



# **Environmental Drivers of Out-migration: Evidence from Nepal**

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# Agenda

- Nepal and Environmental Crisis
- Internal and International Migration from Nepal
- Drivers of Migration
- State of Current Research on Migration & Environment
- Empirical Study
- Conclusion
- Recommendation



## Nepal and Environmental Crisis

Since the 1960s, researchers have warned about the possibility of severe environmental crises in Nepal:

- Prone to natural disasters.
- Over-exploitation of agricultural land, deforestation and soil degradation.
- Considered a climate change hotspot.

In early 1990s, Nepal became a net exporter of food.



## Internal & International Migration

Increase in temporary or permanent migration of people to secure livelihoods.

In the earlier decades, policy response to ease the population pressure on the fragile Highlands.

An increase in both intensity and frequency of floods and drought has now turned the Terai region into a fragile area.



## Internal & International Migration

Since the 1990s, coinciding with agricultural decline, rise in international migration to places other than India.

Concurrently, the country underwent a civil conflict.

Remittances have helped during the political crisis:

- The fifth largest recipient of remittances worldwide when expressed as a share of GDP.
- 55.8% of the households received remittances in 2010.



## Drivers of Migration

- Poverty
- Unemployment and low wages
- Violence from the Maoist insurgency and unstable political climate
- Establishment of labor recruitment agencies
- Decentralization of passport issuance
- Social capital



## State of Current Research on Migration & Environment

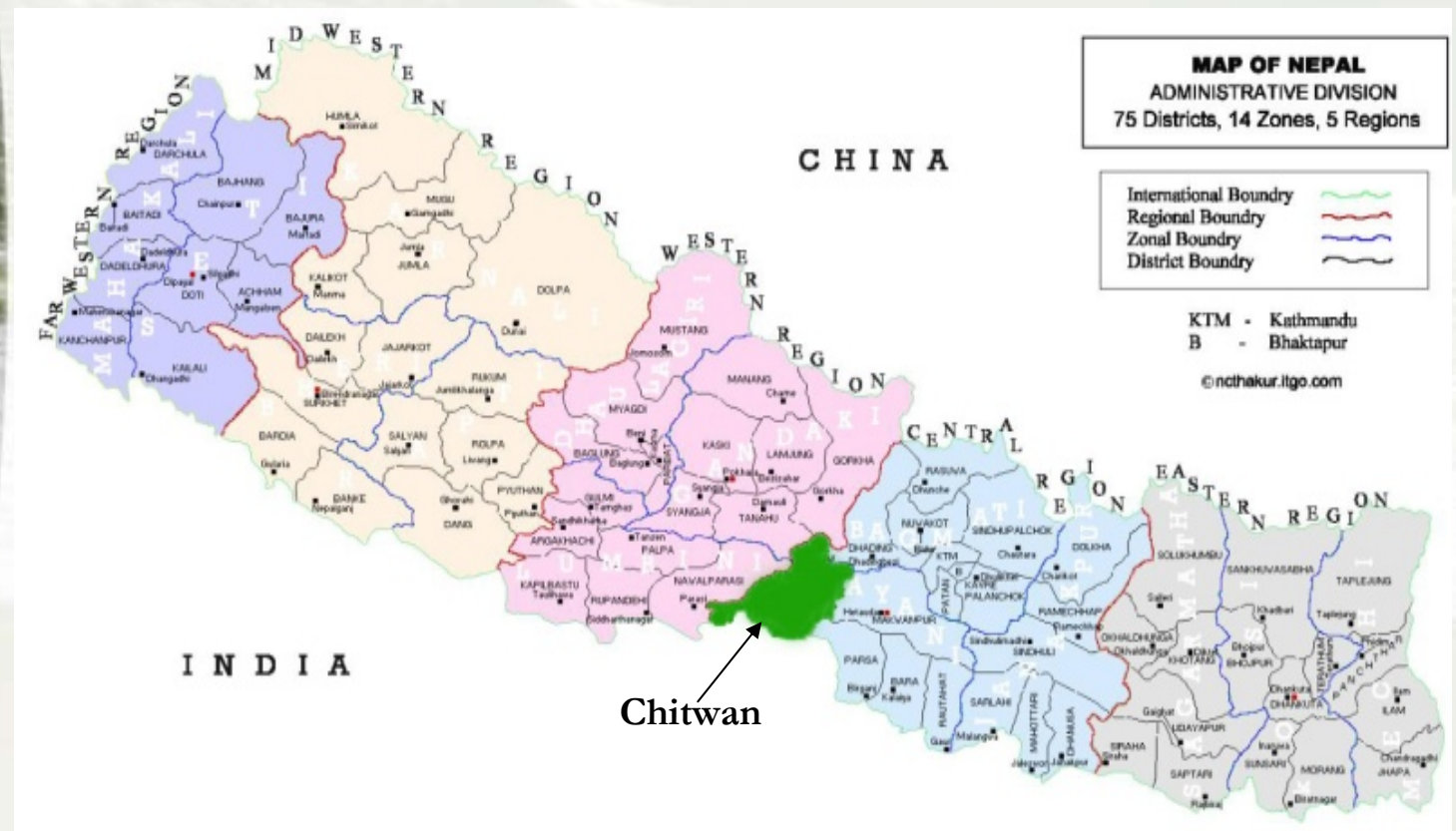
Empirical demonstrations of environmental effects on population mobility have been rare:

