

# Youth Think Tank "Create and In(ter)novate!" 19-21 March 2009

result booklet



# Youth Think Tank "Create and In(ter)novate!"

The Think Tank organized in Brussels by AEGEE was itended to bring together 50 young people from all around Europe to define new, innovative and workable ideas to solve existing issues in sustainability. The heart of the think tank were companies and institutions that posed cases: real, existing questions that they encountered and would like to have a fresh view of solution for. Our interdisciplinary and international participants worked for one day, in groups of 5 people, to define their creative view on the case. This they wrote down in a paper of max 2 A4's. At the end of the day, these were collected and judged by a high profile jury. The best idea was awarded a prize of 1000 Euro. This incentive ensured higher quality of the papers and helped in making it a high profile event.

The Think Tank event was divided into three days: The first day to prepare the participants for the task ahead: workshops with some topical back-



ground, on working creatively, problem solving and to create team spirit. The second day was the Think Tank itself and the third day to visit Brussels, this city in the heart of Europe, and to network further among the participants.

The day was the first of it's kind and a great success, bringing together about fifty promising young people from in total twelve\* European countries, from east to west and north to south. Together they came up with interesting solutions to the questions posed by industry, working in teams together regardless of cultural differences and country borders, as our sustainable future is also not defined by our borders and it will require a common effort.



I would like to thank everyone who helped to make this think tank the success it was. Especially Percin and Robin who were helping hands on when needed; Kadri for being the patient but firm project manager, even when the project got a bit stressful at times; Diego, Romain and all members of AEGEE-Brussels who helped us; ,the jury and our industry partners, especially TÜSIAD and Merifin Capital for their enduring support and last but not least all the participants who really made this event with their enthusiasm and effort.

# Martien van Gool Event manager AEGEE Youth Think Tank "Create and In(ter)novate!"

\* The participants came from the following countries: Belgium, Bulgaria, Germany, Greece, Italy, Poland, The Netherlands, Romania, Russia, Serbia, Switzerland, and Turkey



# AEGEE-Europe Flagship Project 2008-2009

In every 2 years, AEGEE selects itself a flagship project – a focus for the organization, where the entire network is invited to participate and contribute to. Environmental problems and sustainability were quite new to AEGEE, until in 2007 sustainable development was decided as topic by AEGEE members for the flagship project 2008-2009.



"Sustaining our Future" was created and is managed by group of young people all around Europe with the aim to raise knowledge and involvement of European youth and their communities in the topic of sustainable development. We see a sustainable future as important part toward creating a shared sense of European identity and integration and feel that as representatives of future generation it is our responsibility to take active role in it, as it is foremost our own future well-being that is on stake. Since the beginning the project has tried to reach out to young people through their everyday life and experiences.



• Youth Solar Days opened the project with little exploration of renewable energies in the European Renewable Energy Center in Brussels.

• Soon after that **"Changing climate – changing people!?"** took place in Aachen, where different aspects of climate change and its connection to society were explored.

• **European Day of Environment** invited AEGEE local groups to organise small activities in their own university towns, to get to know the home environment and tak action in improving it.

• **Sustainable SCANdinavia** case study trip took group of young people to Copenhagen, Denmark to see Scandinavian sustainability practices in real life.

• **"Danube – let it flow!"** taking place in Danube Delta and Bratislava gave the possibility to see different sides how this river is influencing societies, environments and economies in big part of Europe.

• The final event of the project was **"SuFu and the City"** - a conference about urban environment in Madrid. As in the world where most people are urban areas, sustainability of cities is one of the most crucial challenges.

#### Youth think tank "Create and In(ter)novate" was somewhat more

special part of the project, as it was first of this kind event for AEGEE both in the topic and format wise and for sure it can be said it won't be the last. What better way to combine youth's creativity and challenges of sustainability, then to present it to those, who seek the solutions.

Besides all these events taking place in different parts of Europe, showing us not only the diversity of our continent, but also the diversity of possible solutions, the project team has also used other ways



how to get sustainability closer to young people. Throughout these 2 years we have given workshops in different other AEGEE events, given tips how to act in more environmentally friendly way, and also created some funny videos.

"Sustaining our Future" is the first this scale project in AEGEE about sustainability and is hopefully showing way to many other similar initiatives in AEGEE and to other youth organisation all over Europe. "Sustaining our Future" is big, green and new, and is about you.

#### Kadri Kalle Project manager of "Sustaining our Future"

More information about the project: www.aegee.org/sustaining

# New World Order? Coming Soon

Globalisation is steaming ahead at an ever faster rate facilitating the transnational exchange of goods, services, capital, people, knowl-



edge and social contacts around the world. It has also made easier the movement of disinformation, digital and biological viruses, nuclear technologies, organised crime. terrorism. economic shock waves and climate change. China. India. Brazil and other rapidly emerging countries

exporting more and more products with more and more competitive prices to meet the continuously growing consumption in the West; more and more oil needed to move and consume these products; the third world trying to provide the rest of the World with raw materials such as coal, steel, and copper; China trying to avoid a decrease in the value of its over one trillion US Dollars in its treasury and thus being limited in financing its own social development; the US treasury bonds bought with these dollars, credit market thus swelled, growing consumption and growing production... poisoned financial markets and atmosphere...

The wheels of the global order have been creaking since 2008. Economy and nature, simultaneously, are in trouble. The world economy is shrinking. The Earth is finding it hard to breathe. Current international political networks are getting thinner. New wheels and networks are on the horizon. Is this a mirage? Or is it the new world order of the 21st century? We'll see that shortly after, in a few years, probably.

#### New Pages of History

If every century were chapter of a book, the history of the Earth would have been written in 46 million chapters. It would have contained then only 200 thousand chapters of human history since the appearance of Homo sapiens, 32 chapters for the history of international relations and only two chapters covering the industrial age.

Important phases in the history are not sorted by centuries, naturally. However, there are general trend differences observed within the more or less centenary periods. The demise the Cold War in 1989 marked the end of the 20th century. The terrorist



attacks of 9/11 in 2001 started the transition to the 21st century, a century in which the 20th century's relative victories of the market economy and democracy are being re-shaped through their own dialectic contradictions.

