

# Citizen Science: Towards Global Environmental Sustainability

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## INSIDE THIS ISSUE:

<a href="#">Introduction</a>	1
<a href="#">Sackville River Green Map</a>	2
<a href="#">Saint Mary's University</a>	2
<a href="#">Ulaanbaatar Green Map</a>	3
<a href="#">Ecuador Green Map by Tiffanie Rainville</a>	3
<a href="#">Kings County Green Map</a>	4
<a href="#">Gambia Green Map &amp; Trip</a>	4
<a href="#">Ongoing &amp; Upcoming Activities</a>	6



*Citizen Science: Towards Global Environmental Sustainability* is made possible by the financial support of the Government of Canada through the Canadian International Development Agency in partnership with Saint Mary's University.

### Introduction

In 2008, Saint Mary's University embarked on a new public engagement project called *Citizen Science: Towards Global Environmental Sustainability*. This project aims at building capacity among students, faculty, staff and community members to effectively engage Atlantic Canadians in discourse and action on Millennium Development Goal (MDG) number seven, *Ensure Environmental Sustainability*. It also seeks to highlight the connection between local environmental challenges and global action.

*Citizen Science* is comprised of three components:

- A Student Video Competition
- Film Screenings and Public Discussion Forums
- Green Mapping

Each activity is designed to facilitate knowledge sharing among Saint Mary's students, faculty and staff, community members and students in the Global South through new media and traditional activities.

### Student Video Competition

Launched in September 2008, the video competition is designed to provide an opportunity for students to have their say on the local and global impacts of current environmental issues. *Say it, Show it, Be part of it* invites Saint Mary's students to submit an original short video related to MDG7 *Ensure Environmental*

*Sustainability*. Submissions for 2008 were uploaded to the internet and can be viewed on [SMUTube](#) or by requesting a DVD from the International Activities Office. Videos are judged by a panel comprised of faculty, staff, and students who choose the film they feel is most creative, has the greatest chance to inspire change and which best addresses the connection between local action for global environmental protection.

Overall, the videos submitted in 2008 were an excellent testament to the creative talent and dedication to promoting environmental sustainability found right here on Saint Mary's campus. The winners of the competition in 2008 received an "all expenses" paid trip to The Gambia during reading week in February 2009 (see page 4 for details on their experience).

### Film Screening and Public Discussion Forums

The Public Film Screening initiative is designed to provide funding and assistance to student societies at Saint Mary's and community organizations in Nova Scotia to hold free public screenings of films that address issues related to MDG7. Groups are also encouraged to hold publicly facilitated discussions following their film screenings in order to provide participants with an opportunity to discuss and engage others around the themes addressed in the film.

### Green Mapping

The third component of the *Citizen Science* project is Green Mapping. Green Maps are maps produced using participatory methods and a set of universal icons. They focus on community assets, challenges and solutions and are shared virtually online via the Green Map website [www.GreenMap.org](#). Saint Mary's is working with community organizations in Nova Scotia and in developing countries to produce a series of Green Maps that will be shared on [www.GreenMap.org](#) and at a forum planned for Spring, 2010.



This newsletter contains information about the diverse organizations and groups that have participated in the Green Mapping initiatives, contact information, as well as updates on upcoming events under the project. This information is intended to give organizations and groups with whom we have worked, an opportunity to see what others are using Green Mapping for. It is also intended to build your network of contacts. If something here catches your eye or you would like to have your experience with Green Mapping featured in future publications, please contact us.

*“Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it’s the only thing that ever has.”*

Margaret Mead (1901– 1978)

**UN Millennium Development Goals**

 <b>1</b> ERADICATE EXTREME POVERTY AND HUNGER	 <b>2</b> ACHIEVE UNIVERSAL PRIMARY EDUCATION
 <b>3</b> PROMOTE GENDER EQUALITY AND EMPOWER WOMEN	 <b>4</b> REDUCE CHILD MORTALITY
 <b>5</b> IMPROVE MATERNAL HEALTH	 <b>6</b> COMBAT HIV/AIDS, MALARIA AND OTHER DISEASES
 <b>7</b> ENSURE ENVIRONMENTAL SUSTAINABILITY	 <b>8</b> GLOBAL PARTNERSHIP FOR DEVELOPMENT

