

[Text of letter and comments sent to Amyotha Hluttaw Agriculture, Livestock Breeding and Fishery Development Committee on 9 November 2018]

This submission has been prepared by the Myanmar Centre for Responsible Business (MCRB). Our inputs are primarily based on:

- field research conducted at oil palm plantations in Tanintharyi Region during July-December 2017 at 17 oil palm plantations in Tanintharyi Region as part of its Sector-Wide Impact Assessment (SWIA) of the oil palm sector which will be published in 2019. Hundreds of oil palm plantation managers and plantation workers were interviewed, as well as relevant government ministries, local authorities and NGOs and CSOs. MCRB's findings are also supported by the Fauna and Flora International's (FFI's) field research findings¹.
- Conclusions of a multi-stakeholder roundtable on food safety in Nay Pyi Taw in November 2016, titled 'Towards a Myanmar Food Safety & Responsible Sourcing Initiative', held in collaboration with PRIMEAgri². This discussed how Myanmar could enhance food safety and responsible sourcing in primary agricultural production, post-harvest, and food processing. It was attended by around [70] Myanmar stakeholders and international experts from leading food safety and standards organisations such as GLOBALG.A.P., Fairtrade, FSSC22000 and the Global Food Safety Initiative (GFSI). Myanmar stakeholders included officials from the Ministry of Agriculture, Livestock and Irrigation (MOALI) and the Food and Drug Administration, Parliamentarians, Myanmar agriculture and food businesses and international investors, consumer groups, workers organisations and development partners. The following answers are based on workshop discussions and presentations by experts, more information can be found in the Conference Report.³

Based on our ongoing work across different sectors, the Centre has the following main messages for the Parliamentary Enquiry:

- there should be better enforcement of existing laws, such as the Pesticide Law and others listed below
- there should be greater transparency concerning investments in plantation, their permitting, environmental management and monitoring of compliance
- more training and awareness raising of safe use of agricultural chemicals is needed for plantation managers and workers, small-holders and farmers. Government and private sector both have responsibility for this
- for Myanmar to access export markets, as well as to provide Myanmar consumers with safe food, farmers should familiarise themselves with recognised international certification standards such as GlobalGAP.

¹ 'Myanmar Oil Palm Plantations: A Productivity and Sustainability Review', FFI 2016

² For more information visit MCRB's website: <http://www.myanmar-responsiblebusiness.org/news/food-safety-responsible-sourcing-initiative.html>

³ You can read the Conference Report here: <http://www.myanmar-responsiblebusiness.org/pdf/2017-01-Roundtable-Towards-a-Myanmar-Food-Safety-Responsible-Sourcing-Initiative.pdf>

MCRB warmly welcomes the initiative taken by Parliament to hold this enquiry and has encouraged a range of stakeholders to respond, despite the short deadline. We hope that further enquiries will be held

MCRB, 9 November 2018

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Responses to the questions posed by the Enquiry

What are current agricultural practices relating to the use of agricultural chemicals (including herbicides, fungicides, insecticides, bactericide, fertilisers and post-harvest chemicals applied to produce)?

MCRB assumes that this question relates to practices in Myanmar. Our answers reflect observations during the oil palm SWIA research in Tanintharyi.

Oil palm companies, as users of fertilisers and pesticides, as well as other chemicals, produce large amounts of toxic waste and should dispose this waste in accordance with the laws and guidelines mentioned under *Question 4*. In practice, the majority of the oil palm companies assessed by the MCRB research team did not have systems and equipment in place to monitor and control waste pollution of their plantations and mills. In many plantations and mills, waste water and other waste would be discharged in nearby waterways due to the lack of proper waste disposal systems.

At most large oil palm plantations, workers were not trained on the safe use, storage and disposal of agricultural chemicals such as fertilisers and pesticides; in most companies, workers were also not informed of the potential harmful effects of the use of such chemicals. Overall, plantation workers were not provided with adequate personal protective equipment (PPE) such as masks, gloves, goggles and aprons when spraying and they did not have any facilities to wash themselves after using the chemicals.

According to the November 2016 workshop, farmers have limited access to soil testing for arsenic and nutrients, to enable them to decide which fertiliser to use. MOALI has a lab that carries out tests, but this is rarely used as the price is too high for most farmers. Another agricultural business with whom MCRB is in contact notes that a requirement to use government testing facilities rather than test overseas is problematic as the government laboratory results are clearly inaccurate. One Myanmar company undertakes on the spot testing for farmers to advise them.

What are the human health and environmental effects of agricultural chemicals?

MCRB assumes that this question related to the use and misuse of agricultural chemicals in Myanmar.

