Myanmar Centre for Responsible Business

SECTOR BRIEFING NOTE
(MCRB's Briefing Paper on Biodiversity, Human Rights and Business)

Biodiversity and the Agriculture Sector in Myanmar

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This Briefing Note supplements MCRB's Briefing Paper: "Biodiversity, Human Rights, and Business in Myanmar" (2018). It is addressed to companies operating commercial plantations in Myanmar, rather than the small-holder farmers prevalent throughout Myanmar. Companies operating commercial plantations are likely to have more significant impacts on biodiversity and should, accordingly, have or develop the capacity and resources to address their impacts.

The Business Case for the Agriculture Sector to Address Biodiversity

The agriculture sector's potential for large-scale impacts on biodiversity is increasingly well-documented. Globally, agriculture poses a more significant threat to species survival than any other business sector.[1] In addition to the general business case for companies to minimise impacts on biodiversity contained in the main Briefing Paper, there are additional reasons for agricultural companies to limit their impacts:

- Agricultural operations depend, often heavily, on ecosystem services (e.g. for clean water, pollination, biological pest control, soil and water conservation, nutrient cycling, climate regulation, and flood regulation).
- Biologically diverse soils are generally more productive for agriculture. Crop genetic diversity is a key factor in maintaining disease resistance, yields and coping with weather unpredictability. Diverse tropical forests are prime locations for finding new genes and compounds for agricultural uses.
- Assessing and managing biodiversity impacts is a legal requirement under Myanmar laws (see below for details).
- There is increasing scrutiny of the sector by civil society and the media, internationally and locally, particularly in countries with significant biodiversity and weak government capacity to protect it such as Myanmar. There have already been several reports on agricultural operations in Myanmar and their impact on the environment and biodiversity.

Threats to Biodiversity and Ecosystem Services from Agriculture Operations in Myanmar

Almost all of Myanmar lies within the Indo-Burma Biodiversity Hotspot, one of 35 global hotspots that support high levels of biodiversity and endemism (see below). More detailed information on the 42 Protected Areas and 132 Key Biodiversity Areas (KBA) is available in Supplement on Biodiversity in Myanmar, including Protected Areas and Key Biodiversity Areas.

Commercial agriculture currently occurs in several places throughout the country, including those close to Protected Areas and areas of high conservation value (Figure 1). As the Myanmar Government continues to promote the development of commercial agriculture, it is likely that operations will continue to expand into further areas of the country, with a high potential that agricultural plantations overlap with areas of biodiversity value and areas that support important ecosystem services. The majority of large-scale agricultural plantations are operated by Myanmar or Asian operators. There are very few other international operators applying international sustainability standards.

BOX 1: FURTHER INFORMATION ON POTENTIAL BIODIVERSITY IMPACTS OF THE AGRICULTURE SECTOR

- For a list of some *selected impacts* of agricultural operations on biodiversity and human rights see ***Table 1*** *'Large-Scale Agriculture.'*
- For a more detailed review of the human rights impacts of the oil palm sector in Myanmar, see MCRB's forthcoming "Sector Wide Impact Assessment of the Oil Palm Sector in Myanmar" (2019)
- For a more detailed list of *potential biodiversity impacts* of the sector see the resources highlighted in the Recommendations below.
- For a more detailed discussion of the *inter-relationship* between *business, biodiversity and human rights impacts*, see the Biodiversity Briefing Paper and in particular ***Box 4***.

