

# What is sustainable development?

“ Originally formalized by the landmark 1987 Brundtland Report, sustainable development is generally understood as economic, technological, and political development which allows the needs of the present generation to be met without compromising the ability of future generations to meet their needs. ”



International  
Development  
Forum  
2004

<http://web.mit.edu/idf>



Massachusetts  
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International  
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## The Guide to International Development @ MIT 2004

<http://web.mit.edu/idf>

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# Welcome

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The MIT International Development Forum is pleased to welcome you to the third annual MIT International Development Fair. The goal of the fair is to introduce incoming students and other members of the MIT community to the student groups, classes, centers, programs and academic departments at MIT who, through their activities, have demonstrated an interest in sustainable international development. We encourage you to familiarize yourself with the student groups, classes, centers, programs, and departments participating in the fair and mentioned in this guide. They represent opportunities for MIT students to become informed participants in the global effort to promote justice and sustainable development.

The content of this guide and other useful information can be viewed online at our web site (<http://web.mit.edu/idf>). We welcome your suggestions for how we could improve on this guide and next year's fair. We also welcome your ideas for how to promote a greater understanding at MIT of the Institute's potential to be a leader in sustainable international development.

Finally, we would like to express our gratitude for the generous support of Design that Matters, the Edgerton Center, the Graduate Student Office, MIT Student Pugwash, MIT TechLink, the Program on Human Rights and Justice, the Public Service Center, and the Technology and Culture Forum.

Sincerely,

## The IDF Planning Team

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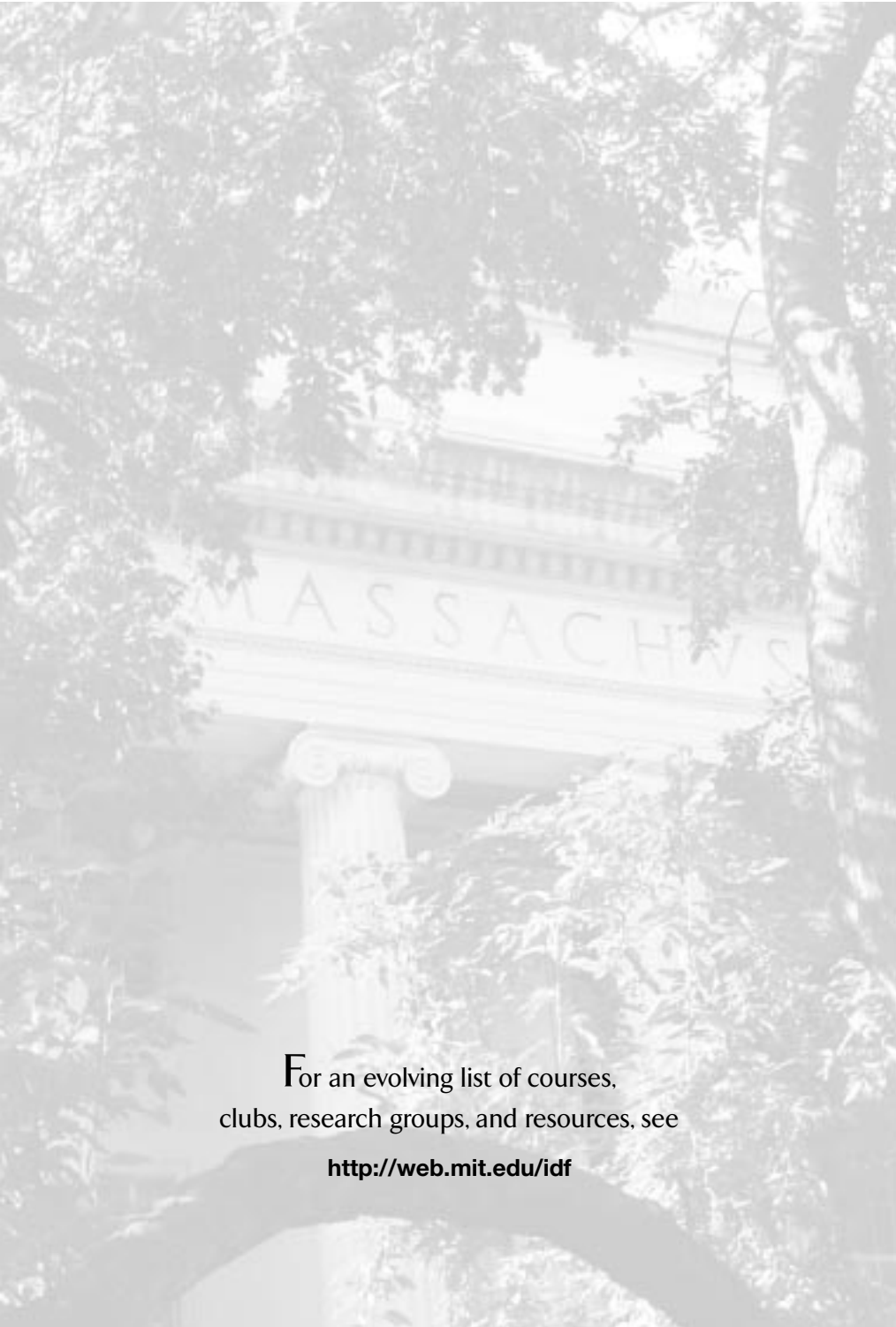
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For an evolving list of courses,  
clubs, research groups, and resources, see

