

Planting Material, Pesticide, Fertilizer Import Non-Tariff Measures - An Impact Assessment

for

Department of Agriculture

Ministry of Agriculture and Forestry



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1 Summary and Conclusions

- Interviewees report that procedures at the border broadly follow those laid out in the Lao Trade Portal. However, not all businesses follow the procedures, which can lead to delays.
- Some businesses avoid the NTM procedures entirely. The NTM procedures are completely disregarded by traders who import their products in small quantities through traditional checkpoints.
- Requests for informal fees at each step of the NTM process reduce the willingness of traders and international investors to comply with NTMs.
- Please note that not all Planting Material NTMs were analyzed for this report. Only NTMs related to seeds (one subgroup of planting material) were considered.
- Controlling fertilizer and pesticide imports at the border through the current quota system is not sufficient in absence of an effective control system in the Lao market related to these products. If these quotas are removed, other approaches need to be considered to mitigate environmental risks from overuse of fertilizers and pesticides, and the economic impact of foreign imports on the local production of these products.
- There is general consensus among stakeholders that issuing import permits for Seeds, Fertilizer and Pesticides at the provincial level is ineffective, as traders may simply transport those goods to another province at a later time.
- There is consensus among stakeholders that customs data shows widespread license evasion, and NTM reform is a crucial step in addressing this serious issue.

1.1 Seeds

- Costs of the NTMs are high. At least 24 traders are affected, and these NTMs cost them an average total of 47.8 Million LAK per year.
- The overall Risk Rating for the Planting Material (Seeds) is Very Low—meaning that the need for regulation on these products is minimal.
- The costs of requiring import permits are not justified by the risk posed by these products.
- It is important to note, that there have been significant risks associated with imports of other planting materials in recent years, notably sugar cane and cassava planting material. However, those products were not covered in the scope of this assessment, and therefore the risks associated with other planting materials beyond seeds, are not factored into the risk rating in this report.

1.2 Fertilizer

- Costs of the NTMs are high. At least 142 traders are affected, and these NTMs cost them an average total of 42.7 Million LAK per year.
- The overall Risk Rating for the Pesticides and Fertilizers is High—meaning that the need for regulation on these products is crucial, and such regulation must be effective.
- The current practice of traders and officials regarding the Pesticides and Fertilizers is such that not all products actually pass inspection, and therefore the system must be changed to ensure all pesticides and fertilizers are guaranteed to be safe for Lao farmers, consumers, and the environment.
Requiring import permits is possibly justified by the risk posed by these products, but an automatic online system issuing import permits would increase accountability and efficiency for the import permit process.

1.3 Pesticides

- Costs of the NTMs are high. At least 66 traders are affected, and these NTMs cost them an average total of 114 Million LAK per year.

- The overall Risk Rating for the Pesticides and Fertilizers is High—meaning that the need for regulation on these products is crucial, and such regulation must be effective.
- The current practice of traders and officials regarding the Pesticides and Fertilizers is such that not all products actually pass inspection, and therefore the system must be changed to ensure all pesticides and fertilizers are guaranteed to be safe for Lao farmers, consumers, and the environment.
- Requiring import permits is possibly justified by the risk posed by these products, but an automatic online system issuing import permits would increase accountability and efficiency for the import permit process.

2 Recommendations

Planting Material (Seeds)

ID	Measure name	Recommendation	Reason
489	Registration	Retain	Effective so long as registration is approved in a timely manner
519	Licensing	Amend	Not effective, costly, redundant for goods which already require product registration. Import licensing should eventually be repealed completely, but in the short term those products which are already required to register should no longer require import permits.
463	Fee and Charges	Amend	Make 100% of fees payable through LNSW. Remove fees for repealed Import Licensing. Fees should be standardized nationally
391	Designated Border	Retain	Need to work with customs at smaller checkpoints to make sure this is enforced
524	Certification	Retain	Ensures quality of imports
456	Fee and Charges	Amend	Make 100% of fees payable through LNSW. Fees should be standardized nationally
392	Inspection	Amend	All plant and plant products with a phytosanitary certificate should not be inspected except in exceptional circumstances

Fertilizer

ID	Measure name	Recommendation	Reason
481	Registration	Retain	Effective so long as registration is approved in a timely manner
406	Licensing	Amend	Not effective, costly, redundant for goods which already require product registration. Import licensing should eventually be repealed completely, but in the short term those products which are already required to register should no longer require import permits.
459	Fee and Charges	Amend	Make 100% of fees payable through LNSW. Remove fees for repealed Import Licensing. Fees should be standardized nationally
407	Labelling	Retain	Important to have labels in Lao language
408	Packaging	Retain	No need to change
409	Inspection	Amend	Exceptions should be made for trustworthy firms

Pesticides

ID	Measure name	Recommendation	Reason
9	Registration	Retain	Effective so long as registration is approved in a timely manner
484	Licensing	Amend	Not effective, costly, redundant for goods which already require product registration. Import licensing should eventually be repealed completely, but in the short term those products which are already required to register should no longer require import permits
461	Fee and Charges	Amend	Make 100% of fees payable through LNSW. Remove fees for repealed Import Licensing. Fees should be standardized nationally
9	Labelling	Retain	Important to have labels in Lao language
484	Storage and Transport	Retain	No need to change
461	Inspection	Amend	Exceptions should be made for trustworthy firms

Note: Benefits and costs of these recommendations can be found in section 3.