It is now well understood that these developments did not mean "the end of history" as Fukuyama had suggested. We can nevertheless affirm as well that one more chapter of history has been completed. In 2008, a unique international economic crisis emerged upon the deep structural roots. Consequently, the transition to the 21st century is almost complete now. During this transition period, two fundamental processes have been underway, one of which is positive and the other one is negative:

- **Information society**: A revolution has been going on, which is triggered by privately owned radio and television stations, the internet revolution, mobile phone networks and mobile technologies. The stance of humanity on the Earth has been changed. We are now always in a mutual interaction with people, events and knowledge everywhere and anytime. The business, family life and entertainment have been fundamentally changed in the last two decades. The human civilization is being renewed by the communication and information technologies, in many different dimensions such as education, government, democracy, health, finance and security.

- **Excessive consumption society**: The air is being polluted; the atmosphere is getting warmer; the amount of clean water is diminishing; and food and cosmetic products are triggering cancer and other illnesses. The energy consumed



by the humans since the 1950's is more than the energy consumed altogether before the 1950's.

# New World Order? Coming Soon

Because of or thanks to the global crisis, the renewal pace of the world order has increased. Within few years, the international environment is likely to evolve on several dimensions:

1. Recovery from the economic crisis will begin sooner or later. Many indicators such as the US real estate market, consumption in Europe and stock exchanges will point in this direction.

2. United Nations' Climate Change Confer-

ence will be held in Copenhagen at the end of 2009. The transition to a clean energy revolution will become ever unavoidable and desired.

3. International financial order will gain strength. A new currency dimension supported by the Special Drawing Rights in the IMF will be established. The old currency system linked to the US dollar will remain, but it will also change and diversify.

4. Information and communication technologies, new products and breakthroughs in nanotechnology and biotechnology will be improved. The crisis will be left behind through more or much more information society, innovation, entrepreneurship, social responsibility and human capital. The consumption society will radically change in order to keep up with the times.

5. The World Trade Organization's Doha round might be concluded. International trade will become more liberalized. Better rules will guide the services and investments worldwide.

6. The European Union will regenerate itself. The EU's institutional identity will be solidified with the Lisbon Treaty. A new and more powerful European Parliament, a more visible EU presidency and more focused European Commission will be in charge.



7. The Transatlantic relationship will continue for the foreseeable future to be the global order's central pillar. Current institutional cooperation between the US and the EU aiming at the Transatlantic Economic Area will deepen.

8. While the mechanism of G20 gains more strength, different G8, G3 and G2 groups will also interact. In the abyss of 'global government', which the United Nations is yet far from undertaking, multiple axes between Washington-Brussels-Moscow-Tokyo-Beijing will become a part of the system.

9. In international conflict areas, the solution processes will be occupying the foreground. In areas such as the Middle East, Afghanistan, Korea and West Africa, the UN Security Council, NATO and the G20 will simultaneously be effective. The global leadership of the US will continue - stripped of its absolute hegemony instruments and ambitions.

10. Many other developments that cannot be foreseen today will affect these general tendencies.

While the world is changing a new generation of leaders, visionaries, innovators, entrepreneurs and social activists is getting ready to take over the responsibilities in all fields of professional life. AEGGE is a perfect model of youth power increasing our optimism and confidence in our planet's future.

#### Dr Bahadir Kaleagasi

International Coordinator TUSIAD - Turkish Industry & Business Association

# Youth Think Tank "Create and In(ter)novate!"

# Rules of the game

Below the rules of the game are explained.

# Computers and other information:

During the day almost every form of information flow is allowed. You may use every form of communication, except the physical presence of non-participants and of course stealing or breaking in on ideas or answer papers of other teams. Every team can use internet on one laptop of their own, wireless internet passwords will be provided to you by the Think Tank organisation. More laptops per group on the internet could seriously slow down the speed of the network also for others, so if the speed is slow the organisation will start controlling on this. The organisation can't know nor guarantee the hardware and software on your own computer, so they can never be held responsible for the functioning of your laptop or connecting to internet with it.

## Other contestants:

Please give each other space to work and respect each other's belongings. If any problems might occur, please go to the organisation.

#### Answer papers:

All answer papers have to be handed in before 17.00 CET. You can do this by printing it at the printer provided at the venue, and handing it in to the organisation. Each answer paper needs to provide the name of the team on it, as well as the names of the participants in the team.

Should two teams end with the same score, the time of handing it in will be used to decide who wins.

Furthermore, you should ask a member of the organisation to come by and put your answer paper on a memory stick.

The answer papers will all have to be made in Microsoft Word. The total amount of text can't exceed 2 A4 papers: Arial font, size 10 (including pictures).

The jury will be using the following criteria to judge the answer papers:

- Innovation and creativity, how new is the idea?
- Effectiveness, can it work and isn't implementation too expensive?
- Argumentation, provide good argumentation for your idea!
- Feasibility, can it be done and is it acceptable to society?

- Presentation, is it well presented on paper?
- Efficiency, is your solution really answering the question?

In cases where these rules do not -or not fully- apply, the organisation reserves the right to decide. This decision is valid for all groups from the moment it has been made public.

## The questions

The questions put forward by our industry partners were:

1. Renewable energy and transport: how to push the car industry to invest money for the development of a new era of cars fuelled with renewables?

2. Renewable energy and public admin: how to convince the public administration, both at governmental and local levels, to invest public money in green transport and renewable energy, e.g. installing solar panels on public buildings and using only renewable energy for buses and metro?

3. Sustainability, energy and consumption: how can emerging and 3rd world countries increase their living standards without compromising the earth's resources?

4. Energy and consumption: How can we save energy in daily life without decreasing living standard, consumption and harming economy?

These questions were put forward by TUSIAD (the Turkish Industrialists' and Businessmen's Association) and SolarPV Globe (global communication consultancy to the photovoltaic sector).

The answers defined were judged by our independent jury, consisiting of representatives of TUSIAD, SolarPV Globe and young people working for the European Union. The best answer went home with the prize of 1000 euro.

The idea that was voted the best was written by team "Adioma", with members studying in Brussels and Leuven. On the following pages all answers can be seen.



