

# SWiM

SUSTAINABLE  
WATER IN  
MONGOLIA



From left to right in Dalanzadgad, Mongolia: Jargal, Gail, the leader of the local herder's group and her son, Joni, Bataar, the two other sons of the local leader, Uska, Dawn and Bagji.

## SWiM Team Project Newsletter – March 2007

### York University and the National University of Mongolia by Dawn Bazely & Carol Irving

Water is essential for life on earth. As global warming increases, many areas of the world will become much drier.

Sonya Nergui, a Botany Professor at the National University of Mongolia (NUM), visited York University in Spring 2006. She has been charged with heading and developing NUM's Water Research Centre in Ulaanbaatar, which will be vital in allowing Mongolia to cope with pressures on water resources.

Sonya's visit was part of an international agreement between the National

University of Mongolia and York University, Canada. In the Fall of 2005, Adrian Shubert, York University's Associate Vice-President, International, signed the agreement in Mongolia.

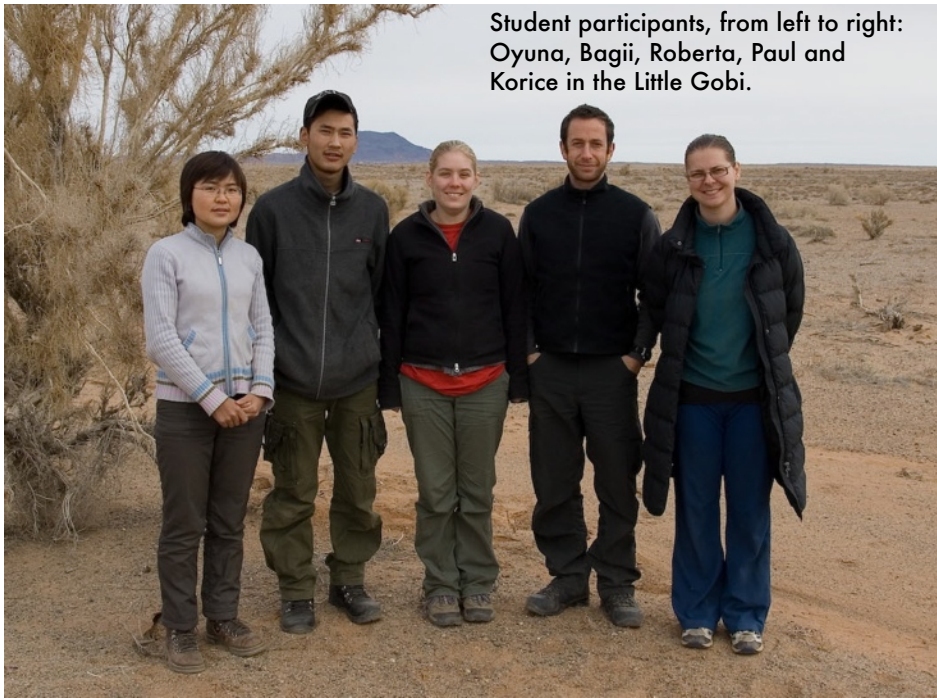
The agreement also provides for student exchanges between the two universities. At York, Sonya was hosted by Prof. Gail Fraser in the Faculty of Environmental Studies and by Associate Dean of Science & Engineering, Paula Wilson. Dawn Bazely led a grant application to AUCC. We settled on a project about Human Security and Water. In addition to Sonya's visit, there has also been an exchange of Administrative staff between York and NUM.



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How did six York University students and faculty come to be in the Little Gobi desert in Fall 2006? And, how did four Mongolian visitors come to be looking at Niagara Falls in November 2006, and commenting on it being "a lot of water!"? We all participated in the Sustainable Water in Mongolia (SWiM) project, a Students for Development project of the Association of Universities and Colleges of Canada (AUCC) that is funded by the Canadian International Development Agency (CIDA). We thank the AUCC and CIDA for their strong support of our project.



Student participants, from left to right: Oyuna, Bagii, Roberta, Paul and Korice in the Little Gobi.

## Gers, Goods & Water

by Korice Moir

The moment you walk into a ger – a traditional yurt (tent) still in common use throughout the country – you feel the close-knit warmth of the communal space and sense that everything has a place and a purpose. All goods are transportable, a must for the herder lifestyle. Consumption is subsistence-based and, as we discovered during our time in the Gobi desert, herders place significant value on their livestock, common pasture, and water.

Herders move in search of better pastureland and access to water resources. Water is an integral part of the daily herder's life: in preparing meals and tea, raising livestock, and producing wool felt used, for example, to insulate the ger. Water wells can be a kilometer or more away from gers, so water is used sparingly, with the bulk satisfying livestock requirements.

