biodiversity in areas covered by oil palms while some species such as snakes have increased their populations. The biodiversity in oil palm plantations is lower than the rubber plantations. (International literature & National Experts Committee on Biological Diversity)

Uncontrollable reproduction of planted species

Some plantation species and associated life forms may reproduce beyond the plantation and become invasive to the local vegetation.

Imbalances in natural animal population

For most local animals, plantations devastate their food sources, shelter and reproduction opportunities. For some species however, plantations may not provide both food and shelter for predators and this can lead to a sharp decline in predator population and uncontrolled breeding of prey populations. In Chile, plantations have caused a drastic reduction in fox numbers and an increase in rodent and rabbit populations, which in the end affected the pine plantations. Sri Lanka lack such research on plantations.

Disturbance to soil microorganism and insects

The enormous variety of life forms existing within the soil (including bacteria, viruses, small insects and worms) can suffer large impacts from the combination of changes in leaf litter and other decomposing vegetable matter and changes in the chemical composition and structure of soil.

Disease and pest proliferation

The new diseases or pests that resulted from the introduction of large monocultures can also attack native vegetation. In India, a fungus which developed on an exotic pine is now threatening the survival of native pines. In Kenya and Malawi, an aphid which began by attacking the exotic cypress moved on to two local trees. Such research has not been done in the Oil palm areas in Sri Lanka.

Chemical use

Chemical use associated with oil palm is widespread use of illegal chemicals, which damage health and pollute land and water. High agro-chemical usage for crop protection Application of heavy doses of inorganic fertilizer. This is 8-10 times higher an amount per hectare of rubber. (SLAAS – 2002)

Up to 25 different pesticides may be used by the oil palm plantation sector, but because usage is not controlled or documented, monitoring is very difficult. The most commonly used weed killer in Southeast Asia's oil palm plantations is paraquat dichloride. This herbicide is very toxic, may be fatal if inhaled, ingested or absorbed through the skin and persistent and accumulates in the soil with repeated applications. The other is Glyphosate which is cancer causing according to the latest research.

Agricultural workers are regularly exposed to this toxic substance during handling and mixing, spraying and working in freshly-sprayed fields. Women, who due to their physiological makeup are more vulnerable to the harmful effects of agrochemicals than men, are predominantly responsible for mixing, handling and spraying pesticides on palm oil plantations.

The fertilisers, herbicides and pesticides can also be carried by wind or water and create impacts far beyond the plantation areas. These chemicals will contaminate soil, waterways and the atmosphere and affect plants, animals and human health.

Palm Oil Mill Effluents(POME)

For oil palm, palm oil mill effluents (POME) have been a major pollution source. in Sri Lanka in the existing Oil palm plantations. POME is a waste mixture of water, crushed shells and a small amount of fat residue. Most crude palm oil mills have outdoor basins in which POME is stored and somewhat detoxified by adding oxygen but these basins easily overflow during heavy rain or intensive production.

The high Biological Oxygen Demand (BOD) content of POME is highly polluting to waterways and has significant negative effects on aquatic life down river. In addition, since the Fresh Fruit Bunches (FFB) of palm oil need to be processed within 24 hours of harvest, a processing mill is usually built for about every 4,000 - 5,000 hectares of plantation. This means that numerous new processing facilities will be operating in rural Sarawak.

Palm Oil processing industry generates high load of pollutants of which 75% of the yield by weight disposed as waste. The effluent contains higher levels of organic matter including oil.

Dumping waste in Maguru Ganga, paddy fields in Baduraliya was experienced in the Kalutara District. Also dogs in Darga town area had lost hair due to eating of POME .

Therefore to treat the effluent complying the CEA standards needs costly and high tech effluent treatment plants. At present both the treatment plants at the two processing facilities are not properly functioning.

Less jobs

Oil Palm cultivation does not create much jobs. It need less labour compared to Rubber, Coconut or Tea. This is one of the main reason that Plantation companies prefer to plant Oil palm.

Soil erosion and changes in nutrient cycle

Erosion caused by land clearing increases topsoil run-off, disturbs stream-flow and increases sediment loads in rivers and streams. Soil erosion, for example, is five to seven times greater during clearance, while sediment loads in rivers increase by a factor of four. Whereas some of these impacts are temporary, the pressure on riverine and coastal ecosystems remains significant in many areas because land clearing and development is continuously taking place in different areas in the same watershed. Soil erosion is especially problematic when oil palms are planted on steep slopes and at high altitude.

Soil erosion is comparatively high in oil palm in sloppy areas. That will be triggered by the preparation of platforms in sloppy areas and soil exposure due to land clearing around the plants (plantations maintaining the clear under cover around the plants for harvesting). Soil rehabilitation is cost effective of oil palm plantations because it will take much longer years than rubber plantations.

