

## **SOCIAL IMPACT ASSESSMENT FOR AGRICULTURE LAND: PERSPECTIVE OF MYANMAR**

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### **Abstract**

The wealth of a nation greatly depends upon the agricultural lands, because the agricultural sector is the main route of gaining country income and economic interest. Based on the use of agricultural land from old ages to till present in Myanmar which applying fertilizers incompetently or not using fertilizer with the correct nutrient balance, partially due to lack of knowledge. From that result, the agricultural lands are losing every year. Besides, it was converted many forms of the way such as soil degrades, becomes unusable due to dissolution, used for highways, housing, factories, and other urban needs, and so on. So, this paper aims to examine social impact assessment on agricultural land and further suggestions for Myanmar will make. And also, it should be needed to make a sure assessment on agriculture land is the valuable interest for the country economics and but also preserves agricultural substantial development for the new generation.

**Keywords:** Agriculture, Farmland, Assessment, Social Impact, Myanmar

### **Introduction**

Agriculture land is land that is called a farmland or cultivated land. It is the systematic and controlled use of other forms of life particularly the rearing of livestock and production of crops to produce food for humans. It is thus generally synonym crop land, as well as pasture or range land. It was enacted The Vacant, Fallow and Virgin Lands Management Law and The Farmland Law in 2012. The Law of Protection of the Farmer Rights and Enhancement of their Benefits was passed by Pyidaungsu Hluttaw.

Social impacts for agriculture land include incorporate farmers' way of life, their culture, community, environment, health and wellbeing, and property rights and their fears and aspirations. Social impact for agriculture land is to reduce poverty, improve health and education, promote peace and democratic governance, foster economic growth, and protect the environment in a country.

Social Impact Assessment is the processes of analyzing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions and any social change processes invoked by those interventions. Its most important purpose is to bring about a more sustainable and equitable biophysical and human environment.

Social impact assessment for Myanmar agricultural lands is the process of identifying and managing the social impact of industrial projects. Sustainable agricultural development has "the management and conservation of the natural resource base, and the orientation of technological and institutional change in such a manner as to ensure the achievement and continued satisfaction of human needs for current and future generations". And it can protect the environment by reducing erosion and natural resource degradation air and water quality, increasing biodiversity. Because agricultural land is played an important role in preserving natural resources, reducing greenhouse gas emissions, halting biodiversity loss, and caring for valued landscapes of present and future generations.

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## **Materials and Methods**

This paper utilizes of descriptive methods based on the information obtained from former publication researches and other data collection, and could include both present and historical information. This paper is come out from the analyzing of Farmland Law 2012, Fertilizer Law 2015, and Pesticide Law 2016. Especially Section 9 (a), (b), (c) of the Farmland Law is by rights of person who has the right to use the farmland.

### **Agriculture Land Use Policy in Myanmar**

In Myanmar, the measurement, the high level of ethnic diversity, and the low level of development mean that a variety of traditional rights to land has existed around the country, most, although not all, of which are new now recognized by statute law. Under the Constitution of the Republic of the Union of Myanmar 2008, the State has an underlying title to all land, with the exception of certain freehold or inherited land. In most cases, land ownership held by Myanmar citizens and companies is actually a long-term grant of land from the government, which is subject to conditions and limitations on the purpose for which it is allowed to be used. Depending on the types of land, a government approval to change the use may be able to be obtained, in particular, to repurpose agricultural land for commercial uses.

Apart from the common land type's farmland, it is a single type, under old legislation referred to as agricultural land, and now called farmland under the Farm Land Law 2012. Farm Land is also granted to private citizens under a land grant from the government, typically for a period of 30 years, and subject to an express condition that the land only is used for cultivation purposes.

According to the Farmland Law, 2012, terms and conditions are to comply with the person who has the Right to Use the Farmland. The person who has the right to use the farmland:

- (a) shall carry out the farmland as prescribed in this Law;
- (b) shall pay land revenue and other taxes levied by the Ministry relating to the farmland;
- (c) shall register in the relevant Township department by paying the stamp duty and registration fees for the contract stipulated by the department in carrying out sale, mortgage, lease, exchange, and the gift of the right to use the farmland;
- (d) shall register in the relevant township department in accord with the stipulations when the right to use the farmland is obtained by inheritance in accord with the existing law;
- (e) shall have the right to mortgage the right to use the farmland only for the purpose of investment for cultivation and shall mortgage it in the Government bank or the Bank recognized by the Government;
- (f) shall not trespass without permission from the relevant Farmland Administrative Body;
- (g) shall not use the farmland by other means lacking permission;
- (h) shall not change the originally cultivated crop with another kind of crop, without permission;
- (i) shall not be fallow the farmland without sufficient reason;
- (j) shall no sell, mortgage, lease, exchange or gift the farmland during the period before having the right to use the farmland or during the period the dispute arises relating to the right to use the farmland If the dispute relating to the right to use the farmland arises after this Law

has come into force, it shall have the right to settle legally only after registration in the department.

