



## International Development Forum

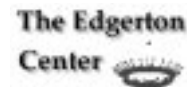
# The Guide to International Development @ MIT 2003



## International Development Forum

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# Welcome

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Welcome to the second annual MIT International Development Forum. The goal of the Forum is to introduce incoming students and other members of the MIT community to the many ways they can participate in international development while they are at MIT. We encourage you to familiarize yourself with the student groups, classes, centers, programs, and departments participating in the Forum and mentioned in this guide. They represent opportunities for MIT students to become responsible participants in the global effort to promote justice and sustainable development.

This guide also can be viewed at the web site (<http://web.mit.edu/idf>). We welcome your suggestions for how we could improve on this guide and next year's Forum. We also welcome your ideas for how to continue the conversation about international development at MIT.

Finally, we would like to express our gratitude for the generous support for the IDF offered by Bill ('56) and Betsy Leitch. Their partnership in this effort has allowed us to broaden the scope of our efforts and bring you a higher-quality Forum. Many thanks to them.

Sincerely,

## **The Planning Team**

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## Introduction to Sustainable Development at MIT

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The satisfaction of basic human needs is essential to achieving sustainable development. There are a number of efforts to this end underway at MIT.

**Food and Nutrition** – Since MIT does not have a school of agriculture, research into food production is minimal. Despite this, MIT has a variety of clubs and research activities devoted to optimizing nutrition and the political economy of food distribution. For example, see (<http://web.mit.edu/mitmsa/www/afghan/home.html>)

**Water** – Major research into water systems is underway in the Department of Civil Engineering. In addition, related issues of political economy are explored through projects in, for example, Nepal and Gaza.

**Transportation** – The Center for Transportation and Logistics (CTL) is a major node for research in ground transportation at MIT. The Department of Aeronautics and Astronautics focuses on air transportation in the highly competitive domestic and international airline industry. In addition, a recently released study by the World Business Council on Sustainable Development (WBCSD) highlights challenges to achieving sustainable global mobility. (<http://lfee.mit.edu/publications/>)

**Shelter** – MIT Building Technology Group within the School of Architecture participates in a cooperative project to develop sustainable urban housing in China. (<http://chinahousing.mit.edu/english/home/index.html>)

**Health Care** – Biotechnology is one of the major research thrusts at MIT. As a consequence, research activity abounds in medical diagnostics, molecular therapeutics, and tissue engineering, just to name a few. Notably, advanced research tools are under development through research on genomics and proteomics at the Whitehead Institute. Student activities such as United Trauma Relief provide opportunities to address health concerns in developing countries.

**Media, Communications, and Computing** – The Media Lab, Laboratory for Computer Science, Artificial Intelligence Lab, and Course 6 engage in a wide variety of analysis and development projects with application to next generation communication devices.

**Energy** – The Laboratory for Energy and Environment (LFE) provides a platform for integrating energy production and environmental stewardship.

## Guide to Participating Organizations

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### AID-Boston

URL: <http://www.aidboston.org>

Contacts: Anand Sivaramanm <[ansiv@mit.edu](mailto:ansiv@mit.edu)>, Vidya Jonnalagadda <[vidyaj@mit.edu](mailto:vidyaj@mit.edu)>, Arvind Saraf <[arvind\\_s@mit.edu](mailto:arvind_s@mit.edu)>

**Description:** In India, the problems of poverty, illiteracy, unemployment, dependency, disease, social inequalities, corruption and the dwindling of natural resources reinforce one another. The solutions to these problems must also be interconnected, and they should concern all of us. Association for India's Development (AID) is a non-profit organization committed to the cause of a just, sustainable paradigm for holistic development in the villages of rural India. In addition, we believe that it is important to involve the people whose lives we would like to change as equal participants in the process. AID's vision covers the breadth of the country and the depth of the problems through short-term projects distributed throughout India; and through long-term involvement in selected projects. AID Boston is a student chapter based at MIT.

**Participation:** Open to people interested in helping people help themselves with enthusiasm, willingness to learn, and ability to listen to multiple perspectives

### Alliance for Global Sustainability (AGS)

URL: <http://globalsustainability.org>

Contact: Karen Gibson <[kgibson@mit.edu](mailto:kgibson@mit.edu)>

**Description:** The AGS is an international partnership of four leading science and technology universities: MIT, ETH-Zurich, University of Tokyo, and Chalmers University, Goteborg. AGS brings together hundreds of university scientists, engineers, and social scientists to address the complex issues at the intersection of environmental, economic, and social goals. In partnership with universities and governments around the world, AGS works towards better scientific understanding of global environmental challenges, development of technology and policy tools to help societies reconcile ecological and economic concern, education of a new generation of leaders committed to sustainable development. The AGS is a program of the MIT Laboratory for Energy and the Environment.

**Participation:** Faculty and researchers from the partner schools submit proposals for collaborative work each year. Students participate through specific AGS research projects, fellowship programs (such as the Martin Family Society for Fellows for Sustainability at MIT), curriculum based on AGS output, and the AGS sponsored Youth Encounter on Sustainability (YES), a two-week summer institute combining lectures and workshops on the environment, with field experience in the form of a group case study.

### Amnesty International

URL: <http://web.mit.edu/amnesty/www>

Contacts: <[mitai-exec@mit.edu](mailto:mitai-exec@mit.edu)>: Shankar Mukherji, Mindy Chao, Emily Havens, David Strozzi, Michal Kaufman

**Description:** Amnesty International is a non-governmental, non-partisan organization working for the protection of human rights. The international organization as a whole consists of roughly 1 million members in 45 countries worldwide. The MIT chapter meets every two weeks to discuss human rights issues and write letters on behalf of prisoners of conscience.

