



# CASE STUDIES FACTSHEET

<b>Nº: 1</b>
<b>Date of Interview:</b> .....8./25/2016.....
<b>Enumerator name:</b> OhnThein

## I. GENERAL INFORMATION

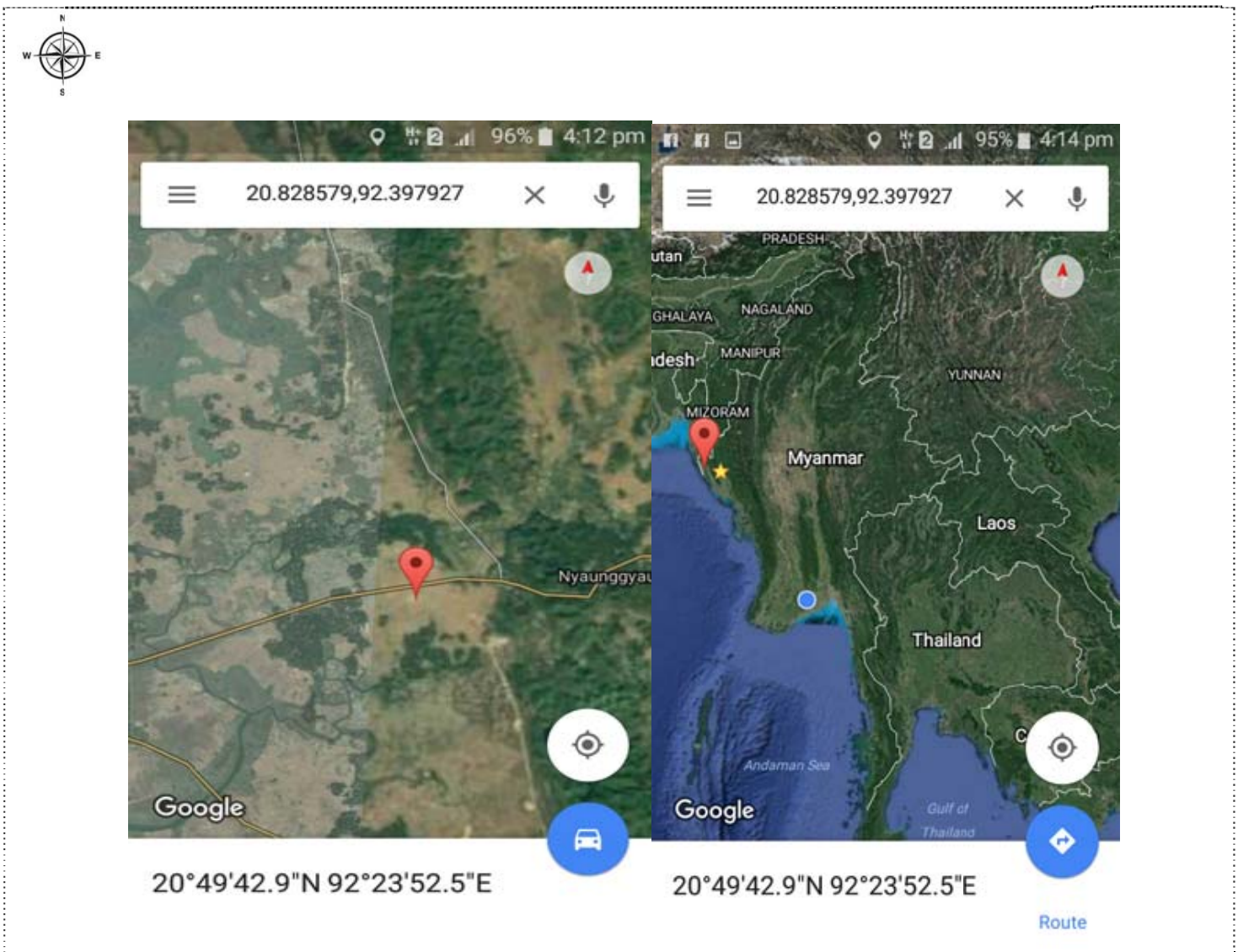
Support organization name အဖွဲ့အစည်းအမည်	GRET-NRS		
Stakeholder classification အဖွဲ့အစည်းအမျိုးအစား	Specify ( ဖော်ပြပါ )		
<input type="checkbox"/> Governmentအစိုးရ			
<input type="checkbox"/> Civil society organizationsလူထု			
<input type="checkbox"/> University / Research institutes တက္ကသိုလ်၊ သုတေသန			
<input type="checkbox"/> Private sectorပုဂ္ဂိုလ်က			
<input type="checkbox"/> Otherအခြား	INGO		
Contact detail	Name:ဆက်သွယ်ရန်အမည် ... OhnThein	Position:ရာထူး	Deputy tec advisor
		Tel:ဖုန်း	09425273103
Location နေရာအရပ်	B1, Kan st., Hlaing, Yangon		
Type of Agro-ecology schoolsဂေဟစိုက်ပျိုးရေးအမျိုးအစား	Specifyဖော်ပြရန်		
<input type="checkbox"/> Conservation agricultureထယ်ထိုးထွန်မြေခြင်းမရှိသောစိုက်နည်းစနစ်			
<input type="checkbox"/> Organic agriculture ဩဂျစ်စိုက်စနစ်	Green manure application on paddy cultivation		
<input type="checkbox"/> IPMဘက်စုံပိုးမွှားရောဂါကာကွယ်နှိမ်နင်း			
<input type="checkbox"/> Agro-forestryသီးနှံသစ်တောရောနှောစိုက်			
<input type="checkbox"/> VAC/Integrated farming systemသီးနှံသားငါးဘက်စုံစိုက်ပျိုးမွေးမြူခြင်း			
<input type="checkbox"/> System of Rice Intensification တစ်ပင်ခြင်းစပါးစိုက်ပျိုးခြင်း			

