

# Abandoned Farmland and Its Causes in Eastern Bhutan: A Case Study in Phongmey Gewog



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# 1. BACKGROUND

Agriculture is main subsistence activity for the people living in rural area of Bhutan. Despite limited arable land, agriculture contributes significantly to the national food-security in terms of self-sufficiency at household level in the country.

Agriculture areas: 2.9%

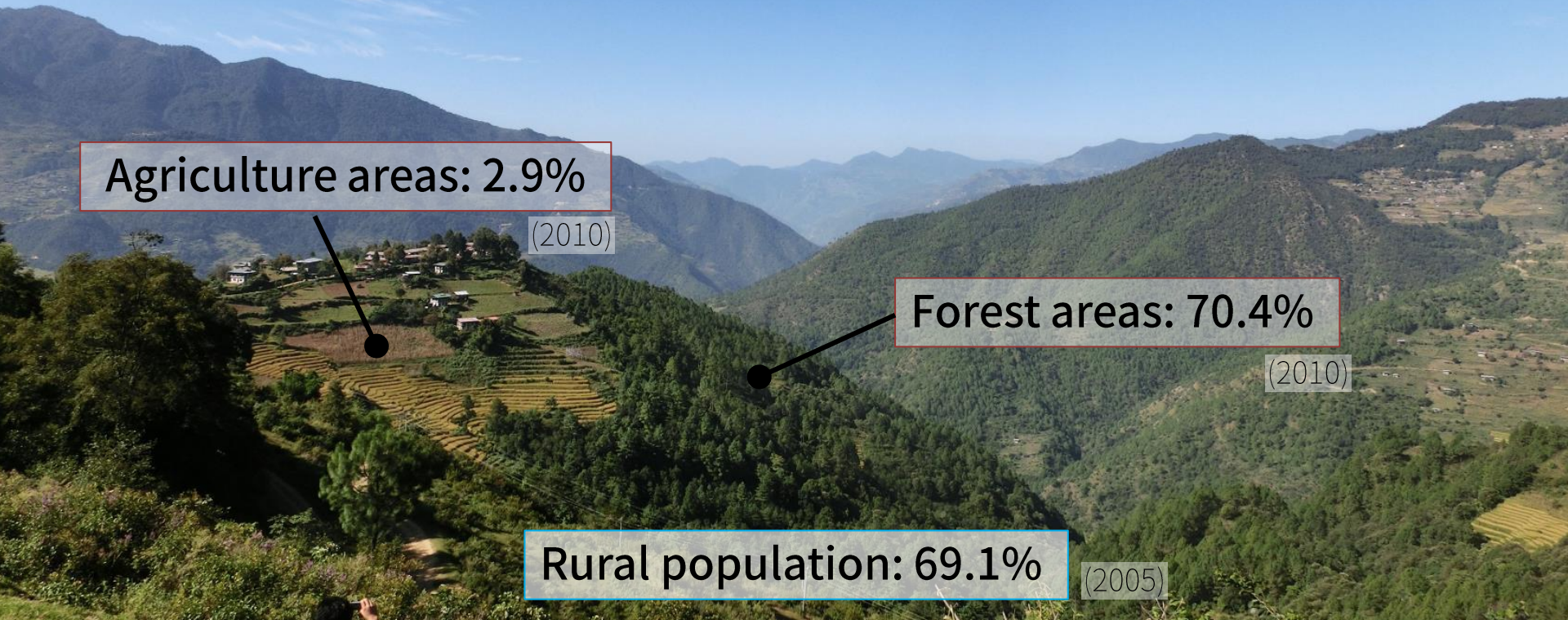
(2010)

Forest areas: 70.4%

(2010)

Rural population: 69.1%

(2005)



## ◆ His Majesty addresses the Nation(2016)

...Over the years, there are **increasing numbers of *Gungtong***, and I find that **large portions of land continue to be left fallow across the country**. The people, especially the young, have been leaving their villages for towns in greater numbers. I am deeply concerned that they will encounter unemployment and other difficulties in urban areas, and begin to despair...

