

# Act Eco Journal.

## Toshiba Youth Conference for a Sustainable Future 2009 takes place in Japan

Twenty-seven high school students and nine teachers from four countries (Japan, Poland, Thailand and the United States) get together to discuss solutions to global environmental issues



Visiting Oyama Senmaida (Terraced paddy fields)

The first week of August became a memorable moment for participants from around the world, and provided inspiration to tackle global environmental challenges. The second annual Toshiba Youth Conference for a Sustainable Future was held from August 1st through the 7th, 2009, and brought together fresh young minds as well as knowledgeable and experienced teachers in the field of environmental education. This year's theme, "Achieving the Best Mix of Energy Resources in order to halve CO2 Emissions by 2050", enabled participants from different countries and various backgrounds the opportunity to confront environmental issues, learn from each other, and work together towards local and global solutions.

Kicking off at Josai Awa Kamogawa Learning Center in Chiba, surrounded by mountains and the Pacific sea, students

participated in team building and goal sharing workshops, allowing them to overcome cultural and language barriers. After presenting pre-camp assignments on the second day (see page 7), the participants ventured out to explore Kamogawa-city. The students reported being inspired by the ecological local community and traditional Japanese wisdom found in Kamogawa (see page 2). On the third day, the conference moved to HRD Toshiba Training Center in Yokohama, where participants learned about Toshiba's environmental policies and modern technologies, and deepened their understanding of the role of green companies (see page 3). Students also had the chance to interview experts who are active in implementing environmental policies (see page 4). The conference concluded with presentations and

### Voices of the Participants

"I was inspired by the students from other countries. They had much more knowledge about the environment, and I thought that I should learn and spread it back at my school and community." (Nao, Japan)

"All the participants were friendly and I learned a lot of things. When I go back home, I'm going to keep the idea of green economy and persuade my friends and family to realize about environmental stuff. I have my new dream now – someday to establish a green guesthouse with a vertical garden." (Bas, Thailand)



Students brainstorming

their creativity and knowledge, acting as journalists and editors. Utilizing the time between lectures and often working late into nights, students, teachers and staff created this newspaper to record their discoveries and capture the spirit of the conference.

### Toshiba Youth Conference

As part of Toshiba's commitment to creating a just and sustainable planet, the conference brought together students and teachers from around the world to participate in a week-long program exploring solutions to global environmental challenges. The 2009 participants were from

discussions about possible measures to introduce progressive change in Japan and the world at large (see page 8).

The conference was also a meeting place for teachers passionate about enhancing their abilities to promote environmental and scientific education and intercultural communication. Japan Center for International Exchange held a series of workshops to create synergy among teachers sharing the same goals (see page 5).

The conference brought together representatives from four countries: Thailand, Japan, Poland, and the US. Each country brought its own national flavor and perspective. The students from Poland contributed their refined critical thinking skills and realistic vision of the world. The American students added their vibrant energy and enthusiasm. The students from Thailand imparted harmony and a quite curiosity. And lastly, the Japanese students provided grounding and a

regional context for discussion. Taken together, the synergistic combination of four countries from three continents encouraged and inspired a commitment to find creative solutions to the fundamental causes of environmental problems.

In addition to formal lectures and workshops, shared meals and traveling as a team helped bridge cultural and language barriers. The entire conference itself was a microcosm of the current global movement towards environmental justice, acknowledging diverse cultural values, and cooperation in finding innovative solutions to achieve a sustainable future. After returning to their respective countries, the participants will keep in touch via internet using a website created especially for this conference ([www.act-eco.net](http://www.act-eco.net)). Progress reports will be shared to promote a deeper understanding of the issues discussed and further the spirit of international exchange.

### Conference Schedule

#### Day 1 (August 1st)

Participants arrive in Japan / Stay at Josai Awa Learning Center

#### Day 2 (August 2nd)

Opening Ceremony / Communication and team building workshop / Goal sharing workshop / Presentation of pre-conference assignments / Teachers' Program 1

#### Day 3 (August 3rd)

Field trip to Mizuta residence, Hayashi Residence, and Oyama Senmaida terraced paddy fields / Stay at HRD, Toshiba Learning Center

#### Day 4 (August 4th)

Field trip to Toshiba's Science Museum and Isogo Engineering Center

#### Day 5 (August 5th)

Field trip to interview expertise / Teachers' Program 2 and 3

#### Day 6 (August 6th)

Final presentation / Closing ceremony / Tokyo trip / Farwell Party

#### Day 7 (August 7th)

Publishing of newspaper "Act-Eco Journal" / Participants depart Japan

Japan (Hitachi First High School, Keio Shonan-Fujisawa Senior High School, Waseda University Senior High School), Poland (Liceum Ogólnokształcące nr 14, Academic High School at PJiIT), Thailand (Triam Udom Suksa School, Assumption Lampang), and the United States (High School for Environmental Studies). The conference was sponsored by Toshiba International Foundation, Toshiba America Foundation, and Toshiba Thai foundation, in cooperation with Toshiba Corporation, Japan Airlines, and Japan Center for International Exchange. The program was organized by BeGood Cafe, a leading Japanese environmental NPO. The next Toshiba Youth Conference is scheduled to be held in Japan during the summer of 2010. For more information, please visit [www.act-eco.net](http://www.act-eco.net)



Learning about Toshiba technology

## A Potential Solution for a Sustainable Future Lifestyle Team



The most important thing is to have fun" says Mr. Hayashi in his home.

