

# Shocks and Food Insecurity in Lao PDR

Nina Dohmeier<sup>1</sup> and Hermann Waibel<sup>1</sup>

<sup>1</sup>Institute of Development and Agricultural Economics, Faculty of Economics and Management, Leibniz University of Hannover

## Background

- Food security definition comprises 4 key dimensions: Access, availability, stability and utilization (FAO, 2002).
- However, food insecurity is difficult to measure due to its multidimensional nature and the need to differentiate between transitory and chronic food insecurity (De Haen et al., 2011).
- As a least developed country Lao PDR remains with even high levels of food insecurity (Ecker and Diao, 2011).

## Research Questions

- What shocks affect rural households in Lao PDR and what is the consequence regarding their food consumption?
- How do agro ecological zones differ with regards to their demographics, landholdings and food security status?

## Survey Methodology

- Measurement of weekly food consumption by food items.
- Monitoring food security indicators by month by indicating whether it is a good, normal or bad month.
- Reporting food shortages and shocks during the past 5 years.

## Data

- Survey of 600 rural households in 46 villages in Savannakhet Province, Lao PDR.
- Stratification by 3 agro ecological zones (Mekong, Central, Mountain).
- Survey instrument with modules on socio economic parameters, climatic and environmental changes and agriculture including a detailed section on food security.



## Results

Table 1: Shocks reported in Savannakhet Province 2013.

Type	Number		Total loss (US\$ PPP)	Reduced consumption expenditures (% yes)	
	of shocks	Severity*		Non food	Food items
Weather	390	1.42	808.95	35.38	37.37
Pest	220	1.52	1187.23	20.45	22.37
Labor	398	1.41	885.51	30.63	23.48
Asset	85	2.06	965.27	17.65	7.06
Market	35	1.71	452.25	48.57	48.57
Other	25	2.00	801.26	24.00	20.00

Note: \*1=high, 2=medium, 3=low, 4= no impact.; Total loss=income+assets+extra expenditures.

- Rural households are affected by various shocks with different severities.
- Due to these shocks households had to either reduce their consumption expenditures on food or non food items.

Table 2: Demographics and landholdings by agro ecological zone.

	Mekong	Central	Mountain
Family size	5.31	6.39	6.30
Agricultural land size (ha)	2.22	2.38	1.64
HH Members engaged in off-farm	1.55	1.79	1.27
Risk aversion (0=high, 10=low)	6.22	6.02	5.68
Education HH head (years)	6.85	5.81	5.10

- The 3 agro ecological zones differ from each other with regards to demographics and landholdings.
- The Central zone has the largest land and family size and most members are engaged in off-farm employment.
- Households in the Mekong zone have the highest risk aversion and the highest educational attainment.

Table 3: Food security indicators by agro ecological zone.

	Mekong	Central	Mountain
Food shortage (% yes)	19.49	26.22	47.78
Food availability			
Good (%)	33.85	13.33	16.67
Normal (%)	62.56	80.00	68.33
Bad (%)	3.59	6.67	15.00
Worried not enough food*	1.45	1.53	1.86
Ate not preferred food*	1.62	1.57	1.93
Ate limited variety*	1.57	1.45	1.79
Ate smaller meal than needed*	1.35	1.41	1.72

Note: \*1=never, 2=rarely, 3=sometimes, 4=often.

- Households living in the Mountainous zone are strongly affected by food shortages and limited food availability.
- However, less than one fifth of households report their food availability to be good in the Central and Mountainous zone.
- On average, households eat never to rarely less or not preferred food and limited varieties of food.

## Conclusion

- In general, rural households in Lao PDR appear to be food insecure with regards to food availability and shortages.
- Thereby, differences among the 3 agro ecological zones concerning demographics, landholdings and food security status become clear.
- Households are sensitive to shocks: Shocks result in reduced food and non food expenditures as well as loss of income and assets.
- Outlook: A cluster analysis will be carried out to establish a typology of households and a logit model will be applied to identify factors that condition households' food security.

## References

- De Haen, H., Klasen, S. and Qaim, M. (2011): *What do we really know? Metrics for food insecurity and undernutrition*. Courant Research Centre: Poverty, Equity and Growth - Discussion Papers, No. 88.
- Ecker, O. and X. Diao (2011): *Food Security and Nutrition in Cambodia: Patterns and Pathways*. A Policy Discussion Paper. Prepared for the Food Security and Agricultural Policy Roundtable in Phnom Penh (4.11.2010). CDRI in partnership with CARD and IFPRI.
- Food and Agriculture Organization (2002): *The State of Food Insecurity in the World 2001*. Food and Agriculture Organization, Rome.