Disruption in the nutrient cycle

Soil imbalances in plantations arise between the nutrients taken up by the roots and those given back to the system by dead organic matter. Trees such as eucalyptus and pine tend to reduce the action of decomposing agents such as fungi and bacteria because nutrients contained in the leaf litter are not freed up in a form that would allow them to be taken easily by roots.

Chemical changes such as acidification of the soil and the introduction of new chemical compounds make life more difficult for many decomposers, and changes in humidity, temperature, and light have an additional impact. Some decomposers can also simply disappear.

The leaf litter of pulpwood trees contains tannin, lignin, oils, waxes, and other substances that are difficult to digest or even toxic for soil flora and fauna, tends to accumulate on the soils, and leaves from exotic pines have been known to take up to three to four years to decompose.

For pulpwood plantations, the soil becomes poorer in direct relation to growth rates and felling rotations. Fast growth combined with slow litter decomposition means that trees are extracting nutrients faster than they are replacing them.

Threats of fire

Plantations also burn very easily due to the accumulation of dry, leathery leaf litter and the drier local climate caused by monoculture farms as opposed to natural rainforest ecology. Acacia and eucalyptus plantations are particularly susceptible to fire as their leaves are high in oil content. Trees that are three years of age or younger are the most vulnerable, as their thin bark is not yet fire resistant. Moreover, the proliferation of low-level branches often helps to carry fire from grassy understorey to the crowns of the trees. This frequently gives added intensity to a fire, turning what may start as a low-level burn into a high-intensity blaze once it enters a plantation site.

In 1997 and 1998, fires raged throughout rural Indonesia, affecting no less than six percent of the country's total

landmass. The damage inflicted by such fires and haze is catastrophic. Wildlife, natural habitats, and ecosystems in the worst affected areas were devastated beyond recovery. There were also heavy losses felt more directly by the public, including damage to health from months of breathing heavy smoke-haze, losses to businesses forced to shut down for weeks or months by the haze and interruption to transport, air-breathing machines and destruction of other economic and social resources.

A report by the Centre for International Forestry Research (CIFOR) tagged the economic cost of the 1997/98 Indonesian fires and the subsequent haze to have cost somewhere between US\$ 2.3-3.5 billion, not including the costs of carbon release which may have amounted to as much as US\$ 2.8 billion. CIFOR further estimated that the fires affected 11.7 million hectares of land, half of which was forestland and 447,000 hectares were estate cropland.

Assessments showed that, depending on the region and time of year, between 46 and 80 percent of larger Indonesian fires in 1997-1998 occurred in plantation concessions, around three-quarters of which were oil palm plantations. Of the 176 companies listed by the Indonesian government as potential culprits behind the fires, 133 were alleged to be oil palm plantation companies.

Although it is notoriously difficult to prove, it is still possible that within such areas, some fires were lit by company staff or locals hired by the company. Land clearing accounts for almost 20 percent of the costs of preparing an oil palm plantation and burning forests and debris from clear felling, as opposed to mechanical clearing and stacking, is still widely considered to be the most practical, quickest and cheapest clearing technique. So-called "zero-burning techniques" are US\$50-150 per hectare more expensive than burning.

There is less possibility for such fire incidents in Sri Lanka although this impact cannot be totally ignored.

Other impacts and factors

Experiencing early drying of wells and water streams during the dry season around oil palm cultivated areas. (International research , Public complaints)

Frequent floods in oil palm grown areas due to poor rain water absorption causing run off in oil palm cultivations. Water absorption is poor due to soil compaction. (International research)

No timber value for the tree trunks Oil Palm compared to the rubber and coconut which provide alternatives to timber.

We cannot ignore the possibility of large scale clearing of forest lands to cultivate oil palm as well as home gardens in future, if proper policy is not implemented.

Uncertain sustainability of oil palm industry as the current high profit is due to the import tax. The profitability of palm oil is due to the artificial value created by high importation tax(130/kg).

The current trends experience by other oil palm growers such as (Malaysia) High cost of production, low yields in the second rotations, occurrence of certain, Diseases and health issues of palm oil (Inter-national studies).

The world trend is currently goes towards the coconut plantations and it must be promoted to established coconut plantation in possible agro-ecological regions in Sri Lanka

Sustainable oil palm is a myth

Roundtable on Sustainable Palm Oil (RSPO) is a mechanism to certify Palm Oil industry. However, there are many criticisms on the RSPO. About 19 percent of palm oil companies currently has a RSPO certificate and is therefore labelled sustainable. Big companies, such as Unilever, only work with 100 percent certified sustainable palm oil and 90 percent of the palm oil used in the Netherlands is sustainable.