- Import permits should be eliminated for products that already require annual product registration certificate.
- All NTM related fees should be payable through an automatic online system paid by bank transfer or debit card.
- Customs needs to share trade data recorded in ASYCUDA with all relevant authorities so that all agencies responsible for enforcing trade regulations can reference the same data.
- Authorities at the checkpoints should collect only the fees set out by Presidential Decree No.003. Fee rates should be posted publicly at the checkpoints and online so that traders can be aware of the proper rates.
- Customs should be tightly regulated, so that traders who have not completed the NTM process are not permitted to import goods. Even if all other border authorities strictly follow all regulations, these NTMs have no effect if customs does not enforce them, as they have the final authority on whether goods may enter Laos.

Other comments from interviewees suggest that:

- Offices that regulate imports should be located in one building at the border.
- Goods need to be clearly designated for regulation by one department authority only. At present there is confusion and disagreement among some departments, causing multiple departments to claim authority over the regulation of certain imports. For example, both MoH and DoLF claim authority over imports of chicken products, one viewing the good as a “food” and the other as “livestock.”
- Both Traders and Government expressed frustration that for some products it is not clear which department has jurisdiction and recommend that jurisdiction be established and publicised widely.
- Traders requested that goods inspections happen concurrently at the checkpoint, especially if a product needs to be opened and resealed. As multiple departments need to inspect certain goods for different reasons, traders request that this happen during one inspection with all representatives from different departments present.

3 Benefits and costs of change

If the recommended changes are enacted, these recommendations will realize the following benefits and costs.

- Improved business certainty & governmental transparency, resulting in improvement in Lao's international competitive rankings and ease of doing business rankings.
- Savings to Seeds traders of 11.5 million LAK annually if import permits are abolished.
- Savings to Fertilizer traders of 64.9 million LAK annually if import permits are abolished.
- Savings to Pesticide traders of 12.1 million LAK annually if import permits are abolished.
- Loss of Revenue for issuing import licenses for Seeds, Fertilizer and Pesticides of 88.5 million LAK based on known numbers of licenses issued for annum.
- Reduction in cost to consumers due to improved competition and availability of products.
- Reduction in opportunities for requests for informal payments and interference in legitimate trade.

4 NTM Analysis

4.1 Background

At the request of DIMEX, Emerging Markets Consulting (EMC) conducted a review of the NTMs for Planting Material, Pesticide and Fertilizer. The Purpose of this review was to determine if the current NTMs are justified and effective and look at potential alternatives.

The review was carried out according to the agreed NTM Review Methodology as detailed in the contract between EMC and MoIC.

Data used in this review comes from:

- Lao Trade Portal;
- Trade data supplied by DIMEX; and
- Interviews conducted in May 2018. Primary Data used in this report was obtained from interviews with representatives from the Department of Agriculture, Ministry of Agriculture and Forestry, and government officials in both the Agriculture Division and from the Checkpoint Authority (plant quarantine) in the Provincial Agriculture and Forestry Office in Vientiane Capital, Luang Namtha, Khammmuane, Savannakhet, and Champasak provinces. We also spoke with private sector traders in each of these provinces. These interviews can be found in **Annex B** of this report.
- The Review Team consisted of Project Advisor Matt van Roosmalen, Team Leader Poutavanh Sithammavanh, and Analysts Latdamone Phodsavang and Pasith Phailom. The project advisor supervised project management and reviewed and approved all secondary and primary data and analysis, also assisting with report generation. The Team Leader supervised the Analysts to conduct secondary and primary data analysis and collection, and contributed to generation of reports.

4.2 The NTMs

This report covers NTMs regarding agricultural imports from the following categories: Fertilizer, Pesticides, and Planting Material. The only planting material NTMs covered in this report are those related to seeds.

The stated legal purpose of these NTMs can be found below.

According to the individual NTM descriptions, and the stated legal purpose, the NTMs in the **Fertilizer** group are intended to increase the effectiveness of Lao agricultural production and prevent the risk of potential disease or contamination that could potentially harm consumers, farmers, or the environment. These NTMs are also intended to generate revenue for the Lao Government at both the provincial and central level. The Fertilizer NTM also includes a labeling requirement for the purpose of how to use the pesticides effectively.

Likewise, the NTMs in the **Pesticide** group are intended to prevent the risk of potential disease or contamination that could potentially harm consumers, farmers, or the environment. These NTMs are also intended generate revenue for the Lao Government at both the provincial and central level. The Pesticide NTM also includes a labeling requirement for the purpose of telling consumers how to use the pesticides effectively.

The NTMs in the **Planting Materials (seeds)** group were intended to increase the effectiveness of Lao agricultural production. Another primary purpose of the Planting Material NTMs are to ensure that imported seeds are in compliance with the WTO Sanitary and Phytosanitary Measures (SPS) Agreement. These NTMs are also intended generate revenue for the Lao Government at both the provincial and central level.

The current NTM Groups reviewed in this report and the laws they were drafted under forms **Annex A** of this report.

Table 1: NTMs Group related to the Import of Planting Material (Seeds)

ID	Measures	Description
489	Registration	Before import plant seeds, it is necessary to register with DOA, MAF.
519	Licensing	Once plant seeds registered with Department of Agriculture, MAF, importer must be obtained an import permit from Provincial Department of Agriculture and Forestry before the product can enter into Lao PDR.
463	Fee and Charges	Fee for the issuance of a permit for import of Plant Seed and Material of 25,000 kip
391	Designated Border	All imports of plants, plant product, and control material must go through a border check point approved by the Plant Protection Authority, Ministry of Agriculture and Forestry
524	Certification	Importing plant seeds must have phytosanitary certificate issued by exporting country before the product can enter into Lao PDR.
456	Fee and Charges	Fee for the issuance of a phytosanitary certificate for Import of plants of 25,000 kip
392	Inspection	All imports of plants shall be subject to inspection by a Plant Protection Officer at the border checkpoint.