**Participation:** The group is open to anyone with an interest in human rights issues.

## Carroll L. Wilson Award

URL: [http://entrepreneurship.mit.edu/wilson\\_award.php](http://entrepreneurship.mit.edu/wilson_award.php)  
Contact: Gracie Alcid <alcid@mit.edu>

**Description:** The Carroll L. Wilson Award is a grant for up to \$5,000 awarded to graduate students, in any MIT department, who wish to pursue exciting and challenging research opportunities abroad. The aim of the Wilson awards is to provide opportunities for MIT graduate students to explore a program of research and/or study of an important societal problem with international dimensions. The award enables students to spend around 6 weeks in a foreign country, pursuing a project that would have excited the interest and enthusiasm of Wilson himself. These awards have been established as a memorial to the late Carroll L. Wilson ('32) in honor of his career achievements and long-standing legacy.

**Participation:** For MIT graduate students, in any MIT department. Four to five graduate students receive \$5,000 awards each year, after a competitive evaluation of proposals by the Carroll Wilson Award Selection Committee.

## CEE Master of Engineering Program

URL: <http://ceemeng.mit.edu>  
Contacts: Heather Lukacs <lukacs@mit.edu>, Susan Murcott <murcott@mit.edu>, Dr. Eric Adams <eadams@mit.edu>

**Description:** The Civil & Environmental Engineering department's Master of Engineering program sends masters level graduate students to work on water and sanitation projects in developing countries (Nepal, Haiti, Nicaragua, Brazil). Throughout the 9-month academic year, students work in teams of 3-5 students on the design of treatment systems, emphasizing appropriate design and sustainable operation, and travel to the site during IAP. The students' masters thesis is usually derived from their group project work.

**Participation:** Most participants are enrolled in the department's 9-month Master of Engineering Program, but a few undergraduate and non-MEng graduate students have also participated.

## D-Lab

URL: <http://web.mit.edu/d-lab>  
Contact: Amy Smith <d-lab@mit.edu>

**Description:** D-lab is a four-part series of courses and field trips that focus on international development, appropriate technologies, and sustainable solutions for communities in developing countries. In the fall, students learn about international development and appropriate technology through case studies, guest speakers and hands-on laboratory experiences. During IAP, students work on site with partner organizations to implement projects and identify further technical challenges on which to collaborate. An extensive language and cultural training program prepares students for the trip. Next, students can take a spring design seminar to develop solutions to the problems identified during the IAP field trip. Finally, students can return to their host communities over the summer to test their designs and get feedback to refine their solutions.

**Participation:** Students who register and take the class, or international student groups that would like to host a field site.

## De Barrio a Playa

Contacts: Reyes Barboza <reyes\_shrugged@yahoo.com>, Elizabeth Bast <ebast@mit.edu>

**Description:** De Barrio a Playa is an environmental leadership workshop for youth in a low-income community in Santo Domingo, Dominican Republic. The week-long workshop combines an educational retreat with a neighborhood improvement project. During the retreat, participants engage in educational, problem-solving team activities. Participants return home for the second part of the workshop, where they actively address a challenge facing their communities. De Barrio a Playa gives youth confidence, new ideas, and the leadership skills necessary to create change.

**Participation:** Anyone excited about carrying this project forward. We completed our first workshop this summer, and we are in the process of following up and figuring out what's next. If you are excited about teaching leadership and teamwork skills to youth or working with youth in disadvantaged communities, please talk to us! Proficiency in Spanish a plus.

## Design that Matters

URL: <http://web.mit.edu/dtm>  
Contacts: <dtm-exec@mit.edu>; Will DeHagen <willd@mit.edu>, Chris Emig, Annie Ding, Josh Wilson

**Description:** Design that Matters does engineering for underserved communities. We have designed technologies for international development, as well as medical and assistive technologies. Products developed include a low cost eye-wear manufacturing device, a non-electric incubator for premature infants, and a cholera treatment IV-drip device. We are always looking for engineering and science students to work on solutions to our multitude of design challenges. But we need more than engineers because the challenges of development reach far beyond pure technology, and we need people who are interested in working with us to build a new and exciting organization.

**Participation:** Everyone is invited to participate and bring their unique skills and interest to the table in the effort to provide solutions to the problems of underserved communities.



Photo by Design that Matters

## Digital Nations Consortium

URL: <http://dn.media.mit.edu>

Contacts: Eleonora Badilla-Saxe <[eleonora@media.mit.edu](mailto:eleonora@media.mit.edu)>

**Description:** Digital Nations aims to address major social challenges (improving education, enhancing health care, supporting community development) through the innovative design and use of new technologies. The consortium's ultimate goal is to empower people in all walks of life to invent new opportunities for themselves and their societies. The consortium focuses especially on populations with the greatest needs: children and seniors, underserved communities, and developing nations.

**Participation:** Primarily UROPs and graduate students supported by Digital Nations Research Assistantships. Requires permission of associated faculty member.

## Earth System Initiative

URL: [web.mit.edu/esi](http://web.mit.edu/esi)

Contacts: Matthew Gardner <[gardner@mit.edu](mailto:gardner@mit.edu)>, Kip Hodges <[kvhodges@mit.edu](mailto:kvhodges@mit.edu)>, Penny Chisholm <[chisholm@mit.edu](mailto:chisholm@mit.edu)>

**Description:** The Earth System Initiative is a research and educational enterprise that cuts across environmentally-oriented disciplines such as geology, atmospheric science, oceanography, biology, chemistry and environmental engineering. In the tradition of innovation that characterizes MIT, this Initiative provides a fertile ground for a new kind of Earth exploration—one that will marshal revolutionary tools and technologies to answer fundamental questions about life on Earth. Furthermore it will develop ways to effectively disseminate this knowledge to the citizens, policy-makers and corporate decision makers whose actions determine how the Earth's resources are managed.