<http://web.mit.edu/idf>

## 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.

**Energy** – The Laboratory for Energy and Environment (LFEE) provides a platform for integrating energy production and environmental stewardship. The newly formed MIT Energy Club provides a multidisciplinary forum for literature reviews and discussions of emerging energy technologies.

**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 and Urbanization** – The Department of Urban Studies and Planning, particularly through the International Development and Regional Planning group, is helping to advance the state of the art in sustainable urbanization. The 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, the Computer Science and Artificial Intelligence Laboratory (CSAIL), and Course 6 engage in a wide variety of analysis and development projects related to next generation communication devices.

**Food and Nutrition** – MIT research into the fundamentals of molecular and systems biology promises deeper understanding of the strengths and weaknesses of genetic technologies in food production. In addition, 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.

**Multi-sector** – MIT has a variety of groups that are best understood as working in multiple sectors. These include the Alliance for Global Sustainability, Design that Matters, the Global System for Sustainable Development, the MIT IDEAS Competition, and the MIT Public Service Center.

**Business and Finance (including poverty eradication)** – MIT has a variety of groups that work at the intersection of business and finance and development. These include D-Lab, the Digital Nations Consortium, the Migration and Development Working Group, the Technology and Culture Forum at MIT, and the Young Activists Network.

**Law and Regulation** – Amnesty International and the MIT Program on Human Rights and Justice analyze, critique, and construct development frameworks.

**Education** – The Media Lab, through programs such as Lifelong Kindergarten, is creating tools to expand the range and reach of creative educational possibilities. MIT's OpenCourseWare initiative strives to provide access to high quality course material for people around the world. Other groups that are heavily involved in educational development include the Digital Nations Consortium, Expediting Access to Standard Education (EASE), the Global System for Sustainable Development, the Laboratory for Energy and the Environment, Learning International Networks Consortium (LINC), the MIT-Africa Internet Technology Initiative, and the Technology and Culture Forum at MIT.

**Environmental** – Understanding and working within the ecological constraints within which we live is the goal of a number of different programs at MIT, including the Alliance for Global Sustainability, the Earth System Initiative, the Laboratory for Energy and the Environment, the Mexico City Project, Students for Global Sustainability and the Technology and Culture Forum at MIT.

**Physical Security** – Physical Security is a precondition for development, and development often leads to greater physical security. Groups working in this area include MIT Humanitarian Demining, the Program on Human Rights and Justice, United Trauma Relief, and Amnesty International.