Source: Lao PDR Trade Portal

Table 2: NTMs Group related to the Import of Fertilizer

ID	Measures	Description
481	Registration	To import fertilizer, it is necessary to register with Agriculture Department, Ministry of Agriculture and Forestry, except for the case stated in article 33
406	Licensing	To import fertilizer, trader must obtain a permit from Provincial Departments of Agriculture and Forestry.
459	Fee and Charges	Fee for the issuance of a permit for Import of fertilizer of 25,000 kip
407	Labelling	To import fertilizer, it must be labelled in Lao language with indicated details and information.
408	Packing	Imported and exported fertilizer must be packed into specific types of containers.
409	Inspection	Importing fertilizer must be inspected by plant protection officer at the border check point.

Source: Lao Trade Portal

Table 3: NTMs Group related to the Import of Pesticide

ID	Measures	Description
9	Registration	To import pesticide, it is necessary to register with Agriculture Department, Ministry of Agriculture and Forestry
484	Licensing	To import pesticide, it is necessary to obtain an import permit from Provincial Departments of Agriculture and Forestry.
461	Fee and Charges	Fee for the issuance of a permit for import of pesticide of 25,000 kip
9	Labelling	To import pesticide, it requires to affix labels on the pesticide container in Lao and/or English language as defined by Agriculture Department, Ministry of Agriculture and Forestry
484	Storage and Transport	The pesticide storage and transport shall be complied with the certain condition of Agriculture Department, Ministry of Agriculture and Forestry
461	Inspection	Importing pesticide must be inspected by plant protection officer at the border check point.

Source: Lao PDR Trade Portal

Stated legal purposes of NTMs

The relevant laws and regulations establishing the NTMs are also included in Annex A.

Table 4: Planting Material (Seeds)

Stated Legal Purpose

Law on Plant Protection and Quarantine (Amended) No. 13/NA, dated 15 November 2016

The Law on Plant Protection and Quarantine establishes the principles, regulations and measures on management, monitoring, inspection of plant protection and quarantine activities with the aims of preventing pest outbreaks within country, preventing the introduction and spread of pests and diseases from abroad into Lao PDR and from Lao PDR to other countries, securing the health of plants, protecting the environment, ensuring food security and commercial production, increasing quantitatively and qualitatively in line with direction on clean agriculture, green growth and sustainable development, and contributing to trade, security and development of the country.

Source: Lao PDR Trade Portal

Table 5: Fertilizer

Stated Legal Purpose

Decision on Fertilizer Management No. 2169/MAF, dated 24 October 2013

This Decision defines the principle, regulation, standards, and measures regarding management and inspection of relevant fertilizers in Lao PDR, to comply with regulations, agreements, and international conventions of which Laos is party, to protect the benefit of consumers, health of human, animal, crop, and to protect environment.

Source: Lao PDR Trade Portal

Table 6: Pesticide

Stated Legal Purpose

Decree on Pesticide Management No.258/GoL, dated 24 August 2017

This Decree defines the principles, regulations and measures regarding the use of pesticides, management and monitoring of pesticide activities to ensure the quality, efficiency and safety for humans, animals, plants and environment with the aim of allowing the agricultural and forest production to be carried out in line with clean, green and sustainable agriculture, capable to ensure regional and international integration, and contribute to the national socio-economic development.

Source: Lao PDR Trade Portal

4.3 Import Data, 2017

To examine the value of goods, number of shipments and number of companies affected by the NTMs, we used 2017 trade data provided by the Ministry of Industry and Commerce. This lists every trade shipment, including the shipment’s HS Code, Regime Code and Tax Code. We then filtered import shipments by the HS Codes subject to the NTMs being assessed.

The Lao Trade Portal has a consistent list of 32 HS Codes for each of the fertilizer NTMs at the 8 digit level. For the pesticides NTMs, there are 30 HS Codes. For plants and seeds there are around 70 HS Codes.

Table 7: Lao PDR Imports: fertilizer, pesticides, seeds; 2017

Products	Value of goods (LAK)	Number of shipments	Number of companies
Fertilizer	451,890,952,389	3,792	142
Pesticide	18,498,645,241	731	66
Seeds	6,753,274,315	468	24

Source: Ministry of Industry and Commerce.