There is a lack of information concerning oil palm companies that operate plantations and mills in Tanintharyi, including an absence of published Environmental Impact Assessments and monitoring data. This makes it difficult to obtain information about what agricultural chemicals are used and whether these products are contaminating the surrounding environment. According to a study by FFI (2016), many plantations in Myanmar apply almost double the amount of fertiliser of what companies in other countries would use due to weather and soil conditions, which could be damaging to the environment.

One of the reported impacts with regard to the use of fertilisers related to contamination of nearby water bodies and wetland through surface runoff, effecting the water quality. Villages around some companies mentioned that nearby streams had changed color and were no longer suitable for drinking; fish population had decreased; they had skin diseases and rashes from bathing in the streams, which

villagers thought was caused by chemicals used by oil palm plantations and effluents disposed in the river.

With regard to the health impacts of the direct use of agricultural chemicals by plantation workers, it was reported that some of the women complained of dizziness and nausea, as well as the feeling of their face 'burning' when mixing the chemicals or after using them. They were not provided with proper personal protective equipment (PPE). At a number of plantations, workers and company nurses mentioned that workers suffered from skin rashes and infections; some workers thought the application of and exposure to fertiliser and pesticides could be cause of the skin rashes.

What impact do residues have on the prices and volumes achieved in agricultural export markets?

MCRB has no information on this, beyond noting that most major international buyers will require producers to meet minimum safety standards concerning residues.

What are the existing Union-level laws and regulations on the production, importation and distribution of agricultural chemicals?

The main laws are the:

Fertilizer Law 2015

An updated Fertiliser Law was adopted in 2015⁴. Its objective is to enable growers to use quality fertilizer, support the conservation of soil and environment by utilizing suitable fertilizer and education for farmers. It is therefore directed at licensing and controlling producers, importers and distributors of fertiliser rather than end-users whose use of fertilisers is regulated by laws on effluent and protection of water sources (see below). The interface between the fertilizer supplier and the farmers is the fertilizer dealer. As noted in a recent study on the fertilizer market, "farmer and dealer training on fertilizers and plant nutrition will greatly assist in more efficient fertilizer use by farmers."⁵

Pesticides Law 2016

A Pesticides Law was adopted in January 2016 (Law 14/2016⁶) to replace the older 1990 Law although few changes were made, mostly to the names of the related Ministries and updated monetary penalty amounts.⁷ Regulations were also adopted in 2016⁸. The Pesticide Law establishes the Registration Board (Board) under the guidance of the Myanmar Department of Agriculture to test pesticides labelling claims as well as their bio-efficacy on the crops and license importers and sellers of pesticides. The 1990 law imposed duties on pesticide users with respect to handling and disposal of pesticides. Concerning handling, users must:

- follow use instructions shown on the label and safe handling instructions published by the Myanmar Agriculture Service from time to time;
- obtain a purchase permit and hiring a certified applicator for highly hazardous pesticides;
- not keep pesticides in close proximity of foodstuffs, nor within easy reach of children;

⁴ http://www.doa.gov.mm/doa/index.php?route=product/product&path=75&product_id=35

⁵ IFDC, [Myanmar Fertilizer Evaluation](#) (2014) p. vi

⁶ http://www.doa.gov.mm/doa/index.php?route=product/product&path=75&product_id=130

⁷ https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Food%20and%20Agricultural%20Import%20Regulations%20and%20Standards%20_Rangoon_Burma%20-%20Union%20of_1-11-2018.pdf

⁸ http://www.doa.gov.mm/doa/index.php?route=product/product&path=75&product_id=131

- prohibit the use of children of 16 years and under, pregnant women, or nursing mothers in handling or in the use of pesticides; and
- comply with directives concerning the use of pesticides in the storage of harvested crops or in cultivated fields.
- Users must comply with the directives of the Board regarding the disposal (Article 26).

Prevention of Hazard from Chemicals and Related Substances Law 2013

The objectives of this 2013 Law include protecting the environmental and the occupational, health and safety of workers.⁹ Like many Myanmar laws, it is very broadly worded and requires a license for anyone in the “chemical and related substances business” which includes chemicals that can pose a hazard to humans, animals and the environment (Article 2). Any company using chemicals requires a license and a registration certificate that includes additional requirements (Chapter VIII) and must comply with a series of duties to protect health, safety, including by providing personal protective equipment (PPE) and training to workers and requiring medical checks. Users of chemicals have a broad duty not to impact and damage to the environment and must abide by more specific requirements set out in the registration certificate or other notices on transporting, possessing, storing, using, discharging (possibly ‘disposal’) the chemical and related substances (Art. 13, 16 and 27).

