



## Rethinking our energy future

### The future of our planet and the way we deal with its resources faced with a growing population and increasing development concern everyone.

«Yesterday they didn't know what they were doing. Today they do, but do nothing about it», said one participant at the Academia Engelberg's 5<sup>th</sup> Dialogue on Science, which closed on 11 October 2006 in Engelberg. Around 120 personalities from the worlds of science, business, politics and society spent three days in Engelberg debating the need for «Rethinking our energy future».

### Politics and business need to act

Once again, Academia Engelberg succeeded in selecting a highly topical theme, which is entering the consciousness of people throughout the world at an ever increasing rate. There was a unanimous call for drastic efforts to stem energy consumption, to make smarter and more sustainable use of energy and to secure access to energy for all. These are the prerequisites for ensuring that future generations will still have sufficient energy at their disposal. Read more on the statements of leading energy experts and the results of project

work by young scientists in the enclosed CD-ROM.



### Involving tomorrow's leaders

It is important for the youth of today to introduce their perception, their knowledge and their perspectives for future generations. Academia Engelberg has already been pursuing this approach for several years. Students both from the Swiss Study Foundation and also from Youth Encounter on Sustainability (YES) regularly communicate their analyses and give voice to their demands in a competent and engaged way. Their input helped to update and deepen the themes discussed, which led to a fascinating debate among participants from the worlds of science, business, politics and society.

### Preview of conference in 2007

As already mentioned at this year's conference, the theme of the 2007 meeting will be water. From 10 to 12 October 2007, representatives from all over the world will discuss various questions: e.g. Who owns water? Is water a public commodity or is its management not better left to private industry? What are the advantages and disadvantages of the two options and what would be the relevant underlying conditions in each case?

Again personalities from the worlds of science, business, politics and society will be invited to Engelberg. It would give us great pleasure if you reserved the dates (10.-12.10.2007) for your participation now. You will receive the invitation in spring 2007.

Dr. Klaus Hug  
President  
Academia Engelberg Foundation

## Zukunft Energie – neue Ansätze und Visionen

### Die Zukunft unseres Planeten und der Umgang mit seinen Ressourcen bei wachsender Bevölkerung und Entwicklung geht uns alle an.

«Gestern wussten sie nicht, was sie tun. Heute wissen sie's, aber sie tun nichts», meinte ein Teilnehmer am Fünften Wissenschafts Dialog der Academia Engelberg, der am 11. Oktober 2006 in Engelberg zu Ende ging. Rund 120 Persönlichkeiten aus Wissenschaft, Wirtschaft, Politik und Gesellschaft setzten sich in Engelberg drei Tage mit dem Thema «Energien der Zukunft» auseinander.

### Politik und Wirtschaft sind gefordert

Einmal mehr ist es der Academia Engelberg gelungen, ein hochaktuelles Thema, das immer schneller in das Bewusstsein der Weltöffentlichkeit tritt, zu thematisieren. Einhellig war der Ruf nach drastischer Eindämmung des Energieverbrauchs, intelligenterem und nachhaltigerem Einsatz der Energie sowie gesicherter Energie-Zugang für alle. Dies sind die Voraussetzungen, dass künftige Generationen noch genügend Energie zur Verfügung haben.

Lesen Sie mehr zu den Statements führender Energie-Experten und den Resultaten der Projektarbeit junger Wissenschaftler in der beigelegten CD-ROM.

### Einbindung der Leader von Morgen

Es ist wichtig, dass die Jugend von heute ihre Sicht, ihr Wissen und ihre Perspektiven für künftige Generationen einbringt. Diesen Ansatz verfolgt die Academia Engelberg bereits seit mehreren Jahren. Sowohl Studenten der Schweizerischen Studienstiftung als auch von Youth Encounter on Sustainability (YES) bringen regelmässig kompetent und engagiert ihre Analysen und Forderungen ein. Ihr Input spielt eine tragende Rolle für die Aktualisierung und Vertiefung der Thematik, die bei den Teilnehmenden aus Wissenschaft, Wirtschaft, Politik und Gesellschaft zu einem fesselnden Diskurs geführt hat.

