



Combating Global Deforestation



Teacher's Guide

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BACKGROUND

The DeforestACTION Pilot Project

In his book *“High Noon: 20 Global Issues, 20 Years to Solve them”*, former World Bank vice-president Jean François Rischard outlines a new approach to global problem solving that involves students building global networks and collaborating to find solutions and act on them. Rischard argues that the fate of future generations depends on our capacity to quickly and effectively address 20 pressing global issues.¹ This was the message that Rischard’s brought to both the 2009 Microsoft Partners in Learning² Worldwide Innovative Education Forum, in Brazil, and the 2010 Asia Pacific (APAC) Regional Innovative Education Forum, in Singapore.

Inspired by Rischard’s call for a new global citizenship mindset, schools at the 2010 APAC Forum discussed the need for new approaches to global problems. **Students** expressed a desire for more relevant, project-based learning experiences. **Teachers and school leaders** expressed a desire for a structured global collaboration methodology and supporting resources.

Led by TakingITGlobal³ and supported by Microsoft, a regional pilot project was proposed to tackle the global problem of deforestation – one of the key global problems identified in Rischard’s book. Teachers and students from across the Asia Pacific (APAC) region were given the opportunity to present their ideas about what collaborative project they could work on to address this pressing environmental issue. Students presented their ideas on TakingITGlobal’s online learning platform and were given one week to vote on the two most popular solutions. The winning solutions were:

1. Buying back trees in endangered forests to protect them: Tree Safe Program.
2. Raising awareness of how palm oil production (and products that contain palm oil) contribute to global warming, habitat loss, destruction of species and other global problems.

Both solutions were combined to create the ‘DeforestACTION’ project – designed by students to raise awareness about the destruction of important native forests and the commercial exploitation of these forests for the production of palm oil. Young people across the planet are seeking support to reclaim at-risk forests and preserve them for future generations and the future of the planet.

¹ Global warming; biodiversity and ecosystem losses; fisheries depletion; deforestation; water deficits; maritime safety and pollution; poverty; conflict and terrorism; education; disease; the digital divide; natural disasters; taxation; biotechnology; global finance; illegal drugs; trade, investment and competition rules; intellectual property; e-commerce; and international labour and migration rules.

² www.microsoft.com/education/pil/

³ www.tigweb.org

Schools across the APAC region worked on the following initiatives as part of the DeforestACTION pilot:

1. Education, advocacy and outreach to help school communities understand the issue of deforestation and the urgency of action.
2. Targeted local actions addressing local challenges around the issue (for example, raising awareness of or boycotting processed foods containing palm oil from poorly managed sources).
3. A united global fundraising effort to protect a major identified tract of land. The plan involves providing alternative forms of income to the local land owners – in this case – the purchase value of the land.

Learn more about their many achievements at <http://collab.tiged.org/deforestation>.

We hope to expand this model to empower the rescue of other forests across the planet, while raising awareness of the urgency of protecting forests.



Sri Lanka's Royal College on their DeforestACTION community march

INTRODUCTION

DeforestACTION and Shout

Following the success of DeforestACTION, Microsoft and TakingITGlobal partnered with the Smithsonian Institution⁴ to expand the pilot to an established global program, called Shout.

The Shout program offers:

- Online events hosted by the Smithsonian Institution that feature some of the world's leading scientists and environmental experts as well as representatives of other fields who bring diverse perspectives to the issues at hand. Sessions can be watched live in real time or in archived format in order to accommodate all time zones.
- Access to Microsoft's Partners in Learning Network, a global community of educators who value innovative uses of information and communication technology, in order to share environmental education resources, experiences, and best practices with teachers around the world.
- Engagement of students in TakingITGlobal's online community, which provides resources, action tools, as well as the complimentary use of content-rich virtual classrooms and collaboration spaces designed to deepen environmental understanding and stewardship, enhance the development of 21st century skills, and facilitate continued communication with Smithsonian experts.
- A web portal (www.shoutlearning.org) that ties these elements together and provides access to additional tools and resources to support a range of "student challenges" – calls for deeper involvement that can range from capturing and sharing scientific data to developing youth-led initiatives for positive change.