## II. FARM BACKGROUND စိုက်ပျိုးခင်းနောက်ခံအကြောင်းအရာ

	Detail information
Small farmers (family size & Labor)မိသားစုလုပ်အား နှင့် အငှားလုပ်အား	Family labors
Land ownership မြေယာပိုင်ဆိုင်မှု	Farmer own
Choice of crops and cultivation methods သီးနှံရွေးချယ်ပုံ နှင့် စိုက်နည်းစနစ်များ	paddy

Year in practice (>2-3 cropping cycles) ဤစိုက်နည်းစနစ်အသုံးချခဲ့သောကာလအကြိမ်အရေအတွက်	2 times in 2 years
Economic benefit အကျိုးအမြတ်ရရှိမှု	Yield increment of 1.25 t/ha that might have been contributed by about 54kg N from green manure practice had secured food need of a family of 4 members for 2.5 months
Main market outlets အဓိကရောင်းချရသောဈေးကွက်	Local traders
Peer-farmers adoption အနီးအနားရှိအခြားတောင်သူများအတုယူဆောင်ရွက်မှုအခြေအနေ	Diffused to 40 farmers

III. AE LAND LOCATION AND TRANSECT LANDSCAPE မြေကွက် နေရာတည်ရှိရာမြေပုံနှင့် ဘေးဝန်းကျင်မြေမျက်နှာသွင်ပြင်ဆက်စပ်မှု



IV. DESCRIPTION OF INITIATIVE (BACKGROUND, REASON FOR STARTING THE INITIATIVE / GETTING INVOLVED, TECHNICAL SUPPORT RECEIVED, ECONOMIC ANALYSIS / PERFORMANCE, LESSON LEARNT, ETC.) ဤစိုက်ပျိုးမွေးမြူနည်းစနစ်ဖော်ပြချက်

(နောက်ခံသမိုင်း၊ ဤသို့ တီထွင်လာခြင်းအကြောင်းခံတရား၊ ပံ့ပိုးကူညီပေးခဲ့သူ၊ စီးပွားရေးတွက်ချေကိုက်မှု တွက်ချက်ပြခြင်း၊ ရရှိလာသောသင်ခန်းစာများနှင့် ဗဟုသုတအသစ်များ

**BACKGROUND**

The population density of Northern Rakhine State is very high (356/sq km) and the farmers are very poor. Most of them are small-holders and landless who grow rice but always struggle to meet their whole year food requirement. Although the soils are low-fertile with a bit sandy in texture, farmers cannot afford to apply chemical fertilizers. Discovering that the rainfall distribution and a few short live varieties used in the area could allow deploying the benefit from green manure practice, GRET collaborated with a bold and interested farmer to test the green manure practice in 2014. The result is really astounding with high appreciation by farmers to adopt the practice in 2015.