### Vorschau Kongress 2007

Wie bereits an der Tagung präsentiert, wird uns im Jahr 2007 das Thema Wasser beschäftigen. Vom 10. bis 12. Oktober 2007 diskutie-

ren Vertreterinnen und Vertreter aus aller Welt darüber, wem das Wasser gehört. Ist Wasser ein öffentliches Gut oder übernimmt nicht besser die Privatwirtschaft die Verwaltung darüber? Welches sind die Vor- und Nachteile der beiden Varianten und welches wären die entsprechenden Rahmenbedingungen?

Nach Engelberg eingeladen sind wiederum Persönlichkeiten aus Wissenschaft, Wirtschaft, Politik und Gesellschaft. Wir freuen uns, wenn Sie sich heute schon das Datum (10.-12.10.2007) für Ihre Teilnahme reservieren. Die entsprechende Einladung dazu erhalten Sie im Frühjahr 2007.

Dr. Klaus Hug  
Präsident  
Stiftung Academia Engelberg

# Tomorrow's Leaders on Shaping our Future

**It is today's young people who will have to live tomorrow with the consequences of decisions that are made now. As important stakeholders in the energy debate, they have to be allowed to raise their concerns and make their contributions. The 5th Dialogue on Science organized by Academia Engelberg offered them this platform. The members of YES (Youth Encounter on Sustainability) made it their task to bring in new perspectives and insights from different regions with regard to «Rethinking our energy future». Getting away from a purely technological and scientific point of view, they focused on social, cultural, political, economic and historical factors.**

## USA/Canada/Australia/New Zealand: Hunger for Energy

Sarah Holdsworth (RMIT) and Thomas Eatmon (Southern University) observed a development in their region in which responsibility is shifting away from the group in favour of the individual. While the population remains stable, energy consumption continues to increase. Security of supplies must be purchased with growing fuel imports. Global expansion and the shifting of industrialization is accompanied by increasing consumption, but the proportion of people living in poverty continues to increase. The region makes up only 5 percent of the world population, but it consumes 20 percent of global energy. Most of this goes on transport and production. Investments in renewable energy remain insignificant. Wealth is unevenly distributed among the populations of the region.



*Thomas Eatmon presented the energy problems in the region of USA/Canada/Australia/New Zealand. He and his colleague Sarah Holdsworth pointed out that high priority needs to be given to heightening consumer awareness.*

To heighten awareness and change behaviour, governments and international institutions are called on to act with a raft of incentives and taxes. Civil society must fulfil its obligations in terms of political education, dissemination of knowledge, monitoring and also sustainability initiatives. Industry, commerce and financial institutions must live up to their corporate responsibilities and ethical principles.

## Middle East: New Approaches

Araz Taeiagh (Chalmers University) and Baruch Rock (Ben Gurion University) pointed out that not all countries in the region (by far) are oil exporters. Today, Iran already imports processed fuels. Israel, which does not have any notable energy reserves of its own, is nevertheless the biggest energy consumer in the region. Despite a modest purchasing power, the country also has the highest gross domestic product in the region.



*Araz Taeiagh presented the situation in the Middle East taking Iran and Israel as examples. Together with his colleague Rock Baruch, he saw potential in local and traditional approaches, permaculture and urban agriculture. In the energy sector, solar power, biogas, natural raw materials and passive houses all have potential.*

By 2050, the population in the region will have grown to 650 million. Infrastructure, transport and services today are already unable to keep pace with the growth of population. Sections of the population have no access to electricity. Bureaucratic inefficiency and corruption are widespread.

The speakers see prospects in local and traditional approaches, in the development and application of ethics-based guiding principles for the design of viable future space (permaculture) and urban agriculture. In the energy sector, solar power, biogas, natural raw materials

and passive houses have potential. Better use of energy and other resources has to be achieved through denser construction and urbanization. Public and private transport needs to be optimized, especially with regard to efficiency and exhaust emissions. Existing systems have to be revised and new approaches considered for the energy needs of the future. Reliable, affordable and available energy sources with minimal environmental immissions need to be found in order to improve the quality of life in the Middle East.

## Asia: Energy and Rural Development

Zehra Ali and Mudit Narain (both from the MIT) took the example of India to illustrate key challenges for the continent of Asia. Is the dynamic economic growth taking place in some countries an opportunity or a risk? The speakers examined energy consumption and rural development in particular. In the year 2000, 35 percent of the total population of India, or 90 percent in rural areas, had no access to electricity. In rural households, energy is obtained by burning biomass. Subsidized kerosene is a source of light for most of the rural population. The result: every year, 2.5 million people suffer from burns. Air pollution is acute, and global warming is an issue.