**Labor** – Students for Labor Justice represents work in labor and development.

**Impact Assessment** – The newly formed Poverty Action Lab assesses the effectiveness of development efforts around the world.

## Guide to Participating Organizations

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### \$50K Entrepreneurship Competition

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

**Contacts:** Marcus Lopez <nmlopez@mit.edu>, Ian Blakely <iblakely@mit.edu>, Armina Karapetyan <armina@mit.edu>, Yerrie Kim <yerrie@mit.edu>, Lisa Huang <lahuang@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 16th 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. Over 85 companies have come out of the MIT \$50K with over \$5 Billion in market capitalization

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

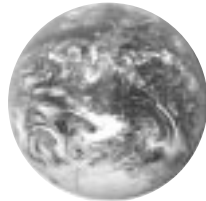
### AID-Boston

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

**Contacts:** Anand Sivaraman, Chaitanya Ullal, Vidya Jonnalagadda <aid-boston-exec@mit.edu>

**Description:** Association for India's Development (AID) is a voluntary non-profit organization committed to promoting sustainable, equitable and just development in India. Working with grassroots organizations and movements, AID supports and initiates efforts in various interconnected arenas such as education, livelihood generation, conservation of natural resources, public health, women's empowerment and social justice. The Boston Chapter based at MIT funded eleven projects last year.

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



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

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

**Contacts:** <mit-aiti@mit.edu>, Manish Gaudi <mgaudi@mit.edu>, Yaron Binur <ybinur@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.

### Alliance for Global Sustainability (AGS)

**URL:** <http://globalsustainability.org>

**Contact:** Karen Gibson <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. 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.

## MIT Amnesty International

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

**Contacts:** Giovanni Talei Frazesi, Tarun Agarwal, Emily Havens, Shankar Mukherji, Matt Brooks, <mitai-exec@mit.edu>

**Description:** Amnesty International is a non-governmental, non-partisan organization working for the protection of human rights. As one of the largest human rights organizations in the world (over 1 million members in 45 countries), Amnesty International uses its broad international membership to publicize cases of human rights abuse and try to bring international pressure to bear on the governments in question, thereby aiding the development of a system of political and human rights around the world.

**Participation:** Chapter meetings, held every other Wednesday evening at 8pm in 4-253, are open to all interested persons.

## MIT Careers Office

**URL:** <http://web.mit.edu/career/www>

**Contact:** Hannah Bernstein <career-www@mit.edu>

**Description:** The Careers Office can serve as a resource to students who are seeking international development related careers. These students are likely to use strategies such as networking, research on contacts, exploration, and targeted job search VS. on-campus recruiting. We can offer expertise in the use of these strategies.

**Participation:** Our office is open to graduate students, undergraduates, and alumni (as well as postdocs).

## Carroll L. Wilson Award

**URL:** [http://entrepreneurship.mit.edu/wilson\\_award.php](http://entrepreneurship.mit.edu/wilson_award.php)

**Contact:** Kenneth Morse <kenmorse@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:** 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.

## Center for Bits and Atoms @ Media Lab

**URL:** <http://cba.mit.edu/>

**Contact:** Sherry Lassiter <cba\_admin@cba.mit.edu>

**Description:** FAB LABS are hands on laboratories that provide the technology to let people build just about anything from inexpensive and readily available materials. Rather than bringing information technology to the masses, the fab labs bring information technology development to the masses. Each fab lab comes equipped with about \$20K of computer-controlled fabrication tools, open-source computer-aided design and manufacturing software, and associated electronic components and test equipment. Together, these tools make accessible engineering in space down to microns, and in time down to microseconds. So far fab labs have been deployed in Ghana, Costa Rica, Norway, India and the US. The NSF funded Center for Bits and Atoms is looking at how to inspire and enable local development and entrepreneurship. Projects include: wire mesh networks, solar power, and cooling systems for refrigeration.

**Participation:** Students who are interested in training and project development for fab labs are encouraged to contact us.