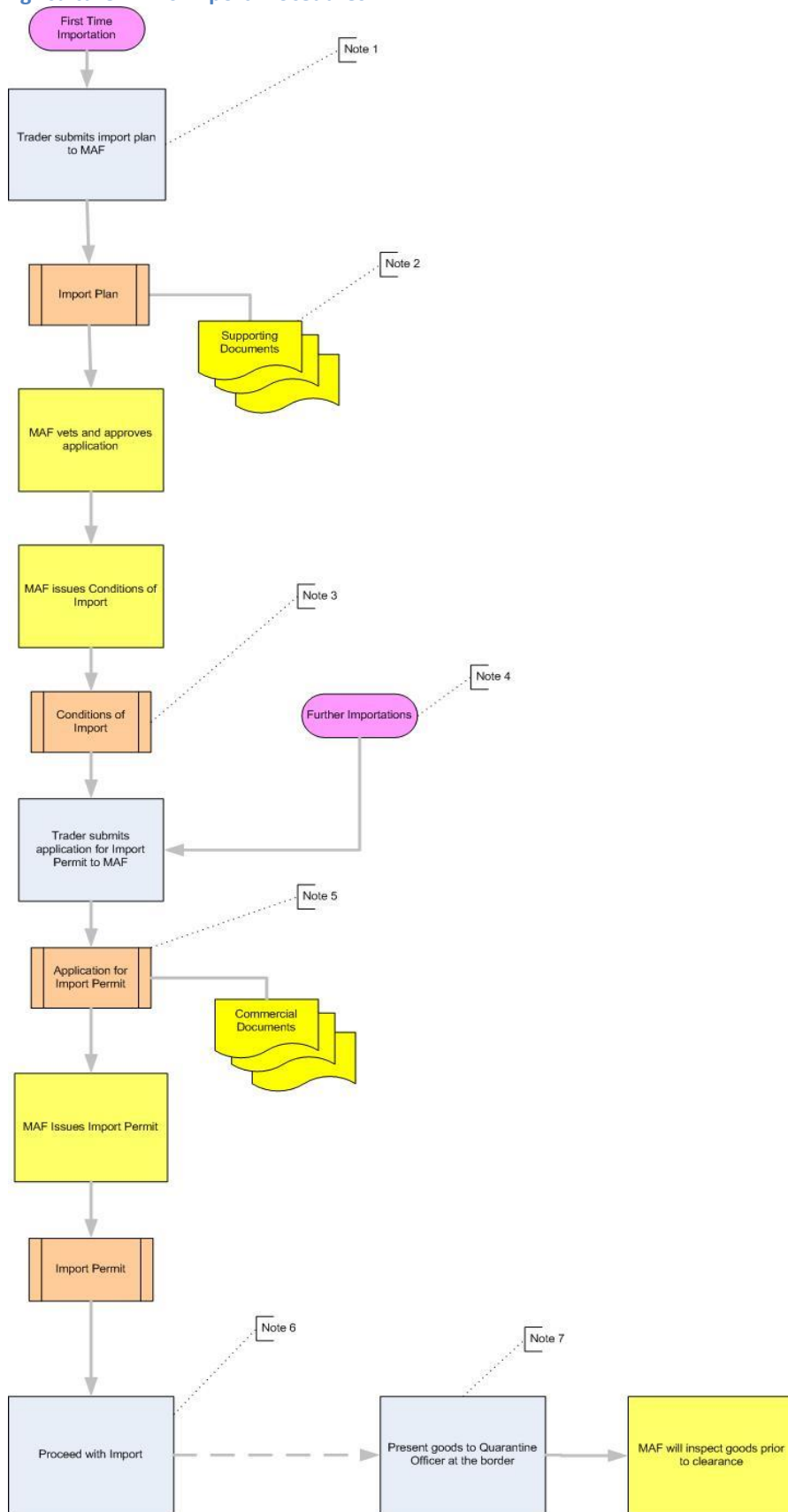
Annex C lists all the products covered by the NTMs by their 10-digit HS Codes. However, the trade data in the table above also includes shipments recorded under the equivalent 8-digit code.

4.4 Procedures

The procedure to use this NTM group (Fertilizer, Pesticide, Plants and Seeds) is the same in practice as it appears in the following diagram, with the only exception that some traders report requests for informal fees during product registration, application for import permit, and during inspection by quarantine authorities at the border.

It is important to note that some companies hire other companies (or brokers) to manage NTM related paperwork and procedures. Companies hire these brokers to save time and money; brokers are more skilled in the NTM group process and have better relationships with the involved ministries.

Table 8: Agriculture NTMs Import Procedures



Source: Lao PDR Trade Portal

The greatest difficulty with this NTM procedure is that traders must travel to Vientiane to apply for their Product Registration Certificate, and then again to pick it up (usually two weeks later). One of the reasons for this, is that the lab for testing a sample of each product is only located in Vientiane because of the high cost of equipment. One suggestion is that two additional labs be built; a northern and southern lab. The Vientiane lab could serve as a central lab.

The requirement to apply for an import permit in person for every import costs the traders time and creates an opportunity for officials to request informal fees. An online application system for an import permit could eliminate the opportunity to request informal fees and decrease the time traders spend applying for import permits. This would only be effective if the online system for import permit application was automatic and provided an option for traders to pay official fees by bank card or transfer.

4.5 Actual Process

Based on interviews with government staff and some traders, the steps laid out in the procedure diagram for this NTM group match the actual process in practice. However, some companies go directly to customs and pay an informal fee at the border, meaning that they never complete any of the steps in this NTM group. Additionally, some traders report offering or being requested to pay informal fees during product registration, application for import permit, and during inspection by quarantine authorities at the border.

Information regarding the actual process of this NTM group was collected from officials at the Department of Agriculture at the Ministry of Agriculture and Forestry, officials from the Division of Agriculture at the Provincial Department of Agriculture and Forestry in Vientiane Capital, Luang Namtha, Khammouan, Savannakhet and Champasak. Plant Quarantine Officers were also interviewed at the identified checkpoints in all five of the provinces. Traders operating each of these provinces were also interviewed.

4.6 Risk analysis

A Risk based approach was taken to assessing the impact - positive or negative – of retaining, modifying or removing the NTMs in question. The first task was to identify the Risk(s) the NTM group seeks to address. In this instance the Risk being addressed for the Pesticide and Fertilizer NTMs was potential negative impact on human, animal, plant and environmental health. The risk addressed by the Planting Material (Seeds) NTMs was low efficiency of crop production and food insecurity.

Risk was then assessed in terms of Possibility (likelihood) of the risk occurring and Severity, where severity may be treated as the impact of the Risk, should it occur.