- Many social and economic predictors of migration.
- Dearth of data on the subject.

“Environmental migrants” - a hotly contested topic.

# Empirical Study

Data from Chitwan, Nepal to explore the impact of environment on migration to competing destinations.







## Empirical Study

A monthly panel survey (from 1997 to 2006) of 3,763 individuals (ages 15 to 69) belonging to 1,373 households from 151 neighborhoods.

Five measures of environmental degradation used.

The outcome variable is migration to three competing destinations: within Chitwan, to other districts, and to other countries.

# Empirical Study Results

Environmental degradation over time elevates rates of local population mobility.

Little evidence of movement outside Chitwan.

<u>INDEPENDENT VARIABLES IN MONTH t</u>	<u>Within Chitwan</u>		<u>To Other Districts</u>		<u>To Other Countries</u>	
	<b>B</b>	<b>SE</b>	<b>B</b>	<b>SE</b>	<b>B</b>	<b>SE</b>
<b><u>Environmental Variables</u></b>						
Increase in time to collect fodder compared to 3 years ago	<b>0.221**</b>	(0.107)	<b>0.294**</b>	(0.124)	<b>-1.359***</b>	(0.456)
Increase in time to collect firewood compared to 3 years ago	<b>0.348***</b>	(0.074)	0.023	(0.096)	0.276	(0.177)
Perception of decrease in crop production compared to 3 years ago	<b>0.168***</b>	(0.055)	0.076	(0.063)	-0.153	(0.116)
Water less clear compared to 3 years ago	0.046	(0.058)	0.037	(0.068)	0.087	(0.132)
Neighborhood population density	<b>0.002***</b>	(0.000)	-0.000	(0.001)	<b>0.0015***</b>	(0.0005)
No. of person months	295635					

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1



## Conclusion

Migration due to environmental changes is an unwarranted outcome but a useful strategy for survival.

Our findings suggest that gradual environmental deprecations produce local rather than international migrations, simply because those most affected by environmental changes---poor agrarian families---lack the resources to finance international trips.



## Recommendations

As the foresight report states “To the international community, this ‘trapped’ population is likely to represent just as important a policy concern as those who do migrate.”

Need to devote resources to facilitate migration of the most vulnerable in the face of environmental crises -- can reduce future possibilities of humanitarian emergencies and displacement.

Need for more empirical research that isolates the actual effect of environment on out-migration.



# Thank you!

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