### Mr Hayashi's Alternative Lifestyle

Mr. Hayashi was a "city boy". He grew up and even tried to obtain a job in Tokyo, Japan. However, after finding it difficult to find a job in Tokyo and realizing that industrial growth has become a threat to nature and the human population, he moved to the mountains in Kamogawa, Japan to live in a serene and environmentally conscious community.

This community consists of 25 scattered houses

with approximately 150 people. Everyone in Mr. Hayashi's community works together to live a sustainable life. This community lives life with nature, posterity, and other people in mind. People in this community recognize the importance of the connection between people and nature. In addition to that they lament the disconnection between the two groups. He refers to this relationship as "Satoyama". Hence they preserve land for biodiversity, not money. They realize that natural resources are finite and they reduce waste by using a resource to its fullest potential. For example, they cut down dead or excessive bamboo trees, burn it for charcoal, then extract liquid from the smoke to use as a natural insecticide.

Mr. Hayashi's home is made out of natural and local building materials. Everything he owns or buys is local or domestic. He is aware of the huge environmental footprints and consequences of buying imported commodities. Mr. Hayashi does not own a television set, grows his own seasonal vegetables, and selects local and domestic products at the supermarket. He does not find the need to live life to meet mainstream demands of a financial and corporate society. He believes living a simple life, relying on nature to support his life is both artistic and environmentally stable. "Zen Spirit" is a simple life spirit and art of living. Mr. Hayashi

said that living in a globalization free community provides a sense of complete liberation from the economy and allows him to live a slow paced, relaxing lifestyle.



Insecticide (left) is collected from the smoke by burning wood to make charcoal (right)

Article written by Songyi EE (U.S.A)  
Yestriel HENRIQUEZ (U.S.A)  
Nao TAKAOKA (Japan)

## Don't worry! Old solutions could save the world Sci - Tech Team

### The first thing we thought after visiting the Mizuta residence.

The question is "how?". Here is the answer: wisdom of Minka architecture. A good example is the residence of Professor Mizuta, which we visited. It is very interesting old house and is the birthplace of the professor. The house was named after him. It was built using only natural sources – wood, susuki, earth and bamboo. Each of them were collected from the neighborhood.

During our visit we met an architect named Mr. Yamada. He told us a brief story about the history of the house. The Minka created solutions for all problems that Japanese people were facing. It is very hot and humid during summer in Japan. The pillars inside the house are able to absorb the humid from the air (even up to two litres). Another interesting thing is earthen walls, which soaks up the rain and cools inside during hot days. The roof made from

susuki (see Photo) has the same function. What's more, it could be also used as fertilizer.

The most important thing is that this house does not produce any wastes– all resources are circulated. The pillars are wooden so after they break they could be used as a floor wood. If something happened to the floor, it would be used as firewood. The ash from the fireplace is a good fertilizer for fields. As you can see everything is useful.

You can ask about safety of this house. It is so solid, that it survived many earthquakes thanks to the pillars – they prevent the house from collapsing. Secondly, the main beams were curved. As we know, angles always help make something stronger. There is no need of any modern complicated systems.

It was very important lesson for us. There are a lot of natural solutions we can use, for example we don't need to use air conditioners to keep the house cold. Those problems are as old as humans are, so why don't we use the solutions already created – there is no need to bust open a door when we have old methods that work just as well. We just hope,



Japanese Pampas grass - material for the Minka's roof.

that nowadays architects will remember about it and take example of Mr. Yamada.

Article written by Piotr KACPERRSKI (Poland)  
Tomomi NAKANE (Japan)  
Napat PHETKUN (Thailand)

## Happiness without Money Business and Politics Team



Inside AWA money notebook

### A local currency unites a Kamogawa community

Half of the members of Toshiba Youth Conference visited Mr. Hayashi's residence on August 3, 2009. Mr. Hayashi moved to his residence in Kamogawa 10 years ago with his family. He moved from Tokyo to find a place where he would be kinder to the Earth.

Mr. Hayashi participates in charcoal making, producing natural insecticides from smoke and started a trust system for rice paddy fields near his

house. He also started a local currency system known as AWA money.

Mr. Hayashi said, "money was a tool to make us happy but our lives are dictated by money." It was this idea that inspired him to make AWA money. AWA money is based on Local Energy Trading System or LETS from Canada. This also shares similarities to traditional Zen Japanese thinking which incorporated neighborhood trading systems. 150 families use AWA money to exchange goods and services throughout Kamogawa.

Local people in the area use AWA money to help each other and support their local community. This way money stays within the local area and people learn about cooperation and their connection with one another

The value of AWA money is similar to Yen where 1 AWA=1 YEN=\$.01. For example, one kilo of organic rice is 800 AWA. Some examples of goods and services Mr. Hayashi uses AWA for are his daughters piano lesson and his African drumming class (1000 AWA). Prices are negotiated and AWA can be used to buy local rice and vegetables. He even was able to renovate his cattle barn into a guesthouse using AWA money.