The question of the legal requirement to have controls in place was not considered as part of the Risk Assessment. A Risk Assessment is simply an identification of the Risk being addressed and an assessment of the effectiveness of current controls, not a commentary on the legal requirement to have controls.

The following Matrix was used to assess the Raw Risk Score for the identified Risk (potential negative impact on human, animal, plant and environmental health):

Table 9: Risk Matrix - Possibility vs Severity

Pesticide and Fertilizer NTMs:

The Possibility of negative impact on human, animal, plant and environmental health was rated as **High**. The Laotian times reported that from 2014-2016 farmers were poisoned or harmed by pesticides in five northern provinces in Laos.

The Severity or Impact of Fertilizers or Pesticides having negative impact on human, animal, plant and environmental health was rated as **Very High**. These products have occasionally caused significant loss of life, and cause serious health risks to people in close contact with harmful chemicals and long term negative

impact to the environment that would be difficult to reverse. The Laotian Times reported that from 2014-

		Severity of Impact					Risk Rating for NTM
Possibility of Event	Very Low 1	Low 2	Medium 3	High 4	Very High 5		
Very Low 1	1	2	3	4	5	Very Low (1-5)	
Low 2	2	4	6	8	10	Low (6-10)	
Medium 3	3	6	9	12	15	Medium (11-15)	
High 4	4	8	12	16	20	High (16-20)	
Very High 5	5	10	15	20	25	Very High (21-25)	

2015 farmers in the north of Laos got sick and some even died from contact with imported pesticides.

The combination of Possibility and Severity for the Risk being treated was calculated to be 20 (Possibility of 4 x Severity of 5), giving an overall Raw Risk Rating of **High**.

It is important to note that while dangerous pesticides and fertilizers have the most severe effect on human lives, ineffective or fake fertilizers and pesticides can have a significant cost on the Lao economy.

Planting Materials (Seeds) NTMs:

Planting Material (seeds) NTMs: As mentioned in Section 1, it is important to note that there have been significant risks associated with imports of other planting materials in recent years, notably sugar cane and cassava planting material. However, those products were not covered in the scope of this assessment, and therefore the risks associated with other planting materials beyond seeds, are not factored into the risk rating in this report.

The Possibility of low efficiency of crop production and food insecurity was rated as **Very Low**. There have been no reports found in recent years of imported seeds causing low crop yields or food insecurity.

The Severity or Impact of low efficiency of crop production and food insecurity was rated as **Very Low**- not likely to cause low crop yields. Although certain cash crops could be affected by poor quality imported seeds, this would have relatively low impact on food security

The combination of Possibility and Severity for the Risk being treated was calculated to be 2 (Possibility of 1 x Severity of 1), giving an overall Raw Risk Rating of **Very Low**.

4.7 Risk Mitigation

Once the raw risk rating was assessed, the current mitigation for that risk was compared to the costs of intervention.

4.7.1 Seeds

The current NTMs do not help to reduce the already Very Low risk rating of Seed imports, and they involve significant cost. An unknown number of Seed imports are approved by customs without following the entire NTM procedure, or pass through informal checkpoints each year avoiding inspection, reducing the effectiveness of this NTM regime. Because these NTMs are either not understood or not followed by a number of traders and government officials throughout the chain of authority for enforcement, their effectiveness is significantly reduced.

While it is a good risk mitigation in theory to require documentation and inspection of Seeds imported into Laos, traders and government officials report that not all imports actually pass inspection or present the required documentation to customs. Additionally, traders report increasing the price of their goods to

compensate for the costs of paying formal and informal fees incurred throughout the import process. Therefore, this risk mitigation is costly to traders, government, and consumers, but is not highly effective.

Furthermore, requiring import permits is not justified by the risk the NTMs seek to address. As long as the product is registered, import licenses serve no risk mitigation purpose.

4.7.2 Costs - Seeds

Table 10 illustrates total official fees for these NTMs. Companies typically pay for a new Product Registration Certificate every 1-2 years, and neither Government officials or Traders could provide information about whether 1 or 2 year renewals are more common. The table below reflects the total cost to traders in a year where they also obtain a Product Registration.

Table 10: Total official fees – Seeds

	Number	Fee	Total cost (m LAK)
Product Registration Certificate – Seeds (Every 1-2 Years)	24	65,000	1.560
Import Permit fee	461	25,000	11.525
Total cost			13.085

Source: EMC estimates based on interviews and trade data

The costs of employing staff to obtain licenses is unique to each business but can be estimated. The average cost to obtain and use a license has been based on the average wage figures supplied by the Lao Government in the Vientiane Times on the 22nd of January 2018.

License and customs clearance positions have been treated as semi-skilled positions. The estimated value of these positions is based upon the average of a low paid Factory worker and a semi-skilled Service Sector worker.

Using the government supplied wage costs, this gives an employee a per monthly income of 1.8 Million Kip per month. If an average work month is 21-22 working days, this is a per day cost of approximately 85,000 Kip per working day in direct staff costs.

Table 11: Total labor costs

	Days	Wage	Total cost (m LAK)
Total cost	408	85,000	34.680

Source: EMC estimates

Therefore, total cost of fees and labor is about 47 million kip.

Table 12: Total costs

	Cost (m LAK)
Official fees	13.085
Labor costs	34.680
Total cost	47.765

Source: EMC estimates

Other costs in addition to those above that this review does not estimate include:

- added incentives to smuggle;
- Lao PDR businesses less internationally competitive because of higher commodity prices. This is also a barrier to international investment;
- Other economic efficiency losses and distortions because of higher commodity prices.