According to some critics "While this seems like a very positive development and the possible solution to the palm oil problem, unfortunately it isn't. In reality, the RSPO certificate and the label of 'sustainable palm oil' are meaningless. The RSPO has not defined many requirements for 'sustainable' palm oil. Many big producers of 'sustainable' palm oil can't indicate where all their palm oil is being produced and often sell their palm oil with the RSPO label for a long

time before the plantations are actually examined. The rules for getting a RSPO certificate are also misleading. For example, a palm oil company that has one plantation that meets the sustainability requirements is allowed to sell all its palm oil with the sustainable palm oil label, even when the other plantations are not sustainable. In addition, there is no clear separation of sustainable and non-sustainable palm oil as palm oil from different plantations are always mixed. Therefore, companies mostly buy a nice sounding certificate and not palm oil that is any more sustainable than 'ordinary' palm oil."(<https://thegreenvegans.com/why-palm-oil-is-bad-but-boycotting-it-even-worse/>)

No Environmental impact assessment

Expansion of the oil palm cultivation is a policy decision that should have gone through an Strategic Environmental Assessment. There was no SEA or even project specific EIAs or IEEs when clearing massive rubber plantation. It is hard to predict the negative impacts without identifying environmental suitability of such lands. This is a major drawback of the expansion decisions of the Oil Palm Industry in Sri Lanka.

CEJ POSITION

Due to these negative impacts, expansion of the Oil Palm industry need a precautionary approach. CEJ's ultimate aim is to ensure that all stakeholders can align around a widely agreed and shared way of practicing oil palm cultivation in Sri Lanka. Therefore, in this position paper we would like to highlight where we stand on certain aspects regarding oil palm.

NO FORESTS TO BE CLEARED FOR PLANTATION DEVELOPMENT

CEJ holds the position of 'Zero Deforestation' or 'No' Deforestation during the plantation development in Sri Lanka. The forest cover in the country is less than 18 % and rapidly decreasing. The targeted areas for oil palm cultivation are located around the mid and central hills and play a vital role as water catchments and preserving the wet zone biodiversity.

SMALL HOLDERS OF OTHER PLANTATION CROPS

In Sri Lanka most of the lands planned for converting in to Oil palms are rubber lands. A Considerable number of smallholders make the living through rubber and tea industry. CEJ is in the position that no any small holder of rubber or tea should be forced in to oil palm cultivation directly or indirectly unless they willingly enter.

EFFECT ON LOCAL AGRICULTURE

High consumption of water by palm oil tree has been well observed both by communities and scientists. This is even higher in dry periods compared to rubber which fall the leaves off as an adaptation to save water.

Out of total lands under paddy cultivation (730,000 ha) in Sri Lanka 120,000 ha belongs to the wet zone. If the oil palm cultivations are to be expanded, these paddy cultivations could be under threat due to water scarcities. People would have no other option left but to work for the plantation company or become oil palm smallholders. Farmers on small-scale farms become workers on large-scale plantations, with less control over their lives and an income ultimately dependent on the fluctuations of the international market. Therefore CEJ is in the view that it is not only the rubber or tea industry that is under threat due to possible oil palm expansion, but the whole agriculture sector.

HUMAN RIGHTS INCLUDING LABOUR RIGHTS

In international examples, most of the times big promises were made to coerce the community into accepting oil palm as a good development project. Income levels are exaggerated, forecasted yields are too high. They often find themselves trapped in a situation of total dependency on the oil palm companies and exposure to commodity price fluctuations. The accident rate in the oil palm cultivations have been reported high because of sharp thorns, branches and the fruit of the oil palm and/or by use of the long-handled implements or by exposure to pesticide. There are reports that, oil palm companies make profit through exploitation of workers in many ways. Child labor is also used due to high harvesting targets. Therefore CEJ urge that the plantation workers and other stakeholders must be well educated on what they are getting into.

GOVERNMENT MORATORIUM ON OIL PALM

The government elected in 2015 took a decision to plant 20,000 ha in the 5 district namely Kegalle, Ratnapura, Kalutara, Galle and Matara districts. According to the CEA report in 2018 there were 8863 ha of oil palm were cultivated in 2015. However, the president in consultation with National Economic Council (NEC) has taken a decision to halt further expansion of oil palm from September 2018 onwards. Therefore, we at CEJ urge the plantation companies to respect the ban and support implementing regulations.

COCONUT INDUSTRY

Coconut has a long history as a vital food crop with multiple uses, It is an important ingredient for cooking in Sri Lanka and our tradition is linked to the coconut very much. Therefore we would like to call coconut as one of our miracle crop. However coconut production is decreasing due to clearing coconut lands for housing schemes, diseases, drought and animal conflict etc. By addressing these issues we believe that coconut industry can regain its role in Sri Lanka as the major oil producing crop. Therefore We at CEJ believe that rather than blindly following regional countries, Sri Lanka should focus on our own way moving towards development.