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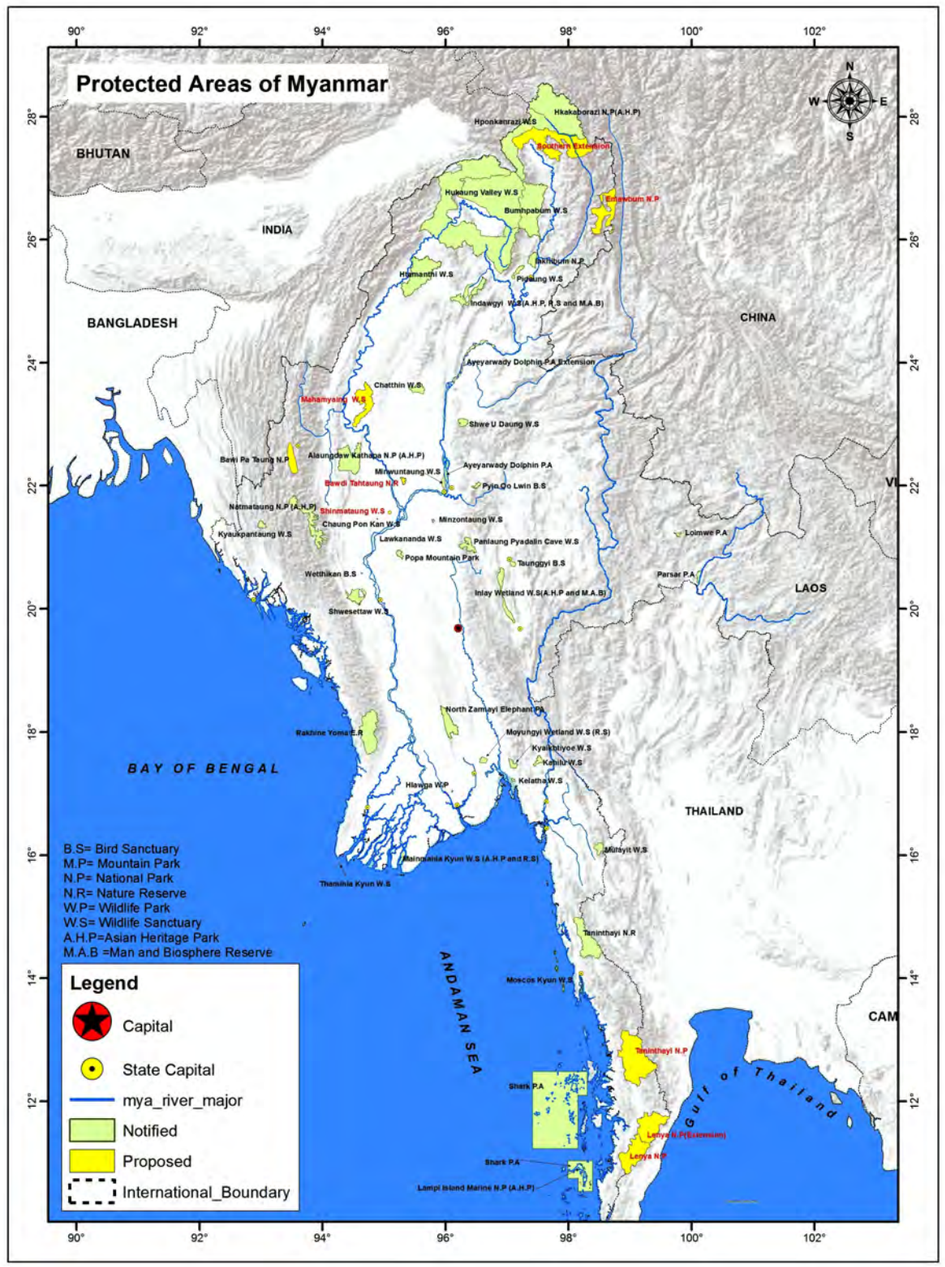
Figure 1: Protected Areas in Myanmar



Source: WCS, Protected Areas, 2017.

Legal and Regulatory Framework Relevant to Biodiversity and Ecosystem Services

This section highlights relevant laws, regulations and contractual arrangements for the agriculture sector, and should be read together with ***Chapter 3*** of the Briefing Paper *(Policy, Legal Framework and Institutions for Biodiversity Conservation)* that addresses the overall policy and legal framework in Myanmar relating to environmental protection and biodiversity conservation.

The Conservation of Biodiversity and Protected Areas Law No. 12/2018 implements the Government's biodiversity and strategy. It provides for the designation and protection of seven different types of Protected Areas and designates the types of activities that can be conducted in each area. The law empowers the Ministry of Natural Resources and Environmental Conservation (MONREC) to set up a system of payment for ecosystem services from Protected Areas (Art. 13) which could mean that agricultural operations are eventually required to pay for water or other ecosystem provisioning services from Protected Areas. Importantly, it empowers MONREC to designate buffer zones and protect the areas around the Protected Areas by regulating the activities that may take place in the adjacent areas. This could limit agricultural operations around designated Protected Areas, indicating that it would be prudent to avoid establishing agricultural operations on or near the borders of established or designated protected areas, as they could eventually be limited by order of MONREC.