4.7.3 Fertilizer

The current NTMs do help to reduce the risk rating of Fertilizer imports somewhat. However, they are not entirely effective, and they involve significant cost. An unknown number of Fertilizer imports are approved by customs without following the entire NTM procedure, or pass through informal checkpoints each year avoiding inspection, reducing the effectiveness of the NTM regime. Because these NTMs are either not understood or not followed by a number of traders and government officials throughout the chain of authority for enforcement, their effectiveness is significantly reduced.

While it is a good risk mitigation in theory to require documentation and inspection of Fertilizer imported into Laos, traders and government officials report that not all imports actually pass inspection or present the required documentation to customs. Furthermore, traders report increasing the price of their goods to compensate for the costs of paying formal and informal fees incurred throughout the import process. Therefore, this risk mitigation is costly to traders, government, and consumers, but is not highly effective.

Furthermore, requiring import permits is not justified by the risk the NTMs seek to address. As long as the product is registered, import licenses serve no risk mitigation purpose.

4.7.4 Costs - Fertilizer

Table 13 illustrates total official fees for these NTMs. Companies typically pay for a new Product Registration Certificate every 1-2 years, but neither Government officials or Traders could provide information about whether 1 or 2 years renewals are more common. The table below reflects the total cost to traders in a year where they also obtain a Product Registration.

Table 13: Total official fees – Fertilizer

	Number	Fee	Total cost (m LAK)
Product Registration Certificate – Fertilizer (Every 1-2 Years)	142	65,000	9.23
Import Permit fee	2,596	25,000	64.9
Total cost			74.13

Source: EMC estimates based on interviews and trade data

The costs of employing staff to obtain licenses is unique to each business but can be estimated. The average cost to obtain and use a license has been based on the average wage figures supplied by the Lao Government in the Vientiane Times on the 22nd of January 2018.

License and customs clearance positions have been treated as semi-skilled positions. The estimated value of these positions is based upon the average of a low paid Factory worker and a semi-skilled Service Sector worker.

Using the government supplied wage costs, this gives an employee a per monthly income of 1.8 Million Kip per month. If an average work month is 21-22 working days, this is a per day cost of approximately 85,000 Kip per working day in direct staff costs.

Table 14: Total labor costs

	Days	Wage	Total cost (m LAK)
Total cost	2,414	85,000	205.2

Source: EMC estimates

Therefore, total cost of fees and labor is about 280 million kip.

Table 15: Total costs

	Cost (m LAK)
Official fees	74.13
Labor costs	205.2

Total cost	279.3
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Source: EMC estimates

Other costs in addition to those above that this review does not estimate include:

- added incentives to smuggle;
- Lao PDR businesses less internationally competitive because of higher commodity prices. This is also a barrier to international investment;
- Other economic efficiency losses and distortions because of higher commodity prices.

4.7.5 Pesticides

The current NTMs do help to reduce the risk rating of Pesticide imports somewhat. However, they are not entirely effective, and they involve significant cost. An unknown number of Pesticide imports are approved by customs without following the entire NTM procedure, or pass through informal checkpoints each year avoiding inspection, reducing the effectiveness of the NTM regime. Because these NTMs are either not understood or not followed by a number of traders and government officials throughout the chain of authority for enforcement, their effectiveness is significantly reduced.

While it is a good risk mitigation in theory to require documentation and inspection of Fertilizer, Pesticide and Seeds imported into Laos, traders and government officials report that not all imports actually pass inspection or present the required documentation to customs. Furthermore, traders report increasing the price of their goods to compensate for the costs of paying formal and informal fees incurred throughout the import process. Therefore, this risk mitigation is costly to traders, government, and consumers, but is not highly effective.

Furthermore, requiring import permits is not justified by the risk the NTMs seek to address. As long as the product is registered, import licenses serve no risk mitigation purpose.

4.7.6 Costs - Pesticides

Table 16 illustrates total official fees for these NTMs. Companies typically pay for a new Product Registration Certificate every 1-2 years, but neither Government officials or Traders could provide information about whether 1 or 2 year renewals are more common. The table below reflects the total cost to traders in a year where they also obtain a Product Registration.

Table 16: Total official fees - Pesticide

	Number	Fee	Total cost (m LAK)
Product Registration Certificate – Pesticide (Every 1-2 Years)	66	100,000	6.6
Import Permit fee	485	25,000	12.125
Total cost			18.725

Source: EMC estimates based on interviews and trade data

The costs of employing staff to obtain licenses is unique to each business but can be estimated. The average cost to obtain and use a license has been based on the average wage figures supplied by the Lao Government in the Vientiane Times on the 22nd of January 2018.

License and customs clearance positions have been treated as semi-skilled positions. The estimated value of these positions is based upon the average of a low paid Factory worker and a semi-skilled Service Sector worker.

Using the government supplied wage costs, this gives an employee a per monthly income of 1.8 Million Kip per month. If an average work month is 21-22 working days, this is a per day cost of approximately 85,000 Kip per working day in direct staff costs.

Table 17: Total labor costs

	Days	Wage	Total cost (m LAK)
Total cost	1,122	85,000	95.37

Source: EMC estimates

Therefore, total cost of fees and labor is about 114 million kip.

Table 18: Total costs

	Cost (m LAK)
Official fees	18.725
Labor costs	95.37
Total cost	114.095

Source: EMC estimates

Other costs in addition to those above that this review does not estimate include:

- added incentives to smuggle;
- Lao PDR businesses less internationally competitive because of higher commodity prices. This is also a barrier to international investment;
- Other economic efficiency losses and distortions because of higher commodity prices.