The person who has the right to use the farmland shall not sell, mortgage, lease, exchange or gift on the whole or part of the right to use the farmland with no permission of the Government to any foreigner or any organization in which the foreigner is incorporated.

The objectives of the Fertilizer Law 2015, specifies as follows:

- (a) to enable supporting the development of the agricultural sector which is the basic economy of the State;
- (b) to enable supervision and control of the fertilizer business systematically;
- (c) to enable growers to use the fertilizer of quality in conformity with the specifications;
- (d) to support the conservation of soil and environment by utilizing suitable fertilizer;
- (e) to enable carrying out of educative and research works extensively for the systematic utilization of fertilizer by the agriculturalist;
- (f) to cooperate with government departments and organizations, international organizations and local and foreign non-governmental organizations regarding fertilizer business.<sup>1</sup>

According to Section 5(d) of Fertilizer Law, Fertilizer Committee has the duty of issuing necessary directives to prevent environmental pollution and hazard to human beings and animals in respect of fertilizer business.<sup>2</sup>

No one shall, without the registration certificate, produce, import, or export fertilizer for commercial purposes.<sup>3</sup>

According to Section 33 of the Fertilizer Law 2002, it states that “no one shall produce, store, or distribute and sells fake fertilizer or fertilizer, not in conformity with original specifications. And no one shall produce, store or distributed or sell fertilizer mixed with toxic substances. And no one shall use the fertilizer in purposes other than agriculture.”<sup>4</sup>

According to Section 36 of the fertilizer Law 2015, it states that whoever violates any prohibition contained in sections 31, 33, or 34 shall, on conviction, be punished with imprisonment for a term which may extend to 3 years or with fine which may extend to kyats 100, 000 or with both. In addition, the order shall be passed to confiscate the exhibits involved in the offense.

Whoever violates the prohibition contained in section 35 shall, on conviction, be punished with imprisonment for a term which extends to one year or with a fine which may extend to kyats 500,000 or with both. In addition, the order shall be passed to confiscate the exhibits involved in the offense.

Whoever violates the prohibition contained in section 35 shall, on conviction, be punished with imprisonment for a term which extends to one year or with a fine which may extend to kyats 500,000 or with both. In addition, the order shall be passed to confiscate the exhibits involved in the offense.<sup>5</sup>

Furthermore, farmers in Myanmar use pesticides to improve agricultural production and increase yield. Actually, abusing pesticides is like using poisons. Because they are toxic, and

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<sup>1</sup> Section 3 of the Fertilizer Law, 2015.

<sup>2</sup> The Law Amending the Fertilizer Law, March, 2015.

<sup>3</sup> Section 31 of the Fertilizer Law, 2015.

<sup>4</sup> Section 34 and 35 of the Fertilizer Law, 2015.

<sup>5</sup> Section 37 of the Fertilizer Law, 2015.

exposure to pesticides can cause a number of health effects. Pesticides can cause short-term adverse health effects, as well as chronic adverse effects that can occur months or years after exposure. Each and every farmer chooses to use chemicals to keep weeds and pests from destroying their crops and to add more nutrients to the soil. There are three different kinds of pesticides: herbicides, insecticides, and fungicides. These pesticides are used to kill different kinds of pests that can be found on a farm.

According to the Pesticide law 2016, the Registration Board has the functions and powers relating to pesticides. The Registration Board shall direct the department to carry out the analysis of pesticide or active ingredient submitted with the application under sub-section (a) of Section 14 of this law for determining whether or not the percentage of active ingredient meets the potency according to the instruction, to carry out bio-efficacy all in the cultivation field whether or not the pesticide is effective in suppressing the pest.<sup>1</sup>

The Registration Board may issue any relevant registration certificate if the quality of the pesticide is fulfilled and effective under the analytical test and efficacy trial of the agriculture and irrigation department.<sup>2</sup>

Moreover, the Registration Board may prohibit the use of pesticide or toxic substance for which registration has been obtained on occurring any of the following events contained hereunder or withdraw the registration:

