

Title Associate Professor

8/31/2007

Permission date

First Name Heejun

Middle Name

Last Name Chang

Institution PSU

Department Geography

Email changh@pdx.edu

Phone 503-725-3162

Photo



Website

<http://www.geog.pdx.edu/research/hydrology.htm>

Research Fields

- Atmospheric chemistry
- Biogeochemistry
- Carbon Footprint Analysis
- Climatology
- Community & Disaster Planning
- Data Analysis & Statistical Modeling
- Ecology & Ecosystem Management
- Economics
- Energy policy & technology
- Ethics
- Fire
- Forestry & Forest Management
- Geographic Information Systems
- Horticulture
- Human Impacts - economics
- Human Impacts - health
- Human Impacts - policy
- Hydrology
- Impacts - agriculture & horticulture
- Impacts - ecosystems, populations
- Impacts - physical
- Instrumentation
- Mitigation Policy
- Modeling Climate
- Modeling Ecosystems
- Modeling Socioeconomic Processes
- Natural Resource Policy & Planning
- Outreach & Engagement
- Paleoclimatology
- Paleoecology
- Physical Ecology
- Physiological Ecology
- Urban Ecology
- Water Policy & Planning
- Other...

Integrated Regional Assessment
Spatial Analysis

Specific Research Interests

I am conducting the socioeconomic and biophysical impacts of climate change on fresh water resources using combinations of numerical simulation models and stakeholder social surveys.

Other research fields: urban flooding, global change, visual spatial analysis, GIS

Projects

1. *Socioeconomic impacts of climate change on Korean water resources, Ministry of Science and Technology in Korea, \$60,365, April 2005-March 2007*
2. *Adaptive water resources policy development under climate change, Ministry of Science and Technology in Korea, \$125,000, April 2007 – March 2011 (pending)*

Selected Recent Publications

Theses supervised:

1. *David Graves, MS 2005, An Assessment of the Impacts of Climate Change on the Upper Clackamas River Basin with a Distributed Hydrologic Model*
2. *Jon Franczyk, MS in progress, Effects of Development and Climate Change on the Water Resources of the Tualatin River Basin*

Publications:

1. Graves, D. and Chang, H. (2007) An assessment of the hydrologic impacts of climate change in the Upper Clackamas basin of Oregon. *Climate Research*, 33(2): 143-157.
2. Chang, H., J. Franczyk, and D-H. Bae. (2006) Putting Climate Change into Water Resource Management: Adaptation efforts in the U.S. U.K., Canada, Australia, and the Netherlands. *Journal of Environmental Policy*, 5(4): 19-50.
3. Chang, H., J. Franczyk, E-S. Im, W-T. Kwon, D-H. Bae, I-W., Jung, (2006) Vulnerability of Korean water resources under the changing environment, “in *Innovations in coping with Water and climate related risks*” Amsterdam, the Netherland.
4. Chang, H. (2004) Water Quality Impacts of Climate and Land Use Changes in Southeastern Pennsylvania. *The Professional Geographer*, 56: 240-257.
5. Chang, H. (2003) Basin Hydrologic Response to Changes in Climate and Land Use: The Conestoga River Basin, Pennsylvania. *Physical Geography*, 24: 222-247.
6. Chang, H., C. G. Knight, M. P. Staneva, and D. Kostov (2002) Water Resource Impacts of Climate Change in Southwestern Bulgaria. *GeoJournal*, 57: 159-168.
7. Chang, H. (2002) Accessing Hydrologic Impacts of Climate Change at the Watershed Scale *American Institute of Hydrology*.
8. Chang, H. (2002) The Political Economy of Carbon Dioxide Emissions in Three Asian Countries. *Asian Perspective*, 26: 237-267.
9. Chang, H., B. M. Evans, and D. R. Easterling. (2001) The Effects of Climate Change on Stream Flow and Nutrient Loading. *Journal of the American Water Resources Association*, 37: 973-985.

Professional Activities

- *I am currently working with a group of international scholars on the study of urban flood hazards in Monsoon Asia in the context of climate change and land development pressure (Supported by START: Global Change SysTem for Analysis Research and Training)*