Together, these components support a number of environmentally-themed "Shouts" to frame our understanding of our relationships and interactions with the natural world: Live, Study, Change, Sustain, Value and Celebrate. Each Shout connects students and teachers to a live event, teacher networking, and student collaborations focused around a specific theme, and presents students with challenges designed to deepen their learning and engagement. Shout is at once a program framework and a call to action. Join us and make your voice heard. The first global environmental issue to be explored within Shout is deforestation with the first student challenge being DeforestACTION (www.tiged.org/dfa).

⁴ www.si.edu/

Why Deforestation?

...The Hidden Roots of Climate Change

Deforestation occurs when areas that used to be forested are converted for use in other ways such as logging or as agricultural ground. The causes of deforestation are multiple and complex, local pressures arise from communities using forests to provide sources of food, fuel and farmland. Poverty and population pressure can lead inexorably to the loss of forest cover, trapping people in perpetual poverty. Whilst millions of people still cut down trees to make a living for their families, a major cause of deforestation is now large-scale agriculture driven by consumer demand. In recent decades deforestation has shifted from a largely state-initiated to an enterprise-driven process. The drivers of the demand for agricultural land vary globally. In Africa, it is primarily small-scale subsistence farming. In South America, it is large-scale farming enterprises, producing beef and soy for export markets. In South East Asia, the driver is somewhere between the two, with palm oil, coffee and timber the main products.



As a result, the destruction of forests beyond sustainable levels only increases global warming. Tropical forests cover about 15% of the world's land surface. Yet, they are being rapidly degraded and deforested, resulting in the emission of heat-trapping carbon dioxide into the atmosphere. Approximately 14 million hectares - an area the size of Nicaragua - are converted for other land uses each year, accounting for one-fifth of total global carbon emissions, making deforestation the second largest contributor to global warming. Forests therefore have a vital role to play in combating climate change.

In addition to carbon storage, the forest and its resources directly support the livelihoods of 90% of the 1.2 billion people living in extreme poverty and are home to nearly 90% of the world's biodiversity. Local communities depend on forests as a source of fuel, food, medicines and shelter. The loss of forests jeopardizes poverty alleviation, and directly threatens Indigenous and forest-dependent people's cultures. Climate change will hit the poorest hardest and so reducing deforestation will help build their resilience to climate impacts.⁵

⁵ Information adapted from The United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries, <http://www.un-redd.org/>.

There are two issues related to deforestation: it is getting worse, not better, and the traditional approach to dealing with it, such as international treaties, is simply not measuring up. The main challenge, Rischarad argues, is that we still haven't caught up with the high-population, fast-paced, globalized and interconnected world that we are living in. The rate and depth of globalization has far exceeded the development of our institutions and approaches to decision-making.

Identifying technology as a crucial tool in the fight to address increasingly complex and urgent global issues, Rischarad notes that the "global issues networks" made possible through the internet should be utilized to keep governments accountable to the people they represent. These networks of concerned citizens can make decision-making more inclusive by giving people the voice, and hold institutions, businesses, and organizations accountable by monitoring their compliance with globally recognized standards and commitments.

As schools are looking for ways to engage their students in real-world issues through their learning, this collaboration aims to empower students to take on challenges like deforestation through the use of technology.

DEFORESTATION PROGRAM OVERVIEW

Aims and Objectives

The DeforestACTION initiative was established in order to empower young people worldwide to become *inspired* by youth working to fight deforestation, become *informed* about the issues and politics deforestation, and actively *involved* in finding a solution. Through the DeforestACTION lessons, students will have the opportunity to:

- Develop and work on projects that raise funds and protect endangered forests; and
- Develop local projects related to the theme of deforestation, unique to their school and community.

The overall pedagogical aims and objectives of DeforestACTION are to:

- Collaborate on a global platform to solve global problems.
- Review and evaluate the causes, impacts and politics of deforestation at the local and global level.
- Analyze, using deforestation as an example, how to plan and organize for global issues using collaborative technology.
- Prepare action plans by engaging in interactive activities and taking part in valuable discussions with peers and mentors.

21st Century Learning

The DeforestACTION Toolkit is an interdisciplinary educational resource developed to help secondary school students around the world learn about the issues of deforestation.

As the toolkit was designed to support curriculum objectives across a wide range of subject areas and 21st century skills, teachers of various subjects can use this guide to incorporate considerations of sustainability into their teaching. The interdisciplinary nature of the toolkit also makes it possible for educators to deliver the curriculum independently or in collaboration with colleagues in their school.

