

Sustainable Futures in a Changing Climate 11–12 June 2014, Helsinki, Finland

Environmentally, socially and economically sustainable development as well as successful climate change adaptation and mitigation can only be achieved by encouraging knowledge sharing and cooperation between different sectors and decision-makers. This year's FFRC international futures conference focused on these important issues.

"Sustainable Futures in a Changing Climate" conference was held on 11–12 June 2014 in parallel with "Future Infinite" (12–13 June) as "Future Infinite Academic". The conference was organized in Wanha Satama, Helsinki in collaboration with Messukeskus. The conference was a success with a broad audience consisting of researchers, students, corporate leaders and decision makers.

Distinguished Group of Keynote Speakers

The conference was honoured with welcoming words from **Pekka Haavisto**, Minister for International Development. The conference had high level keynote speakers, who all focused on climate change from different viewpoints in their speeches. The keynote speakers were President **Tarja Halonen**, IPCC Chairman Dr. **Rajendra Kumar Pachauri**, Prof. **Sohail Inayatullah**, Prof. **Ying Chen**, Prof. **Joyeeta Gupta** and Senior Advisor **Markku Wilenius**.

This Futuuri special issue includes articles giving insight to the keynote speakers on the basis of the keynote speeches carried out during the conference. Slides of the keynote presentations are available at the conference website.

Prior to the conference, a seminar on climate change and energy-related development in the Mekong region in Asia took place on 9 June 2014 at the University of Helsinki. A summary report from the seminar is also included in this special issue.

Various Aspects of Climate Change

This 16th FFRC international conference gathered together 140 participants from all over the world. During the two days, altogether 67 presentations were held in 10 thematic working groups dealing with topics such as forests, institutional analysis and energy transitions, North-South-South research cooperation, arctic futures, climate change actions in companies and rural areas, climate governance in the South, urban adaptation, urban sustainability, reasons of and implications on climate change, as well as theory and methodology of futures studies regarding climate change.

In the working groups, international FFRC research projects such as "Redefining energy and climate policy in the least developed countries: analyzing institutions and initiatives in the Mekong region" (RECLAIM), "Promotion of capacity and energy education development in the Caribbean region" (PROCEED), and "China and European Union in the context of global climate change: analysis of changing economic structures and related policies" (CHEC), were disseminated. Outcomes from these projects were presented by FFRC and by researchers of the international project partners from China, Cuba, Barbados, Jamaica, Cambodia and Laos.

Slides of workshop presentations are available at the conference website, and a peer-reviewed Conference Proceedings based on the submitted conference papers will be published in due course in the FFRC eBook series. ●

*Minister for International Development
Pekka Haavisto.*



Wanha Satama offered an excellent venue to organize an international conference.



Dr. Rajendra Kumar Pachauri and President Tarja Halonen.



During the two days, altogether 67 presentations were held in ten thematic working groups.



The Rights and Responsibilities of People in Sustainable Development After 2015



In 2000, the United Nations member states agreed on the commitment to eight Millennium Development Goals (MDG) – the goals tackling world's most problematic issues such as extreme poverty, undernourishment, living conditions, health, primary education, employment, gender equality, as well as environmental and economic sustainability. The year 2015 was chosen as a deadline for achieving these targets. As the deadline for MDG is approaching, the discussion about the post Millennium Development Goals agenda is going on.

President **Tarja Halonen**, who is the Co-chair of UN High-level Panel on Global Sustainability, has been actively involved in the discussion of post-MDG agenda. In her speech at the conference, she explained what has been achieved during the MDG-realization process and told about her vision of Sustainable Development Goals (SDG) – the new set of goals coming into force after the year 2015.

Setting new global goals is highly important

Since the Millennium Development goals have been set in 2000, a significant progress has been made in some areas, such as in extreme poverty rate reduction and providing access to safe drinking water. These goals are either met already, or close to achievement, despite the population growth. However, other goals, particularly maternal mortality rate reduction and environmental sustainability achievement are still quite far from meeting the target.

President Halonen emphasized the importance of environmental sustainability, and mentioned that economic growth should be accompanied with nature protection.