### ➤ Aims of Presentation

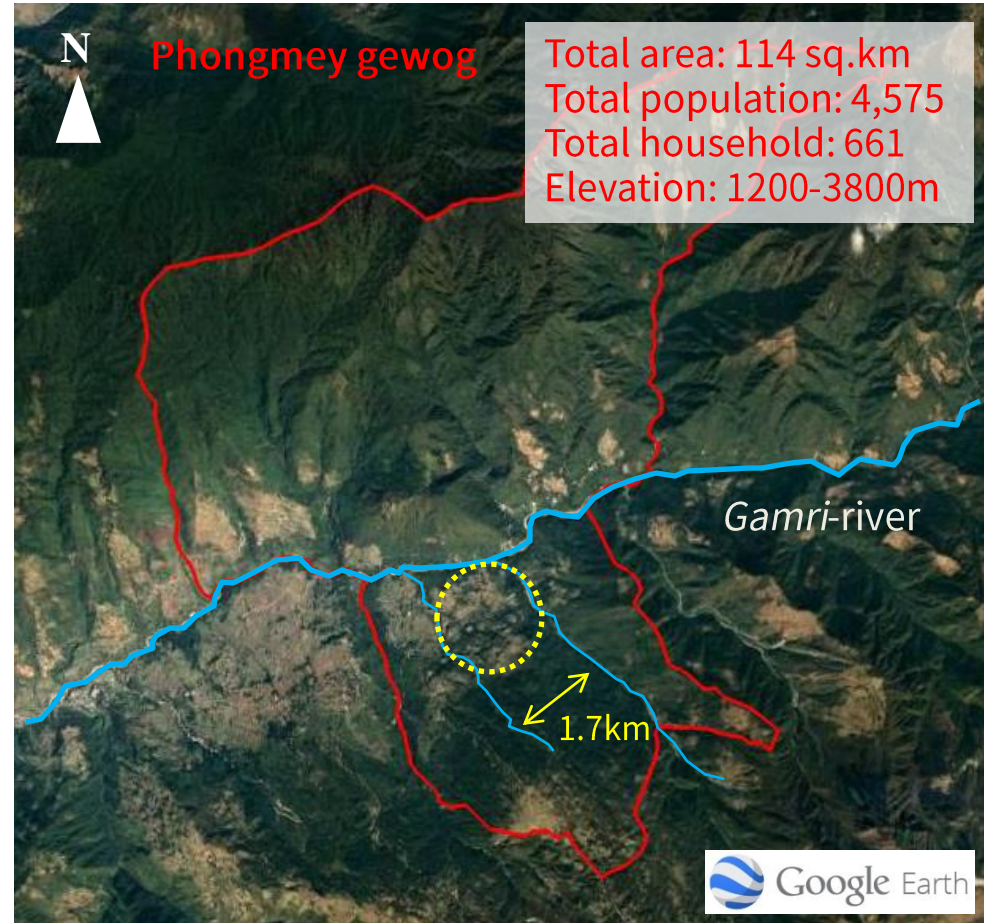
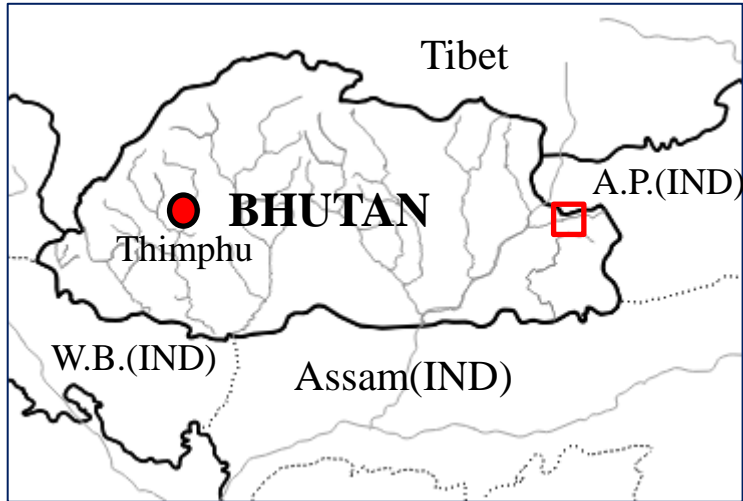
- To introduce current situation of farmland abandonment in the village of eastern Bhutan
- To reveal the causes and driving forces of farmland abandonment



Address to Nation in 2016  
(<http://www.bbs.bt/news/?p=64599>)

## 2. STUDY AREA & METHOD

### ➤ **Phongmey Gewog**, Trashigang Dzongkhag, Bhutan



### ➤ **Field Work**

Period: November-December, 2016

- Interview survey using structured questionnaire  
➔ 81 households
- Land use survey using GPS and aerial photos