**Participation:** Any faculty, staff or students who are involved with environmental research or engineering at MIT

## Expediting Access to Standard Education (EASE)

URL: [web.mit.edu/ease/www](http://web.mit.edu/ease/www)

Contacts: <[ease-exec@mit.edu](mailto:ease-exec@mit.edu)>: Jehanzeb Noor, Arthur Musah

**Description:** EASE is an effective system for sponsoring the education of needy children in Africa at the middle school and high school level.

**Participation:** Volunteers, funders, organizers from the MIT community and general Boston area who are committed to service



Photo/Courtesy Pawan Sinha, MIT

## Engineers Without Frontiers

Contacts: Marta Fernandez Suarez <[martafs@mit.edu](mailto:martafs@mit.edu)>,

Candace Jantzen-Marson <[candace@mit.edu](mailto:candace@mit.edu)>

**Description:** Engineers Without Frontiers is a world-wide non-profit organization, which seeks to bring appropriate technology to developing countries. Students in EWF design and develop projects from NGOs through EWF-USA. EWF also offers summer internships for students who want to implement the projects in the corresponding country.

**Participation:** Open

## Global System for Sustainable Development (GSSD)

URL: <http://gssd.mit.edu/>

Contacts: Nazli Choucri, Director <[nchoucri@mit.edu](mailto:nchoucri@mit.edu)>,

Vincent Maugis <[vmaugis@mit.edu](mailto:vmaugis@mit.edu)>

**Description:** The Global System for Sustainable Development (GSSD) is a multi-dimensional and multi-lingual knowledge-networking system designed and developed at MIT. The system is based on an integrated framework and on an evolving decentralized quality controlled cross-referenced knowledge base. Designed in response to the increasing complexity of global realities, it supports knowledge management and meta-networking functions dedicated to improved knowledge, decision making and policy in the domain of sustainable development at all levels and in all contexts. The Internet-enabled networking system provides human-assisted advanced information technologies for meeting sustainability challenges in both private and public sectors by enabling functions and services across stakeholders communities, adopting strategic linkages to enable globalization and localization of knowledge, and supporting "top-to-bottom" and "bottom-to-top" knowledge provision and communication.

**Participation:** Anyone

## Habitat for Humanity

URL: <http://web.mit.edu/habitat/www/>

Contacts: Radhika Jagannathan <[radhika@mit.edu](mailto:radhika@mit.edu)>,

Sidharth Puram <[sidpuram@mit.edu](mailto:sidpuram@mit.edu)>

**Description:** Habitat for Humanity is an international organization devoted to eliminating poverty housing and homelessness. Volunteers can work with individual chapters to build houses for the prospective families. MIT Habitat has funded and built one house and regularly builds at other sites with local affiliates. Our other goals include raising awareness on campus of poverty housing and homelessness issues, and fundraising.

**Participation:** Anyone. Some building sites have an age requirement that all volunteers be over the age of 14. However, youth programs exist to enable younger people to participate and there are plenty of other ways to get involved without building.

## International Development and Regional Planning (IDRP)

URL: <http://web.mit.edu/dusp/www/academics/idrp/index.html>

Contact: Karen R. Polenske <[krp@mit.edu](mailto:krp@mit.edu)>

**Description:** The International Development and Regional Planning (IDRP) group is the longest standing and largest graduate program within a U.S. planning school devoted specifically to the developing world. IDRP faculty and students conduct research on local, regional, and global issues concerning Africa, Asia, Europe, North America, Oceania, and South America. IDRP faculty believe that effective planners working in today's world must acquire an institutional and integrated view of economic, physical, political, and social factors that influence development. They have, therefore, designed the program to provide this view and strive to prepare students for careers in local, state, and national government, in universities and other research institutions, and in non-governmental organizations and international agencies here and abroad.

**Participation:** Any faculty, student, and/or staff member in the Department of Urban Studies and Planning. For talks and presentations, any person at MIT or outside MIT may attend, subject to space availability and individual faculty restrictions.

## Laboratory for Energy and the Environment

URL: <http://lfee.mit.edu>

Contacts: Professor David H. Marks <[dhmarks@mit.edu](mailto:dhmarks@mit.edu)>,

Professor Ernest Moniz <[ejmoniz@mit.edu](mailto:ejmoniz@mit.edu)>, Dr. Stephen Connors <[connors@mit.edu](mailto:connors@mit.edu)>, Dr. Teresa Hill <[thill@mit.edu](mailto:thill@mit.edu)>

**Description:** The Laboratory for Energy and the Environment (LFEE) includes projects and programs the sustainable development of all aspects of the environment, with a special focus on the sources and uses of energy. LFEE supports research, education, and out-reach programs designed to encourage the interdisciplinary study of sustainability-related issues in both the developed and developing worlds.

## Learning International Network Consortium (LINC)

URL: <http://ken.mit.edu/linc/>

Contacts: Richard Larson <[rclarson@mit.edu](mailto:rclarson@mit.edu)>, Carol Sardo <[csardo@mit.edu](mailto:csardo@mit.edu)>

**Description:** Developing countries have millions of bright, motivated people reaching college age each year and, with few exceptions, limited opportunities for them to receive quality college education (4%, in contrast to 40+% in Western industrialized countries). These young people represent a way to achieve better lives for themselves and for their fellow citizens, yet even if universities were built, the limiting constraint is the lack of qualified teachers. Technology via e-learning and similar innovations can leverage a few good teachers to reach far more students as Mexico's Virtual University, ITESM, at Monterrey Tech exemplifies <<http://www.ruv.itesm.mx/>>. LINC aims at becoming the premier community of scholars and practitioners who are focused on technology-leveraged higher education in emerging countries. LINC will share information, help make professional connections, foster innovative programmatic initiatives, and otherwise support scholarship and practical results. A new project is a global collaborative learning community focusing on urban and regional operational problems in developing countries.