#### Question 1

<u>Renewable energy and transport:</u> how to push the car industry to invest money for the development of a new era of cars fuelled with renewables? It is true that one of the main sources of pollution comes from the massive use of petrol derivates for the car fuelling. In the meantime, the rising of the petrol prices and the crisis of the car industry are giving us a clear signal that something needs to be changed and quickly.

This is why we (at SolarPVGLOBE) think that a clear signal coming from people, and youth in particular, should be sent to the car industry, engineers and universities to support and spur the development of "the green cars" in the near future.

## Question 2

<u>Renewable energy and public admin:</u> how to convince the public administration, both at governmental and local levels, to invest public money in green transport and renewable energy, e.g. installing solar panels on public buildings and using only renewable energy for buses and metro?

Some years have already passed from the first promotional campaigns and argumentations on the use of renewable energies instead of the old and polluting producing methods. Governments and local authorities are already setting up feed-in tariffs, creating incentives and promotional campaigns to speed up the development of the renewable energy industry, but we (at SolarPVGLOBE) think further steps should be made. The large majority of public buildings, facilities and transports are not powered by renewables.

We (at SolarPVGLOBE) believe that the best promotional way to convince people to trust (and consequently use) renewables is to show them how they work in practice. Therefore the public administration should be one of the pioneers in using energy from the renewable sources, for example for the system of public transportation. It will be great to find a way to convince them that people do not need only good words or money. For a real change they need a good example!



### Question 3

<u>Sustainability, energy and consumption:</u> how can emerging and 3rd world countries increase their living standards without compromising the earth's resources?

The industrialized countries have been increasing their wealth and GDP in an unsustainable way for decades. Many resources, like oil and gas, are no longer in seemingly unlimited amounts available.

At the moment there is a push towards more sustainable economies and models which don't achieve their economic growth together with depletion of natural resources. At the same time emerging and 3rd world countries are looking for ways to increase the living standards of their inhabitants. This could jeopardise this push. TŰSIAD would like to see your answer to the question if and how emerging and 3rd world countries could increase their living standards, while building their economy in a more sustainable way.

#### **Question 4**

<u>Energy and consumption:</u> How can we save energy in daily life without decreasing living standard, consumption and harming economy?

Almost everyone agrees we should save energy in order to move towards a more sustainable future. But many people are still buying and using appliances which consume lots of energy. The trend in holiday trips has been further and more exotic – and more energy consuming. And so we can go on. In general, the public doesn't seem to like to sacrifice their living standard to save energy. And reducing consumption drastically imposes a big risk on our economies. But there could be other ways to save energy in our daily lives. Maybe it could even provide opportunities for the world's economies.

# **The Winners:**

**Team Adioma** 



# The Power of Example

Over the past few years, many people have thought about alternative energy sources

such as solar power, wind energy, and natural gases. As the level of awareness on the urgency and the importance of saving the Earth's resources has increased, the search for new sustainable energy is now at a very advanced stage. However, a sustainable society cannot exist without a positive, proactive attitude from the people.

So instead of thinking of new ways to completely revolutionize modern industry and to make it sustainable and energy saving, our strategy is to concentrate on educating the public and changing the mentality of a consumer society on both short term and long term. We need to make people understand that living in an ecologically friendly way does not mean that they will have to endure a decrease in their living standard. Therefore, consumption will not decrease, instead it will undergo an ecological shift and in this way the economy will not be harmed.

How can we make people think green? Our short term plan is to increase the level of awareness by implementing ad campaigns that illustrate the need for sustainable living. One way to do this would be to introduce "green" television programs into mainstream media in order to promote a positive attitude towards sustainability. Our long term strategy is to educate the youth and all future generations about sustainable living. This would be accomplished by introducing a more eco-friendly educational program into all public schools.

#### Short term

Our plan is to introduce ad campaigns sponsored by Intelligent Energy Europe that promote and educated citizens about energy saving techniques. Such techniques include the installation of solar panels, automatic lights, decreasing thermostats and increasing insulation within homes. Outside the home, these campaigns will also promote car pooling and increasing the use of public transportation. In this day and age, Internet and television are the two most efficient ways to influence people. This is why we will introduce eco-friendly games and websites in the Internet, similar to The Sims or Second Life.

Also, in order to touch the masses and to give a positive view towards energy saving, a reality show called "Eco Pimp your House" will be introduced into mainstream television. It will be a competition designed to implement energy saving techniques into everyday homes. There will be three different high consuming households, with a team of seven people in each one. These competitors will be smart or dumb but of course young and attractive, so that viewers will stay interested in the reality show. But several middle aged competitors will also be included, so that the average citizen will also be able to relate to them. The goal will be to transform these energy consuming houses into green, sustainable abodes. The teams will also have to use eco-friendly products. Each team will be allocated a certain budget to transform their house, one that is not too high, so that viewers will realize that moving towards sustainability is indeed feasible.

The teams will have briefings twice a week and weekly goals that they will have to attain. In the end, the teams will compare how much energy they have saved compared to how much energy their house used to consume, as well as the differences in electrical, gas, and water bills. The team with the most successful outcome will receive €100.000, as well as the installation of free solar panels in their personal homes.

Viewers who are watching this reality show will be interested by the fact that the winners have not only saved energy, but most importantly have saved money in their monthly bills. This will give families living in everyday average households the incentive to imitate the energy saving techniques they saw on television and implement them into their daily lives. The home is the keystone of everyday life, so by starting with their households, citizens will realize that pursuing an eco-friendly way of life is very beneficial for them both socially and economically. And even the people who do not watch this reality show will be influenced by this new trend to shift towards sustainable living.

#### Long term

Our long term goal is to change the mentalities and behavior of citizens towards a positive ecofriendly way of life. This will be achieved by introducing sustainable education programs for the youth in both obligatory education and higher education. Thus, children who are born into consumer nations and future generations thereafter will learn in their earliest years how to live green and about the benefits that arise from this life style. This ecological education will continue after primary school, into secondary school and then into higher education. The government will not only subsidize the schools to sponsor these educational programs, but will also be pressured to adhere to the many treaties they have signed such as the Kyoto Protocol, in order to set a good example for its citizens.

