

## Geographic Coverage

In the first year, the geographic spread of the project will occupy major rice growing townships in three regions with a maize pilot project in S. Shan State:

Region	Township
Ayeyarwady	Bogale
	Einme
	Maubin
	Myaungmya
	Nyaungdon
Bago	Pantanaw
	Bago
	Daik-U
	Letpadan
	Nyaunglebin
Yangon	Thayarwady
	Hlegu
	Htantabin
	Kyauktan
	Taikkyi
Thanlyin	

## Collaboration and Leveraging of Resources

FSI+ is a collaborative effort, involving a range of stakeholders. FSI+ engages with NGOs, private enterprise, international organizations and government for the benefit of smallholder farmers and small agribusinesses.

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## Fertilizer Sector Improvement (FSI+) Project



### The Fertilizer Sector Improvement Project

The Fertilizer Sector Improvement (FSI) project started as a three-year project in March 2014, funded by the United States Agency for International Development. In March 2015 it was expanded and extended to a five-year project, referred to as FSI+. Its goal is to *Increase incomes and enhance food security for smallholder farmers in target districts in Myanmar.*

FSI+ promotes the judicious application of balanced fertilizer with urea deep placement (UDP) as well as use of good quality seed and better water management practices. The project will encourage the efficiencies of demand and supply of agricultural inputs with an emphasis on manufacture and sales of urea briquettes. In addition, it will strengthen the capacity of fertilizer retailers to improve their business management and provide an advisory service to farmers concerning the products offered at local fertilizer retail shops.

An estimated 52,000 farmers will benefit from FSI+ through higher crop yields and gross margins. Thirty-five small businesses will share the cost of the machinery required to produce fertilizer briquettes and establish supply points to afford farmers access to UDP products.

### **Smallholder Production Systems**

Rice is the dominant crop in Myanmar. Most farmers are smallholders (< 2 ha), practicing a low input: low output, subsistence production system. Aspirations to support the farm family require increased productivity, market predictability and risk management, all of which are out of reach. FSI+ will address productivity with an emphasis on fertilizer management in the rice-rice and rice-gram cropping patterns as well as a small pilot on the productivity in a maize cropping system (in S. Shan State). The project will impact productivity in rice, gram or maize through increasing crop yields. It is expected that yields will increase by 15-20 percent and gross margins by 15 percent.

### **Urea Deep-Placement Technology**

UDP technology is extremely well suited to rice production, and use in other crops shows good results. It involves point placement of a large size (1.8 to 2.7 grams) urea particle at a depth of 10 cm near the root zone of the plant. On average, farmers may realize an increase of 500 kg per hectare from the use of UDP technology.

The benefit from UDP is derived from more efficient use of nitrogen. When urea is broadcast onto the surface of a paddy field, as much as 70 percent is lost. UDP technology reduces “losses” of applied urea by up to 50 percent. It improves nitrogen use efficiency and offers environmental benefits due to reduced nutrient loss.

### **Project Activities**

FSI+ activities are designed to achieve results in improving farmer demand for UDP technology, improving access to supply of UDP products, supporting balanced fertilizer use, developing capacity to achieve sustainability in market development, improving soil fertility management and expanding farm advisory services to farmers.

The FSI+ project will implement its activities through a grants program offered to nongovernmental organizations and private sector candidates with a capability to deliver results. Over the five-year term, FSI will implement:

- 90 on-farm trials for UDP technology.
- 186 field demonstrations of UDP technology.
- 393 batches of farmer training with 30 farmers in each batch (50 percent women farmers).
- 59 field days within demonstration plots.
- 15 motivational field trips for farmer cross visits – tasking new recruits to more experienced farmers to learn from their experience.
- 3 national workshops to engage stakeholders and report results.

To inform and measure impact the project will:

- Complete a fertilizer market assessment with a focus on input dealer mapping.
- Complete a baseline survey at startup.
- Take crop cuts in farmer fields at each season harvest.
- Complete a farmer gross margin interview at time of crop cut.
- Complete a household survey to enumerate the adoption of the technology.

Cross-cutting activities, such as capacity building, inclusion of women farmers and entrepreneur beneficiaries, and institutional strengthening, will be emphasized under FSI+.

- The relationship between women’s adoption of UDP technology and their empowerment in agriculture will be tested.
- FSI+ will seek opportunities to build capacity in the Ministry of Agriculture and Irrigation, particularly the Department of Agriculture and Department of Agricultural Research staff.