Related subjects		Related 21st century skills
Art	Language Arts	Collaboration
Civics	Math	Critical thinking
Communications	Media Studies	Social responsibility
Environmental studies	Science	Graphing
Geography	Social studies	Inquiry
Global issues	Technology	Problem solving
History		Systems thinking
		Written and oral communication skills

Module Overview

The toolkit will contain 20 lesson plans, organized into 5 modules, with a new module released every 2 months. All modules and resources will be available within online classrooms made available to all teachers participating in DeforestACTION.

This table outlines the DeforestACTION timeline and associated modules:

MONTH	MODULE
Nov 2010	Module 1: Deforestation
	This module is designed to help students explore why existing forests need to be protected. Through the lessons contained in this module, students will confront the threats to existing forests and contemplate the very real dangers that await us if we do not learn to effect change and contribute to a more sustainable world.
Jan 2011	Module 2: Reforestation
	This module is designed to help students evaluate why we need to restore rainforests. Students may produce action projects that will help raise awareness of how issues such as palm oil production contribute to global warming, habitat loss, destruction of species and other global problems.
Mar 2011	Module 3: Orangutans
	This module is designed to help students understand the threatening survival issues concerning orangutans. Students will have the opportunity to devise orangutan 'rescue' projects, with the aim of providing long term security for orangutans.

MONTH	MODULE
May 2011	Module 4: Sustainable Villages
	This module is designed to help students explore how the production of sugar palms and sustainable bio-fuel contribute to sustainable life for village people. Students will be asked to reflect upon the issues threatening livelihoods and have the opportunity to sponsor their own Village Energy Hub.
Jul 2011	Module 5: The Dome tree
	This module is designed to help students to actively get involved in growing the world's largest tree as an education centre for orangutan intelligence, protection and care. Students will have the opportunity to engage in online communication and gaming with orangutans.

DEFORESTATION THEMATIC CLASSROOM

As mentioned above, by participating in DeforestACTION, you will have access to a customizable online classroom, preloaded with relevant content to help your students learn about deforestation.

TIGed Classroom Sign Up

IMPORTANT: All schools, teachers and students must be registered with TIGed classroom before they can start their DeforestACTION projects. Instructions on how to do this are below.

Step 1: Sign Up or Login to TakingITGlobal

If you have a TakingITGlobal account, you will be prompted to sign in, and you will move on to Step 2. If you are not an existing TIG member, you will be asked to create an account.

Step 2: Join Your School

To join your school, enter your teacher registration link and code.

Step 3: Create your Classroom

After you have joined your school, the next step is to create a classroom. Once created, classroom settings can be modified (except for the class web address, which *cannot* be changed later). The settings are divided into the following categories:

Basics

- *Class name:* This name will appear on your school's TIGed school page
- *Class web address:* Your TIGed.org web address
- *Subject:* The subject of the class
- *Grade:* The grade of the class who will be using the classroom
- *Language:* Language of the class environment

Privacy and Student Signup Settings

- *Class Privacy:* Student profile information will always be hidden, however some class content can be made available.

- *Public*: The classroom and its content will be viewable by anyone. Only student profile information will be hidden
- *Private*: The classroom will only be accessible by teachers, students and guests of the classroom

Student Sign Up

- *Teacher Managed*: You will add students directly through your class page. Students are not required to have email addresses.
 - You will have the option to create one password for all students or create individual passwords for each student. You will have to distribute the class URL (located in the address bar on the homepage of your classroom) to each student, along with their username and password (individual or group)
 - *Student Managed*: You will create a student registration code and students will sign up and create profiles on their own. Students are required to have email addresses.

Adding Students to Your Classroom

There are two ways which you can add students to your classroom:

Student Managed: You will create a student registration code and students will sign up and create profiles on their own. Please note that students are required to have email addresses. If you choose this option, add students by following these steps:

1. From your classroom home page, click on 'Participants' on the left hand side.
2. Click on the green '+ Invite' on the lower right hand side of the 'Participants' page.
3. Input the email addresses of students you would like to invite.
4. Include a message you would like to send with the invitation to join your classroom.
 - Note: Each invitee will receive an e-mail explaining how to become a TIG member (if they are not already) and how to register to your class.