Pictures from [www.UNDP.org](http://www.UNDP.org)

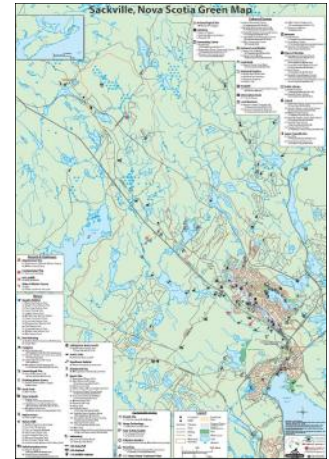
## Watershed Green Map By Sackville Rivers Association

In collaboration with Saint Mary’s University, the Sackville Rivers Association hosted a Green Mapping workshop in October, 2008. The event took place at the Sackville Community Center in Lower Sackville, Nova Scotia, a suburb of Halifax city. A full range of participants from groups, associations, and organizations within the community were invited to participate in the event and eleven community members came out to get involved.

Dr. Cathy Conrad, a professor from the Department of Geography at Saint Mary’s led the workshop with the assistance of Dr. Peter Bush, from Dalhousie University. Workshop participants focused their map-

ping activities on the Sackville River and watershed area, the largest source of fresh water to Halifax Harbour. Historically, the Sackville River has provided a suitable habitat for fish and other aquatic organisms, but the watershed has been increasingly disrupted due to the intensification of urban development over the last number of years. The Green Mapping workshop allowed participants to discuss and highlight these environmental assets and challenges in the watershed area. The information and discussion gathered from the workshop was later compiled onto one map. To view a final copy of the map, please [click here](#) or visit [www.greenmap.org](http://www.greenmap.org).

To learn more about the Sack-



Sackville Rivers Watershed Green Map

ville Rivers Association and their Green Mapping efforts please contact :

Larry Bell, CEO of Water Research Associates  
[lbell@water-associates.com](mailto:lbell@water-associates.com)  
[www.sackvillerivers.ns.ca](http://www.sackvillerivers.ns.ca)

## Saint Mary’s University - Green Map

The Saint Mary’s University Green Map was created by a graduate student under the guidance of Dr. Cathy Conrad. The map was produced to provide students, members of the Saint Mary’s community, and visitors with information and resources that will help them live more sustainable lifestyles on campus.

A poster of the map was created and unveiled during Sustainability Week which took place in March 2009. In order to present the map in a more user friendly form, a brochure was also created, which will soon be available on-line.

Input was gathered from a range of stakeholders on campus. The preliminary list of ‘green’ sites included on the

map were provided by the Department of Facilities Management. Additions were made by speaking to various faculty, service representatives and students.

As part of the Sustainability Strategy, the Saint Mary’s Green Map is designed to work towards inspiring a culture of sustainability through understanding the impact of our choices on the world; engaging faculty, students and staff in rethinking, reducing, reusing, and recycling; transforming as individuals and as a community; and coordinating and communicating towards the creation of a sustainable future. With the university campus currently undergoing numerous changes including the construction of the new

Atrium, built to LEED environmental standards and featuring an interior bio-wall, this map will be updated as required.

To view a copy of the Saint Mary’s Campus Green Map please [click here](#).

For more information contact:  
 Dr. Cathy Conrad  
[cconrad@SMU.CA](mailto:cconrad@SMU.CA)



Saint Mary’s University Green Map

## First Green Maps of Ulaanbaatar, Mongolia

In April 2009, approximately thirty students from three local universities participated in a Green Mapping workshop which was organized by faculty and staff from the Mongolia University of Science and Technology (MUST) in partnership with Saint Mary's. The group of thirty students was then split into smaller groups and each team worked to gather information and develop the first ever green maps of Ulaanbaatar, the capital of Mongolia.

Following the workshop, students were given a full day to scour the city to identify and record sites of interest for their green maps. Groups set out on foot and by bus to gather their information. Each team was given two weeks to work with their group to produce a final

copy of their Green Map and they were asked to share their maps with fellow students. The three maps produced focused on sustainable living, natural features and challenges in the community.