4.7.7 Conclusion and alternative risk mitigation proposal

Overall, the current NTMs regime is judged ineffective as a risk mitigation strategy. An alternative risk mitigation regime:

1. Import permits should be eliminated for products that already require annual business license and/or product registration.
2. All NTM related fees should be payable through LNSW.
3. Limiting the quantity of pesticides that traders can import helps prevent overuse, which can lead to negative health and environmental effects.
4. Customs needs to share trade data recorded in ASYCUDA with all relevant authorities so that all agencies responsible for enforcing trade regulations can reference the same data.
5. Authorities at the checkpoints should collect only the fees set out by Presidential Decree No.003. Fee rates should be posted publicly at the checkpoints and online so that traders can be aware of the proper rates.
6. Customs should be tightly regulated, so that traders who have not completed the NTM process are not permitted to import goods. Even if all other border authorities strictly follow all regulations, these NTMs have no effect if customs does not enforce them, as they have the final authority on whether goods may enter Laos.

Annex A: Laws and Regulations related to the NTMs Group:

1. Law on Plant Protection and Quarantine (Amended) No. 13/NA, dated 15 November 2016
2. Decision on Fertilizer Management No. 2169/MAF, dated 24 October 2013
3. Decree on Pesticide Management No.258/GoL, dated 24 August 2017

Annex B: Interviews

Organization/Sector	Location
Agriculture Department	Agriculture Department, Ministry of Agriculture and Forestry
Agriculture Division	Provincial Agriculture and Forestry Office of Vientiane Capital
Plant Quarantine Unit	Friendship Bridge 1, Vientiane Capital
Agriculture Division	Provincial Agriculture and Forestry Office of Luang Namtha Province
Agriculture Division	Provincial Agriculture and Forestry Office of Khammuane Province
Plant Quarantine Unit	Boten International Checkpoint, Luang Numtha Province
Plant Quarantine Unit	Friendship Bridge 3, Khammuane Province
Agriculture Division	Provincial Agriculture and Forestry Office of Savannakhet Province
Agriculture Division	Provincial Agriculture and Forestry Office of Champasak Province
Plant Quarantine Unit	Dansavanh International Checkpoint, Savahnakhet Province
Plant Quarantine Unit	Vangtao International Checkpoint, Champasak Province
Trader-Agriculture	Savahnakhet province
Trader-Agriculture	Champasak province
Trader-Agriculture	Luang Numtha Province
Trader-Agriculture	Khammuane Province
Trader-Agriculture	Vientiane Capital

Annex C: Products and HS Codes

Fertilizer

HS Code	Description
3101001100	- Of solely vegetable origin: - - Supplement fertilisers in liquid form, not chemically treated
3101001200	- Of solely vegetable origin: - - Other, chemically treated
3101001900	- Of solely vegetable origin: - - Other
3101009100	- Other: - - Supplement fertilisers in liquid form, not chemically treated
3101009200	- Other: - - Other, of animal origin (other than guano), chemically treated
3101009900	- Other: - - Other
3102100000	- Urea, whether or not in aqueous solution
3102210000	- Ammonium sulphate; double salts and mixtures of ammonium sulphate and ammonium nitrate: - - Ammonium sulphate
3102290000	- Ammonium sulphate; double salts and mixtures of ammonium sulphate and ammonium nitrate: - - Other
3102300000	- Ammonium nitrate, whether or not in aqueous solution
3102400000	- Mixtures of ammonium nitrate with calcium carbonate or other inorganic non-fertilising substances
3102500000	- Sodium nitrate
3102600000	- Double salts and mixtures of calcium nitrate and ammonium nitrate
3102800000	- Mixtures of urea and ammonium nitrate in aqueous or ammoniacal solution
3102900000	- Other, including mixtures not specified in the foregoing subheadings
3103101000	- Superphosphates: - - Feed grade
3103109000	- Superphosphates: - - Other
3103901000	- Other: - - Calcined phosphatic fertilisers
3103909000	- Other: - - Other
3104200000	- Potassium chloride
3104300000	- Potassium sulphate
3104900000	- Other
3105101000	- Goods of this Chapter in tablets or similar forms or in packages of a gross weight not exceeding 10 kg: - - Superphosphates and calcined phosphatic fertilisers
3105102000	- Goods of this Chapter in tablets or similar forms or in packages of a gross weight not exceeding 10 kg: - - Mineral or chemical fertilisers containing two or three of the fertilising elements nitrogen, phosphorus and potassium
3105109000	- Goods of this Chapter in tablets or similar forms or in packages of a gross weight not exceeding 10 kg: - - Other
3105200000	- Mineral or chemical fertilisers containing the three fertilising elements nitrogen, phosphorus and potassium
3105300000	- Diammonium hydrogenorthophosphate (diammonium phosphate)
3105400000	- Ammonium dihydrogenorthophosphate (monoammonium phosphate) and mixtures thereof with diammonium hydrogenorthophosphate (diammonium phosphate)
3105510000	- Other mineral or chemical fertilisers containing the two fertilising elements nitrogen and phosphorus: - - Containing nitrates and phosphates
3105590000	- Other mineral or chemical fertilisers containing the two fertilising elements nitrogen and phosphorus: - - Other
3105600000	- Mineral or chemical fertilisers containing the two fertilising elements phosphorus and potassium
3105900000	- Other