**Participation:** We welcome students, faculty and staff as volunteers.

## Mexico City Program

URL: <http://www-eaps.mit.edu/megacities/>

Contacts: Dr. Luisa Molina <[ltmolina@mit.edu](mailto:ltmolina@mit.edu)>, Samudra Vijay <[samudra@mit.edu](mailto:samudra@mit.edu)>

**Description:** The Mexico City The Project, led by Dr. Luisa and Mario Molina, is an interdisciplinary approach to understand complex scientific issues such as air pollution in an integrated manner. The project is aimed at identifying, developing and implementing policies to reduce air pollution in the Mexico mega-city. Stakeholder participation in the decision-making process, and capacity-building in the local population are two of the chief objectives of the project. The integrated methodology developed as part of the program may also provide a transportable framework to address complex issues involving conflicting requirements of development and pollution in other developing societies across the globe.

## MIT-Africa Internet Technology Initiative (MIT-AITI)

URL: <http://web.mit.edu/mit-africa/www>

Contacts: <[mit-aiti@mit.edu](mailto:mit-aiti@mit.edu)>: Solomon Assefa <[solomona@mit.edu](mailto:solomona@mit.edu)>,

George Heming <[heming@mit.edu](mailto:heming@mit.edu)>

**Description:** MIT-AITI is an innovative program started by MIT students to integrate computers and Internet technology into the education of students in African schools. The program uses innovations such as cutting-edge programming tools and free open-source systems to introduce students in Africa to the Internet, and to equip them with skills that encourage them to be creative and resourceful. Given that information technology carries the potential to empower people around the globe with knowledge, African students need to be equipped with the tools and skills needed for the development of information technology. MIT-AITI also aspires to create change beyond the classroom: students have succeeded in getting jobs in their local IT industry and have been involved in web development for local community initiatives. The program aims to serve a wide audience across gender and income levels. MIT-AITI has succeeded in improving the quality of education at the schools by teaching African teachers, thus enabling sustainable development of the curriculum at each school.

**Participation:** All MIT students, both graduates and undergraduates, with strong interest, passion, dedication; faculty can be advisors; offices can sponsor MIT students.

## MIT \$50K Entrepreneurship Competition

URL: <http://50k.mit.edu>

Contacts: Daniel Riskin <[driskin@mit.edu](mailto:driskin@mit.edu)>, Erkko Etula <[etula@mit.edu](mailto:etula@mit.edu)>,

Timo Somervuo <[somervuo@mit.edu](mailto:somervuo@mit.edu)>, Cole Sirucek <[coles@mit.edu](mailto:coles@mit.edu)>,

Matt Richards <[mtrichar@mit.edu](mailto:mtrichar@mit.edu)>

**Description:** The MIT \$50K Entrepreneurship Competition is designed to encourage students and researchers in the MIT community to act on their talent, ideas and energy to produce tomorrow's leading firms. Now in its 15th year, the Competition has awarded hundreds of thousands of dollars in cash and business startup services to outstanding teams of student entrepreneurs who submitted business plans for new ventures showing significant business potential in areas ranging from cutting edge technology to social, economic and environmental development.

**Participation:** All teams must have at least one MIT student to be eligible.

## MIT Haitian Alliance

URL: <http://web.mit.edu/mitha/www>

Contacts: <haitians-exec@mit.edu>:Jamy Drouillard, Charly Jeune, Natalie Paul

**Description:** The MIT Haitian Alliance is proud to be a part of D-Lab by teaching culture, development and language material to MIT students interested in doing development work. We are currently organizing appropriate community based projects in water quality, agriculture, alternative fuels, electrification and computer projects for Haiti. In addition, plan to develop a wind turbine construction seminar where interested student groups can make wind turbines for their dorms or elsewhere.



**Participation:** We welcome faculty, staff and students for input, advice and physical assistance on the wind turbine seminar with interest in development, sustainability, appropriate technologies, field practice, design and prototyping.

## MIT Humanitarian Demining

URL: <http://web.mit.edu/demining/www/demining.html>

Contact: Benjamin Linder <blinder@alum.mit.edu>, Andrew Heafitz <heafitz@alum.mit.edu>

**Description:** Humanitarian demining is the process of detecting, removing and disposing of landmines. Millions of landmines are buried in more than 70 countries resulting in 20,000 civilian victims every year. MIT Humanitarian Demining is run as an informal, project-based design course. Students learn about demining while they design and build a device to aid the demining community. Course work is informed by guest speaker presentations and a class field trip. Past students have worked on probes, shears, metal detectors, shields, flails, and grapples.

**Participation:** The course is open to students from all class levels and departments.

## MIT IDEAS Competition

URL: <http://web.mit.edu/ideas>

Contacts: <ideas-admin@mit.edu>: Amy Smith, Sally Susnowitz, Amy Banzaert, Alison Hynd

**Description:** The MIT IDEAS Competition provides teams with the opportunity to develop their creative ideas for projects that make a positive change in the world. With over \$20,000 in awards, as well as additional development grants, teams can take an effective step towards resolving pressing community needs. Projects are judged for their innovation, feasibility and impact.

**Participation:** Each team must be at least 1/3 MIT students; anyone can join the IDEAS staff.

## MIT Program on Human Rights and Justice

URL: <http://web.mit.edu/phrj/>

Contact: <phrj@mit.edu> Professor Diane E. Davis

**Description:** The MIT Program on Human Rights and Justice (PHRJ) is a collaborative effort between the Center for International Studies and the Department of Urban Studies and Planning. The Program creates a cutting-edge inter-disciplinary environment for research, teaching, curricular development and real-world application in human rights, especially relating to the global economy, science and technology. It is the first human rights program in a leading technology school and the first in the world with a specific focus on the human rights aspects of economic, scientific and technological developments. Cross-cultural dimensions of human welfare, security and dignity animate all the activities of the Program. Offerings include speaker series, workshops, conferences, research projects including through partnership with NGOs and international organizations, student internships, a fellowship program and a working paper series.