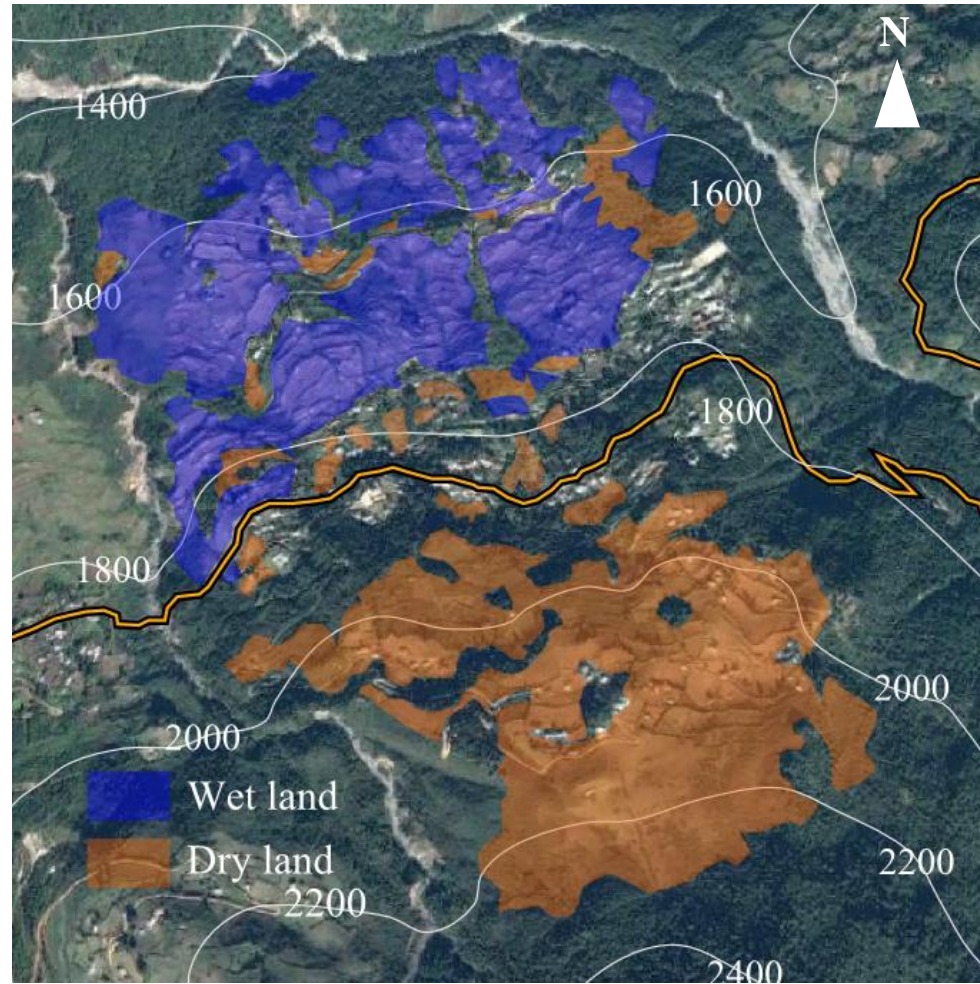
# 3. RESULT & DISCUSSION

## ➤ Land use of study area

~1800m: Wet land(*arin/chuzhing*)



1800m~: Dry land(*un/kamzhing*)