The overall response from the students who participated in the workshop was great, and MUST is planning to make this an annual event, by incorporating this into its outreach activities with local high schools.

The final maps were produced in Mongolian (with some English) and all are available on the [Green Mapping website](#) or by following the links below: [Green Apple Group](#), [Green Tank Group](#), [Green Rockers Group](#).

To learn more about these maps and their experiences with Green Mapping please contact:

Demberelsuren Batbold, Professor  
Mongolia University of Science and Technology (MUST)  
[ds\\_deegii@yahoo.com](mailto:ds_deegii@yahoo.com)



Green Map of Central Square in Ulaanbaatar

*“The benefit of a Green Map is not in pointing out the obvious but revealing the community’s hidden under belly”.*

*~ Damien Henderson,  
Journalist*

## Ecuador Green Map by Tiffanie Rainville



Local women in Ecuador work on a Green Map

Tiffanie Rainville writes....

“I’ve been in Ecuador for two short months and things are going well. I’ve been working through an organization called the C-CONDEM (Coordinadora Nacional para la Defensa del Ecosistema Manglar) who have helped with initial introductions into the com-

munity and information about mangroves and projects in each of the specific areas. I just finished my field work in Portovelo, Manabí, Ecuador. What an amazing community. I ended up doing three mapping activities with a woman’s group, Fishermen Association, and Isla Corazon guides.

The woman’s group does a variety of projects in the community including making clothing, life jackets, etc. The fisherman’s association has 37 members and have been working together for several decades and the Isla Corazon guides (11 in total) have been together for 10 years doing eco-tourism on Isla Corazon an uninhabited mangrove forest island. The themes covered in all three workshops varied from culture, natural environment, mangroves, changes to the natural envi-

ronment (especially with reference to the El Niño phenomenon). I am heading to my second community (Musine, Esmeraldas) and I plan to use a similar methodology to create maps of that area as well. I received good feedback from the participants who enjoyed putting their thoughts and knowledge on paper and they are excited to receive the final product. The main goal of these maps will be to promote tourism in the area, but also as an educational aide to share information on the coastal habitat and El Niño with their children”.

*Tiffanie Rainville is a masters student in Environmental Studies. She is currently doing field research in Ecuador. Check the Green Map website in the coming months to see the final maps produced in Spanish.*

To learn more please contact:  
Tiffanie Rainville, MSc. Candidate  
[tkrainville@dal.ca](mailto:tkrainville@dal.ca)

THINK  
GLOBAL,  
MAP  
LOCAL!

SUSTAINABILITY

CULTURE

NATURE



GreenMap.org

Picture from greenmap.org

*"Within those few minutes sitting in the Headmasters' office, we all knew that we would carry some of this responsibility for the rest of our lives. We were speechless, in tears, and changed in many ways". Dr. Cathy Conrad*

## Kings County Emerald Web: An initiative by the Ecology Action Centre

The Kings County Green Map was created as part of the [Ecology Action Centre's](#) (EAC) new [Emerald Web Initiative](#). The mission of the Emerald Web Project is to demonstrate a new approach to economic prosperity by showcasing existing green initiatives, and how these create jobs as well as support local communities.

As its first activity, the Emerald Web initiative invited community members to map ecological initiatives happening throughout the county. EAC and Saint Mary's brought community members, representatives from municipal government, local organizations, and institutions together in two Green Mapping workshops. Participants identified a wide range of eco-focused programs and businesses found in their community.

While the goals of the province-wide Emerald Web project are to show how these initiatives create jobs and support communities, the purpose of this Kings Co. Emerald Web map was to build the visual of what EAC would like to do for the entire province. In particular, EAC is hopeful that this map will help residents of Kings Co. identify and support projects and businesses with an environmental focus. They also hope the map will help foster a better sense of community and that it will help to situate local actions at the community level within the larger global movement around environmental sustainability.

Through the *Citizen Science* project, EAC is eager to share its mapping and outreach experience as well as the Emerald Web model with international partners involved in similar types of capacity and environmental outreach

work. To view a copy of this map, [click here](#). For a detailed view of Kentville, Wolfville and Berwick [click here](#).