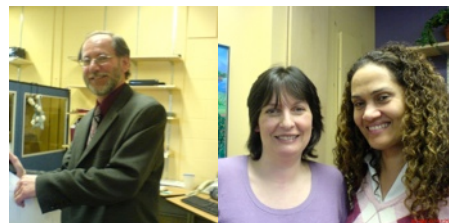
Lacking direct connections to water supplies, water consumption in the ger is based on need. When water is scarce, needs are prioritized. When compared to the average Canadian's domestic water use, herders appear to waste little. As Canadians, we have much to learn from herders on the difference between water needs, wants and waste. Our time in Mongolia emphasized the need for us all to strive towards a new ethic of water conservation. It is time to renew our own connection to this vital resource.

## Herding through change

by Paul Marmer

Mongolia has some of the world's most impressive landscapes. Extensive grazing lands span over 80% of the country and represent the world's largest contiguous common grazing areas. Nomadic pastoralists have roamed these lands for millennia, but new solutions are urgently needed to allow Mongolians to cope with rapidly changing circumstances if this distinct way of life is to flourish for another millennium.

SWiM students (from YorkU and NUM) worked closely with herder communities in the Gobi desert. We investigated linkages between scarce water resources, vegetation, and livelihoods, to raise a greater awareness of issues and to aid in developing strategies for dealing with change. Our efforts contributed to on-going local programmes as well as creating new possibilities for future YorkU/NUM exchanges.



York International's Adrian Shubert, Lynn Hamilton & Sharon Sammy (left to right).

## Key players in addition to Korice, Paul and Roberta:

### A SWiM who's who

1. N. Soninkhishig (Sonya)  
Professor in the Botany Department, Faculty of Biology, NUM
2. J. Jargal  
Director of the Steppe Forward Programme funded by Zoological Society of London and Whitley Foundation.
3. M. Tsogbadrakh  
Dean of the Faculty of Biology, NUM
4. B. Bayartogtokh  
Professor and Chair of the Zoology Department, Faculty of Biology, NUM
5. Joni Seager  
Dean of York University's Faculty of Environmental Studies (FES).
6. Gail Fraser  
Professor in FES, York University
7. Dawn Bazely  
Biology Professor and Director of the Institute for Research and Innovation in Sustainability, York University.
7. Tungaa Johnstone  
Graduate Assistant for the SWiM project and graduate student in FES.
8. Jamie Pratt  
Graduate Assistant for the SWiM project and PhD student at York University.

## York International (YI)

Adrian Shubert, Carol Irving, Lee Mendelsohn-LiVolsi, Lynn Hamilton, Sharon Sammy and Nathan Muiruri were essential to the project's success.

## NUM Foreign Affairs

We thank Altantsetseg, Munkhtegsh, and Mungunsarnai for their invaluable support throughout the project.



# Calendar

Many people were involved in the SWiM project and there were many activities and trips. We summarize them here.



Sonya on the right, and Jargal at left, in Ulaanbaatar.

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1–14 Oct '06

York faculty, Bazely, Fraser and Seager, visit Mongolia, including Little Gobi Strictly Protected Area A.

York sponsors a workshop at the National University of Mongolia on 10 Oct, to which stakeholders involved in water issues, including NGOs, are invited.

6 Oct–9 Dec '06

York graduate students, Korice Moir, Paul Marmer and Roberta Hawkins, assist Sonya and Jargal in developing resources and conducting workshops for the respective NUM Water Research Centre and Steppe Forward Programme.

12–23 Nov '06

NUM and York students conduct participatory rural appraisal workshops with herder and vegetable farming communities in and around Little Gobi Strictly Protected Area.

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22 Nov–7 Dec '06

The National University of Mongolia delegation visits Canada. They meet with many faculty members at York to learn about inter-disciplinary programmes, including the Director of York's Centre for Support of Teaching.

28 Nov '06

Sonya and Jargal give lectures at the Faculty of Environmental Studies, York University on their programmes and research activities.

6 December '06

Trip to Ottawa to meet with Ambassador Gotov, Mongolian Ambassador to Canada, and staff at the IDRC, plus Sonya and Jargal meet with Centerra Gold in Toronto.

# Outreach

10 November '06

Mongolia Day at York University, attended by Ambassador Gotov, and Avdai and Sodnomtseren, members of the Mongolian Khural (Parliament), NUM President Gant-sog, and members of Toronto's Mongolian community

[www.yorku.ca/yfile/archive/index.asp?Article=7331](http://www.yorku.ca/yfile/archive/index.asp?Article=7331)

6 December '06

Press conference in Ulaanbaatar is held by Korice, Paul and Roberta. An article in the UB Post entitled "Watertight Friendship" appears on 7 December 2006.

22 March '07

World Water Day celebrated at York University, with activities and posters prepared by SWiM and other York University students, faculty, and visiting research fellows.