Photo by Design that Matters

## 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.

## Design that Matters

**URL:** <http://web.mit.edu/dtm/www/>

**Contacts:** Piali Mukhopadhyay <piali@mit.edu>, Will DelHagen <willd@mit.edu >, <dtm-exec@mit.edu>

**Description:** Design that Matters (DtM) supports student projects that serve marginalized communities in developing countries and here in the U.S. We plan events to raise awareness of social problems and opportunities to help and facilitate student projects as part of the academic program and as independent projects. Many student projects through DtM have received significant financial support and resulted in field work in developing countries.

**Participation:** Everyone is invited to participate and bring their enthusiasm, unique skills, and desire to make a difference to the table in the effort to provide solutions to the problems of underserved communities.

## Earth System Initiative

**URL:** <http://web.mit.edu/esi/>

**Contacts:** Matthew Gardner <gardner@mit.edu>, Kip Hodges <kvhodges@mit.edu>, Penny Chisholm <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

## Emerging Markets Initiative

**URL:** None available

**Contacts:** Amitabh Chandrashekhar <amitabh@mit.edu>  
Anil Dharni <adharni@mit.edu>, <emergingmarkets@mit.edu>

**Description:** Emerging Markets Initiative is an MIT wide effort to develop, enhance and utilize management expertise to face challenges associated with the emerging economies. It is our firm belief that management and technology together, as disciplines, can be very potent tools in solving business and development problems.

**Participation:** Anyone.

## Expediting Access to Standard Education (EASE)

**URL:** <http://web.mit.edu/ease/www>

**Contacts:** Arthur Musah <ease-exec@mit.edu>

**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

## Global System for Sustainable Development (GSSD) Laboratory

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

**Contacts:** Professor Nazli Choucri <nchoucri@mit.edu>,  
Dinsha Mistree <dmistree@mit.edu>, Cristobal Garcia <crisg@mit.edu>,  
Jon Randall Lindsay <lindsayj@mit.edu>, Carlos I. Ortiz <ciortiz@mit.edu>

**Description:** GSSD is an adaptive and evolving global knowledge system dedicated to sustainable development based on distributed networking principles and practices. Designed to help identify and develop innovative approaches, enabling technologies, as well as new institutional, financial and regulatory mechanisms, the GSSD domain spans over the complex dimensions of the sustainability challenges - at all levels and all parts of the world. A set of knowledge management, search, and navigation functionalities allow users to customize their own site inputs into the system and/or to tailor specific retrieval queries over the GSSD knowledge base.

**Participation:** Anyone



Photo/Courtesy Pawan Sinha, MIT

## Habitat for Humanity

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

**Contacts:** Radhika Jagannathan <radhika@mit.edu>, Sidharth Puram <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.

## Humanitarian Demining

**URL:** <http://web.mit.edu/demining/>

**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.

## 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.

## International Development and Regional Planning (IDRP)

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

**Contact:** Karen R. Polenske <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 nongovernmental 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.

## The Inter-University Committee on International Migration

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

**Contacts:** Amelia Graham <akgraham@mit.edu>, Feiya Huang <feiya@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:** Amelia Graham <akgraham@mit.edu>, Estrella Alves <estrella.alves@tufts.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

## Laboratory for Energy and the Environment

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

**Contacts:** Professor David H. Marks <dhmarks@mit.edu>, Professor Ernest Moniz <ejmoniz@mit.edu>, Mr. Stephen Connors <connorsr@mit.edu>, Dr. Teresa Hill <thill@mit.edu>, Dr. Amanda Graham <agraham@mit.edu>

**Description:** The Laboratory for Energy and the Environment (LFEE) coordinates initiatives on 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 outreach 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://linc.mit.edu/linc/>

**Contacts:** Richard Larson <rcl Larson@mit.edu>, Carol Sardo <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. LINC also hosts an international symposium during the spring semester which is its major annual activity.