Japanese government and the AWA currency are not

connected because AWA money is not taxed. If the government introduces the system, it has the potential to change the Earth. He hopes small communities can influence government change within the country. However, Mr. Hayashi still needs Yen to buy certain products at his supermarket. He makes his income through art including CD jacket covers, paintings as well as presentations to interested groups. Mr. Hayashi hopes to change the way people think by showing the reality of his life and that there is a fun way of living without money.



Mr. Hayashi's cattle barn turned into a guesthouse using AWA money

Article written by Kanna ARAOKA (Japan)  
Tidarat (Jane) WANNALERT (Thailand)  
Shiori YANAGISAWA (Japan)

## The Green Company leads us to a glorious future Business and Politics Team



Heat helps erase the e-blue ink

### We all know what crisis our world is facing, but who really takes the important role?

When we mention of Toshiba, we usually think of entertainment products and other electrical appliances. But how many people know that Toshiba also works on energy and environmental issues? We have visited the Toshiba facilities, and learned about their continuous effort to develop a series of sustainable technology.

Firstly, Toshiba is working on erasable ink. We can

see that homes and offices use and throw away tons of paper every day. Toshiba offers a better way than just recycling them, the 'decolorable toner e-blue'. If documents are printed by this ink, it is erasable, so the paper can be reused. Although it is not suitable for storing documents, the ink will disappear when it is heated.

Secondly, Toshiba has a project concerning the global warming issue. They want to replace the old Incandescent bulbs with LED ones. The LED lighting bulb lasts longer and consumes less electricity. If this project is a success, by 2025, we can reduce the CO2 emission from energy consumption by 12.5 trillion tons per year.

At this moment, Toshiba cooperation is still working on new innovations which will help us save even more energy. They revealed about a new battery called the 'Direct Methanol Cell'. The cell will be in use worldwide in 2 years. It lasts for 20 hours with less energy loss and more portability providing a size of a small kit-kat bar.

So what about their nuclear technology? Most of the developed countries try to use nuclear energy in order to avoid the usage of fossil fuel. In general, there are still some issues such as safely collecting and disposing nuclear wastes, but Toshiba's engineers told us they keep enough place for

disposing and developed a safe way to dispose them. They mix unrecyclable uranium with glass and bury deep underground. And one of the Toshiba's engineers also told us they are studying about the solar system as an alternative solution.

Toshiba and many other green companies provides us a safe, comfortable, and ecological future. And what we as citizen of this planet can do now is to think about how to use these technologies effectively.



The still-developing Direct Methanol Cell

Article written by Vichawan SAKULSUPICH (Thailand)  
Wiphada DETANBATKUL (Thailand)  
Yusuke URATA (Japan)

## Consumers Around the World Lifestyle Team

### How Toshiba Contributes to Your Lifestyle

When we think about the quality of our lives today, we can't imagine it without our rice cookers, stoves, refrigerators, computers, TVs, Light bulbs and the list goes on. Today participants of the Toshiba youth conference for sustainable future 2009 visited the Toshiba Science Museum. We explored many of the museums exhibits and discovered a room filled with relics from the past.



Japan's first fan in 1894

The room, First-Of-It's-Kind, had many appliances that originated in Japan. These appliances developed by Toshiba include electric fans, refrigerators, vacuum cleaners, DVD players and word processors. Nao Takaoka, a participant from Keio Shonan-Fujisawa Senior High School said "Wow, I thought it was awesome because back then the structure of things were so simple and now things are much more complex." This shows the evolution of technology throughout the century.

Toshiba has helped improve the quality of millions of lives everywhere through the development and production of many of our household products. Modern refrigerators, air conditioners, and computers are items that we cannot live without. But what is their impact on the environment?

We sat down and counted over 20 electrical appliances in our respective households, and discovered that our lives were very similar in terms of energy usage. One exception came from Thai students who spoke of the limited Internet availability in the rural areas as well as the lack of household scanners and fax machines. Even with price differences of products between our countries we still all consume a large

amount of energy with the appliances we use daily. All of this electricity usage contributes to the emission of greenhouse gases, which leads to global warming.

Toshiba is helping reduce the impact from electrical appliances by creating environmentally friendly products and supporting environmentally friendly practices (like the Toshiba Youth Conference for a sustainable future 2009). Toshiba's goal is to "...develop products with minimum environmental impacts ..." in the hopes to reduce CO2 emissions. If we, the consumers, could choose to purchase eco products like those developed by Toshiba then collectively we can a big difference with a smaller footprint.