Distribution of wet land and dry land

# ➤ Current condition of farmland

Area and Percentage of cultivated and abandoned farmland

## Total

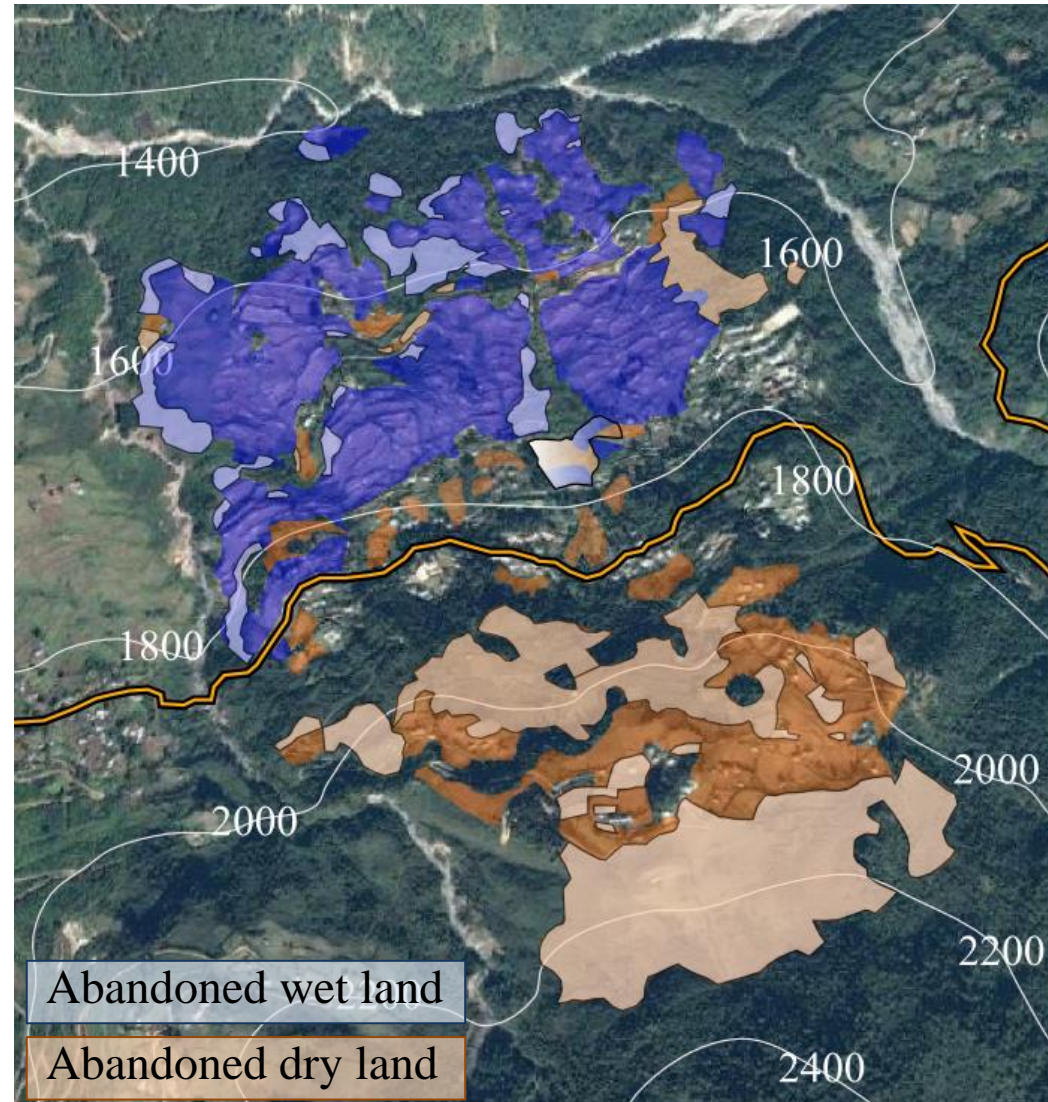
	Area(ac)	Percent
Cultivated	96.8	62.0
Abandoned	59.4	<b>38.0</b>
Total	156.2	100

## Wet land

	Area(ac)	Percent
Cultivated	58.4	87.2
Abandoned	8.6	<b>12.8</b>
Total	67.0	100

## Dry land

	Area(ac)	Percent
Cultivated	38.4	42.0
Abandoned	53.0	<b>58.0</b>
Total	91.4	100



# ➤ Year of Abandonment

Land type	Year					Total
	~1999	2000~04	2005~09	2010~	n/a	
Wet land(ac)	0	3.5	1.8	2.1	1.2	8.6
Dry land(ac)	10.9	4.7	15.4	11.2	10.8	53.0

Abandoned dry land(ca.1993~)



Abandoned dry land(ca.2005~)