Pesticides

HS Code	Description
3808501000	- Goods specified in Subheading Note 1 to this Chapter: - - Insecticides
3808502100	- Goods specified in Subheading Note 1 to this Chapter: - - Fungicides: - - - In aerosol containers
3808502900	- Goods specified in Subheading Note 1 to this Chapter: - - Fungicides: - - - Other
3808503100	- Goods specified in Subheading Note 1 to this Chapter: - - Herbicides: - - - In aerosol containers
3808503900	- Goods specified in Subheading Note 1 to this Chapter: - - Herbicides: - - - Other
3808504000	- Goods specified in Subheading Note 1 to this Chapter: - - Anti-sprouting products
3808505000	- Goods specified in Subheading Note 1 to this Chapter: - - Plant-growth regulators
3808506000	- Goods specified in Subheading Note 1 to this Chapter: - - Disinfectants
3808509100	- Goods specified in Subheading Note 1 to this Chapter: - - Other: - - - Wood preservatives, being preparations other than surface coatings, containing insecticides or fungicides
3808509900	- Goods specified in Subheading Note 1 to this Chapter: - - Other: - - - Other

3808911100	- Other: - - Insecticides: - - - Intermediate preparations for the manufacture of insecticides: - - - - Containing 2-(1-Methylpropyl) phenol methylcarbamate)
3808911900	- Other: - - Insecticides: - - - Intermediate preparations for the manufacture of insecticides: - - - - Other
3808912000	- Other: - - Insecticides: - - - In the form of mosquito coils
3808913000	- Other: - - Insecticides: - - - In the form of mosquito mats
3808919100	- Other: - - Insecticides: - - - Other: - - - - In aerosol containers: - - - - - Having a deodorising function
3808919200	- Other: - - Insecticides: - - - Other: - - - - In aerosol containers: - - - - - Other
3808919300	- Other: - - Insecticides: - - - Other: - - - - Other: - - - - - Having a deodorising function
3808919900	- Other: - - Insecticides: - - - Other: - - - - Other: - - - - - Other
3808921100	- Other: - - Fungicides: - - - In aerosol containers: - - - - With a validamycin content not exceeding 3% by net weight
3808921900	- Other: - - Fungicides: - - - In aerosol containers: - - - - Other
3808929000	- Other: - - Fungicides: - - - Other
3808931100	- Other: - - Herbicides, anti-sprouting products and plant-growth regulators: - - - Herbicides: - - - - In aerosol containers
3808931900	- Other: - - Herbicides, anti-sprouting products and plant-growth regulators: - - - Herbicides: - - - - Other
3808932000	- Other: - - Herbicides, anti-sprouting products and plant-growth regulators: - - - Anti-sprouting products
3808933000	- Other: - - Herbicides, anti-sprouting products and plant-growth regulators: - - - Plant-growth regulators
3808941000	- Other: - - Disinfectants: - - - Containing mixtures of coal tar acid and alkalis
3808942000	- Other: - - Disinfectants: - - - Other, in aerosol containers
3808949000	- Other: - - Disinfectants: - - - Other
3808991000	- Other: - - Other: - - - Wood preservatives, containing insecticides or fungicides
3808999000	- Other: - - Other: - - - Other

Planting Material (Seeds)

HS Code	Description
0701100000	- Seed
0909210000	- Seeds of coriander: - - Neither crushed nor ground
0909310000	- Seeds of cumin: - - Neither crushed nor ground
0909611000	- Seeds of anise, badian, caraway or fennel; juniper berries : - - Neither crushed nor ground: - - - Of anise
0909612000	- Seeds of anise, badian, caraway or fennel; juniper berries : - - Neither crushed nor ground: - - - Of badian
0909613000	- Seeds of anise, badian, caraway or fennel; juniper berries : - - Neither crushed nor ground: - - - Of caraway
0909619000	- Seeds of anise, badian, caraway or fennel; juniper berries : - - Neither crushed nor ground: - - - Other
1002100000	- Seed
1003100000	- Seed
1004100000	- Seed
1005100000	- Seed
1007100000	- Seed
1008210000	- Millet: - - Seed
1209100000	- Sugar beet seeds
1209210000	- Seeds of forage plants: - - Lucerne (alfalfa) seeds
1209220000	- Seeds of forage plants: - - Clover (Trifolium spp.) seeds
1209230000	- Seeds of forage plants: - - Fescue seeds
1209240000	- Seeds of forage plants: - - Kentucky blue grass (Poa pratensis L.) seeds
1209250000	- Seeds of forage plants: - - Rye grass (Lolium multiflorum Lam., Lolium perenne L.) seeds.
1209291000	- Seeds of forage plants: - - Other: - - - Timothy grass seeds
1209292000	- Seeds of forage plants: - - Other: - - - Other beet seeds
1209299000	- Seeds of forage plants: - - Other: - - - Other
1209300000	- Seeds of herbaceous plants cultivated principally for their flowers
1209911000	- Other: - - Vegetable seeds: - - - Onion seeds
1209919000	- Other: - - Vegetable seeds: - - - Other
1209991000	- Other: - - Other: - - - Rubber tree seeds or kenaf seeds
1201100000	- Seed
1202300000	- Seed
1204000000	Linseed, whether or not broken.
1205100000	- Low erucic acid rape or colza seeds
1206000000	Sunflower seeds, whether or not broken.
1207101000	- Palm nuts and kernels: - - Suitable for sowing
1207210000	- Cotton seeds: - - Seed

1207290000	- Cotton seeds: - - Other
1207300000	- Castor oil seeds
1207401000	- Sesamum seeds: - - Edible
1207409000	- Sesamum seeds: - - Other
1207500000	- Mustard seeds
1207600000	- Safflower (Carthamus tinctorius) seeds
1207700000	- Melon seeds
1207994000	- Other: - - Other: - - - Illipe seeds (Illipe nuts)
1207999000	- Other: - - Other: - - - Other
1207910000	- Other: - - Poppy seeds