Japan's first Refrigerator in 1930



Japan's first Notebook Computer

## Toshiba Leads innovation Sci - Tech Team



Toshiba's first attempt at a Japanese word processor

### Toshiba's effort to make the world a sustainable world

Entering the Toshiba Science Museum, the first thing you notice is a giant globe, in the center of the room where 150,000 people visit annually, automatically one will know that this is no ordinary museum. Soon after a quick orientation we are taken to see the various exhibits. Set up by Ichisuke Fujioka and Hisashige Tanaka in 1875, Toshiba has been a major producer of consumer products from

refrigerators to computers. On our tour we saw their first refrigerator, washing machine, DVD player, and the first laptop. These innovations changed the world and led to today's modern technology. Some of these developments include, erasable ink, super-semiconductors and motion capture technology. After our time was up we visited yet another Toshiba facility, this time the Isogo power plant. After given a presentation we learned Toshiba's goal in the future, such as their contributions in the way of building Nuclear power plants, and reducing CO2 emissions by 50 % in 2050. We were then given a tour of the surrounding facility, encompassing the technology behind the reactors such as the turbines, rods and fail safes. We were then shown their 3D-CAD program which they design their buildings with. We could see the entire plant before it is even built. For the finale we visited their High tech 1.5 million liter volume 30 meter high nuclear reactor where they conduct experiments and tests. While there we could see high tech robots made for diving in the radioactive water to inspect eventual cracks and fix them with laser that can weld underwater. We then had some time to ask questions about Toshiba's plants and their nuclear technology in general, and their plans for a

sustainable future. There we learned among other things that there is a real possibility to recycle the once used uranium in another advanced power plant. Parts for those are also made by Toshiba.

Sci-Tech believes that the nuclear path is one of the best, safest paths leading the world to a better way. Though, it shouldn't be the only solution we'll follow.



Japan's first washing machine made in 1930



Toshiba's key principles for future policy

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## Keep The World's Balance Sci-Tech Team



Mr. Arinobu explains Toshiba environmental policy

### The environmental policy

On August 5th Sci-Tech team has spoken to Mr. Mutsuhiro Arinobu, Advisor at Toshiba Research and Development Center at the Toshiba headquarter. At the beginning of the meeting, Mr. Arinobu presented us a Toshiba Environmental Policy and ecological problems. He said about the Factor T, a number indicating effectiveness and causing less environmental impact during production, usage and

recycling stages of a single product. It occurred that Nuclear power plant is much more efficient energy source than any renewable one, which makes this type of energy the best solution for the sustainable future. It is also important that people are now paying more for services than for goods.

### Mind the energy consumption

After the presentation, several questions have been asked. However we expected accurate information, Mr. Arinobu avoided giving us any details. He mentioned that the most important things for companies are: to increase the Factor T of their products, to combine many new technologies to gain new quality and to improve the lifestyle. To achieve these goals during the design and production they should remember about the heat reduction, increasing fuel and heat efficiency in engines, development of nanotechnology, and improving energy output in power generators. Therefore the questions about new promising technologies appeared during the interview. Compressed air, hydrogen and new long-life batteries occur to be a very good substitute for traditional car fuel. Also the CCS, Carbon Capture and Storage, seems to be a way of reducing air pollution significantly but

what shall we do with stored carbon dioxide? Although we still do not know the answer, there is an idea of using plants to convert carbon dioxide to oxygen. Growing plants can be one of the best ways to reduce the heat in the air. The last question concerned the issue of energy consumption. Mr. Arinobu claimed that the more energy is provided, the bigger energy demand is. That is why we should rather save energy than produce more and this would be the best way to keep the world balanced.



Sci-Tech team interviewing Mr. Arinobu

Article written by Tomasz WIECZOREK (Poland)  
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Maciej TYSZKO (Poland)

## Wanted! Active Government for a Sustainable Future Business and Politics Team

### What this prominent NGO believes the government should be doing?

In one of the leading non-governmental organizations in Japan lies a wealth of solutions to ameliorate the global warming crisis. The Institute for Sustainable Energy Policies (ISEP) works to use data to convince politicians to introduce renewable energy for the country. Mr. Noriaki Yamashita is a senior researcher at ISEP. In its own words they say, "... realization of energy policies ..." with particular



Mr. Yamashita introducing his topic

focus on natural resources. He emphasizes the government's active role in procuring significant results. The purpose of his lecture was to convey that the government regulation is paramount to any action.

It is safe to say that the Japanese public has a high awareness of the environmental issues. Public promotion like Team-6% advocate that carbon emissions are reduced six percent by 2012. However, the environmental ministry does not address other fields. The Japanese government does not have policies that address all of them. Mr. Yamashita contacts NGOs in other countries such as Germany and Denmark who provide insight into how their countries deal with the energy issues. He believes that the Japanese government is slowly developing advocacy of solar power, but it can do more.

In 1999, Japan was ahead of Germany in producing solar power. By 2004, Germany exceeded Japan in the solar power sector. The regression can be attributed to a firmly entrenched belief in Japan that one must not profit from doing a good deed. This belief resonates in the government's decisions on tax credits for those who utilize the solar panel. Another reason why the government does



Mr. Yamashita explains how solar power production has decreased in Japan

Article written by  
Sadia HANNAN (U.S.A)  
Narakorn INKAMMA (Thailand)  
Takayuki NIISHIKAWA (Japan)

not act is that it believes that the economy is more important. To effectively make a change in society, the social structure must change to accommodate the cultural shift. It is a choice that will decide how Japan reacts to the change. The majority of the energy used now is oil, presumably for the vast industries. This can only happen with radical alterations to policies, economy, local communities, and technology. For example, Japan is a leader in innovative technologies, but the sundry of competent inventions are not dedicated to advancing renewable energies.