## Experiences with gender and water in Mongolia

by Roberta Hawkins

This project was an exceptional experience for me. I was able to see at first hand how environmental issues interact with gender, both in individual households and in Mongolian society as a whole. During the project, I witnessed the multi-faceted nature of gender and water management issues, which I was able to compare to the theory learned in class. The interviews, surveys and time spent with local families were important activities that allowed me to gain a deeper understanding of the reality of gender and water issues in a developing country. I am grateful for this experience which has encouraged me to pursue further studies in this area. I still have much to learn, but have had a wonderful start.

## Inspired by the Gobi

by Paul Marmer

The opportunity to visit a country that has moved from communism to a parliamentary democracy, and where traditional herding practices still survive, was, in short, life changing! Despite economic hardships and uncertainties, herders in the Gobi welcomed us with open arms and gave valuable time to work with us. Their vigor and determination was both admirable and contagious. The project helped define the scope of my graduate studies—vegetation dynamics in response to grazing pressure in arid rangelands—and provided unparalleled fieldwork and professional experiences ranging from hosting workshops to a national press conference. I now see my research interest in linked social-ecological systems in northern regions in a new light that urges me to get ever more involved.



Korice Moir, MES candidate, YorkU



Lee Mendelsohn-LiVolsi, YI (left)

Nathan Muiruri, YI (right)



D. Narantuya (Faculty of Biology, NUM) and Carol Irving (YI) in Terelj National Park.

## Water governance in Mongolia – a case study

by Paul Marmer, Korice Moir, and Roberta Hawkins

As available freshwater resources become increasingly scarce, new or improved forms of governance that protect these vital resources are needed. As a nation emerging from a transition to democracy and a free market economy, Mongolia, with its inherently arid environment, faces challenges in protecting its dwindling water resources. Following the collapse of the socialist era in Mongolia during which the state claimed control over resources, governance of natural resources in Mongolia was left in a vacuum. The interests and well-being of the country's large pastoralist population were at odds with increasing and sometimes deleterious industrial demands on water resources that remain largely unchecked. This project aimed to investigate resources in Mongolia through a human security approach. Water governance was investigated using several methods and methodologies (e.g., participatory rural appraisals (PRAs), surveys, interviews, workshops) and addressed a variety of key issues including pastoralism, mineral mining, gender, and ecological restoration. Governance of water resources to ensure their sustainable use requires collective management among local communities and collabora-

tion between academics, government, NGOs, and socially and environmentally responsible industries, as well as an integrated perspective, linking environmental, social and economic issues.

## NUM at York

by Soninkhishig Nergui

Of course, we tried to spy as much as we could, since Gill Wu (then Dean of York's Faculty of Science and Engineering) had teased us about this! But I am sure both sides were happy in the end. I really enjoyed working with York staff and students. The NUM delegates picked up many ideas that we can integrate into our training, research and public service at the Faculty of Biology at NUM. We can better align our programme with the changing environmental and socio-economic development, while simultaneously reflecting on water issues and academic institutional management. There is no doubt that the roots being established to support strong co-operation in various fields between York and NUM were further strengthened through the SWiM project.



## Project Results

### The key achievements:

- 1. Building the NUM-York relationship**  
Built upon the collaborative partnership between researchers and activists at York University and NUM (including the Water Research Centre and the Steppe Forward Programme).
- 2. Participatory research in Little Gobi**  
Conducted participatory research highlighting significant water-related issues in the Gobi desert, producing a list of recommendations from community members to improve environmental governance capacity.
- 3. Promoted IWRM**  
Promoted dialogue on IWRM (Integrated Water Resource Management) and the social, environmental and economic aspects of water governance, especially from a gender perspective, through a series of workshops, development of academic resources, and on-going discussions.
- 4. Experience sharing among students**  
Shared experiences and reciprocal learning among graduate students (with diverse backgrounds) from both universities through workshops and discussions about water governance issues.
- 5. Future collaboration opportunities**  
Future water-related research opportunities emerged, including a study to determine the effects of current livestock grazing regimes on vegetation dynamics in the Gobi desert.

York University: [www.yorku.ca](http://www.yorku.ca)  
Faculty of Environmental Studies:

[www.yorku.ca/fes/](http://www.yorku.ca/fes/)

National University of Mongolia (NUM): [web.num.edu.mn](http://web.num.edu.mn)

Water Research Centre (WRC): [www.num.edu.mn/wrc](http://www.num.edu.mn/wrc)

Steppe Forward Programme (SFP): [www.steppeforward.com](http://www.steppeforward.com)

Institute for Research and Innovation in Sustainability (IRIS): [www.iris.yorku.ca](http://www.iris.yorku.ca)

York University is a member of the American Center for Mongolian Studies: [www.mongoliacenter.org](http://www.mongoliacenter.org)