**Participation:** There are no prerequisites, but applicants interested in getting academic credit for human rights-related work should contact the Program.

## MIT Public Service Center

URL: <http://web.mit.edu/mitpsc>

Contact: <psc@mit.edu> or Sally Susnowitz <susnowit@mit.edu>

**Description:** The MIT Public Service Center facilitates community service efforts by the MIT community to assist local, regional, national, and international communities. For international projects, we offer planning assistance, grants, and independent and international fellowships. With the Edgerton Center, we also support service learning classes, including Public Service Design Seminars, and the IDEAS Competition, which celebrates and supports innovative designs that meet community needs worldwide.

**Participation:** Fellowships are reserved for MIT undergraduates and graduate students; grants and planning assistance are available to anyone in the MIT community for projects that involve MIT students in community service projects. Faculty and alumni are needed as project mentors or IDEAS team members. Faculty and student grants are available for service learning class projects.

## MIT Western Hemisphere Project

URL: <http://web.mit.edu/hemisphere/>

Contact: <hemisphere-admin@mit.edu>

**Description:** Project activities are designed to help members of the MIT community understand the connections among peoples, governments, and corporations in the Western Hemisphere. We examine all facets of these relationships, from the historical and cultural to current economics, politics, mass media, and human rights. In the past we have brought speakers and activists to campus. One of our current efforts is to create a not-for-profit "International Corps of Engineers," whose goal is to provide systematic technological aid to developing communities and those in the process of re-building after a natural or other disaster.

**Participants:** MIT community; others by invitation

## Setu

URL: <http://setu.mit.edu>

Contacts: Mahesh Kumar <maheshk@mit.edu>, Anand Rajgopal <andyraj@mit.edu>

**Description:** Setu is a student group at MIT founded in 2002 to promote sustainable development in South Asia through social action projects with a focus on technology-based solutions. In the past year, Setu successfully implemented a Computer Training Center and Women's Empowerment Center in rural India and is currently in the process of launching several new projects.

**Participation:** Anyone who is interested in social development in South Asia

## Special Program for Urban and Regional Studies of Developing Areas (SPURS)

URL: <http://web.mit.edu/spurs/www/>

Contacts: John de Monchaux <demon@mit.edu>, Nimfa de Leon <nvdeleon@mit.edu>

**Description:** SPURS, which is part of the IDRP group, is a one-year program for mid-career planning professionals from developing countries. Over the 36 years of the program, SPURS has hosted Fellows from over 83 countries with a broad range of experiences in the field of international development.

## Student Pugwash

URL: <http://web.mit.edu/pugwash>

Contact: Daniel Collins <daniel\_@mit.edu>

**Description:** Student Pugwash promotes the socially responsible application of science and technology, by raising awareness, fostering balanced discussion, and encouraging people to assess the roles their work and research play in society.

**Participation:** Anyone

## Students for Global Sustainability (SfGS)

URL: <http://web.mit.edu/sfgs>

Contacts: Xiaomin Mou <xmou@mit.edu>, Chaitra Chandrasekhar <chaitra@mit.edu>, Shruti Chandrasekhar <shruti@mit.edu>, Philip Sheehy <sheehy@mit.edu>

**Description:** SfGS is committed to promoting the basic tenets of sustainable development through a combination of education and action. As part of the World Student Community for Sustainable Development (WSC-SD, <[www.wscsd.org](http://www.wscsd.org)>) we are a local student chapter that acts on a local and regional scale. Some recent projects that we are currently involved with include a partnership with the City of Cambridge to aid in the implementation of the Cambridge Climate Protection Plan, working with the MIT Solar Power initiative, reducing waste on campus with "Sustainable Containers," and organizing a Seminar Series on Sustainable Development.

**Participation:** Anyone who is interested, with good ideas and a strong commitment

## Students for Labor Justice

URL: <http://web.mit.edu/labor>

Contact: Jean Walsh <walshie@mit.edu>

**Description:** SLJ is dedicated to the struggle for workers' rights and economic justice on our campus, in our local community and around the world. We're currently working on two campaigns: the Fair Trade Coffee Campaign will spread the word about fair trade products and ensure fairly traded coffee is available in all campus dining establishments, and the Anti-Sweatshop Initiative will build demand for "sweat-free" apparel on campus and monitor the Institute's progress on its commitment to fair labor standards for workers making MIT-licensed products.

**Participation:** Open

## Technology and Development Program (TDP)

URL: <http://web.mit.edu/mit-tdp/www/>

Contact: Patricia Vargas <pvargas@mit.edu>

**Description:** The Technology and Development Program at MIT explores new models of international collaboration designed to fit the unique needs of national environments in the developing world. TDP is an interdisciplinary international program reporting to the Vice President for Research. For the past 32 years, TDP has promoted expertise in solving specific technological and socioeconomic problems facing newly industrialized countries and in enhancing the quality of higher education. In addition, TDP pursues international partnerships that build infrastructure and human resources in science and technology adapted to the needs and priorities of the partnering countries. TDP was instrumental in establishing the Cairo University/MIT Technological Planning Center and the Malaysia University of Science and Technology.

**Participation:** MIT graduate students may participate as Teaching or Research Assistants with the agreement of the professor or Principal Investigator.



