

# Household adaptation and migration under conditions of environmental stress



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# North Americans have firsthand experience



Glenbow Archives NA-4179-15

FN 30

Hanna, Alberta, Canada 1930s



Migrant family at roadside, OK, 1937



Refugee camp, rural California 1936



Orphaned refugee children, California, 1935

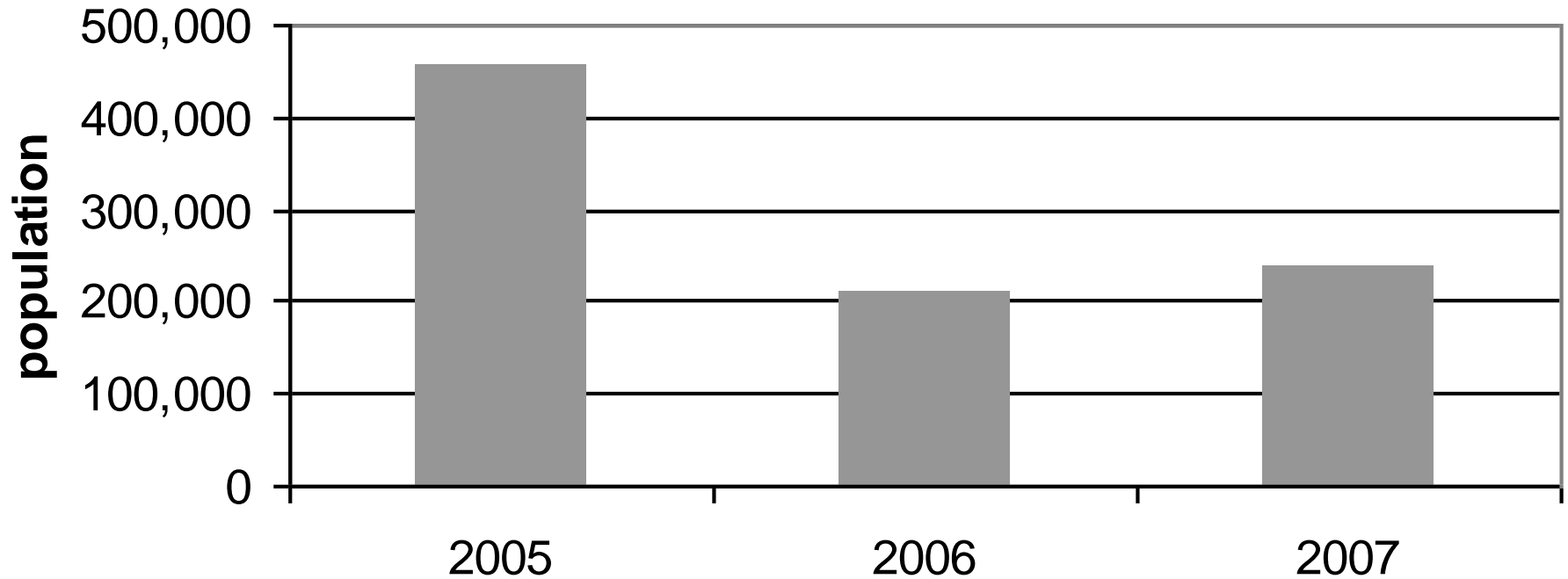


Child labourer, Kern County, CA 1938



Starvation, Sequoyah County, OK, 1939

# New Orleans post-Katrina



Source: US Census

# Global climate change could lead to refugees: study

OTTAWA

Canada could see an influx of environmental refugees from countries rocked by hurricanes, droughts and other disturbing effects of global climate change, says a study prepared for the national spy agency.

Others might be drawn to Canada as icy regions of the vast North become warmer and more hospitable to marine traffic, posing possible new security challenges.

"Climate-related disruptions of human populations and consequent migrations can be expected over coming decades," the study says. "Many of the consequent stresses, risks and opportunities have implications for the security community."

**GUELPH PROFESSOR**

**Last summer Europe's hottest in 500 years**

**PAGE D14**

Many scientists believe human activity has prompted global warming that will lead to an increase in average temperatures. Other anticipated changes include rising sea levels, enhanced risk of drought, more frequent and intense storms, and other extreme weather events.

The paper notes sea ice in Canada's Northwest Passage has thinned to previously unimaginable levels. Should this continue to the point that commercial shipping becomes practical, more people and money would flow into northern Canadian communities.

Aspects of these new patterns "could be of interest to the security

# Some questions

- Why does migration sometimes occur during periods of environmental/climatic stress, but not always?
- Why do some people migrate in the face of drought while others do not?
- Why do some people return to New Orleans while others do not?

# Migration in context of adaptation

- The range of adaptation options available in Saskatchewan may not be the same as in Nigeria



**Northern Nigeria, 2005**



**Saskatchewan 2002**

# Migration as adaptation

- Migration is one of a range of potential adaptive responses to environmental stress
- Is presently used in many parts of world
- Is typically initiated at the household level
- Is not available to everyone
- Is not used by all who might do so

See McLeman & Smit, 2006 in *Climatic Change* 76, pp31-53

# Factors influencing environmental migration

## **Nature of household's wealth**

- Land tenure
- Transferability of wealth/savings

# Factors influencing environmental migration

## **Nature of social networks**

- Strong local social networks and community institutions are disincentives to migration
- Geographically extensive social networks facilitate longer-distance migration

# Factors influencing environmental migration

## **Nature of household's cultural, physical attributes**

- Advanced age, poor health, broken families are disincentives to migration
- Youth, education, transferable skills facilitate migration

# Social distinctions in environmental migration

*More likely to migrate:*

- Young, healthy, skilled, educated
- Middle class, working class, rural poor
- Family ties elsewhere

*Less likely to migrate:*

- Wealthier classes, landowners, owners of fixed assets
- Urban poor
- Elderly, infirm, broken families

# Where to watch for future climate change migrants

- Areas where populations have limited capacity to cope with existing climatic risks
- Examples: South Asia, dryland China, Sudano-Sahelian Africa, North American Plains, tropical storm belts, low-lying coastal plains, atolls

# Thanks! Merci! Vielen dank!

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