Environmental Conservation Law No 9/2012, the Environmental Conservation Rules (2014), Environmental Impact Assessment (EIA) Procedure (2015) set out the rules for EIA. Annex 1 of the EIA Procedure specifies whether an IEE or an EIA is required, depending on the type of plantation/ industrial crop production (e.g. rubber, palm oil, cocoa, coffee, tea, bananas, sugar cane) and annual crop production (e.g. cereals, pulses, roots, tubers, oil-bearing crops, fibre crops, vegetables, and fodder crops) and size of the operation. In addition, under the EIA Procedure, an EIA requirement can also be applied to a smaller project by virtue of it being located in an environmentally sensitive area.[2] There have been few EIAs carried out in the agriculture sector in Myanmar and none that has been made publicly available.

National Environmental Quality (Emissions) Guidelines (2015) that apply as part of the EIA process, set specific effluent levels for plantation/industrial crop and annual crop operations intended to protect ecosystem health.

Biodiversity Action Plans can be required as part of Environmental Management Plans (EMPs) that are an integral part of EIAs, are contractually binding commitments. The Environmental Compliance Certificate (ECC) issued at the end of the EIA process can also add specific requirements on biodiversity protection where needed.

There are several international standards and lists of important biodiversity sites that are relevant to companies carrying out EIAs or looking for relevant guidance:

- IFC's Performance Standards (PS), which includes PS 6 on Biodiversity Conservation and the Sustainable Management of Living Natural Resources (2012)
- There are also a range of agricultural commodity certification schemes and standards that contain environmental risk management practices, such as the Round Table on Sustainable Palm Oil (RSPO)[3] and the Roundtable on Responsible Soy (RTRS) that could be looked to and eventually applied in Myanmar.

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TABLE 1: BIODIVERSITY IMPACTS AND RELATED HUMAN RIGHTS IMPACTS – COMMERCIAL AGRICULTURAL PLANTATIONS

	BIODIVERSITY IMPACT	ACTIVITIES CAUSING OR CONTRIBUTING TO THE IMPACT	RELATED HUMAN RIGHTS IMPACTS
ESTABLISHING THE PLANTATION	Habitat damage, fragmentation and loss Species disturbance and loss	• Progressive **land clearance, degradation and deforestation** during land clearance to establish plantations. Failure to use already ecologically degraded areas for production in place of clearing new land. • Progressive **land clearance by local communities displaced** to make way for plantations. • Potential clearance of **primary forest** or areas considered to be of **high conservation value (HCV)**. • Tree removal to open up semi-arid land for cropping resulting in **subsurface salt rising to the surface**. • **Construction of access roads** and other infrastructure. These can directly result in habitat loss and extraction, and indirectly open up previously inaccessible areas to development, which have a potentially more far-reaching impact. • **Watershed degradation through deforestation**	**Right to Food and Adequate Standard of Living** • Reduced or eliminated provisioning services because of elimination of food stocks, medicines, fuel. • Restriction of access to food due to destruction or degradation of plants and animals, or their habitats. **Right to Water** • Reduced physical access to water, because of blockage of access • Reduced access to potable water due to pollution • Reduced quantities of water due to use for operations • Reduced regulating services because of altered hydrologic /hydrogeological regimes, including reduced groundwater **Right to Health** • Directly, due to consumption of contaminated plants and animals • Indirectly, due to restricted or eliminated access to plant or animal biodiversity with health-restoring properties. **Cultural Rights** • Reduced or eliminated access to habitats that are culturally significant
ON-GOING OPERATIONS	Habitat damage, fragmentation and loss	• On-going **land degradation** due to **poor agricultural management practices**, reducing the quality and fertility of soils through erosion, salinization, compaction or soil compression, nutrient depletion, further lowering agricultural productivity. For example, farming in hilly areas of Myanmar without due regard for slope conditions can lead to extensive erosion during rainy periods. • **On-going expansion** of plantation areas to compensate for low yields instead of improvements in cropping systems or use of improved technology. • **Runoff of water contaminated** with pesticides and fertilizers, resulting in releases of excess of nitrogen and phosphorus. • **Soil compacting** that restricts water penetration and increases the amount of surface water, causing runoff to carry away greater volumes of soil from where it is needed into the aquatic ecosystems where it is disruptive. • **Disruption of hydrological or hydrogeological regimes**, leading to impacts on terrestrial or aquatic biodiversity.	
	Overexploitation of resources	• **Abstraction/depletion** of water resources - the most recent statistics for Myanmar suggest agricultural production accounts for 89% of water abstraction.[4] • **Depletion of wetlands** due to water abstraction. • **Depletion of soil** through agricultural intensification.	