- (a) on facts received from outside or inside of the country that pesticide may be hazardous to human beings, animals, crops, and the environment
- (b) finding on reinvestigation of the pesticide that the percentage of the active ingredient has met neither the analyzed strength nor the quality, as shown at the time of application;
- (c) on being requested to discontinue the use by the applicant who may be either the pesticide or active ingredient manufacturing foreign company or the local formulator.<sup>3</sup>

Pesticide's use has been found to cause problems to farmers' health and the environment, especially since farmers do not dispose of used pesticide bottles properly. Pesticide's use can lead to environmental problems such as the death of fish and other insects, air pollution from its unpleasant odor, and water pollution from pesticide residues. Pesticides residues in water can lead to human health issues (e.g, headaches, dizziness, and vomiting, and eye irritation).<sup>4</sup>

Pesticide User has conditions for compliance. The user of pesticide shall:

- a. comply with the instruction for use of pesticide;
- b. comply with pesticide safety guidelines published by the department from time to time;
- c. neither keep pesticides in close proximity to foodstuffs nor within easy reach of children;
- d. comply with the methods of disposal and destruction of the used empty container and packing materials of the pesticide in accord with the directive of the department;
- e. comply with the educational directives published from time to time by the department concerning the use of pesticides in cultivated fields and the storage of harvested crops.<sup>5</sup>

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<sup>1</sup>Section 5 of the Pesticide Law, 2016.

<sup>2</sup>Section 6 of the Pesticide Law, 2016.

<sup>3</sup>Section 8 of the Pesticide Law, 2016.

<sup>4</sup>Economy and environment Institute Lower Mekong Sub-region, the Impact of Pesticides Use on Health: A Case Study from Myanmar, 2017.

<sup>5</sup>Section 26 of the Pesticide Law, 2016.

The Pesticide Law provides the prohibitions relating to pesticides; no one shall, import or export the pesticide and active ingredient without a permit of the Registration Board.<sup>1</sup> No one shall, without a license, engage in an enterprise of formulating and selling of active ingredient imported from abroad as a pesticide or repacking and selling of pesticide imported into the country or of the retail and wholesale of the pesticide and of fumigation.<sup>2</sup> In Section 33 the Pesticide Law provides that no one shall use the pesticide or active ingredient, apart from suppressing the outbreak of pests, in crops or foodstuffs or beverages consumed by the public. No one shall use the pesticide or active ingredient to catch or kill any creatures. No one shall use other types of the pesticide and application methods other than types of the pesticide and application methods prescribed by the Registration Board in the storage of crops.<sup>3</sup>

Under Section 39, of the Pesticide Law, it lay down the punishment for whoever violates any provision of subsection (d) of Section 25, Sections 31, 32, 33, 34 shall, on conviction, be punished with imprisonment for a term which may extend to 5 years or with fine which may extend to 100,000 kyats or with both. In addition, the exhibits involved in the offense shall be also be confiscated.

Under Section 40 of the Pesticide Law, also provides for, whoever violates any provision of Section 35 shall, on conviction, be punished with imprisonment for a term which may extend to six months or with a fine for a term which may extend to 300,000 kyats. Whoever violates any provision of Sections 36 and 37 shall, on conviction, be punished with imprisonment for a term which may extend to one year or with a fine for a term which may extend to 100,000 kyats or with both. In addition, the exhibits involved in the offense shall also be confiscated.<sup>4</sup>

Thus, apart from the set outlaw and controlling of agricultural impact is essential. For instance, making modern organic farming is developed as a response to the environmental harm caused by chemical pesticides and synthetic fertilizers in conventional agriculture. Conservation tillage is a part of a system of crop production designed to minimize soil disturbance, maintain previous crop residue on or near the soil surface and minimize the number of field operations. And organic farming is one of the methods of crop and livestock production that involves much more than choosing not to use pesticides and fertilizers genetically modified.

### **Challenges on Agriculture Land**

Agriculture is at the heart of our daily life, vital to the economy and society. And farming cannot exist without farmers. They produce high-quality, safe food for consumption and export are also help tackle climate change and preserve the diversity of agriculture. Although industrialized agriculture has been successful in producing large quantities of food, the future of food production is in danger due to problems in agriculture. Two of the most major problems in agriculture are the loss of agricultural land and the decrease in the varieties of crops and livestock produced.

Agricultural lands are those lands that are utilized to grow a marketable crop of botanical or biological nature. Arable land is a type of agricultural land which is under temporary crops such as cereals, temporary meadows for mowing, land under market or kitchen garden, and land temporarily fallow. Land abandoned as a result of shifting cultivation is excluded. Pasture land is land used for five or more years for forage, including natural and cultivated crops. Agriculture uses

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<sup>1</sup> Section 31 of the Pesticide Law, 2016.