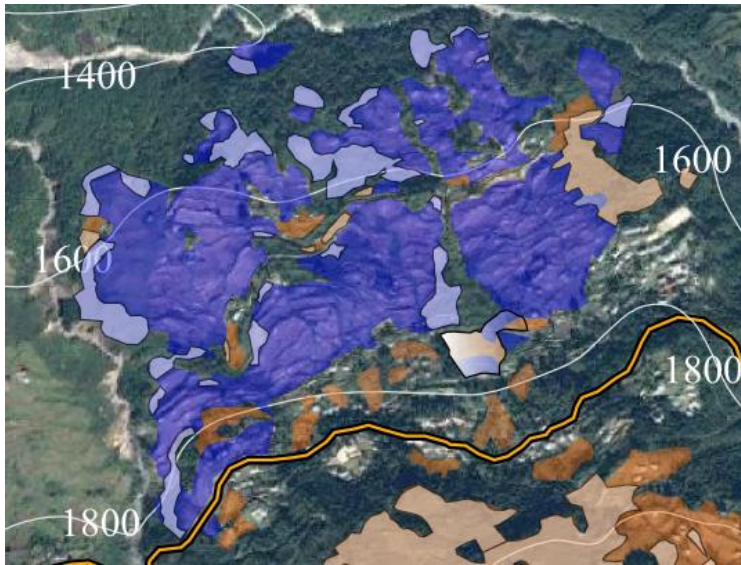
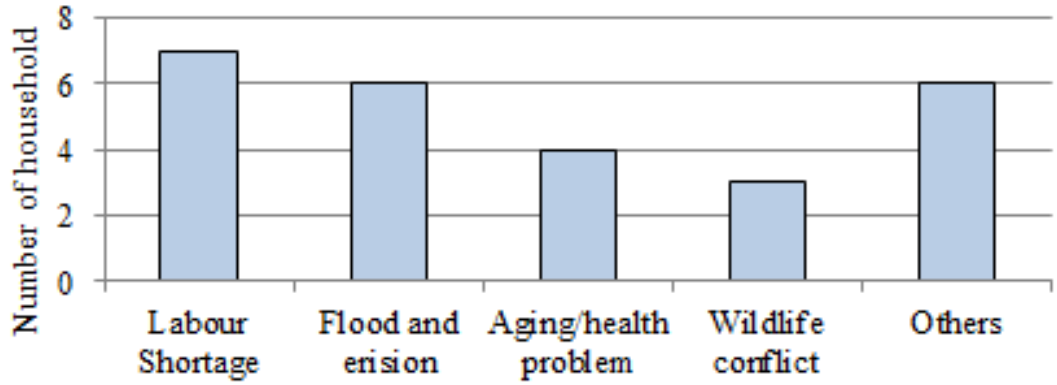


Abandoned wet land(2014~)

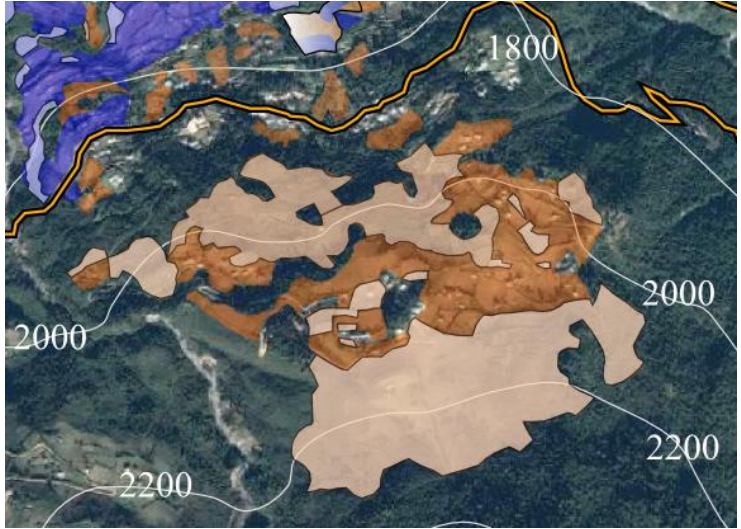
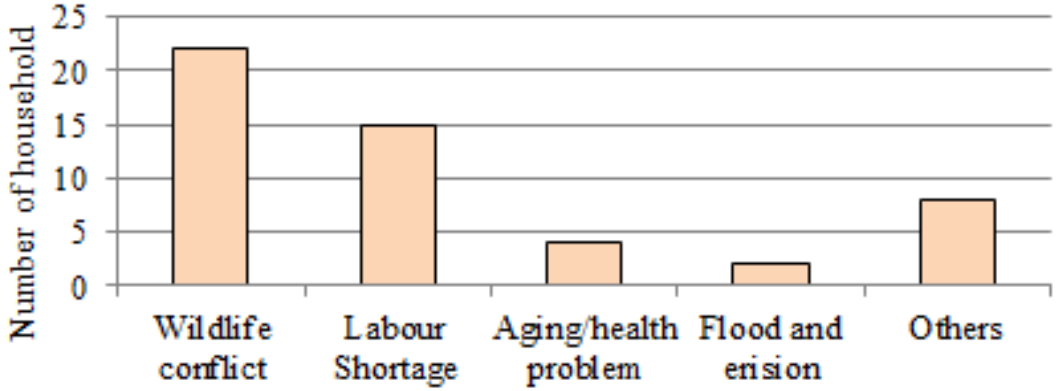