Photo by Stuart Darsch

## The Inter-University Committee on International Migration

URL: <http://web.mit.edu/cis/www/migration/index.html/>

Contacts: Sarah Anderson <sarahwa@mit.edu>, Josh Kirshner <jkirsh@mit.edu>, Neil Ruiz <nruiz@mit.edu>, Sharon Stanton Russell <srussell@mit.edu>

**Description:** The Inter-University Committee on International Migration is a focal point for migration and refugee studies at MIT and five other local universities. The Committee sponsors two seminars series (open to the public), two working paper series, topical workshops, as well as the Mellon-MIT Program on Non-Governmental Organizations (NGOs) and Forced Migration, a small grants program open to graduate students, faculty, and other scholars at member institutions who wish to pursue research in partnership with NGOs on issues of migration.

**Participation:** Seminars are open to the public. For other participation guidelines, contact the programs



## The Inter-University Initiative in Humanitarian Studies

URL: <http://www.humanitarianstudies.org/>

Contacts: Sarah Anderson <sarahwa@mit.edu>, Josh Kirshner <jkirsh@mit.edu>, Neil Ruiz <nruiz@mit.edu>, Sharon Stanton Russell <srussell@mit.edu>

**Description:** The Inter-University Initiative in Humanitarian Studies is an innovative certificate program designed for graduate students who wish to incorporate humanitarian studies into their degree work, requiring a supervised, three-month field placement in which students gain practical experience in humanitarian response yet allowing flexibility based on individual background and interest.

**Participation:** Seminars are open to the public. For other participation guidelines, contact the programs

## The MIT Working Group on Migration and Development

URL: [http://web.mit.edu/nruiz/www/MIT\\_mig\\_dev.html](http://web.mit.edu/nruiz/www/MIT_mig_dev.html)

Contacts: Sarah Anderson <sarahwa@mit.edu>, Josh Kirshner <jkirsh@mit.edu>, Neil Ruiz <nruiz@mit.edu>, Sharon Stanton Russell <srussell@mit.edu>

**Description:** The MIT Working Group on Migration and Development sponsors working papers and speaker series on current issues of how international migration effects the economic development of migrants' countries of origin.

**Participation:** Seminars are open to the public. For other participation guidelines, contact the programs.

## The Technology and Culture Forum at MIT

URL: <http://web.mit.edu/tac/www>

Contact: Patricia Weinmann <weinmann@mit.edu>

**Description:** The Technology and Culture Forum at MIT sponsors lectures and symposia that address critical issues of our time. The programs explore the role of science and technology in promoting positive social, ecological, and economic change. In addition, they stimulate discussion about the ethical implications of scientific discovery and technological innovation.

**Participation:** A Steering Committee coordinates T&C events. All MIT students, faculty and staff, and the public are invited to all events.



Photo by Stuart Darsch

## Thread

Contact: Karim Abdul-Matin <thread@mit.edu>

**Description:** Thread is a forthcoming journal of science, politics, and ethics. Our mission is to broaden awareness of the scope of science; to inspire students, scientists, and engineers of all disciplines to acknowledge and address in their work the conceptual, technical and ethical challenges of contemporary life. Our target audience consists of the students, professionals, and public officials whose choices determine the path of innovation.

**Participation:** Any member of the MIT community

## United Trauma Relief

URL: [web.mit.edu/utr/www](http://web.mit.edu/utr/www)

Contact: <utr@mit.edu> Shefali Oza

**Description:** We are a student-run organization working to prevent and alleviate suffering that results from poverty, disease and war. UTR members work on projects relating to international and local issues. Past and current work includes an AIDS drug recycling program, landmine clearance funding, natural disaster and refugee relief fundraisers, and campaigns for access to medicine and labor rights. Members are welcome to create their own projects or help out on current projects.

**Participation:** Anyone who is MIT affiliated

## Young Activists Network

URL: <http://www.youngactivists.net/>

Contact: Leo Burd <leoburd@media.mit.edu>

**Description:** The Young Activists Network (YAN) aims at organizing young people from low-income areas to become agents of change in their neighborhood. Young people usually have the time, the energy, the will, and the right to improve the quality of life in the places where they live. What they lack is appropriate space, support and recognition. YAN addresses those issues by helping to transform existing community technology centers into community empowering spaces in which youth have access to the appropriate tools and human support required to bring a deep and positive social contribution to their neighborhoods.

**Participation:** Highly committed and energetic students interested in working side-by-side with teenagers from low-income communities in the Boston area. Opportunities range from working with youth weekly, to carrying workshops about multimedia tools, developing new activities and designing new technologies for the community centers.



# Index of Development Related Resources at MIT

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## MIT Resources

MIT is a great environment for resourceful people. Programs and departments may have funds available to students who work in the areas they represent. Administrators and department Chairs may have discretionary funds that they might apply to interesting projects. Student government resources may be available for local fundraising activities that can in turn support international development work. Also consider working through established resources such as research teams, the IDEAS Competition, D-lab, and Alternative Spring Break. In other words, it is important to think strategically when it comes to resource acquisition at MIT.

Here are a few funding and information resources:

### Carroll L. Wilson Award

**Purpose:** To provide opportunities for MIT graduate students to study an important societal problem with international dimensions.

**Amount:** Four or five \$5,000 awards are awarded each year

**Time commitment:** Approx. six weeks

**Eligibility:** MIT graduate students selected through a competitive evaluation of proposals by the Carroll Wilson Award Selection Committee.