<sup>2</sup> Section 32 of the Pesticide Law, 2016.

<sup>3</sup> Section 37 of the Pesticide Law, 2016.

<sup>4</sup> Section 41 of the Pesticide Law, 2016.

about a third of the world's land surface. So, it directly depends on the Environment because of its existence and sustainability are very important for living organisms.

There are many causes of the loss of agricultural land. In these causes, population growth is an important factor. Urbanization is the most dramatic human form of environmental alteration, resulting in widespread changes to the structure and functioning ecosystems including those of agricultural systems. Therefore, urbanization has direct impacts on the conversion and loss of agricultural land. Agricultural pollution is the phenomenon of damage, contamination, and degradation of the environment and ecosystem and health hazards due to by the products of farming practices. The earliest source of pollution has been pesticide and fertilizers. Generally, most of the people realize that agricultural fertilizers and pesticides do not have the main sources of environmental pollution and social impact. So, they should apply pesticides and fertilizers systematically, which is little prospect for pollution and environmental impact.

### **Advantages and Disadvantages for Assessment on Social Impacts**

The agriculture sector is very often related to land issues and monopoly issues. In front of small-scale farming, foreign companies easily take over the control of the market. So, organic farmers should protect in their investment and public incentive must be proposed by public authorities to allow the proper development of the organic sector. Policies need to prevent small-scale farmers in general and organic farmers in particular from any abuses coming from industrial agriculture investments. In order to promote organic and sustainable agriculture, it is necessary to earn consumers' trust.

The organic agriculture sector should be strengthened and developed through the creation of an independent body made by experts and relevant stakeholders to control those organic products that fit with the consumers' expectations. Sustainable agriculture's products shall be promoted through the creation of a Sustainable Agriculture label.

The organic supply chain must be strengthened through cooperation between farmers, retailers, and banks. The lack of storage facilities as well as infrastructure does not allow proper development of the sector. Civil Society Organizations, organic farmers, banking institutions, and public authorities should cooperate to ease the access to funding and thus reinforce the sector all along the supply chain. Specific attention must be made to the training of farmers on different sustainable methods of production and their benefits for the farmers' lifestyle, the environment, and the community.

A particular emphasis must be made on the negative impact on their health of the unreasoned use of chemicals, and on adaptation to climate change effect. Agriculture has been the origin of every country's development and constitutes the core of any society.

Modern agriculture proved its relevance while looking at the production increase. However, it leads to major threats to the environment such as soil degradation, deforestation, and overuse of chemicals. Organic and Sustainable agriculture appear to be relevant alternatives since they allow high productivity while preserving the environment and people's health.

Lack of access to market information is an initial problem of social impact. There is no mechanism to provide farmers with knowledge of market prices and supply/demand trends for individual agricultural products; hence, there is little guidance on planting, storage, or marketing decisions. Returns to farmers tend to be based on the low prices at harvest time, with most profits going to traders and exporters.

Inadequate access to fertilizers is the second problem of social impact. Fertilizers are expensive and difficult for farmlands to obtain, given the lack of credit and poor state of the road network. While Myanmar has ample supplies of natural gas from which to produce urea fertilizers.

Limited access to improved seed is a third of the problem of social impact. The recently established Public/Private Myanmar Rice Specialized Companies are designed to facilitate access to improved seed, but so far, the results have been limited. Most farmers use seed retained from the previous harvest, which tends to be of poor quality and deteriorates genetically over time.

Thus, inadequate access to fertilizers, limited access to improved seeds, lack of access to market information and it is the deficiency of knowledge of farmers. So, it should be given for the awareness to farmers.

### **Myanmar Social Impact Assessment Processes on Agriculture Land**

In Myanmar, land possession is defined in relation to land uses. Agriculture Land: Land being utilized or kept in possession for agricultural purposes. With the enactment of the 'Land Nationalization Act', all agricultural land has come under exclusive State-ownership. Farmers become tenants and have the right to cultivate only. Correspondences under Agriculture Land are not transferable and the tenant must pay land revenue.

It is also necessary to develop an umbrella land law, based on the guidelines and principles of the over-arching National Land Use Policy. This process could mobilize a genuine and inclusive, multi-stakeholder public consultation process. This law would need to address the unresolved gaps such as the recognition of customary tenure and mechanisms for conflict resolution and accountability of the authorities involved in land administration. It is also necessary to develop an umbrella land law, based on the guidelines and principles of the over-arching National Land Use Policy.