*Zehra Ali and Mudit Narain took the example of India to illustrate the challenges for the continent of Asia. They saw research, renewable energy, appropriate technology, regulatory supervision and low-cost energy for the poor as crucial factors in order to do something in this country about global warming.*

Newly industrializing countries, too, need to use modern and appropriate technology: efficiently, adapted to local conditions and with competent management. Subsidies distort the market situation and hinder innovation, but regulatory mechanisms may be necessary. Energy efficiency, promotion of renewables and taxation based on the «polluter pays» principle need to be pursued further. Energy and development are interrelated:

health, education and emancipation are promoted through affordable and more efficient fuels for cooking, heating and light. Production, distribution and consumption of food demand improved access to energy sources. Local initiatives for small enterprises, employment and generation of income required suitable energy models. Access to global environmental resources must be guaranteed for everyone. Development refusal can lead to conflicts.

### Europe: Technology and Consumer Behaviour

Cosima Strasser (FUB) and Hesamedin Ostad (TUV) called for a sustainable approach in the provision and consumption of energy. The energy consumption of Europe is half that of North America and twice the global average. Gas consumption and CO2 emissions show a rising trend. The scenario for 2030 suggests there will be further growth in fossil fuel imports and emissions. Industry, the transport sector and domestic households are the largest consumers.

Business requires low energy prices, competitiveness, growth and employment. Nevertheless, consumers need to change their lifestyle. All consumer decisions must be directly or indirectly associated with energy



*Cosima Strasser and her colleague Hesam Ostad focused on Europe. They identified potential for improvement in a more energy-efficient lifestyle, conscious demand for local products that involve minimal energy expenditure, new technology, investments, decentralization for the creation of new jobs and increase in prosperity with lower energy expenditure.*

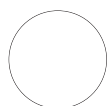
consumption. In the area of consumption, ecological consideration must be given to the «grey» energy used in the manufacture, transport and logistics of a product. Decentralization of energy and product supplies creates sustainable jobs. Increased prosperity must be the goal despite reduced energy consumption. Technology plays an important role both as initiator and as the consequence of economic change. At the political level, energy efficiency and inde-

pendence of supplies are important. Eco-taxes, labels and neighbourhood initiatives are essential factors. At the level of society, consumers have to take individual, local and regional responsibility. Costly investments have to be made in energy efficient production and consumption in order to achieve sustainability.



*Michelle Grant, Project Manager with ETHsustainability, Zurich, briefly introduced the Youth Encounter on Sustainability (YES) group and the excellent collaboration that has existed with Academia Engelberg since 2004.*

ETHsustainability coordinated a group of students from Youth Encounter on Sustainability (YES) for presentations on «Rethinking our energy future». The foundations for the presentations were laid in a series of workshops at this year's summer camp in Braunwald (CH). At the conference in October, each presentation was given by two members of YES – e.g. from India and Pakistan, Iran and Israel, side by side. These presentations in the plenum addressed the energy problems in four different regions with sound analyses and concrete fields of action. In workshops, they then examined aspects of the association between energy and development in their region together with the conference participants.



*The presence of young scientists at the conference has become a tradition with Academia Engelberg. In the ETHsustainability summer camp in Braunwald, around 20 members of YES prepared various themes. Eight YES members then took part in the conference and presented their proposals.*

# Take action and sensitize/Agieren und sensibilisieren

## Forest Policies Project

According to a UN study, South America has one of the highest logging rates in the world, which is causing a substantial increase in greenhouse emissions. A quick rethink is essential in terms of sustainable management of what forests remain, in order to ensure that the next generation is spared the impending greenhouse gas disaster.

During the conference, Fabio Segura described the current status of the Forest Policies Project – a follow-up project to the 3rd Dialogue on Science in 2004. One of the three projects on climate improvement presented at the time by the International Student Initiative for Action on Climate Change (ISIACC) group was realized with the support of the ETH and other partners.