Thus, the informal form of education brought upon by the short term action plan will be complimented by the formal education introduced in the long term. The generation that is affected in the short term will acquire an eco-friendly attitude which will be passed on to their children, thus ensuring a perfect transition between the consumer generation to the future sustainable generations to come.

Team ECO-5

# **Renewable energy and transport:**

how to push the car industry to invest money for the development of a new era of cars fuelled with renewable?

Lately we are witnesses of an ecological crisis whose end is unpredictable. Every single day people realize the damage that it is caused to the environment and the experts are trying to find these directives which will permit to the final upgrade of the quality of life. It is a common belief that the main source of pollution comes from the fuels of the cars. But, is there any way to prevail the car industry to invest money for renewable energy powered cars in order to start hoping again for a better tomorrow?

As every problem has a solution, the same happens here. At this point of time that the economical crisis has undermined the world economy, car manufactories are at a centre point. They have the chance to lead the efforts to alter the recession through the exploitation and further investment on renewable energy sources for transports. Negotiations and practical solutions is the key.

According to the Society of Motor Manufacturers and Traders the glob al car production plunged 59% to 59,777 units last month with year to date output off 58.8% to 121,181 units. The above statement means that the economical crisis has touched the ground of the car production. From an economical point of view, it is an opportunity, at this difficult situation, to get the engine running once again and get the automakers industry back on its feet on stable grounds. So far, the oil is the main source of the car industry but available resources are already pretty low.

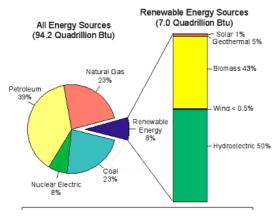
As long as the car industry remains depended on the oil, it will remain vulnerable to the ups and downs of the oil prices which are also affected by the policies implied by the global players. In order the car industry to avoid being a part of this vicious circle it should focus on alternative energy sources. Hydrogen, electricity and the solar photovoltaic are the elements which can help to achieve that goal. Specifically, hydrogen is not yet exploited on full capacity, although according to the scientists this is the most likely alternative way for the future.

In nature there are abundant quantities of sun, air and water. Such resources will be free of production costs (costs for exploitation and transportation costs) since there way to exploit them is discovered. As we can understand we are talking in the long run about a cheap source of energy which will offer to the car industry great gains. In the short-run, the risk and money required scare automakers. But what will such a risk mean for the first car company to acquire such a technological achievement? It will guarantee its future. As petrol and gas are becoming more scarce -until they disappear- the only alternative will be renewable energy sources. In the future we will have to put them in our daily lives.

The question is when we will adopt them in our life. The sooner the better. For example, Honda and Toyota, have invested amounts to hybrid technology and it is proven that it was an excellent strategic movement, as they have seen their current sales to rise.

We can understand the cost of this change for the car industry, but according to the principles of economics, something new, innovative and socially accepted it is mathematically accurate that it will achieve a full amortization and will succeed. Imagine the impression that it will be defined if a company will do that which the other companies do not even dare to try for it and contribute to the ecological solution stepping ahead to its competitors.

The government needs to back up the automakers in this situation. The economical crisis is a valuable tool in this direction. A lot of money has been offered on the car industry in the USA in order the Big Three (Ford, GM, Chrysler) to survive and not to go bankrupt. So, it is a com mon belief that the governments have to cooperate with the automakers. The money that is invested instead to the ecological campaigns has to be the basis for the automakers to create these infrastructures to follow an ecological policy. Of course these huge amounts have to be used also for the beginning of a new constructive research in order to find the technical solutions to the issues of the renewable resources. One of the most important institutions is education. The educational system can provide the knowledge to promote the ecological sensation. From the first class of education courses of ecology has to be adapted to the daily school program, in order to grow personalities which will be able to apply the proposed solutions and protect the environment. These courses have to contain the idea of sustainable development and emphasizing the damage that the CO2 does to the whole system. This solution can be worked out with conversations, reforestation, recycling, theatrical games and practical experience, the last means that the students can follow projects to the countryside in order to upgrade their relationship with the nature..



The public awareness is more mature in ecological issues. As time is passing, the humanity worries about the current situation and understand that there is a necessity to take measurements in order to protect the climate. The young community is even more sensitive on the environmental issue and in the future it is

not sure that the young people will tolerate any more

postponements in the series of the actions that need to be taken to save the nature. The first one which the young people will turn against will be the automakers. Thus they increase their pressure towards them. As far as public relations are concerned it is an excellent way to win the public favor reversing the existing opinion that blames car manufacturers and petrol companies about the pollution and economical crisis.

One thing is certain, it is one-way road to the future of transportations and this is the renewable energy sources. The ideas expressed above show the worry of young people about the issue and the qualifications that they have to find the appropriate solutions. It is true that if the automakers start the effort to change the nowadays circumstances, the whole world will support this movement. We would like to express our point of view that "every crisis is a chance for change".

#### **Team Believers**

# "Thank God men cannot fly, and lay waste the sky as well as the Earth." Henry David Thoreau

The world is changing rapidly. In the last 50 years the global transportation scenario has dramatically changed due to rapid industrialization and increase in urban population, jeopardising the environment. Today transportation segment accounts for more than 16% of global carbon emissions and is the only sector of the world economy in which carbon emissions have consistently risen since 1990 (WRI 2005). So this report focuses on how to motivate the automobile manufactures in a feasible, practical way to produce successfully vehicles which uses the renewable energy sources. We are going to evaluate various factors like regulation, market demand, and maturity of market, return on investment and payback period that influences the manufactures and instigate them to produce these vehicles. The solution which we are suggesting is to go in an incremental way instead introducing a sudden radical expensive product and give time to market to stabilize. Once the Industry sees the profit the cycle is continuous.