## "Transition Town" Leads to a Different World Lifestyle Team

### Change of Life

Life, happiness, and change, these are the many thoughts that come to the mind when discussing life and the environment. In the interview with Mr. Shunro Lawrence Yoshida, he explains how his life went through a complete change. Growing up and living in the United States was very difficult; Mr. Yoshida never stopped working and was never able to live life and tend to his own needs. He then quit his

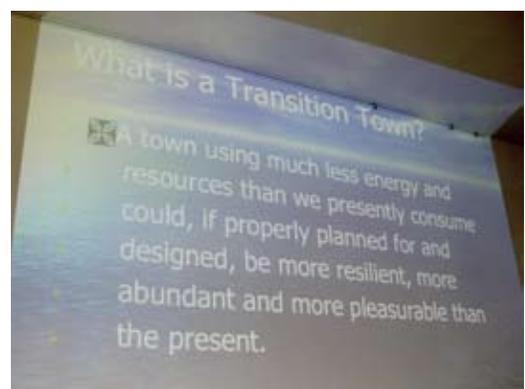


Mr. Yoshida talks about his transition

job and moved to Japan where he began his new life. When he arrived in Japan, he attended school and began to be involved in the medical field for approximately 20 years. However, he had a passion for the environment and wanted to help the world. Mr. Yoshida eventually quit this profession and began his new quest. He moved to Hayama and currently lives by himself. He lives off the land off the land by using renewable resources in the correct eco-friendly matter. Mr. Yoshida says his neighbors are more than friends, they are family and they too use less energy which means less carbon dioxide is released in the air. They all help each other by giving each other fishing and helping rebuild the community. Mr. Yoshida was also involved in the concept of "Transition Town" for approximately one and a half years. The concept known as "Transition Town" refers to human attempts to solve the issues of global warming by decreasing harmful emissions. This concept was created in 2005 by Rob Hopkins who is a teacher in the United Kingdom. Mr. Yoshida incorporated this concept into his life. He promotes this concept to the people by explaining its background and its positive effects.

The concept of "Transition Town" is slowly but effectively

being spread in Japan in the towns of Hayama and Fujino; it is also spreading around the world. This concept of using less energy and conserving are the answers to our tribulations and is the key to the world's positive change.



What is a Transition Town?

Article written by Islam DASHOUSH (U.S.A)  
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Tomoka MAEDA (Japan)

## Climate change deadline approaches Day -2 Teachers' Program



Dr. Suzuki talks about Science, Technology and Public Policy for Climate Change

### Japanese Professor and teachers from around the world agree on drastic worldwide solutions

Teachers from Thailand, Poland, Japan and the United States had the pleasure today of hearing Dr. Tatsu Suzuki present on "Science, Technology and Public Policy for Climate Change". The presentation focused on four areas: Science, Energy and Climate Change, Technologies for Sustainability, Public Policy for Climate Change, and Recent Developments with respect to climate change. The big ideas that Professor Suzuki impressed upon the group were:

that technologies are not, in themselves, the ultimate solution, and that the next 30-50 years are the key "transition period", and that international collaboration and concern by individuals are the essential elements in solving the problem.

Global energy demand is increasing with population and industrialization in developing countries, especially in Asia which is predicted to double energy demand by 2030. This will in turn contribute to substantial increases in greenhouse gases, specifically, CO<sub>2</sub>. He stressed that CO<sub>2</sub> levels should not surpass 450 ppm which would result in a 2°C increase in average global temperature (see Fig. 1). In order to stabilize CO<sub>2</sub> levels, non-carbon emitting forms of energy need to be utilized. Currently, more than 80% of energy comes from carbon-emitting fossil fuels, with nuclear and hydropower falling far behind.

Dr. Suzuki explained that the alternative to fossil fuels will not be a single "magic bullet", but a portfolio of renewable resources that must be incorporated over time. This portfolio strategy must also include an increase in end-use efficiencies, especially in the transportation, housing and building sectors. In Japan, improvements in water heating system designs, for example, have reduced carbon dioxide emissions by 30-40%.

Participating teachers were asked to design lesson plans around the information presented in Dr. Suzuki's lecture. Groups focused on the complexities and realities around

solutions for climate change, including but not limited to, public opinion, corporate interests, environmental advocates, politicians as well as artists and scientists. Global communication representing the diversity of viewpoints is essential for solving climate change. This lecture and the meeting of teachers and students from around the world, through the support of the Toshiba Foundations, will continue to help encourage everyone to work toward these solutions.

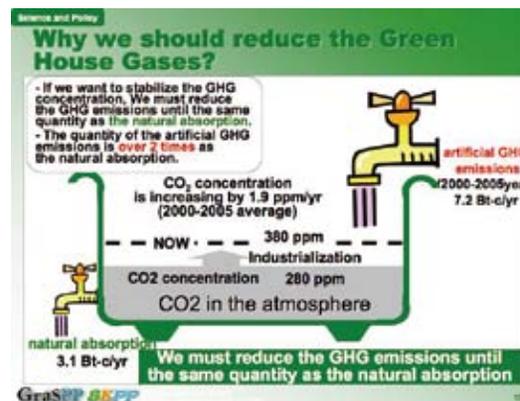


Fig. 1

Article written by Marissa BELLINO (U.S.A) Takumi TANABE (Japan)  
John P. GOLLISZ (U.S.A) Hideho MOTOSUGI (Japan)  
Mika MIYAZAWA (U.S.A)

## Two Ways – One Target Day -5 Teachers' Program

It all started in the year 1991, when a group of visionaries put forth a mission for the New York school, High School for Environmental Studies. The spirit of the mission's goal was twofold: an environmental curriculum and an extra-environmental curriculum through the Friends of HSES. This extra-environmental curriculum includes field education: trips to places of nature, clubs such as Urban Recyclers, Hiking Club, Career Curriculum and professional development. The best thing about the extra-curriculum of HSES is that it lets students get their hands "dirty" by doing things that would be impossible during standard classes. Through that, students can achieve the main goal of the mission which is that of support for a sustainable future.