**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>, Samudra Vijay <samudra@mit.edu>, Ali Mostashari <amostash@mit.edu>

**Description:** The Mexico City Program, led by Drs. 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.

## Philippine Emerging Startups Open (PESO)

**URL:** <http://web.mit.edu/peso>

**Contacts:** Neil G. Ruiz <nruiz@mit.edu>, Johanna Klein <johannaklein@sloan.mit.edu>

**Description:** Philippine Emerging Startups Open (PESO) was founded when a group of Filipino graduate students at MIT got together to talk about how they can help strengthen the Philippine economy. As the MIT \$50K Entrepreneurship Competition and many other similar programs have shown, a business plan competition is one of the most effective ways to educate entrepreneurs, to facilitate networking across various sectors, and to foster the creation of new companies, thereby ultimately making a positive impact on economic development. Using the MIT \$50K model, PESO sought to establish an entrepreneurship program that emphasizes technology and innovation, and a business plan competition, called the PESO Challenge, in the Philippines.

**Participation:** MIT student interested in building entrepreneurship for economic development in the Philippines

## Poverty Action Lab

**URL:** <http://povertyactionlab.org/>

**Contact:** Rachel Glennerster <povertyactionlab@mit.edu>

**Description:** The Poverty Action Lab serves as a focal point for development and poverty research based on randomized trials. The objective is to improve the effectiveness of poverty programs by providing policy makers with clear scientific results that help shape successful policies to combat poverty. The Lab works with NGOs, international organizations, and others to evaluate programs and disseminate the results of high quality research. We work on issues as diverse as boosting girls' attendance at school, improving the output of farmers in sub-Saharan Africa, racial bias in employment in the US, and the role of women political leaders in India.

**Participation:** Starting in the spring the lab will be looking to fill 1-2 year positions abroad to do field work

## MIT Program on Human Rights and Justice

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

**Contacts:** Susan Frick, Professor Balakrishnan Rajagopal <phrj@mit.edu>

**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 a 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.

## Social Entrepreneurs for International Development (SEID)

**URL:** <http://web.mit.edu/seid>

**Contact:** Paul John Paredes <paredes@mit.edu>, Kamal Quadir <kamal\_quadir@sloan.mit.edu>, Stephen Hazelton <shazelton@sloan.mit.edu>, Simon Poon <spoon@sloan.mit.edu>, Joe Zeff <joezeff@mit.edu>

**Description:** SEID is a community of students engaged in solving international development (ID) challenges through innovative and sustainable entrepreneurial initiatives.

The club's objectives are three-fold:

- (1.) To build awareness within the broader MIT community and neighboring institutions about international development and innovative, sustainable developmental entrepreneurship
- (2.) To act as a catalyst for engaging MIT in entrepreneurial projects that benefit causes in the developing world
- (3.) To bridge opportunities and resources through a global network of relationships related to developmental entrepreneurship

**Participation:** MIT undergraduate and graduate students who are interested in social entrepreneurship and international development projects.



## Special Interest Group in Urban Settlement School of Architecture and Planning (SIGUS)

**URL:** <http://web.mit.edu/sigus/www>

**Contact:** Dr. Reinhard Goethert <rkg@mit.edu>, Susana Williams (TA) <susanamw@mit.edu>, <sigus@mit.edu>

**Description:** SIGUS explores methods for promoting affordable, equitable and efficient housing for low income communities, with focus in developing countries. It champions participatory technique through short workshops and courses, and undertakes research on innovative approaches in support of low-income individuals. It concentrates on the new professionalism emerging for designers, architects, and planners demanding a shift in practice and teaching. SIGUS has over 10 years of experience in Action-Learning workshops. It has lead programs in Peru, Ecuador, Poland, Vietnam, Cambodia, Thailand, Laos, India, Bhutan, Syria, and Ethiopia; hosted by governments, development agencies, or NGOs, with local university counterparts.