### Eloranta Fellowship

**Purpose:** Student-originated and/or directed research, investigation, or creative study in any field

**Time commitment:** full time summer occupation

**Amount:** \$6,000

**Allowable expenses:** living expenses, travel, or materials and services costs

**Eligibility:** MIT undergraduates (including June graduates)

**Timing:** Early April application deadline for summer award

**Website:** <http://web.mit.edu/eloranta/>

### Kelly/Douglas Traveling Fellowship

**Purpose:** To enable MIT juniors who are committed to further work in the humanities, arts or social sciences to travel to develop a scholarly project to support theses or other future work

**Amount:** \$1000-\$1500

**Time commitment:** full time summer occupation

**Allowable expenses:** living expenses, travel, or materials and services costs

**Eligibility:** MIT juniors

**Timing:** mid-April application deadline for summer award

**Website:** <http://web.mit.edu/mta/www/music/resources/kellytraveling.html>

### Program on Human Rights and Justice

**Purpose:** to provide MIT students the opportunity to study human rights issues first-hand at the field level or through applied research

**Amount:** \$5,000 maximum

**Time commitment:** 8-12-week summer

**Allowable expenses:** living and travel expenses

**Eligibility:** graduate and undergraduate students

**Timing:** Late March application deadline for summer award

**Website:** <http://web.mit.edu/phrj/internships.html>

### Public Service Center Grants

**Purpose:** Community service work, including conference attendance related to service leadership and training; group programs and events; individual service projects

**Amount:** variable

**Allowable expenses:** materials and transportation

**Eligibility:** MIT graduate and undergraduate students who will be enrolled for at least one semester following the grant project

**Timing:** applications accepted monthly

**Website:** <http://web.mit.edu/mitpsc>

### Public Service Center Independent Public Service Fellowships

**Purpose:** Independent community service projects that provide sustainable benefits

**Amount:** variable

**Time commitment:** IAP or summer

**Allowable expenses:** living expenses, travel, materials

**Eligibility:** MIT graduate and undergraduate students who will be enrolled for at least one semester following the Fellowship

**Timing:** October application deadline for IAP award; April deadline for summer award

**Website:** <http://web.mit.edu/mitpsc>

### MIT Public Service Center International Public Service Fellowships

**Purpose:** Community service projects at sites arranged by the PSC

**Amount:** pays expenses for international project

**Time commitment:** variable, IAP or summer

**Allowable expenses:** travel, room and board, materials

**Eligibility:** MIT graduate and undergraduate students who will be enrolled for at least one semester following the Fellowship

**Timing:** October application deadline for IAP award; April deadline for summer award

**Website:** <http://web.mit.edu/mitpsc>

## External Service Project and Funding Resources

So, you've decided to do community service overseas. You're excited, full of energy, and eager to find a place to go. You get on the favorite search engine and type "international community service" and WHAM. Thousands of web-sites, databases, and organizations fill your screen. Two hours later: frustrated and with blurry eyes you're convinced it is impossible to find a project you really like at a cost you can afford.

Though it's easy to get frustrated when attempting to identify an appropriate service project on the internet, it is important to remember the following: The reason you are bogged down with thousands of project sites and funding sources is because so many are available! Not all of them will apply to you, and not all of them will be exactly what you want or need. Keep in mind that there is a project that's right for you, and remember that with a little hard work and creativity, funding can be found for even the most unusual request. Here are a few web-sites to get you started.

A great web-site for international service is the **University of Minnesota International Travel and Service Center** (<http://www.istc.umn.edu/default2.html>). This site contains a database of over 600 service opportunities all over the world, and is searchable by keyword, region, type, and compensation. In addition, they have a database of over 200 funding sources and scholarships. Geared toward college students, this is an excellent place to start.

Another useful college web-site is the **Northeastern University Center of Community Service** (<http://communityservice.neu.edu/links.htm#service>) which contains websites for international service and funding.

There are plenty of databases for international service sites on the web. These usually contain hundreds of web-sites for organizations that sponsor service projects around the globe. Please read them carefully, as many may not apply to students. They may also vary depending on whether you are looking for an established project, or funding for a project of your own design. For a list of organizations that promote volunteering abroad, and descriptions of the opportunities available, visit Idealist.org at (<http://www.idealist.org/career/travel.html>).

For a list of funding opportunities for international service projects, try (<http://www.fundsnet.com/internat.htm>) and (<http://www.proposalwriter.com/intgrants.html>).

Another way to search for funding and projects is to look for the exact field in which you are interested. For example, the **Directory of International Grants and Fellowships in the Health Sciences** (<http://www.fic.nih.gov/news/directory.html>) is a comprehensive compilation of hundreds of international opportunities in biomedical research.

Good luck, and happy hunting!

## Suggested Courses

Though there is not a formally organized course of study focused on sustainability at MIT, there are many classes that provide a chance for students to develop their understanding of issues related to sustainable international development. In addition to this general overview of the class offerings related to sustainable international development, the IDF website (<http://web.mit.edu/idf/www/>) provides a comprehensive list of course offerings.

### Course 1: Civil and Environmental Engineering

Classes in numerous areas of study, including (among others) environmental chemistry and biology, geotechnical and geoenvironmental engineering, environmental fluid mechanics and coastal engineering, and transportation

### Course 2: Mechanical Engineering

Classes on environmentally benign engineering, sustainable energy, and more generally on the applications of technology in energy and the environment

### Course 3: Materials Science and Engineering

Classes in industrial ecology, sustainable energy, and the relation between industry, technology, and ecology

### Course 4: Architecture

Classes on sustainable settlement design and low-income housing in developing countries

### Course 5: Chemistry

A class on the applications of technology in energy and the environment

### Course 10: Chemical Engineering

Classes on sustainable energy and the applications of technology in energy and the environment.

### Course 11: Urban Studies and Planning

Classes in the following four specialization areas: City Design and Development; Environmental Policy; Housing, Community and Economic Development; and International Development and Regional Planning. They also offer classes in Transportation Planning and Policy, and Urban Information Systems.