TABLE 1 [CONTINUED]: BIODIVERSITY IMPACTS AND RELATED HUMAN RIGHTS IMPACTS – COMMERCIAL AGRICULTURAL PLANTATIONS

	BIODIVERSITY IMPACT	ACTIVITIES CAUSING OR CONTRIBUTING TO THE IMPACT	RELATED HUMAN RIGHTS IMPACTS
ON-GOING OPERATIONS [CONTD.]	Ecosystem change	• Increased **use of fertilisers** (for example around Inle Lake) can lead to high inputs of nitrogen to natural ecosystems, encouraging faster-growing species that can rapidly assimilate nitrogen. This leads to **ecosystems change** as some species thrive under different nutrient conditions. • Failure to **maintain areas for the native biodiversity** between and among production areas. • **Failure to create** zones with reduced disturbance activities compared to operational zones or to establish or maintain wildlife habitats and diverse land cover on farms.	**Right to Housing** • Displacement from traditional lands and housing due to land acquisition or forced eviction **Right to Security** • Disputes between communities and agricultural companies related to impacts on ecosystem services (especially water). • Opening up of previously inaccessible areas to illegal logging and wildlife trafficking increases insecurity
	Species damage or loss	• Introduction of **invasive species** intended for crops, shade or pest control that become invasive and spread much further than originally intended. • Decline in **pollinator populations** due to fragmentation of the habitat of these species, agricultural and industrial chemicals that reduce their fertility and numbers, parasites and diseases, and the introduction of invasive alien species. • Decline in populations due to release of **agricultural and industrial chemicals** • **Disturbances** of animals and plants due to noise, light, dust, etc. • **Disruption of pest-predator relationship** through the application of chemicals to control pests that also harms their predators (birds, lizards, other insects)	
	Habitat change due to climate change	• **Permanent conversion of forests to agriculture** increases CO2 emissions through land-use change. • **Land degradation** also reduces carbon fixation since above and below ground biomass is compromised. • **Subsequent plowing** further reduces soil carbon	

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Recommendations for Companies

The Briefing Paper makes general recommendations on biodiversity conservation for all companies. Specific suggestions for companies in the agricultural sector are:

Essential

- **Do not locate plantations** in, or adjacent to, legally Protected Areas or in areas that have been designated to be set aside for Protected Areas (including World Heritage Sites) or in Key Biodiversity Areas (KBA). Do not plant in areas considered to be of High Conservation Value (HCV).
- If the company is required to carry out an EIA, it should Incorporate biodiversity considerations at each stage (screening, scoping, assessment, management, monitoring and reporting), including in a **Biodiversity Action Plan** developed as part of the Environmental Management Plan (EMP)
- Publish on the company **website all draft EIAs** (and EMPs) once submitted to MONREC for consideration, in line with the legal requirement in the EIA Procedure, and publish all subsequent **monitoring reports** submitted to MONREC.

Desirable

- Align practices with guidelines set out in commodity certification schemes such as RSPO.
- Develop an informed and proactive approach to managing and protecting biodiversity by applying relevant **guidance for the agriculture sector** such as:

- CSR Asia (2017). Agribusiness and the SDGs: How the agribusiness sector in ASEAN can embrace the Sustainable Development Goals. Oxfam; CSR Asia; Swedish International Development Cooperation Agency (Sida)
- FAO (2016). Sustainable Agriculture for Biodiversity: Biodiversity for Sustainable Agriculture. Food and Agriculture Organisation, Rome.
- FAO (2015). Incentives for Ecosystem Services in Agriculture (IES). Food and Agriculture Organisation, Rome.
- IIED and ProForest (2004). Better Management Practices and Agribusiness Commodities Phase Two Report: Commodity Guides.
- Leibel, N. (2011). Protecting Biodiversity by Working with Agribusiness Supply Chains. United Nations Development Programme
- ZSL (2011) A Practical Handbook for Conserving High Conservation Value Species and Habitats within oil palm landscapes
- ZSL (2013) Practical Toolkit for Identifying and Monitoring Biodiversity in Oil Palm Landscapes

- Given the low capacity of the Myanmar Government to collect biodiversity data, collaborate with MONREC and environmental NGOs to share relevant biodiversity data, including through platforms such as:
  - » Myanmar Biodiversity Clearing House Mechanism
  - » Myanmar Alliance for Conservation
  - » One Map Myanmar (OMM)

Endnotes

1 See FFI. https://www.fauna-flora.org/approaches/biodiversity-business/agricultural-landscapes

2 EIA Procedure (2015), Article 25.

3 RSPO http://www.rspo.org

4 FAO (2016). AQUASTAT. Main Database, Food and Agriculture Organization of the United Nations, Rome

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