**Participation:** Please contact us if you would like to collaborate.

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

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

**Contacts:** Nimfa de Leon <nvdeleon@mit.edu>, Apiwat Ratanawaraha <rapiwat@mit.edu>, Roberto Bruno <rbruno@mit.edu>, Tomer Gothelf <gothelf@mit.edu>, Bish Sanyal <sanyal2mit.edu>

**Description:** SPURS, which is part of the IDRP group, is a one-year program for mid-career planning professionals mostly from developing countries. Over the 37 years of the program, SPURS has hosted Fellows from over 89 countries with a broad range of experiences in the field of international development.

## Student Pugwash

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

**Contact:** Christopher J. Sequeira <csequeir@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



Photo by Stuart Darsch

## Students for Global Sustainability (SfGS)

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

**Contacts:** Elke Hodson <elkeh@mit.edu>, Ari Shapiro <ashapiro@whoi.edu>, Dylan Wright <wrightd@mit.edu>

**Description:** SfGS is committed to promoting the basic elements 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 act and organize on a local and regional scale. Some recent projects that we are currently involved with include developing a student's guide to sustainable development on campus, co-hosting an annual Climate Change Conference with Massachusetts Climate Action Network (MCAN, <<http://massclimateaction.org>>), 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/www/>

**Contact:** Valentina Zuin <labor-info@mit.edu>

**Description:** Students for Labor Justice is a group at MIT dedicated to doing something about labor issues in our neighborhood and around the world. Past campaigns have included: Justice for Janitors in Boston, Protesting the Iraq war, Protesting the Free Trade Agreement of the Americas (FTAA), Converting MIT's campus to Fair Trade Coffee, and work on promoting alternatives to Sweatshop labor. Each semester we pick a new focal point so come along and get involved in some positive change.

**Participation:** Open

## Technology and Development Program (TDP)

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

**Contact:** Patricia Vargas <[pvargas@mit.edu](mailto: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 33 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.

## The Technology and Culture Forum at MIT

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

**Contact:** Patricia Weinmann <[weinmann@mit.edu](mailto: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.

## United Trauma Relief

**URL:** <http://web.mit.edu/utr/www>

**Contact:** <[utr@mit.edu](mailto:utr@mit.edu)>

**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](mailto: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.



Photo by Stuart Darsch

# 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.

**Website:** [http://entrepreneurship.mit.edu/wilson\\_award.php](http://entrepreneurship.mit.edu/wilson_award.php)

### Eloranta Fellowship

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

**Amount:** \$6,000 Allowable expenses: living expenses, travel, or materials and services costs.

**Time commitment:** full time summer occupation.

**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 firsthand 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>

## 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 your 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 websites to get you started:

A great website 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.fundsnetservices.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/getinvolved.html>) 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



Photo by Stuart Darsch

### **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

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/>).

## Beyond the Institute

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MIT and its alumni have a long and rich history of founding, building, and leading for-profit and non-profit organizations that have transformed the human condition.

**Energy** – blueEnergy, GreenFuel, Evergreen Solar

**Transportation** – Solectria, ZipCar, General Motors, Logistics.com, Ford Motors

**Shelter and Urbanization** – Mapjunction.com, PlaceLab, China Housing Project

**Health Care** – Dimagi, Low Cost Eyeglasses, Akaza Research, Genentech, Ancora Pharmaceuticals

**Media, Communications, and Computing** – First Mile Solutions, AfricaOnline, SOHU.com

**Water** – Ionics, Inc. (water purification)

**Food and Nutrition** – Campbell's Soup (food preservation technology), MedicalFoods

**Impact Assessment** – Poverty Action Lab

**Education** – MIT OpenCourseWare, DesignThatMatters.org, EDC.org, Howtoons.org, co-founded CalTech, Stanford, Babson College, Birla Institute of Technology and Science

**Finance** – WAY Systems (mobile payment solutions), KPCB (venture capital)



# Notes

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 **Massachusetts  
Institute of  
Technology**



**International  
Development  
Forum**