The school does not forget about teachers, however. It offers them many ways for them to develop their professional skills as well as gaining more useful knowledge. What seems to be crucial is

the highest possible of environmental awareness among younger generations. A typical lesson was demonstrated with the teachers present as a model for how the environment is infused into the curricula at HSES.

This led to the Japanese presentation which discussed the limited time permitted for environmental issues in Japanese curricula. It was discussed how much time is required for preparation of college exams and how the social studies department is solely responsible for addressing environmental issues. The group agreed that this is a general problem amongst all the countries and how the Toshiba conference will help change all our education systems to require environmental education as a subject in itself, and not just as a minor topic in a social studies course. All agreed that, unless all governments begin to take their environment seriously, there will be never be a comprehensive understanding by our youth about what needs to be done to save the planet.

It is our hope that our participation in this conference will develop a deeper belief in the need to provide a sustainable

future for our planet and that we will be able to work together, with the help of the Toshiba Foundation, for a common solution for the good of all countries and mankind.



Lecturer: Marissa Bellino, High School for Environmental Studies, NYC

Article written by Radoslaw Siedlinski (Poland)  
Nipon Srinarumon (Thailand)  
Bogdan Poltorak (Poland)  
Somsak Gathong (Thailand)

## Speak out!

Teachers' comment on the conference

### Atsushi Ohtaka (Japan) Hitachi First High school

During this year's program, the number of students almost doubled, and every night students worked on the Act Eco Journal. Both the size and content of the conference has been scaled up, and I was very impressed.



### John P. Gollisz (U.S.A) High School for Environmental Studies

It is a wonderful opportunity to return to Toshiba Youth Conference 2009 to see a new group of students inspired and grow to respect the Earth and its limited resources.



### Radoslaw Siedlinski (Poland) Academic High School at PJIT

I would like to point out the students' ability to get along with students from different countries in a very friendly and open-minded fashion. That's something very difficult to observe during our daily activities in Poland.



### Nipon Srinarumon (Thailand) Triam Udom Suksa School

My students and I had a chance to discover new ideas, new visions, new lifestyles, and friendship at the Toshiba Youth Conference for a Sustainable Future 2009. Thank you for everything.



### Hiroaki Narita (Japan) Keio SFC High School

With Poland joining this Youth Conference, this program has become much more productive. The experience from sharing the same time and the continuous relationship they will have from now on will be a great asset to all participants.



### Marissa Bellino (U.S.A) Hitachi First High school

This year's conference has exposed students to a diverse and unique side of Japanese culture and technology. From the Josai International University/Awa learning center to the Toshiba Science Museum, our students will be forever changed!



### Somsak Gathong (Thailand) Assumption Lampang

Toshiba gave us a great opportunity to participate in this camp, and the time went very fast. We gained not only new knowledge to sustain life on earth, but more importantly, discovered "friendship" that will keep us in touch and help solve the problems we all face.



### Hideho Motosugi (Japan) Waseda University Senior High School

I am very impressed with the positive attitude of the students. All of the students enjoyed the camp, the challenge of communicating in English, tackling environmental issues, and received the great treasure of friendship that lasts forever.



### Toshiyuki Nawa (Japan) Hitachi First High school

This Toshiba Youth Conference is not only a place to interact with people from various countries, but it is also a place to discuss and think about crucial topic – the Environment.



### Bogdan Poltorak (Poland) Liceum Ogolnoksztalcace nr 14

Students were involved in many activities. They had a chance to explore different environmental issues. I hope they will share information when they go back home. Students had a great chance to exchange (share) information with students from different countries.