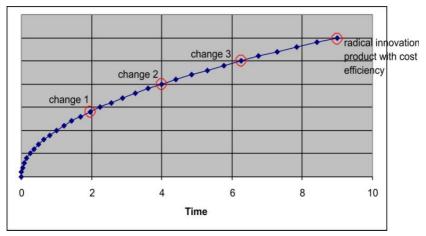
The auto industry is like any other industry is for profit. A company will invest in a project only if there are returns. So the motivation is from returns on the investment they make. All the new renewable technologies require huge investments in fixed assets and new infrastructure which is risky as the demand is not consistent. The new solutions should be using the current infrastructure that should make use of all the current logistics and supply chain so not to reinvest again. This should be done in a gradual phase by phase process.

A recent analysis of current trends (Schellnhuber et al. 2006) concludes that the planet will face dangerous climate change consisting of irreversible and drastic impacts on the biosphere, possibly crossing critical thresholds in the near future. So what should we do? The answer is simple and we know it. **GO FOR RENEWABLE RESOURCE.** But how do we do it?

#### Our solution:

The problem today is not that we don't have technologies which use renewable energy sources. We have Fuel cells, hydrogen combustion engines, and electric vehicles. But all these technologies are expensive to produce a feasible model on road for an average consumer. Our solution focuses on giving time to both market to adapt and industry to make the above technologies cheap. Making the company independent and voluntary in investing renewable technologies is. Once the market is lucrative and developed other competitors will follow the leader and system is independent. The starting should always be slow, with minor changes like using solar panels over the panorama of the car to conserve the energy and reduce the battery size. Introducing regenerative braking solutions that conserve the energy lost during braking. Almost 35% of the momentum that is gained during acceleration is lost during braking. This energy can be captured and used efficiently. These minor changes in the current models would make a drastic impact on the society by making them feel, know how these products work and how efficient they are. We are creating a market demand for products which use renewable energy. These products can be used as test marketing to understand the customer preferences and to optimize the product year by year and making changes continuously. Now this gives the company sufficient time to economize the current expensive technologies with further research.

One of the problems that companies wouldn't want to invest in renewable energy technologies is that these products would be a competition with their current product line.



Now that we have consumer tastes and preferences we can predict the demand with less volatility and even investors will come forward to invest more in the company to research more on these technologies. This period will give sufficient time to develop test and release the new latest technology products like hydrogen combustion engines, advanced fuel cell vehicles at affordable prices. So by the time manufacturers can produce the economical model of the car using renewable energy all its previous polluting models would have become outdated and the market has only eco-friendly cars.

This is the time when the governments should come in the picture trying to subsidize the vehicles, along with giving tax benefits to the manufac-

turers to reduce the burden initially. But this should not be for long as the market should move on its own. The European Commission should also implement stringent emission regulations in confluence with Industry and should update them regularly.

One more important aspect is the awareness among the public regarding the renewable energy sources and their advantages. Government should try to impose regulations like every company should sponsor awareness events at schools and universities.

#### Conclusion:

To implement all these solutions the governments, Industry, People everyone should coordinate and cooperate in tandem with each other to achieve one common goal of everyone. The system should be symbiotic not parasitic helping each other to develop by understanding not by forceful regulations. With continuous changes as we proposed, using renewable energy with managing to make and keep our environment sustainable, we could save our planet and show to the God that He does not need to be afraid of men learning to fly.

# **Team Elan Vital**

# Renewable energy and public administration:

Before turning to the case solution, we analyzed the factors preventing authorities from acting in a consistently sustainable way – in particular as they make decisions on investing in sustainable projects.

There are three main factors influencing their decisions: project costs, available information on sustainable development and funding, and public opinion.

There are a lot of institutions promoting sustainable development and providing funding for environmentally friendly projects. They are, however, failing to address the above shortcomings.

Therefore we propose to set up an independent agency with an innovative and interdisciplinary approach to active citizenship, information dissemination and education of the public administration.

# How to develop active citizenship

The first dimension of the agency will use a social networking approach and subsidiarity principle. Modern communication allows for better organization of people at local level: social networks present initiatives

quickly and efficiently as well as gain substantial support. A network structure based on local cells (grassroots democracy approach) helps to mobilize people,

accumulate public opinion and spread information at all levels effectively. A network provides new communication links among the existing entities creating a multiplier effect. New technologies in Web 2.0 enhance word of mouth, trigger flashmobs and letter-campaigns as well as facilitate the organization of thinktanks and voluntary service in the public and private ecological sector. This contributes to active citizenship and thus puts social pressure on decision-makers.

# There are different types of flashmobs. First, a lot of people meet in a public place in order to interrupt the usual schedule. A second type is through the use of art. For instance, the synchronized dancing campaign in Germanys train stations.

The letters-campaign provides the opportunity for people at the local level to write a pile of letters to support specific action for sustainable development. A template will be provided and individual change in the texts are possible. Templates can be distributed at a university or other public place for 24 hours. All letters are then collected and sent to the decision-making authority.

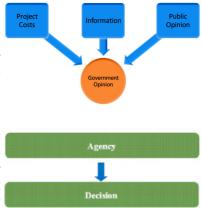
## How to disseminate information

The second dimension relates to the provision of information for two essential target groups: the general public and decision-makers. Decision-makers currently lack comprehensive information on funding opportunities, application procedures, modern green technologies. The "cells" of the network organization could address the corresponding levels of decision-making with concise monthly newsletters on relevant local and other issues, training events and seminars as well as legislative proposals on regional, national and supranational level.

A newsletter could cover such topic as policy updates, funding opportunities and local campaigns coverage. On the regional level a help line could be established, as well as training events. A further problem is that the majority of information on sustainable development is presented negatively, i,e. "doom and gloom" style, which does not motivate people to act. A "green and sexy" campaign with green product placement and implicit advertisement conveys a positive message. An example of implicit advertisement is showing the use of renewable energy without being in the centre of attention. This can be in soap operas, in posters or other TV advertisement. Imagine a butter advertisement taking place in the nature, but in the background there is a house with solar cells on the roof. Complex information on environmental damage can be presented more legibly by transforming statistics and figures s into something tangible, e.g. a "sticker-campaign" that shows the number of trees necessary to absorb CO2 emissions of a certain building or vehicle.