Teacher Managed: You will add students directly through your class page. Students are not required to have email addresses. If you choose this option, invite students by following these steps:

1. From your classroom home page, click on 'Participants' on the left hand side.
2. Click on the green '+Add' button on the lower right hand side of the page.
3. You can use this tool to create accounts for all your students for your TIGed classroom. Each student will need a username and password. Initially, you will choose one password that all the students will use when they first login, or you have the option of assigning individual student passwords.
 - Note: Some students may attempt to use the class password to access each other's accounts. You may want to consider selecting the individual password option.

4. When creating usernames, we suggest starting all student usernames with your school alias, for example "MCI-SteveB", because many common usernames may be taken, and it will help to identify them more easily!
 - Note: No spaces are allowed in usernames!
5. Step 5) You're finished! As a reminder, students will not be allowed to change their passwords.

Making the Most of Your Online Classroom

Take advantage of the free virtual classroom community offered to all DeforestACTION teachers. TIGed offers teachers the ability to create and manage private, advertising-free virtual classrooms, through which students can take advantage of the benefits of web 2.0 tools without sacrificing security.

You can choose which tools to integrate into your online classrooms based on what is most appropriate for your students and projects. Available tools include: blogs, podcasts, maps, digital image galleries, discussion boards, live video chat, online file space, and more.







The table below provides some suggestions on how to use the virtual classroom tools.

TIGed Tools	Suggestive use
Blogs	Create a classroom blog. Update the blog once a week . The blog tool also has a 'comments' tool to allow student to comment on each other's journey!
Discussion boards	The discussion boards are a great place for students to engage in meaningful asynchronous dialogue with their peers. Students can upload questions, share views and opinions on key topical issues. The discussion wall is an opportunity for EVERYBODY to get involved.
Writing wall	Writing is a place for students to submit various writing pieces such as poems, short stories, essays and articles. Their writing pieces may be submitted for an assignment.
Maps	The mapping feature allows your students to create points on a map, allowing them to explore various points of interest around the globe. They are also able to calculate the distance between two or more points on a map.
Digital image galleries	The Gallery is a place for your students to post artwork/images, either in connection to an assignment or in simply because they want to.
Live video chat	Video chat supports up to 4 webcams and 100 text chat participants at one time, and is a great way for your students to connect online with each other or with other students across the globe.
Online file space	Class files provides a secure space for teachers and students to exchange and store files.

APPENDIX 1: UTILIZING TIG AND TIGed




The TIG website, www.tigweb.org, offers a number of free tools for you to use to support the DeforestACTION project in your school.

Here is a snapshot of what you can expect to find in each of its 6 sections:

	Community: Features discussion boards and member stories that can be used to find inspirational reflections and discuss important topics with young leaders from across the globe.
	Action Tools: Facilitate activism by providing youth with online tools to manage projects and groups, create and sign petitions and commitments, and download action guides.
	Resources: Feature a global database of youth-serving and/or youth-run organisations as well as event and opportunity listing to help youth get involved in social and environmental initiatives, either online or in their communities.
	Youth Media: Includes blogs, educational games, the Global Gallery and the Panorama e-zine.
	Global Issues: Offer information and resources to learn about more than 50 global issues.
	Regions: Feature information and community pages for every country and territory in the world.

Introducing students to TIG's online social network of young leaders from around the world provides them with a positive, safe space to remain inspired, informed, and involved after the DeforestACTION project comes to an end.

Joining the online TIGed community at www.tiged.org allows you to access:

	A community of over 3,800 global educators and 17,500 students in 112 countries around the world who are interested in collaborating, sharing, and learning together.
	A resource centre with lesson plans, activities, games, and thematic classrooms linked to MCREL ⁶ curriculum benchmarks and 21st century skills.
	Virtual classroom communities, that teachers create, moderate, and control to fit the needs of their students and objectives of their curriculum. Classroom tools include blogs, podcasts, maps, image galleries, live video chats, discussion boards, and online file storage, allowing students to demonstrate their learning, express themselves, engage in constructive dialogue around important topics, and develop a portfolio of their work – all within a private, secure, and advertising-free online environment, anytime, anywhere!

⁶ www.mcrel.org/