## Phase I – Latin America Forest Charter

Four multidisciplinary teams consisting of young scientists and industry representatives collected background information on forest management and signs of gradual climate change over the last eight months for the regions of Mexico, Central America, South America and Brazil.



In an intensive workshop at the end of October 2006 on the Brazilian/Columbian border, the teams presented and completed their findings and recommendations for sustainable forest policies. Also present at the workshop were climate, environment and forest management experts from South America, such as Dr. Manuel Rodriguez, Chairman of the United Nations Forum on Forests, Member of the FAO Committee on Forestry and former Minister for the Environment in Columbia, the prominent environmental protection activist Capas and committed environmental scientists from various South American universities.

## Phase II – Lobbying and Advocacy

The next steps were also discussed as to how regional representatives from the authorities and industry in the regions studied can be persuaded to rethink the situation. The aim is to produce a «Forest Charter» that lists specific



demands and recommendations for each region. With the support of the academic community and NGOs in South America, intensive lobbying is to be done with the help of the «Forest Charter» to exert an influence on public policy.

## «Forest Charter» für Südamerika

Gemäss einer UN-Studie weist Südamerika eine der höchsten Abholzungsraten der Welt auf, was die Treibhausgas-Emissionen stark erhöht. Rasches Umdenken bei der nachhaltigen Bewirtschaftung der noch bestehenden Waldreserven ist notwendig, damit nachfolgende Generation die Treibhausgas-Katastrophe erspart bleibt.

Im Rahmen des Kongresses präsentierte Fabio Segura den aktuellen Stand des Forest Policies Projects – ein Nachfolgeprojekt zum 3rd Dialogue on Science 2004. Mit Unterstützung der ETH und weiteren Partnern wird eines der drei damals vorgestellten Projekte zur Klimaverbesserung durch die Gruppe «International Student Initiative for Action on Climate Change» (ISIACC) realisiert.

## Phase I – Latin America Forest Charter

Vier multidisziplinäre Teams bestehend aus jungen Wissenschaftlern und Wirtschaftsvertretern haben die letzten acht Monate für die Regionen Mexiko, Zentralamerika, Südamerika und Brasilien Hintergrundinformationen über die Forstbewirtschaftung und Anzeichen der schleichenden Klimaveränderung gesammelt.

In einem Intensiv-Workshop Ende Oktober 2006 an der Grenze Brasilien/Kolumbien haben die Teams ihre Erkenntnisse und Empfehlungen für eine nachhaltige Forstpolitik präsentiert und ergänzt. Mit dabei waren Klima-, Umwelt- und Forstwirtschafts-Experten aus Südamerika wie Dr. Manuel Rodriguez, Vorsitzender des United Nations Forum on Forests, Mitglied FAO Committee on Forestry und ehemaliger Umwelt-Minister in Kolumbien, der prominente Umweltschützer Capas sowie engagierte Umwelt-Wissenschaftler verschiedener südamerikanischer Universitäten.

## Phase II – Lobbying

Diskutiert wurden auch die nächsten Schritte, wie die regionalen Vertreter von Behörden und Wirtschaft der untersuchten Regionen zu einem Umdenken gebracht werden können. Ziel ist die Herausgabe der «Forest Charter» die pro Region konkrete Forderungen und Empfehlungen auflistet. Mit der Unterstützung der Akademischen Gemeinschaft und NGO's in Südamerika soll mit Hilfe der «Forest Charter» intensiv Lobbying zur Beeinflussung der «public policy» betrieben werden.

## New member of the Foundation / Neues Stiftungsrats-Mitglied

In the summer of 2006 there was a change in the foundation's management council: Government Councillor Niklaus Bleiker handed over his seat on the council to his government colleague Hans Hofer, Director of the Department of Education and Culture of Canton Obwalden.



Im Sommer 2006 gab es einen Wechsel im Stiftungsrat: Regierungsrat Niklaus Bleiker übergab seinem Kollegen Regierungsrat Hans Hofer, Vorsteher des Bildungs- und Kulturdepartements des Kantons Obwalden, seinen Sitz.

## Contacts/Kontakte

The advance announcement with the provisional programme can be found at [www.academia-engelberg.ch](http://www.academia-engelberg.ch) as from mid-April 2007.

Die Vorankündigung mit dem provisorischen Programm ist ab Mitte April 2007 auf der Homepage abrufbar.

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