#### How to obtain funding

The funding dimension plays a crucial role for public administration. Funding is generally available, however a lack of information and highly bureaucratized application process prevents public administrations from applying. The national application process is easier than the European one, but still few communities venture to try it. The agency could organize regular seminars, bringing together local authorities from a region for training that could teach them to search and apply for funding as well as other necessary skills.



The agency could also act in the educational sphere, at higher education, corporate and government level, furthermore recommending available university degrees in sustainable development with the prospect of increased employment in the green sector.

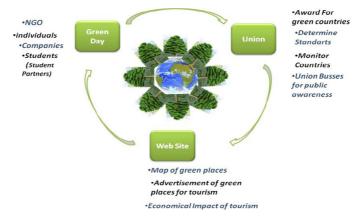
#### Team M.T.E.D.: Mediterranean Team for Energy and Development

During the global economy crises the needs of our states have been increased. So, what are our biggest problems today? Unemployment? Pollution? Lack of tourists and investments? Traffic? Too much pressure from the environmental organization from one side and companies from the other side? By 2020, according to European commission's recently



voted rule, the 20% of our energy should be produced by renewable energy sources. And what are we doing for that?

Politicians do not seem to realize the need for a big change. And maybe because they do not realize that the green power can solve all (!) these problems. Now it is time to show them that taking the big step, investing in renewable power, starting using and promoting environmental friendly techniques of producing energy will bring only positive results! The truth is that individual actions are not enough to press the authorities. The only way is to give them enough motives and to attract their attention by making the public react somehow. And how can we do that? Here there are our proposals for an organized campaign to convince and press the authorities to MOVE ON!!!!



# THE IDEA

We detected the need of an independent association, a GREEN UNION which would organize the whole campaign. Its role will be to gather the people who all care about convincing their governments and organize a common action. They will affect their governments by attracting their attention to the points that they already know but they do not pay attention to. It will organize a variety of activities from small events to international projects. Its role will not be against the governments. It will actually help them and offer them important statistical info about how they can earn money by changing their environment politics. This is how the politicians are going to be convinced by scientist from NGOs, active citizens, university communities (students in NGO's) and industries that will cooperate.

Furthermore, they will shape an **independent monitoring center**, which is going to control the activity of every country according to

- the percentage of the renewable energy it uses for the state buil ings,
- the measures that it takes (laws that votes) to limit the industriawaste
- and the level of green transportation

and by their activities they will convince and press the governments to register to this Union. ( activity #5)

Who is going to cooperate for that?

1. Companies who produce devise that process natural sources of energy: solar panels, water mills, wind mills

- 2. Environmental N G Os , Youth N G Os ,
- 3. Independent activists.

### What type of activities it is going to organize?

1. Mainstream activities: since it is going to be a union of many organizations it will have more power. So, scheduling discussion meetings with governments to show them the results of recent studies, publishing newspapers and creating websites will be some examples.

The arguments to convince both governments and local authorities to invesmoney during those meetings are numerous.

a. The big problem of lack of investments: the new technologies about renewable energy constitute a whole new industry! It will bring more money and it would solve the problem of unemployment.

In Europe, especially in Russia we will have huge fields where we can still cultivate materials that could be biomass (miscanthus, switchgrass, hemp, corn, poplar, willow, sorghum, sugarcane [1], and a variety of tree species, ranging from eucalyptus to oil palm ).

b. Pollution: except from the obvious reduction of waste , there are new technologies that can process rubbish and create energy! Most of the big European cities do not have anymore damp yards. It would solve this problem also.

c. About transportation: The most important argument is that by increasing the buses and the trams people do not use their cars, they go faster to work and they are happier. We know that for now the solar buses are not so functional. But the electric ones are!!! And if we can use solar station to produce electricity for cars... it is totally green! Not to mention that it is a whole new industry also..

d. The tourists are decreasing every year because of the economical crises. The green tourism is the answer. Small villages that are ready to die can receive funds from the European Union and other organizations and became the absolute destination for today's tourists that they do not want to spend much. The local authorities will see the results of their investments after 2-3 years. The website that we are going to create is going to promote this even more.

e. search engine which will search destinations according to how green they are, it is going to show all the energetically autonomous hotels and the environmentally friendly airlines.

f. Another common argument of the local authorities concerning the public transportation is that they do not have enough money to buy new buses of transform the ones that they already have.

The governments can actually solve this problem by offering tax reduction to the companies that will donate solar panels to the authorities. The same will be applied for any other renewable power equipment that can be used in public buildings.

g. It is known that our future is our kids. So, by investing to the new generation they will have a better future even if the results will be seen after 10 years. Replacing the energy system of the school buildings will make the kids to start thinking about the environment. The state will be the perfect example.

 $\ensuremath{\text{2.}}$  An International Green Day where many events can be organized worldwide.

3. It will be really interesting if it could sensitize children. And that is not difficult to be done. A solar panel

company can donate solar panels to some schools and make some lectures there. Kids can always be creative. They can go to the streets at the International GREEN day, holding flowers outside the politician's offices and speak to the media.

4. Buses and Kiosks all around the world, where people will work voluntarily that will inform the citizens.

5. The UNION will set an international competition. The states that are going to register will be judged every year and the best one will win an award. They will be judged upon the progress they have made to the field of the green transport and renewable energy. This is going to be a great motivation for the countries because except from the funds that they will get, the publicity will attract even more tourists ( it is already happening to countries like Netherlands where bicycles are used).

The rules will be taken from the International law, Kyoto protocol and European Commission's rules. Every year this is going to be

more and more popular and more and more countries will feel pressed to register. Media and Internet, are going to spread the idea and the results everywhere.

# What are the means that they will use? (FR)

This plan doesn't need a lot of money to start working. At the begging the most important tool that will gather all these people will be the internet: events planned via facebook, discussions and brainstorming via platforms. After establishing a reputation ( the companies can always use the media for that) the UNION can accept money from donations and NGOs.