Setting and achieving common global development goals after the year 2015 is consid-

ered as a highly important task. "Millennium Development goals system is expensive, but it is more expensive to do nothing at all", President Halonen said. What should the new goals be based on and what should they include?

Democratic and transparent process is needed to set the new goals

According to President Halonen, there are three basic principles, which the new set of goals should be based on: democratic process, human rights and sustainable development.

Firstly, the goals setting process should be democratic and transparent. The major drawback with the Millennium Development Goals of 2000 was that these goals were formulated by a narrow group of experts, without inclusion of other stakeholders into discussion. The post-2015 goals should be made through a more democratic process, meaning that all people should have a possibility to express their opinions freely.

Secondly, the new development goals should respect human rights of different groups of population, especially women and adolescents.

And finally, the new goals should be based on three dimensions, which are usually regarded as constitutive parts of sustainable development: environmental, social and economic dimensions. Therefore, the new goals will be called as Sustainable Development Goals (SDG).

More emphasis on gender equality, young people and education

Sustainable Development Goals should continue the path taken in 2000 and tackle the problems which were not resolved by the Millennium Development Goals. In addition to that, a strong focus should be made on gender equality, young people and education. Gender equality and women's empowerment should form a stand-alone goal. Besides women, youths and adolescents need attention. For example, youth unemployment is currently a big problem in many countries. It is important that the unemployed and poor



President Tarja Halonen

President of the Republic of Finland, 1.3.2000 – 1.3.2012

Co-chair of UN High-level Panel on Global Sustainability, 2010–

Co-chair of the "Panel of Eminent Persons" of the United Nations Conference on Trade and Development (UNCTAD), 2011–

Chair of the Council of Women World Leaders, 2009–

people would have the same rights as richer people and would be equally respected. "Being poor doesn't mean being stupid", as President Halonen said. Also, an outdated educational system should be reformed and the system based on lifelong learning should be adopted instead.

Maternal health has been a part of the Millennium Development Goals since 2000. However, President Halonen argued that a new goal should be broader and should aim at "sexual and reproductive health rights for all", rather than only on maternal health. The goal formulated in a new way would be more effective in maternal mortality rate reduction, and at the same time it would provide the equality under law regardless of sexual orientation and gender identity.

To sum up, the new Development Goals, according to President Tarja Halonen, should be made through listening the voices of various stakeholders, they should include targets on each of the three dimensions of sustainable development, and they should be based on equality and respect of human rights (including sexual rights). ●



Text: Elizaveta Shabanova-Danielyan

In Climate Change Mitigation the Most Costly Option is to Do Nothing



In his keynote speech, Dr. **R.K. Pachauri**, concentrated on the vast scientific evidence on climate change, ways forward and the urgency of addressing the problem: "we really cannot postpone action much later".

Even if climate change is most often perceived as an intergenerational inequity issue, it also creates intergenerational injustice. Dr. Pachauri highlighted that exposure to the impacts of climate change will be a central question in the future: after all the poor are the most vulnerable to social implications such as displacement, violent conflicts and threat to food security, to name just a few.

He argued that energy should not be neglected in the development policy discourses, an example of which has been the absence of energy among the Millennium Development Goals (MDGs) even though 1.3 billion people live without electricity and vast masses are burning biomass for cooking purposes.

There are still unknown impacts on the oceans' ecosystems

As the scientific knowledge on climate change has improved, the certainty that human influence is the leading cause of climate change has also increased. According to current estimates the current greenhouse gas levels are

unprecedented in 800,000 years. Apart from the atmosphere, land climate change has also affected the oceans. The global sea level rose 19 cm between 1901–2010, threatening the low-lying coastal areas. A massive amount of heat and 30% of carbon emitted since industrialization has sunk in to the oceans, latter of which is raising concerns of the oceans' acidity in the future. Changes in ocean ecosystems bear a huge risk because much of the marine life is not well known and research will need to be conducted to understand the implications of these changes.

Global warming increases the amount of massive weather events

Climate change is a multifaceted issue and therefore also the work of the IPCC addresses is not only mitigation of greenhouse gases but also adaptation and disaster risk reduction.