To learn more about the Emerald Web Initiative or the EAC please visit their [website](#) or contact them by email at: [info@ecologyaction.ca](mailto:info@ecologyaction.ca)



Kings County Emerald Web: An Initiative by Ecology Action Centre

## The Gambia Trip - 2009

In the Fall of 2008, Saint Mary's launched its first annual Say It, Show It, Be Part of It video competition which asked students to submit short films on MDG7 Ensure Environmental Sustainability. In November, three International Development Studies graduate students — Mira Lyon, Camaro West and Dustin Martin — were awarded a grand prize "all expenses" paid trip to The Gambia for their work on a video called [Responsibility for Sustainability](#).

The students set out in February 2009, during Saint Mary's reading break, with Dr. Cathy Conrad, to carry out green mapping workshops, set up and facilitate a pen pal program between elementary schools in Nova Scotia and The Gambia, to meet with the [National Environmental Agency](#) in The Gambia, to work with the [Nova Scotia Gambia Association](#) and to make a film about their experience (this

documentary will soon be available to the public).

This is what the students had to say about their experience:

*"On the whole, I went into this trip not knowing what to expect. As a masters student I had made up my mind about focusing my thesis on issues in Latin America, but this trip had such a profound impact on me that I'm no longer certain about that. As a result of the work we did with the schools, I have decided that I definitely want to pursue access to and the impacts of education in developing countries and I may change my region of interest to Africa". - Camaro West*

*"This experience in The Gambia is one which has been truly life-changing. Getting such an opportunity is an enormous honor, and I learned so much. Personally, setting foot for the first time in the continent that I love so much and am dedicating my studies to but have never really seen was inspirational". - Mira Lyon*

*"I saw great potential in the youth, and I hope that they are given the opportunities to continue to develop their talents to make a positive impact on their communities and their country." - Dustin Martin*

To read more about The Gambia trip please visit Dr. Cathy Conrad's blog [here](#) or check out an interview with the students [here](#).

For a copy of the Green Maps produced click [here](#).



2008/2009 Video Contest Winners from L to R  
Dustin Martin, Mira Lyon and Camaro West

# Pictures from The Gambia Trip



Here the team visits a sand mine site. Sand is used in the construction industry and exported from The Gambia. It is an important local issue because it has led to the destruction of coastal habitats and erosion along the Gambian coast.



The team visits students from St Therese Junior High School. Here students participate in a Green Mapping workshop.



Camaro West assists students at Saint Therese Junior High School during a Green Mapping Workshop.



Dr. Cathy Conrad with students from Bakoteh Lower Basic School. The team had the opportunity to facilitate a Green Mapping workshop and a pen pal activity.



Students at Wellingara Lower Basic School welcome Dr. Conrad and the students to their school.



Dr. Cathy Conrad and the students pose for a quick picture with the Mayor of Kanifing and the local environmental youth club during the Green Mapping workshop.



The team was honored with special entertainment from the students of Wellingara Lower Basic School as this was the first time a foreign delegation had visited their school.



Dr. Conrad and the students learn how to prepare a traditional West African dish of fish and rice called Benachin. Benachin literally translates as 'one pot'.

Farmers / Local Market

Organic/ Local Food

Habitat at Risk

Amphibian Habitat

Community Garden

Eco-Club/ Organization

Wind Energy Site

Eco-Expert

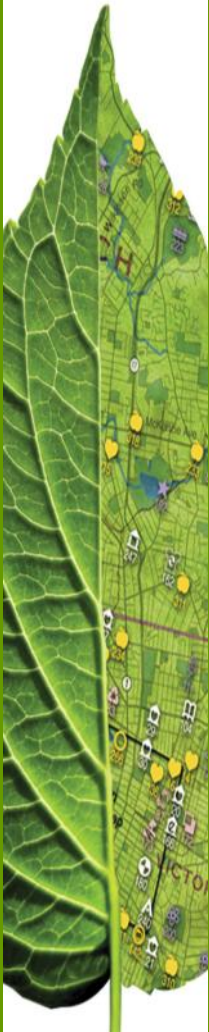
Wetlands

Traditional Way of Life

Environmental Education

Unsustainable Land Use

THINK  
GLOBAL,  
MAP  
LOCAL!