# Sustainability, energy and consumption:

# how can emerging and 3. world countries increase their living standards without compromising the earth's resources?

#### 1. Introduction

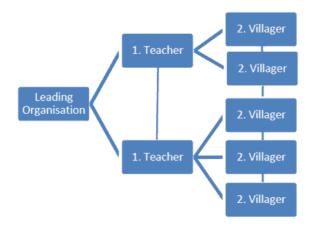
Intherecentyearsemerging and third world countries have been struggling to raise the standard of living. Most pressing issues are alimentation, energy supply, education and health care. The question is how those countries can raise the standard of living and on the other hand avoid the ecological mistakes committed by the first world countries during the industrialization. The crucial point is to raise consciousness of the possible advantages of sustainable concepts. To achieve this goal we propose to implement a peer-to-peer network for knowledge sharing.

#### 2. The peer-to-peer network for knowledge sharing

To demonstrate the main points of this concept we pick an example of covering basic needs. In cooperation with one village we have experts teach them simple and affordable techniques which can effectively improve for example their agriculture. These techniques are based on sustainability and being environmentally friendly. After successfully experiencing these techniques and realising their advantages in real life, the main part of the project starts. The organisation plans and puts into action an e change program for people from other villages.

One person from the prototype village goes to work in another village in exchange for someone from the second village visiting the first village and learning about the improved methods. After returning to their original village they will adopt the newly learned superior methods and teach them to their fellow villagers. People teaching and sharing information with other people will cause a snowball effect. As we can see in Graphic 1, a multiplicative effect occurs with integrative connections between all the stages in the peer-to-peer network.

The contact is maintained by (optimally) using the internet (possibly by a scheme similar to the One Laptop per Child (OLPC) project) or by established means of communication. Feedback is provided over the same channel and spread to all members (possibly by using a knowledgebase or a "wiki"-like system). Repeat visits to other villages are being encouraged to quickly spread new or improved ideas and discuss problems. Participants are invited to do research or experimentation themselves and share the results over the network. Lifelong learning is one of the main goals. This way a dynamic system is set in motion. Thus the sum of available knowledge grows like an expanding spiral.



Graphic 1: The peer-to-peer knowledge network (every connection is bi-directional).

This concept is effective because:

- It can be implemented no matter the development stage of the target nation

- It can be started locally and can be extended step by step

- As soon as the network is established it carries itself, further external input is unnecessary

- It can be transferred to all areas of life like education, health care, culture, sports and leisure activities...

- It can be realised on any level of expertise, e.g. in the field of education: in schools as well as at universities

- It can be also be adapted to the industrial sector by holding seminars and promoting an exchange of technologies.

Another strength of this concept is its feasibility because the acceptance by the concerned societies is promoted by the following aspects:

- Many third world cultures and religious views are related to nature and based on sustainability

- They are more effected by climate change natural disasters

- Family structures and community play a big role in their life, which supports the building of network structures

- They are not used to luxury, so they are not losing any comforts by changing

## to sustainable energy concepts

# 3. Conclusion

Communication and the exponentially growing knowledge in the network will be the basis for further development. By starting with the people sustainability will be a part of everyday life, anchoring it in the collective conscience, while preserving the regional culture and traditions. The peer-to-peer network is a long term project which will increase the quality of life of people in emerging and third world nations. By applying our approach to the various aspects of life, the standard of living can be improved successively in every single field, starting from basic needs continuing with health care leading to increased quality of leisure and cultural activities.

# Team 6 Sustainability, energy and consumption:

# Introduction

This paper deals with the issue how emerging and 3rd world countries can increase their living standards without comprising the earth's resources. The development of these countries will be accompanied by increasing energy and resource needs, the need of a better infrastructure and the need for funding for the implementation of these measures. Therefore in the following we will investigate the possibilities to satisfy these needs through sustainable development and then give a case study to show this more concretely. Energy

In order to meet the energy demand sustainably the countries could on the one hand develop more sustainable ways of energy productions such as renewable energies and on the other hand try to reduce their energy demand by increasing energy efficiency. The countries could use the renewable energy (solar, wind, geothermal, hydropower or biomass) or a combination of them which would be best suited for them.

# <u>Infrastructure</u>

The design of every city is very important for both economic development as you will attract more financial investment and also for environmental and social quality, as you will have a higher life, quality. If the living condition is excellent, you can attract more experts to work in the local regions, and even to create more job opportunities. The government could also give incentives for a better environmental policy to achieve these gains, for instance, the encouragement of public transportation.

# Education

In order to use the technical possibilities, the people also need knowledge transfer. Experts from developed countries could therefore give the local people trainings. But also the knowledge of the indigenous people should be considered in finding the best solution for local problems.

People would also have to change their behavior to live more sustainably. In order to achieve this aim, it would be very important that the people would be educated and that awareness for the issue of a sustainable life style would be created. This could already start in school or also be promoted by other media. Resource use

#### <u>General</u>

In addition to acting directly in the developing countries, it would also be helpful to reduce the external strains on them. As their resources are often exported, the developed country which consumes them could give incentives for a more sustainable production. For example a label in analogy to the bio label or the FSC could be introduced to attest the level of sustainability during the production.

#### <u>Water</u>

One of the biggest problems of the 3rd world countries is the lack of drinking water. They can use the offshore wind energy to produce electricity so that way they can use it to produce drinking water from the sea water. Generally it is very worthy procedure but if the companies that develop the know-how make a joint venture, they can experiment it in the 3rd world countries. Forests

The conservation of ecosystems could be improved by using it more sustainably. For example tourism could be introduced in forests instead of their exploitation. In order to better illustrate how these measures could work practically, we will use China as a case study.

#### Case Study

Due to its vast and diverse area China offers the potential for the implementation of diverse renewable energies which could be enhanced. For example, the policy in China could be changed to improve the preconditions for renewable energies.

The government could give subventions to certain programmes or developed countries could make investments so both of them could profit. Moreover the energy efficiency could be improved by for example by better isolations of the houses. As soon as the market is well enlarged, an important aspect is funding of sustainable technologies. For example Japan could support the extension of renewable energies financially and import therefore part of the produced energy.