# Act Eco Journal. My Exciting View of Japan



Sun above Yokohama  
Tomasz Wiczorek



Vichawan Sakulsupich

The Road Between the Ocean & the Sky



Mmmmmmm!  
Marina Maeda



We've Got The Winner!  
Alexander Lis



Wiphada Det-Amnatkul

Yummy



Islam look sexy!  
Islam Dashoush



The view from 39th floor  
Piotr Jakub



Geko Geko  
Takayuki Nishikawa



Japan Fat Food  
Napat Phetkub



Japanese train  
Kanna Araoka



Dew's photo  
Narakorn Inkamma



I have the whole world in my hands  
Yestriel Henriquez



Bamboo As Far As The Eye Can See  
Adrian Andersz



Karakuri carrying a cup of tea  
Yusuke Urata



The Clash  
Maciej Tyszko



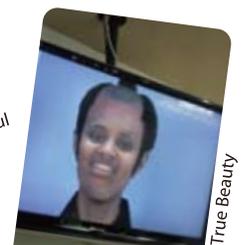
He is so cute!  
Tomomi Nakane



Nice Try Kyle  
Pattarapong Tantarariyangkul



True Beauty



Naoki Matsumoto



Ultimate Light Bulbtitle  
Pawel Wnek



Jakub Gaweda



Glowing Girls On The Tempura Bus  
Songyi Ee



Jumping jack  
Tiffany Doley



Yusuke & Tanaka Hisashige  
Shiori Yanagisawa



Tidarat Wannalert

We Stay In The Stairs



b2  
Sadia Hannan



True Shocking Love!  
Nao Takaoka

## Haiku (Japanese style poem)

On the way to HRD, everybody in the bus tried making Haiku. Here we introducing beautiful Haiku written by two guests from Thailand.

The rain scatters  
In the summer breeze  
Friendship Begins

Ms. Anjira Assavanont (Bankok Post)

Summer comes with new friends  
American Polish Japanese  
You're Thai's friends

Ms. Nantariga Painupong (Toshiba Thailand, Ltd.)



## Reports

List some examples of good energy production and/or consumption practices and activities implemented in an effort to tackle environmental issues in your country or community. Choose one best example among them and explain why it is most desirable. Also, discuss any issues or future possibilities for improvement associated with that particular practice.



### ① New York State Energy Use and Environmental Education Programs

by Tiffany DOLEY (U.S.A)

There are 50 schools that are participating in the School Power ... Naturally Program supported by NYSERDA. These schools have a 2 kilowatt, grid-tied, photovoltaic (PV) system installed on their roof. With these installments, students are able to participate in hands on lessons related to solar power. Students also collect data on the PV system and keep track of the energy captured by the system.

### ② Vertical Garden

by Pattarapong TANTIJARİYANGKU (Thailand)

Vertical Garden is a garden that grows vertically. To be precise, vertical garden is actually a way of planting; instead of doing it horizontally, do it vertically, by hanging on walls, partitions or even around hi-way pillars.

### ③ Photovoltaic power generation

by Yusuke URATA (Japan)

We believe that the best energy production that we have today in our country is the photovoltaic power generation. They do not need to consume electricity so they are harmless to the environment. Nuclear power plants seem also harmless to the environment, but they cannot produce energy without producing radioactive waste.

### ④ Forest Fire in the North

by Narakorn INKAMMA (Thailand)

Since February this year, the Northern Provinces have met problems about smoke from forest fire all over the province, especially Lampang. It had the highest smoke percentage in the North.

## My Life

Take pictures of the following five different scenes of your daily life: meals, garbage, electricity, transportation, and shopping, which show how energy and resources are consumed everyday. Post the pictures on the website with short descriptions of each photos.



### ① Transportation : Running

by Pawel WNEQ (Poland)

### ② Electricity : Phone and Iphone

by Aleksander LIS (Poland)

### ③ Shopping : Shopping in NYC

by Songyi EE (U.S.A)

### ④ Food : Typical Thai meal called kow soi

by Tidarat WANNALERT (Thailand)

### ⑤ Trash : Trash separation

by Takayuki NISHIKAWA (Japan)

Yes, I'm saving for a car. I know that's not an eco-friendly attitude but don't worry, it will take years for me to get my own ...:D

Unfortunately, it's using a lot of electricity.

My lunch. In thai, it is called "kow soi". It's northern food and this composition has chicken, noodle and coconut milk.

This is the rubbish box of my cram school. I can put each kinds of garbage in each rubbish box.

## Interviews

Interview your grandparents or other older people in your community or family, and ask them how they remember energy and resources being used in the past. Try to interview more than one person if possible. How does their lifestyle in the past compare with the way you use energy and resources today?

Nao TAKAOKA

The amount of garbage has exponentially increased in the past 40 years in Japan. After losing the World War 2, Japan's government promoted "mass production and consumption" to Japanese people in order to make Japan's economy grow rapidly to catch up with United States and other developed countries. This made the amount of garbage increase.

I interviewed my grandmother to know how we can decrease the amount of garbage...

Narakorn INKAMMA (Thailand)

When my mom was young. She was living with her mother, her dad, and her relatives with love and harmony one another. They lived in Maetha, Lampang, the north of Thailand where had been rich in natural resources.

My mom told me

\* Formerly, we always used a charcoal brazier when she was cooking but now we use a gas stove that more convenient than a charcoal brazier...

Tiffany DOLEY (U.S.A)

Energy use has changed a great deal in the past few decades. The perfect candidate for this interview would be my grandfather. He is 90 years old and he knows so much about the energy and resources that were used in the past. He witnessed energy changes and lived through decades. My grandfather grew up in Dominican Republic. Wood and fire were used to cook food when he was a young boy. People used to walk and did not have cars...

Adrian ANDERSZ (Poland)

I asked my grandmother, how her world looked like, when she was at my age (she was born in the 1920's). I was shocked, that Poland was such a different country from what it is like today.

TRASH

Mostly there were organic type of garbage, e.g. peelings. People couldn't afford to throw away anything that could be used again (all kinds of metal or wooden parts)...