Picture from  
Greenmap.org

### Contact Us

Saint Mary's University  
c/o International Activities Office  
The Oaks Building  
923 Robie Street  
Halifax, NS B3H 3C3

### Project Director

Dr. Cathy Conrad  
Tel: (902) 420 5737  
E-mail: [cconrad@smu.ca](mailto:cconrad@smu.ca)

### Project Manager

Rayna Preston  
Tel: (902) 420 5260  
E-mail: [rayna.preston@smu.ca](mailto:rayna.preston@smu.ca)

### Public Engagement Assistant

Maryanne Nduati  
Tel: (902) 496 8793  
E-mail: [public.engagement@smu.ca](mailto:public.engagement@smu.ca)

### International Activities Office

The International Activities Office offers students, faculty and the public information about student mobility, international projects and services, and linkages with universities and other organizations throughout the world. We are dedicated to enriching lives through the development and enhancement of international experiences and perspectives. Through our international network of contacts, we are able to provide support to anyone involved with the Saint Mary's community who is interested in becoming involved in a broad range of activities with an international focus.



The Oaks Building, Saint Mary's

## Ongoing Activities

### 🌿 Halifax North West Trails Green Map

Halifax North West Trails is a small community group that advocates trail building for recreation, healthy living and active transportation and an appreciation of the natural environment in a highly urbanized region of Halifax Regional Municipality. Halifax NW Trails met in June, 2009 to develop a green map focusing on outdoor living, which will be ready by the fall. To learn more about this project please contact:

Wendy McDonald  
[wendyathome@eastlink.ca](mailto:wendyathome@eastlink.ca)  
[www.halifaxnorthwesttrails.ca](http://www.halifaxnorthwesttrails.ca)

### 🌿 Mombasa Green Map

In July, 2009 a group of local youth in Mombasa, Kenya called Kijani (meaning 'leaf') came together to discuss and map some of the environmental challenges facing Mombasa Island. The workshop organizers plan to use the information from the Mombasa Green Map to look for ways to incorporate more green space into city planning. For more information about this project please contact:

Penina Ngombo  
[perfectglobal@yahoo.com](mailto:perfectglobal@yahoo.com)

### 🌿 Bosse Santa Su, The Gambia Green Map

A group of nurses from Halifax, under the guidance of NSGA, traveled to The Gambia during July, 2009. While there, the nurses conducted green mapping workshops with local youth around issues of healthy living and the environment. To learn more about the work of the NSGA and this project please contact:

The Nova Scotia Gambia Association  
[info@novascotiagambia.ca](mailto:info@novascotiagambia.ca)  
[www.novascotiagambia.ca](http://www.novascotiagambia.ca)

## Upcoming Activities

### 🌿 World Café –November 2009

Plans are underway to host a World Café at Saint Mary's in late fall. This event will bring together high school students from Nova Scotia to connect them virtually with students in the Dominican Republic who will take part in a similar activity.

For more information or to get involved please contact us. You can learn about the World Café format [here](#).

### 🌿 Society and Community Film Nights

Are you interested in hosting a public film screening to help raise awareness

about International Development and Environmental Sustainability? Saint Mary's can provide a venue, negotiate a public license and fund your event. Have something in mind? Contact our Public Engagement Assistant to arrange a film screening or download the application form [here](#).

### 🌿 Citizen Science Video Competition 2009/2010

The second annual Citizen Science video competition begins again this fall. All current Saint Mary's students are eligible to submit a film about MDG7 Ensure Environmental Sustainability. The winning team will receive an "all expenses" paid trip to The Gambia.

### 🌿 Green Mapping Forum and Exhibition — Spring, 2010

Join us as *Citizen Science* comes to an end in the Spring of 2010. Saint Mary's is planning a range of activities including interactive displays, workshops, activities and an exhibition of all the Green Maps created under this project. Come out and connect with other organizations from around the world that are using Green Mapping in their community work.

For more information or to get involved [contact us](#).