# Reasons of Abandonment

## a) Wet land (n=18/81)



## b) Dry land (n=37/81)





# ➤ Labour shortage - Migration

Member Status	Frequency	Percent
Present	330	56.6
Absent	253	<b>43.4</b>
Total	583	100.0

Ave. present household size: 3.8  
➡ Available for agriculture: **2.3**  
(Male: 0.9, Female: 1.4)

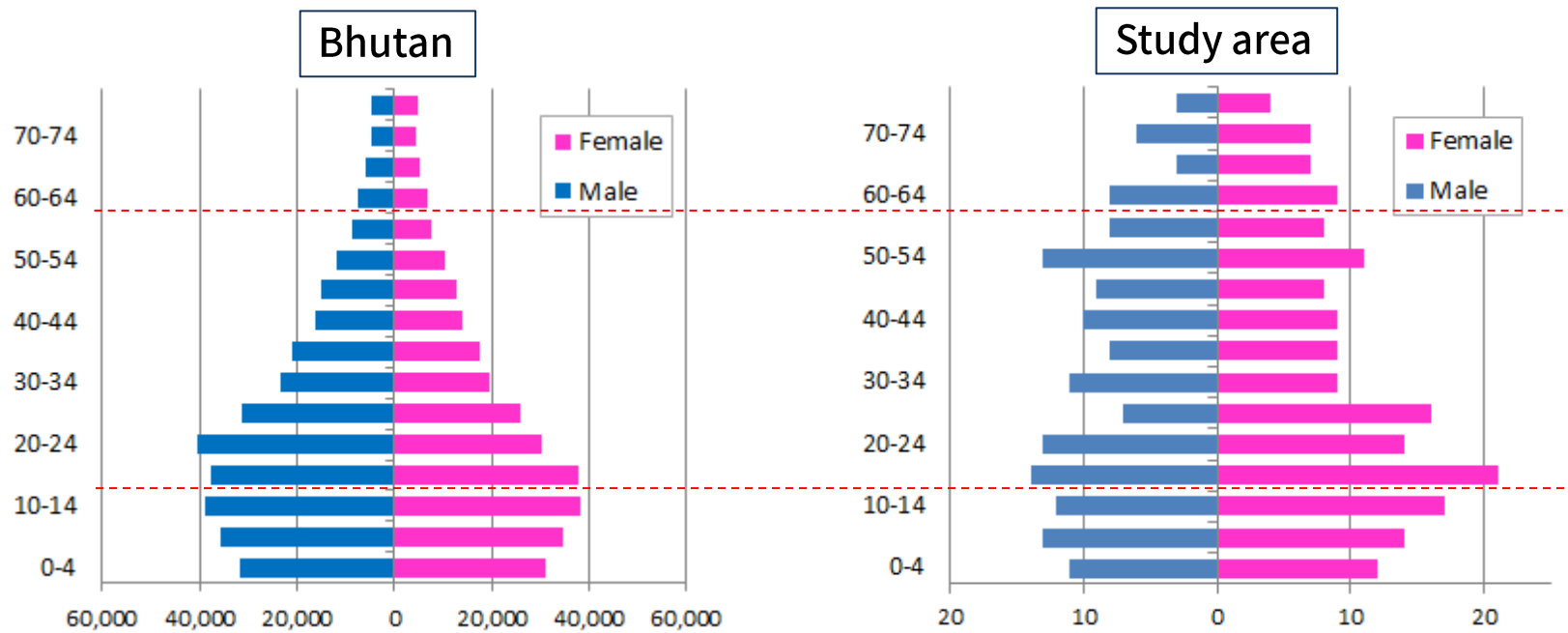
## < Farming problems > (farmer's comments)

- ▶ Not enough labour in house
- ▶ Labour shortage during planting, protection of crops and harvesting
- ▶ Children cannot help agricultural work because of study in the school
- ▶ Less person for labour exchange in the community
- ▶ Labour charge is increasing and it make difficulty to employ labour



Woman harvesting paddy alone(Radhi,2015)

# ➤ Labour shortage - Ageing



Population pyramid in Bhutan(2005)\* and Studied Household in Phongmey(2017)