The Law also requires the business to have insurance to cover any claims for compensation to harm to health or the environment (Article 17). While the Law does not address specific sectors and therefore does not include any specific requirements for the agricultural sector, but applies to any business using chemicals, which would cover agrochemicals. Rules to implement the law were issued in 2016 which establish the role of a Central Supervisory Board to lay down rules on storage, labelling and handling,¹⁰ and the Ministry of Industry has issued a List of Prohibited Chemicals, including 26 pesticides¹¹.

Although this question does not address laws relating to use, MCRB has also provided information about these to the best of its knowledge, since failure to abide by these laws – where they exist – causes negative effects. Main laws are

Environmental Conservation Law (ECL) 2012 (and Rules (ECR) 2014)

MONREC is charged with monitoring of the use of agro-chemicals (ECL Art 13) and coordination between MONREC and other government departments to sustainably manage agricultural resources (ECL Art 18)

The ECR authorise the Ministry to set out further requirements on waste management, including with respect to hazardous wastes generated from the production and use of chemicals or other hazardous substances in carrying out agriculture; and conservation, management, beneficial use and sustainable use of natural resources (ECR Chapters IX and X)

Environmental Quality (Emission) Guidelines 2015

The Guidelines are based on the 2007 IFC/World Bank Group Environmental Health and Safety (EHS) Guidelines. However, WBG EHS Guidelines for annual crop production have been updated¹² since the

<https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Food%20and%20Agricultural%20Import%20Re>

¹⁰ [Prevention of Hazard from Chemical and Related Substances Rules](#), Ministry of Industry Notification 85/ 2015-2016, 12 January 2016

¹¹ Central Leading Board on Prevention of Hazard from Chemical and Related Substances [Notification No: 3/2016](#) 30 June 2016

¹² [World Bank Group Environmental, Health and Safety Standards for Annual Crop Production](#) (2016)

adoption of the Dec 2015 Myanmar Guidelines, which therefore do not reflect the most up-to-date international standards.

Requirements for Agricultural Projects:

- The Guidelines contain a general set of requirements on air emissions, wastewater, noise and odour (Annex 1, section 1)
- In addition, they contain sector specific effluent levels for plantation industrial / crop production. These set specific levels for arsenic, biological oxygen demand, cadmium, chemical oxygen demand, heavy metals, lead, mercury, pH, total coliform bacteria, total nitrogen, total organochlorine pesticides, total phosphorus, and total suspended solids:
- large-scale commercial plantation crops, including banana, citrus, sugarcane, olives, palm oil, coffee, and cacao (Annex 1, Section 2.2.1)
- large-scale commercial annual crops, including cereals, pulses, roots and tubers, oil-bearing crops, fiber crops, vegetables, and fodder crops (Annex 1, Section 2.2.2)
- The levels for each type of crop are identical.
- The EMP must include controls necessary for the project to meet specified effluent levels. The requirements will also be reflected in the ECC.

Environmental Impact Assessment Procedure 2015

Commodity/Crop	Criteria for IEE Type Economic Activities	Criteria for EIA Type Economic Activities
Plantation Industrial/Crop Production (e.g. rubber, palm oil, cocoa, coffee, tea, bananas, sugar cane)	≥ 200 ha but < 500 ha	≥ 500 ha
Annual Crop Production (e.g. cereals, pulses, roots, tubers, oil-bearing crops, fibre crops, vegetables, and fodder crops)	≥ 500 ha but < 3,000 ha	≥ 3,000 ha

Conservation of Water Resources and Rivers Law 2017

While this law does not include any specific references to the agricultural sector, it contains very broadly worded prohibitions on disposing of chemicals “and other materials” into waterways that may cause environmental damage that could be interpreted to prohibit fertilizer or pesticide runoff and to prohibitions on disposing of soils from “resource production” into waterways.

Draft Occupational Safety and Health (OSH) Law

This will contain relevant provisions concerning employer’s responsibility to provide protective equipment and training.

Also relevant is the *Consumer Protection Law*.

How much public knowledge exists about agricultural chemical dangers and harms?

Based on interviews with plantation workers, there is a lack of knowledge about the potential dangers and negative impacts on the health of workers when using fertilisers and pesticides. Oil palm plantation

workers do not receive adequate training and are not informed about potential negative health impacts when applying pesticides on young oil palm trees.

MCRB recommends that the Committee seek evidence from organisations such as Myanmar Consumers' Union who have worked in more detail on this issue.

Are existing agricultural chemicals instructions and warnings sufficient?