**REASON FOR STARTING THE INITIATIVE / GETTING INVOLVED**

Green manuring “involves the soil incorporation of any field or forage crop while green or soon after flowering for the purpose of soil improvement.” Green manures are effective alternatives to chemical fertilizers in the management and preservation of soil fertility and productivity, adding organic matter and nutrients to the soil as well as protecting surface soil from damage due to wind, rain and sun. Characteristics of green manures include a crop that is fast growing with rapid decomposition and quick nutrient release.

**TECHNICAL SUPPORT RECEIVED**

- Location: Kan Kya, Maungdaw, Myanmar
- Farmer’s name: Sulay Man
- Plot size: 0.50 ha
- Land preparation: 20 May 2014
- Green manure (sunn hemp) sowing in line: 21 May 2014
- Seed rate: 12 Kg/ha-local variety

*Crotalaria juncea* is a fast growing green manure plant that can fix N as high as 120 kg/ha in 50 days. It was grown in 1 feet row spacing with a seed rate of 12 kg/ha on 21May.



Green manure planting and cutting down before paddy

After 50 days from sowing at plant height of 1m, they were cut down and chopped into smaller pieces by swords swinging and incorporated into soils by a plough and left for 22 days.



Paddy responses to green manure

Then rice seedlings of a local high yielding short live variety were transplanted. The farmers field visit organized at-harvest time.

ECONOMIC ANALYSIS / PERFORMANCE

The green manure treated yield was 3.90 t/ha against the control yield 2.65 t/ha. An increase in yield of 1.25 t/ha that must have been contributed by about 54kg N from green manure practice had secured food need of a family of 4 members for 2.5 months.

LESSON LEARNT

Green manure application was much more effective on the paddy in fair land and upland than that in water-logged area once it did not love water logging while its growing stage.

It would be good to start green manure planting in rows after the first rain in the third week of May in Myanmar to save its growing time of 50-60 days.

Flooding period after incorporation was in need of 15 days for complete releasing organic acids and gases that would be toxic to younger paddy.

V. POTENTIAL ON SCALING UP – DISSEMINATION နောင်တွင် ဤနည်းပညာကျယ်ပြန့်ပွားများလာနိုင်မှု

Forty farmers have copied this practice in 2015 rice growing season with the practice of growing *C. juncea* on farm boundary to save seeds for next year need with the mobilization of village development committees formed by the project in conformity with community action plans.

VI. ADDITIONAL INFORMATION AND SUGGESTION အခြားဖော်ပြလိုသော အချက်များ နှင့် အကြံပြုချက်များ

Sunn-hemp of the green manure plants was more vigorous and better growth than other green manure plants: black gram, green gram, sesbania, rice bean, and cow pea.

*Cassia tora* (ဒန့်ကျွဲပင်), a variety of legume would be potential in Myanmar for future green manure taken into consideration with plenty of seed and vigorous growth; second only to sunn hemp.



Cassia tora plant

VII. MESSAGE FROM FARMER TO FARMERS တောင်သူများအချင်းချင်းဖလှယ်သောသတင်းအချက်အလက်များအသိပညာများအကြံပြုချက်များ



Knowledge-sharing

Growing sunn hemp was not too laborious, not too costly, and no risk for lost but no doubt, paddy responds well to green manure; it looked like nitrogen fertilizer application. Actually, they had not enough cow-dung in the village. Similarly, they could not produce enough compost with farm residuals. Green manure was pave a way of improving organic source in their soils.

*Farmers shared about green manure that was good for paddy growth thanks to former agronomists. However, they hadn't started yet. With the continuous attempt of PHASE-IN staff, they gained this knowledge and deeply under as the saying goes: "Seeing makes believing". Next monsoon, they were sure to grow sunn-hemp before paddy.*

Once green manure practice had no risk for crop loss, it would be good to take into consideration for future paddy cultivation as low cost-high profit and organic farming practice.