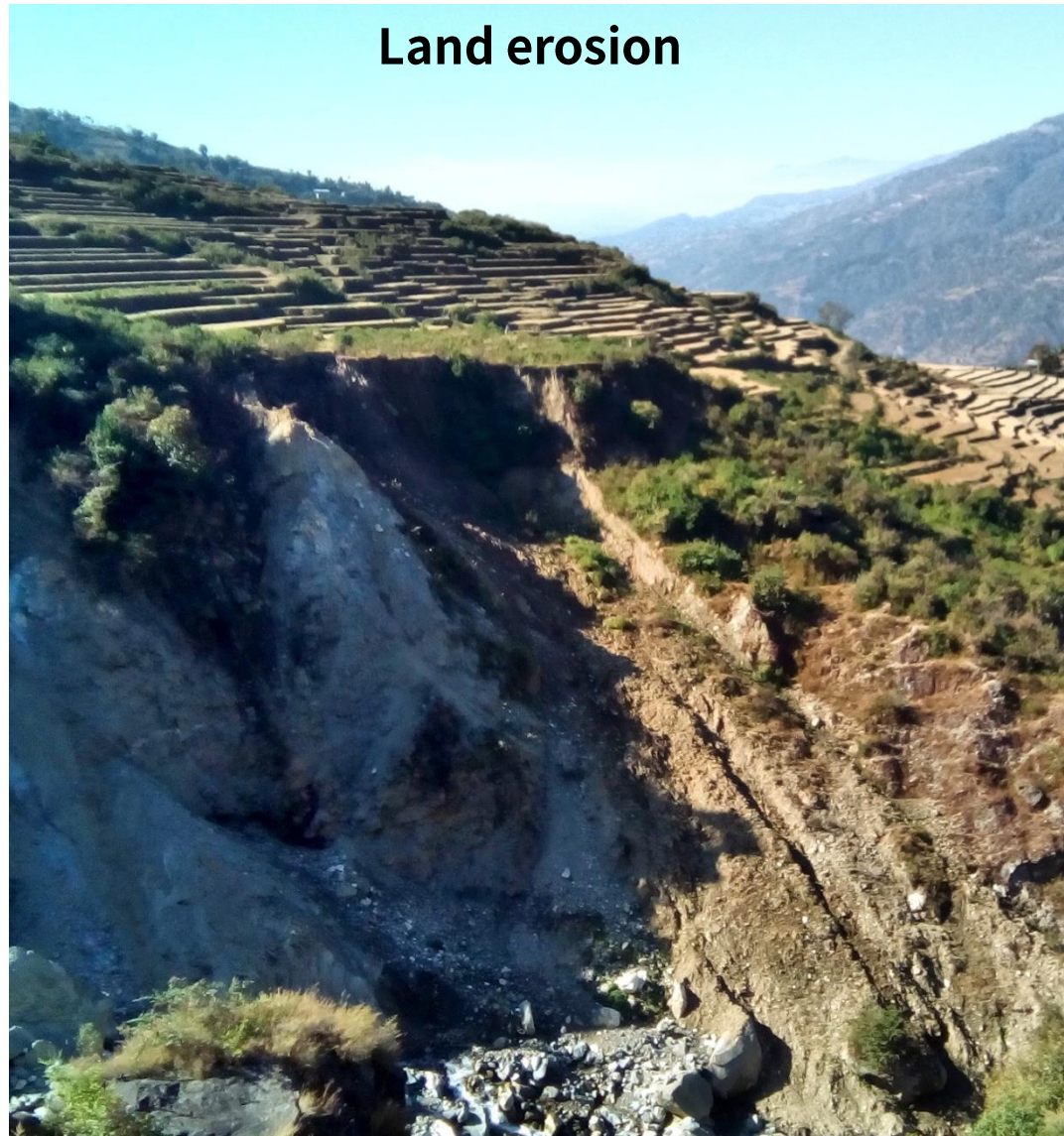
		Age			Total
		0-14	15-59	60+	
Study Hhs (Phongmey)	Population	79	198	47	324
	Percent	24.4	61.1	14.5	100
Bhutan*	Population	209,969	380,704	44,309	634,982
	Percent	33.1	60.0	7.0	100