LOSS OF LIVELIHOODS

Studies in Malaysia shows that labour land ratio is high around 1: 9.95 in Oil palm industry compared to rubber which means many people would lose their jobs if rubber plantations are to be replaced with oil palm. In 2010 there were around 75,000 ha of rubber planted under small holders and around 50,000 ha under estate sector. We estimate that over 200,000 people are employed directly and indirectly. Industry also provides 11% per cent of domestic timber requirements and number of people is engaged with the process. Therefore a major portion of this labour force will lose their employments. Therefore, CEJ is in the view that government and plantation companies together should address the unemployment issue resulting due to palm oil expansions.

PLUS SIDES OF OIL PALM

A major factor that lowers the income levels of rubber growers is the interference of rain on tapping. Around 140 days of tapping is lost each year due to rain. However oil palm does not face this problem and it can be pointed as a plus side. Avoidance of the interference of rain and the high global demand for palm oil are the only factors that can be considered as advantages.

CLIMATE CHANGE AND OIL PALM INDUSTRY

Changes in climate can affect survival rate and yield of palm oil. Studies have predicted that increases in temperature and rainfall would decrease the oil palm yield in Indonesia and Malaysia. In a situation where Sri Lanka was indexed as the second in the Global Climate Risk Index, We think that oil palm expansion in Sri Lanka should be reevaluated.

OIL PALM AS A BIOFUEL

CEJ agree on the opinion of WWF(World Wide Fund for Nature) on this which is that palm oil is a basic foodstuff and an increase in palm oil production for energy use may have wider sustainability impacts, such as food shortages, food price increases or displacement. CEJ believes that Bio energy production displacing agricultural production and pushing it into other areas, causing a net expansion of the area under cultivation and associated forest loss is a great danger.

NEED A STRATEGIC ENVIRONMENTAL ASSESSMENT

It is widely accepted norm that such policy decisions and programmes need to go through the Strategic Environmental Assessment. However, there is no SEA developed for the expansion of Oil Palm in Sri Lanka. Such an assessment will bring the actual social, environmental and economic impacts of Oil Palm industry. In case government to review the decision of the non-expansion need such an assessment.

PUBLIC VOICES NEED TO BE HEARD

Plantations are located in the rural settings with many local rural communities are making their livelihood. They depend on their surrounding for food, water, medicines etc. The farming culture fully depends on the natural system. If the Oil Palm going to bring disaster to this agroecology systems, they have the right to oppose and engage with such decisions. Plantation companies have no right to disrespect the local communities. CEJ is in the opinion that the local people should be consulted in such decisions and no Oil Palm cultivation expand without listening to their grievances.

RESPECT ENVIRONMENTAL HUMAN RIGHTS AND DEFENDERS

There are some incidents that Environmental Human Rights Defenders and the local communities have been arrested and threatened when opposing the Oil palm cultivation in the recent times. CEJ believes that the Plantation industry and the Government agencies should respect the rights of the local communities and rights defenders and not to harass them when raising voice on the social, environmental and livelihood rights of the local communities.

CONCLUSION

Expansion of Oil Palm should have taken a precautionary approach. We have enough tools such as Strategic Environmental Assessment, Environmental Impact Assessment, Free Prior Informed consent to reach such a decision. Local communities have right to oppose when they are not consulted and no consent was obtained.

We have already destroyed our natural systems, food systems, ecological systems for short term benefits and the benefits for the minority. It is the practice that once these systems destroyed such external costs transferred to the public. This is no more acceptable as we have limited resources to survive. There should be an External cost benefit analysis done for this kind of decisions.

Therefore CEJ believes that no ad hoc decisions should be made by the plantation companies or by the politician without following the proper investigations, research and adequate safeguards.

About CEJ

CEJ is a national level environmental organization working for the promotion of Environmental Good Governance and Environmental Justice started in 2004. We engaged in our activities through Law, Science and Advocacy. CEJ has managed number of environmental projects and programs over the last 15 years. Legal aid, Chemicals governance, Forest governance, biodiversity protection, Mangroves and Wetland conservation, Climate Change, Sustainable Development Goals (SDG) and Food sovereignty are among them. We have extensive experience on environment and natural resources management and sustainable development and have been involved on international policy dialogues related to the same. CEJ is a member of FoEI, APMDD, ELAW, IPEN, NGO Forum on ADB, GAIA, Break Free from Plastics etc.

For more Information

Centre for Environmental Justice

20A, Kuruppu Road, Colombo 08, Sri Lanka | Tel/Fax: +94112683282 | email: info@ejustice.lk