Among the central hazards are extreme weather events: the length, frequency, and intensity of warm spells is likely to increase; the hottest days are likely to become more frequent from once in 20 years to once in 2 years and precipitation is likely to pour down more frequently in heavy showers. "Every time there's a massive weather event, life and property are in threat", Dr. Pachauri highlighted. The continuously melting ice in the Antarctica and Greenland also threatens the infrastructure built on the permafrost.

Awareness and understanding are the keys to change the course

Dr. Pachauri emphasized that doing nothing is the most costly out of all the options because delayed mitigation will be more expensive. On the other hand, the level of risk can be reduced by mitigating greenhouse gas emissions, which will give more time to adapt to major changes caused by climate change.

In order to achieve the mitigation targets, every sector of the economy will have to bring about changes since all of them have a direct or indirect impact on the greenhouse gas emissions. Dr. Pachauri identified bioenergy, carbon capture and storage (CCS) and afforestation as some technologies that will need to be deployed in the future. He praised the Finnish expertise in climate modelling and called for setting up a group in his own institute to help the local authorities.

All in all, Dr. Pachauri argued that the technological and scientific capacity already exists but a change of mind will be needed – his belief is that one way to achieve this is building awareness and understanding. Fighting against climate change will also require unprecedented cooperation so that the success stories would get replicated. He ended his presentation with **Mahatma Gandhi's** wise words: "Speed is irrelevant if you're going in the wrong direction". ●

Text: Outi Pitkänen

Dr. Rajendra Kumar Pachauri

Chair of the Nobel Peace Prize-winning Intergovernmental Panel on Climate Change (IPCC), the scientific intergovernmental body that provides decision-makers and the public with an objective source of information about climate change.

Director General of TERI (The Energy and Resources Institute), a major independent research organisation providing knowledge on energy, environment, forestry, biotechnology, and the conservation of natural resources.



Climate Change in the Context of Environment and Development – Sharing Our Earth



The problem of climate change would be easier to solve now than it will be in years to come. This will not be possible unless politicians from both the developed and the developing countries steer up the process.

In her presentation, Professor **Joyeeta Gupta** firstly introduced a brief history of climate change governance, what has happened globally on the climate change issue and how the current global climate change governance has been affected by past politics.

She discussed in detail the proceedings of the period before 1990 up to the period after 2008 and the key outcomes of this period. These outcomes include the first World Climate Conference 1979, UNFCCC 1992, and the Kyoto Protocol 1997. All efforts were geared towards finding ways to ensure that the developed countries would lead by reducing their own emissions and by helping the developing countries to reduce their emissions. Nevertheless, this was affected largely by the actions of the developed countries, notably the USA's limited commitment to reduce greenhouse gas emissions in 1992.

More countries are involved but still the negotiations are disproportionate

Professor Gupta emphasized that it is much easier to solve the problem of climate change now than it will be in years to come. However, this will not be possible, as already evidenced by past events, unless politicians from both the developed and the developing countries steer up the process.

In the post-2008 period, advances were made in climate change governance which led to the creation of REDD and CDM policies. Additionally, financial and technical resources were made available to assist the developing

countries in reducing emissions. More developing countries became involved as evidenced by the increase in the number of submission and inclusion in global climate negotiations. Although there is an increase in the countries involved, there are still disproportionate levels in the negotiating power with the developed countries outnumbering the delegates in comparison with the developing countries.

The shrinking ecospace will threaten peace and development

Secondly, Professor Gupta discussed about the shrinking ecospace challenge. Human race is faced with a shrinking ecospace. This is due to resource scarcities, e.g. rare metals and minerals, as well as to overexploitation of fixed natural resource assets/sinks as the demand increases. This inevitably can be seen in the increased greenhouse gas emissions into atmosphere and deterioration of ecosystem services. The shrinking ecospace will threaten peace and development. Thus, it is essential to share this common ecospace. The important question is how this sharing can be done.