### **Findings**

The principal outcome is the study of what impact is likely to have on the environment and how to stop the overuse of land, limit the use of chemicals in agriculture; protect the rights of ethnic peoples, and enable people to participate in decisions about conservation. On the other hand, it was found out that the terms and conditions to be complied by the person who has the right to use the farmland, the farmland law and policies onwards.

And Myanmar Government needs to protect the farmland that an agricultural conservation easement is deed restriction landowners voluntarily place on their property to protect productive agriculture land. They are used by landowners to authorize a qualified conservation organization or public agency to monitor and enforce the restrictions set forth in the agreement.

### **Recommendation**

Agriculture land is a value that non-renewable natural resource. It serves several important factors for living organizations; also, it provides food products and raw materials that are used to manufacture goods throughout the world. It absorbs rainwater, helping replenish groundwater supplies and reduce flooding. It also provides a habitat for wildlife and open space that enhances the landscape. So, the government's economic development strategy gives high priority to the agriculture sector. Of the economic development objectives of the government, in the agriculture sector development is regarded as one of the major driving forces and the basis for the uplifting of social well-being. In accordance with the government's plans, the major role of the agriculture

sector is to fulfill food security, increase foreign exchange earnings through agricultural exports, and spur rural development generally.

In the field of fertilizing corps at the time of seeding, the government should provide the seeds with essential nutrients like potassium, phosphorous, and calcium. The root zone at the base of crops is the most important area to facilitate growth. In that way, corps can thrive and produce an impressive yield.

However, Myanmar silences behind in modern agriculture production. The use of machinery in agriculture will raise productivity, cut processing time and bring about economies of scale. Technological and scientific inputs are also important in boosting agricultural production. At present, agriculture production is more or less traditional in Myanmar. Modernization and expansion of agriculture require large capital requirements and modern technology. For these requirements, private sector participation, Foreign Direct Investment, and assistance from international agencies are needed. In addition, other factors such as infrastructure development both social and physical, efficient administrative procedures, and political stability within the country are required to attract foreign investment and maximize private domestic participation. Consequently, the success of agricultural development tasks as well as the acceleration of growth and development can occur. As much as progress has been made in the agriculture sector, the capital will gain and it can be used in implementing sector for national development.

### **Conclusion**

Agriculture land plays a crucial role in Myanmar's economic life. It is the backbone of our economic system. Agriculture provides not only food and raw material but also employment opportunities to a very large proportion of the population.

It is a duty to Ban Dangerous Pesticides. ... Children are especially vulnerable to pesticides because their bodies are still developing, and their diets and activities such as playing on pesticide-treated lawns or eating a lot of fruits with pesticide residue result in high exposure.

The State Peace and Development Council enacted the Fertilizer Law on 1st October 2002 with notification no. 7/2002. The objectives are to enable supporting the development of the agricultural sector which is the basic economy of the State, to enable supervision and control of the fertilizer business systematically, to enable growers to use the fertilizer of quality in conformity with the specifications, to support the conservation of soil and environment by utilizing suitable fertilizer, to enable carrying out of educative and research works extensively for the systematic utilization of fertilizer by the agriculturalist, to cooperate with government departments and organizations, international organizations and local and foreign non-governmental organizations regarding fertilizer business.

The government has protected the farmland that an Agricultural Conservation Easement (ACE) is deed restriction landowners voluntarily place on their property to protect productive agricultural land. They are used by landowners to authorize a qualified conservation organization or public agency to monitor and enforce the restrictions set forth in the agreement.

The agricultural sector is one of the most important components of our society. Farmers and ranchers produce food and fiber for human beings every day. Soil is a critical part of successful agriculture and is the original source of the nutrients that we use to grow crops. In agricultural productivity in rising will release workers from food production for employment in other sectors. Building infrastructure for rural development such as dams, roads, and railways, especially in remote areas, brings benefits to geographically disadvantaged groups and thus meets the country's social concerns. Hence, there are strong economic and social imperatives for



Myanmar to build up its agricultural base. A sound agricultural base will provide a good foundation for the development of agro, wood, marine, and other traditional resource-based industries

Today, it keeps the economy running and helps people to survive. More than half of the lands engaged and developed by human beings in the world are devoted to agriculture. Agriculture is mainly contributed to the Gross Domestic Production over the past years. At the same time, productivity has been increasing. We should protect that the farmers manage nearly half of the land in the states. It is in their interests to be good stewards of the land. In turn, well-managed agricultural land provides food and cover for wildlife.

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