\* source: Population & Housing Census of Bhutan 2005

**Steep slope**

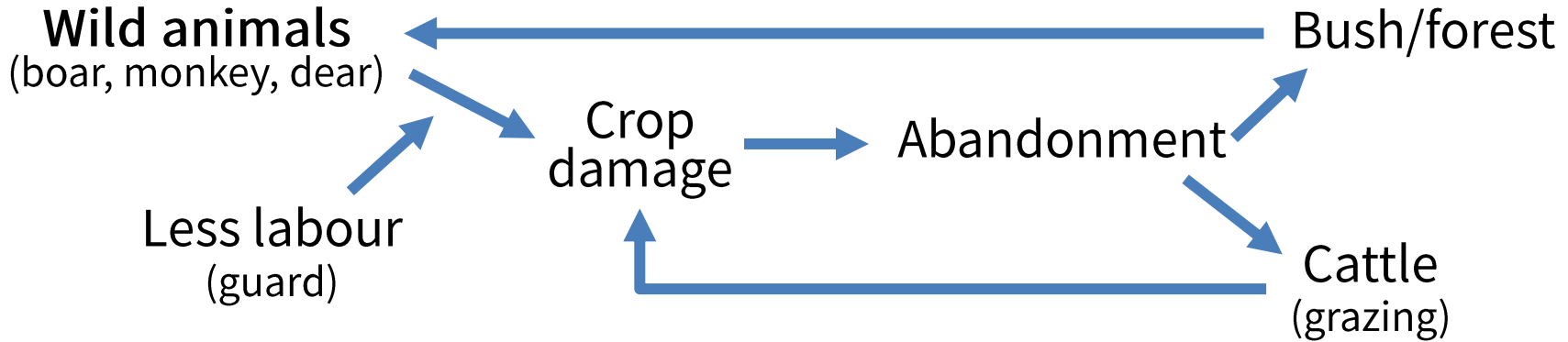


**Land erosion**

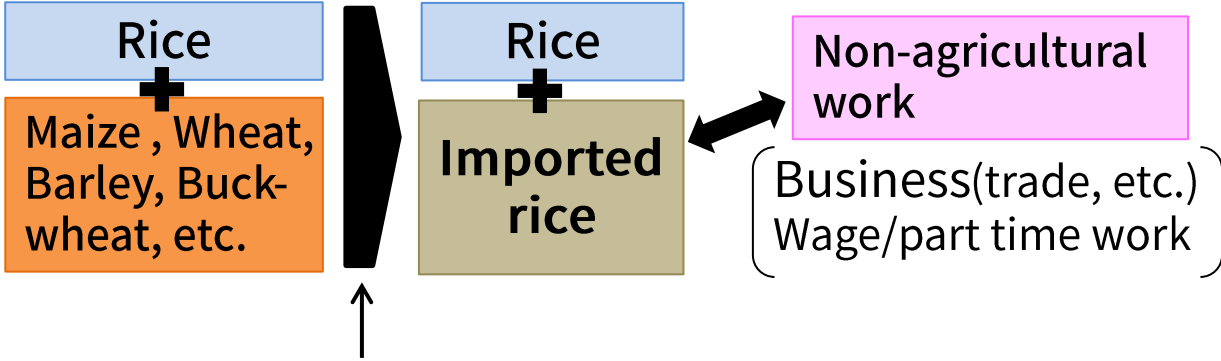


# ➤ Reasons of Abandonment(Dry land)

- Negative chain(human Wildlife conflict)



- Food habit an Non-agricultural work



Improved market accessibility and cheaper rice

Cultivated major cereal crops in dry land, 2016 (n=56)

	Frequency (household)	Percent
Maize	53	94.6
Wheat	11	19.6
Barley	9	16.1
Buckwheat	6	10.7

# 4. CONCLUSION

## ➤ Large abandoned farmlands in the study area

- Farmland abandonment: Wet land(12.8%) < Dry land(58.0%)
- Abandonment: Wet land→2000s~, Dry land→1990s~

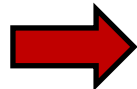
## ➤ Causes of farmland abandonment

- Socio-economic and political change after modernization

Penetration of market economy, Out-migration, protection of nature and less human pressure to wild animals, food habit, labour exchange system, etc.

## ◆ Future perspective

- Less young generation and aging population
- Increasing disaster(flood & land erosion) and impact of climate change



Further difficulty in rural agriculture

## <Acknowledgement>

We are grateful for the support given by students and faculties of Department of Social Sciences, Sherubtse College, RUB and localities of Phongmey Gewog

 **THANK YOU FOR YOUR ATTENTION**