### Course 12: Earth, Atmospheric, and Planetary Sciences

Classes in science and environmental policy, alternative energy sources, global change science, global atmospheric pollution and the economics, science, and policy of global climate change

### Course 14: Economics

Numerous classes on the theoretical, institutional, and policy aspects of international and development economics

### Course 15: Management

A range of classes on international management, as well as classes on global entrepreneurship, technology strategy, and the relation between sustainability, trade, and the environment

### Course 17: Political Science

Classes in a number of research areas, including (among others): ethnicity and identity; the politics and political economy of globalization; environment, defense, science, and energy policy studies; humanitarian intervention

### Course 21A: Anthropology

Classes on environmental struggles, the relation between technology and culture, debating globalization, and the relation between gender, power, and international development

### Course 21F: Foreign Languages and Literatures

Classes on communicating across cultures, working in a global economy, and on the relation between culture and globalization

### Course 21H: History

A class on the relation between imperialism, nature, and the environment

### Course 21L: Literature

Classes on the literature of exploration, exile, and cultural contact, and problems in cultural interpretation

### Course 22: Nuclear Engineering

Classes on sustainable energy, nuclear energy economics and policy analysis, systems analysis of the nuclear fuel cycle, and the applications of technology in energy and the environment

### Biological Engineering

Classes on toxicology and public health, and infectious agents and the environment

### Engineering Systems Division

A highly diverse range of offerings including, for example, classes on technology and policy, energy systems and economic development, the regulation of chemicals, radiation, and biotechnology, the relation between sustainability, trade, and the environment, and a class on the policy choices surrounding environmental issues

### Harvard-MIT Division of Health Sciences and Technology

Classes on health economics, medical innovations, and biomedical enterprise

### Media Arts and Sciences

Classes on developmental entrepreneurship, design, arts, and education

### Science, Technology, and Society

Classes on environmental conflict and social change, the historical and philosophical foundations of environmental policy, contemporary food politics, and the relation between energy, environment, and global politics

### Special Programs & Undergraduate Seminars

Classes on turning ideas into inventions, the history of technology, trends in global change, and more



Photo by Stuart Darsch

On a final note, IAP offers many opportunities where informal and credit-bearing classes are available, many with development relevance (<http://web.mit.edu/iap/>).

1. What does sustainable development mean?
2. How does environmentalism relate to sustainable development?
3. Who is addressing the tension between business interests and environmental concerns?
4. Are there funding sources to pursue sustainable development?
5. Is there a research program in sustainability which can lead to a tenure track position?
6. Can I be an entrepreneur and do development work?
7. Are there models which combine service, research, and teaching in today's fast-paced competitive environment?
8. Who is working to set the rules of the "sustainability game"?
9. What are major structural barriers to more rapid progress toward sustainable development?

### 1. What does sustainable development mean?

Sustainable development has a variety of meanings. One of the most comprehensive is provided by Professor Nicholas Ashford of the MIT Technology and Policy Program. He seeks to co-optimize environment, economy, employment, and equity.

### 2. How does environmentalism relate to sustainable development?

Environmental sustainability is one of the most visible streams within sustainability discourse. Environmental constraints were one of the driving factors for UN action, and high-profile international, supranational, and regional challenges such as global climate change, water shortages, and rainforest destruction remain. As seen by the activities represented at this forum, however, international development contains many other dimensions beyond the environmental, including economic empowerment and entrepreneurial approaches.

### 3. Who is addressing the tension between business interests and environmental concerns?

The National Academy of Engineering has begun to address these issues through publications such as *Engineering Within Ecological Constraints*. Proactive firms such as 3M, DuPont, and Shell are beginning to rethink their business practices given the goals and values implied by sustainable development. Business coalitions, such as the World Business Council on Sustainable Development (<http://www.wbcsd.org>) are also emerging.

### 4. Are there funding sources to pursue sustainable development?

Some commentators have noted the historic difficulty in obtaining funding for development initiatives. With the recognition of the strategic importance of environmental quality and the interconnected nature of ecological, industrial, and social systems, various governmental and private funds have begun to

support research activity in sustainable development niches. Examples include the US National Science Foundation and the Gates Foundation. Additionally, firms with an interest in sustainable development sometimes make available funds for internal projects.

### 5. Is there a research program in sustainability which can lead to a tenure track position?

Currently, there is no tenure track for those studying sustainable development, although sustainability studies programs are emerging at universities such as Rice, the University of Wisconsin-Madison, and the University of Minnesota. At MIT, the LFEE supports research in environmental sustainability. Organizations such as ThinkCycle and conferences such as Development by Design (<http://www.thinkcycle.org/dyd02>) are providing project examples and fora to support such an academic enterprise. Perhaps you will make a crucial contribution in this area.

### 6. Can I be an entrepreneur and do development work?

Given the historic lack of funding sources, some of the major initiatives have been launched by entrepreneurs in the technical, business, or policy domains. At MIT, competitions such as the IDEAS competition (<http://web.mit.edu/ideas>) and the \$50K (<http://50k.mit.edu>) provide mentorship and experience for interested individuals.

### 7. Are there models which combine service, research, and teaching in today's fast-paced competitive environment?

These three categories are the historic goals for those pursuing tenure at land grant institutions, such as MIT. Today, many acknowledge the primacy of research among this set. Offerings from the Public Service Center, the Graduate Student Volunteer Corps, and others are helping to strike a new balance.

### 8. Who is working to set the rules of the "sustainability game"?

A variety of international frameworks, such as the World Trade Organization (WTO) and the General Agreement on Tariffs and Trade (GATT), exist to promote economic development. Frameworks to support the social dimensions of sustainable development, including labor agreements, international war crimes tribunals, and human rights, are in development around the world. At MIT, the Program on Human Rights and Justice provides an opportunity to engage these issues.

### 9. What are major structural barriers to more rapid progress toward sustainable development?

Underlying institutional structures, including political, economic, social, and religious traditions, shape the physical technologies which are developed. A number of classes and clubs at MIT provide frameworks for thinking more deeply about these issues. For example, Course 17, DUSP, and ESD each offer courses which complement the activity of clubs such as the MIT Western Hemisphere Project and Students for Labor Justice.