Read more at

[act-eco.net](http://act-eco.net)

## Changing One's Mindset and Lifestyle for a Sustainable Future *Lifestyle Team*



Team content with work

### The Benefits of Localization

Over the past few days we have learned much about a sustainable, alternative lifestyle. In our opinion, living a minimal lifestyle in an industrial society is a potential solution for a sustainable future. Two specific lifestyles we

learned about was Mr. Hayashi's AWA money community and Mr. Yoshida's Transition Town. These are examples of communities that work collaboratively to live with bare necessities and support the local area by buying local commodities.

Mr. Hayashi lives in a localized community and he enjoys living a "simple life". Mr. Hayashi gets food from his neighbors or buys local products. We think it is good to have this way of life because the energy used to transport products from far places will be decreased. It is truly inspiring to know that he is contributing to save the planet. Starting and living in a localized community is not something everyone can do. We think his courage to live an extreme lifestyle is remarkable.

Mr. Yoshida once lived a busy, urban life; however 2 years ago he realized that this lifestyle was not meant for him. Although he had great success in the medical field he decided to give it up. Everything that he worked in college for was not worth losing touch with nature and with himself. As time progresses he saw how his "ideal" life was too time consuming and demanding and he wished to make a drastic change. He decided to quit his job and join a movement called "Transition Hayama" that aimed to change the community in which

you reside from a fossil fuel dependent community to a self sustainable community. He believes that this is a great solution to our environmental problems.

Sure, green technology is great for acquiring renewable energies, but in order for humans to achieve a completely sustainable future, we must change our mindset and daily habits. The reasons why we agree with both men are because they both practice sustainable behavior and have a concerned and insightful mindset.



Students experienced organic food and alternative energy source, solar lantern which is used to light up village homes in India

## Yes, we can!

*Business and Politics Team*

### The best solution for a greener society

This camp has opened our eyes to how business and politics are closely related. During our time in Japan, we have stayed in Kamogawa and Yokohama. We have traveled to many places. Each was a learning experience. In order for significant change to occur, the government must implement regulations for businesses to comply with. The first day we traveled to either Mizuta Residence or Hayashi Residence. Second day, we went to the Toshiba Science Museum and R&D Center for Toshiba Day. The last day we went to the Institute for Sustainable Energy Policies to interview Mr. Yamashita, who is a senior researcher.

Going to the Toshiba facilities, we learned a great deal about the new and innovative technology they have developed. The gadgets we saw at the science museum are geared towards saving the environment. We believe that these products are very promising and will eventually make it into the market. But the government must support them

in their endeavors. In the interview of the Mr. Yamashita of ISEP, the Japanese government does not properly support these actions.

On a business aspect, the government has a duty to the people to hold these large corporations accountable. This means that they must be active; moreover, strict in the regulation. During our interview with Mr. Yamashita, he spoke extensively of the Japanese government's reluctance to promote solar power production. The role of government in the fight for the environment is paramount because they are an agent of change. After the interview, we collectively felt that government must act immediately and radically.

Toshiba is an excellent example of a large corporation that is effecting change into their line of work. In the R&D center, we learned that Toshiba invites young children to learn about their factories. This is the way to spread environmental awareness because the consumer will be more knowledgeable about what they buy. Toshiba has also promised to eradicate incandescent light bulbs by the next year. This is an extreme measure taken with good intention and we hope they phase out other harmful products

Non-governmental Organization is the solution to the environmental ignorance. They advocate to the government, thus

grows awareness. NGOs have potential to become the backbone of the environmental movement.

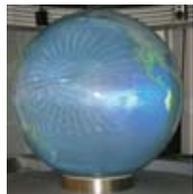


Time is money!

## Is our future really sustainable?

### A closer look at our environmental future

Over the course of the entire Toshiba Youth conference we have been revolving around this idea of a sustainable future. But what is a sustainable future really? Is it even really achievable? Can we as a human race get over our differences and unite together to solve the whole global warming crisis or not? And even if we could what type of solution would we have? One consisting entirely of a nuclear future or one with a mix of energy sources. First of all we need to ask ourselves what a sustainable future is? Is this a future where people give up worldly luxuries to be



Dr. Suzuki talks about Science, Technology and Public Policy for Climate Change

one with nature, or one where we can create technology that would allow us to continue a relationship of respect with nature.

Technology has advanced to such a point that convenience is expected from people. Not many would be willing to do what Mr. Hayashi or Mizuta have done. Start a life based on the principle of satoyama where one lives in a perpetual state of respect with nature. Where everything is used and as little waste as possible is made. Even if such a life is not possible for many, efforts can be made to make technology that has as little impact as possible. This is where the question of completely relying on nuclear power comes in. At the current state it is the most realistic solution for our energy crisis. Offering an extreme output of energy, for a relatively small amount of CO<sub>2</sub>, it easily outclasses such fossil fuel sources such as coal or oil. The problem of waste disposal becomes apparent, as safe removal of these wastes is hazardous.

A mix of energy resources is the only way to go. We have to combine the solar, wind geothermal and nuclear energies. Having only the solar one, we would be helpless while a cloudy day or in the night. The wind turbines won't work in a windless area, and the geothermal energy is restricted only to few areas.

The path we should follow is mixing those energies together. They all should be used in the terrain and climate that is the best fit for every kind.



Critical thinking always helps

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