The field research, November 2016 workshop participants (and media reports¹³) indicated that workers using the agricultural chemicals have not been instructed on how to safely use the chemicals. Not all workers understand the labels as many fertilisers and insecticides come from Thailand and China (sometimes illegally) and have no labels or instructions in Myanmar language. Many don't have labels or instructions translated into Myanmar language, despite Myanmar legal requirements.

A list of registered pesticides is available on the website of the Plant Protection Division of MOALI (www.ppdmyanmar.org/prb.html), together with a Banned Pesticides List and Restricted Pesticides List, but it is not clear how many farmers access it. There is also an educational period implemented by the government on pesticides and fertilisers, but it is not clear when this will end and enforcement will start. Non-compliant companies and products need greater control.

What are the viable alternatives to agricultural chemicals?

This is not MCRB expertise.

What effective legal and regulatory prevention of harmful agricultural chemical residues, and consumer protection systems, exist in other countries?

The November 2016 workshop heard from a range of foreign experts who presented on explained that safety 'private standards' had arisen, and the food industry had decided to join together to create global standards such as GFSI and GLOBALG.A.P. for primary production. This to avoid multiple audits of a single factory by different buyers. The drivers of these standards were primarily business and included retailers/brands and manufacturers. However, they had been developed through multistakeholder approaches with civil society and unions. International organisations such as EU and UN were supportive and increasingly recognised these 'private standards'. Much documentation already exists, for example GSCP best practices. However, it needs to be translated into Burmese/local languages.

The European Union has extensive legal and regulatory prevention systems.

In the USA the Food Quality Protection Act, which was passed in 1996, requires the US Environmental Protection Agency to set residue levels for foods to protect the most vulnerable populations, specifically infants, children and fetuses (pregnant mothers) from harm due to cumulative exposure taking into account all routes of exposure. This law has led to the restrictions on use and voluntary withdrawal from the market by manufacturers of several previously widely used pesticides.¹⁴

What are the opportunities for legal and regulatory reform in Myanmar?

There are already laws in place for the regulation of use and disposal of agricultural chemicals (see Q4). The problem is that they are not known by users, and not enforced.

¹³ Myanmar Times, [Farmers Use Illegally Imported Fertiliser and Insecticide](#), 16 December 2015

¹⁴ Food Quality Protection Act 1996. See for a summary of the act: <https://www.epa.gov/laws-regulations/summary-food-quality-protection-act>

For example, MCRB is aware of anecdotal evidence concerning cross-border smuggling of products which do not meet Myanmar legal standards, particularly from China, including of product which is no longer considered safe for use in China, but is manufactured for export. MCRB is also aware of anecdotal reports of dilution and adulteration of agricultural chemicals by local companies. Therefore, the priority should be:

- Review by officials of existing laws to consider any loopholes or weaknesses preventing enforcement. This should take a holistic look at all of the above-mentioned laws, and how they interact.
- There should be improved collaboration between relevant ministries and departments, such as MONREC, MOALI and Ministry of Health and Sports
- in order to address the issue of harmful effects of pesticides
- Stronger compliance monitoring and enforcing against sales of illegal and adulterated agricultural chemicals
- Improved research facilities and agronomic advisory visits to plantations
- Training and awareness raising is required for plantation companies, including managers and workers, on the safe use, storage and disposal of agricultural chemicals is required, including training of plantation workers

Regarding the current practice in food safety and responsible sourcing, it is weak due to a combination of:

- Lack of awareness of food safety issues, including agrochemical use
- Lack of awareness of international standards
- Costs for farmers of meeting higher standards
- Gaps in Myanmar laws, in content and enforcement of existing law, including unclear accountability, and illegal imports
- Lack of coordination and information sharing between Ministries (particularly Agriculture, and Health/FDA)
- Existing regulation around disposal of used/contaminated containers or pesticides is unclear:
- According to old regulation contaminated containers should be burnt or destroyed but, there is a lack of enforcement.
- One option is that company selling pesticides and fertilisers should take back the containers
- Whatever the chosen method, enforcement is essential. Identifying a department to enforce the existing regulation is a good first step (Department of Agriculture under AoAU). However DoA needs to collaborate with others on enforcement.
- Regulation for fertilisers and pesticides needs to be consistent with existing environmental regulations. Collaboration needed between MOALI and Environmental Conservation Department
- The companies selling pesticides should be more controlled

- More care needed with storage of fertilisers and other chemicals at shops and distribution centres
- Companies need to provide more recommendations/training to farmers
- There should be enforcement at the point of sale, by using registered shops or distribution centres
- Responsibility of bodies in the supply chain needs clarifying, including the responsibility of the farmer for misuse
- There should be more collaboration with CSOs, including to change behaviour.