About the sustainable use of resources, areas with biodiversity value could be protected and opened for more tourism and be less exploited. Another approach would be to reduce the strains on these systems and choose more environmental friendly ways of transport such as horse riding and bicycling to protect the natural reservoirs. In regard to the aspect of knowledge transfer, China could learn from developed countries by looking how successful programs were at other places and develop own programs according to its complex situation regarding economic development, political system, energy mix or demographic structure. It is import in the field of transportation, like the regulation for restricting the private cars during weekdays. Now in Beijing, we have the case that every private car can only be used in four days instead of five, which means that if you have a number like EJ6122 than you cannot drive it on Tuesday this month and not on Wednesday next month. And if you have a number like HK8767 then you cannot drive on Tuesday too. In addition, it changes every month.

The legal framework is also important for the possibilities given in a country. In China there is the idea for a new law—the Renewable Energy Development and Utilization Promotion Law. The goal of the law is to meet short-term energy needs while strengthening long-term sustainable development objectives. The law aims to reduce air pollution, safeguard human health and the environment, and provide power to off-grid rural areas as well as contribute to mitigating climate change. The law synthesizes basic principles of the market economy and the political objectives of energy security.

Incentive policies will be structured to encourage the development of renewable technologies and provide market opportunities for renewable energy companies so that local governments, energy enterprises and the public can themselves promote and utilize renewable energy.

# <u>Conclusion</u>

There are many different approaches possible to achieve sustainable development. These should be according to the needs of the countries and their given resources. As the development concerns different areas, different solutions appropriate to the kind of problems should be used, therefore a combination of renewable energies, improved infrastructure, increased awareness and thus changing consumption pattern as well as a more responsible use of natural resources should be applied.

The implementation of these measures could be facilitated by more transparency of the processes, the implementation of a better regulation system, an improved access to knowledge, professional advices, appropriate financial incentives, networking and voluntary agreements and marked-based policies.

# Sustainability, energy and consumption:

how can emerging and 3rd world countries increase their living standards without compromising the earth's resources?

Let us envision a world where people are living respectfully together. A world where nature is used carefully and with regard to future generations, where business is run to serve people and with regard to creating a healthy and reasonable level of growth and a global community where people share competencies and resources, creating an assured basic living standard that endures. This might still be a vision, but a quick and efficient change of paradigm is a necessity.

Since the beginning of industrialization, the "1st world" severely exploited the planet's resources. It took until today that the need for a change towards sustainable technology and sustainable development enters the public discussion.

But more than half of the world is now at the point where we have been at the beginning of the last century. Desires and actions of these parts of the world are mainly controlled and initiated by multinational companies. Along with our unsustainable investments we also exported our needs and systems (both political and economical). The markets they want to take part in are based on maximizing profit and constant need for growth.

While the less developed countries inherit enormous opportunities their actions are mostly limited by their struggle with fulfilling even basic needs. The consequences of them repeating our mistakes would be fatal to our planet and everyone's living standard. This is why our approach addresses the root of the problem which will also be the most important factor in the change towards sustainable development:

**Changing minds – creating awareness and competencies today for our future.** Any idea on sustainable development might only succeed if today's youth 1) internalizes the importance of future oriented acting and 2) is educated in the current state of knowledge about sustainable technologies and paradigms. Our idea is a concept on how to educate the next generation on the importance of sustainable development and actual measures that might be taken on small and large scale. These young people might then not only bring their knowledge to other countries but also impact our companies' actions once they arrived in the business world.

The most important asset will be the idealism of youth, a strategic

capital that is often underestimated by conventional campaigns.

One example for a roadmap for this process is presented in the business plan. Inside of this concept we came up with innovative approaches that contribute to the diffusion of knowledge as a basis for increased standards of living:

# Creating an exciting and educating network

• Successful student organization like AEGEE and AIESEC show impressively how, even on a low budget, young and open minded students might be mobilized to work together for a common cause. This kind of energy should be used to support a similar network structure with focus on sustainability.

# "Teach and Travel"

• Taking the example of work and travel visas one could create and promote a new kind of social travelling. Institutions might provide free lodging and food in less developed countries in exchange for teaching activities. This might be classical classroom teaching or an engineering student helping on a project. With these people teaching sustainable lifestyle alongside, even rural areas might be reached.

# Lobbying for teaching sustainability

• So far the idea of sustainability is not yet present enough in the teaching media. Parallel to creating a knowledge base on sustainable use of resources there is need for lobbying activity to

ensure that these concepts also find their way into classrooms at an early student's age. In the following we provide a detailed business plan presenting all the different steps that will have to be taken into account when implementing our concept:

1:

1.1. Establish the right legal body for the execution of this plan (ngo, cooperation, company)

1.2. find a suitable location

1.3. professionalize / cooperate with existing sustainable development organ sations (world student community for sustainable development)

1.4. find equity investors (companies, governments, persons, legal bodies)

1.5. educate youth (networks), change perspective and awareness by help of existing organisations and spread this knowledge by means of student exchanges, teacher exchange programs

1.6. send youth to educate employers who want to be sustainable (example; TUSIAD can invite WSC-SD youth to lecture the people working in their company as a start) these people can later be involved in the plan again.

1.7. lobby fundamental changes in education materials of all area's towards sustainability

2:

2.1. establish framework (member countries, living standards, culture, economics, needs, wants, etc)

2.2. combine framework reports

2.3. research culture/markets

2.4. research technology, alternatives, legislation, 1st to 3rd world country / business relations

2.5. research strengths and weaknesses for 3rd world countries (sun, biostock, labour costs)

3:

3.1. combine research and make business plan

3.2. find strategic investors

4:

educate young people/students in 3rd world countries in (sustainable) technology

5:

establish support from (lobby with) governments of 3rd world countries resulting in legislation changes

6:

establish support from people and businesses in 3rd world countries 7:

7.1. create the right legal body for managing and sustaining the plan (manage growth of this body to be manageble and sustainable)

7.2. rotate leadership between member countries (country 1-2-3 years leadership creates awareness; focus on events, year topics etc)

8:

e e

8.1. exchange new sustainable technologies

8.2. patent ownership special discounts/deals

8.3. carbon credits usage and introduction of carbon credit-like systems for other sustanable technologies.

1	1	1	1	1	1	1	1	1
	2	3	4	4	4	4	4	4
			5	6	7	7	7	7
						8	8	8
Year 1	Year 3	Year 7	Year 12	Year 17	Year 19	Year 20		

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