Joyeeta Gupta emphasizes that this sharing does not imply equality but it calls for equitable governance. She pointed out three possible policy options: neo-liberalism (let the markets allocate), hegemony (sovereignty), and poly-centric governance (multiple actors approach). However, these options have negative repercussions for the developing countries. Hence the necessity for transformational governance to address this challenge.

Transformational governance is needed

Finally, Professor Gupta emphasized that to ensure such sharing of ecospace that is beneficial to both the developed and the developing countries there is a need for transformational governance. This type of governance will potentially define ecocentric standards and

deal with ecospace-related rights, responsibilities, and risks. Transformational governance is based on effective intergovernmental and multi-level governance system discouraging free-riding, promoting accountability and liability systems and including all countries and peoples.

What is required for this transformational governance to work? Firstly, problems need to be analyzed from a global to local scale. Secondly, the persistent problems need to be analyzed in relation to a broader context. Thirdly, there should be more emphasis on sustainability rather than on securitization by all actors. Fourthly, a global rule of law and constitution, where rules must be applied to all without discrimination, is needed. Lastly, there is the need for inclusive development which takes into consideration the needs of all marginalized or excluded groups in the development process.

Professor Gupta finished her presentation by highlighting some possible areas of systematic research on critical, constructive, temporal, spatial, relational, plural and inclusive governance analysis. ●

Text: Faith Mavengere

►► Future *infinite*
Academic

Keynote presentations:
www.futuresconference.fi/2014

Professor Joyeeta Gupta

Professor of environment and development in the global south at the Amsterdam Institute for Social Science Research of the University of Amsterdam and UNESCO-IHE Institute for Water Education in Delft.

Member of the Amsterdam Global Change Institute.

Editor-in-chief of International Environmental Agreements: Politics, Law and Economics (IF 2.0). On the editorial board of several journals.

Lead author in the Intergovernmental Panel on Climate Change (shared the 2007 Nobel Peace Prize with Al Gore) and of the Millennium Ecosystem Assessment (the Zaved Second Prize).



China's Climate Policy and Low Carbon Development – a Dream of Blue Skies



In China, the main driving forces of climate change are the growth of the population and GDP. The exponentially growing Chinese economy has caused a very rapid increase in China's CO₂ emissions during this millennium, almost triple-folding within a decade.

Dr. **Ying Chen** started her keynote speech by reminding everyone of how the global average temperature of the earth's surface has increased by 0.85°C since 1880 and how almost all the regions on the planet are getting warmer.

Also, in China the climate is changing and quite unevenly: there is a lot of variation on how the temperature and rainfall are changing in the different regions across the country. For example, Beijing is rapidly getting warmer and dryer whereas some other regions will get somewhat cooler or rainier.

Food security will be threatened

The economic losses due to climate change are significant, and they arise from many sources. One of the most serious one is the decline in productivity in agriculture: by the second half of the 21st century climate change can cause yield of rice, maize and wheat to decline by as much as 37%. Thus, agricultural production may be seriously affected, compromising also long-term food security in China. Climate change has raised due concern in China and adaptation measures are now being integrated into sustainable development strategy.

The rise of the Chinese economy has had its downsides

In China, the main driving forces of climate change are the growth of the population and GDP. The exponentially growing Chinese economy has caused a very rapid increase in China's CO₂ emissions during this millennium, almost triple-folding within a decade. China is the biggest CO₂ emitter globally in absolute terms and it is on a path to catch up USA also in per capita emissions. In addition to population and GDP, the contributing factors behind the rising CO₂ emissions are urbanization, large scale heavy industries, embodied energy in exports and the coal-dominated energy mix.

In cities, new buildings and other infrastructure will need to be constructed. Urban people will also consume substantially more energy in their housings, electric appliances and vehicles. The industry is being transformed from exporting relatively low value products with

high energy content to producing high value products to the domestic markets. On the other hand, poverty in the rural areas is also a major challenge for the society development.

China is investing strongly in energy saving projects

The unavoidable conclusion from all this is that the CO₂ emissions should be reduced urgently, reaching the peak preferably by 2030. To analyze possible national development paths research institutes have prepared alternative energy and climate scenarios.

China has already done a lot to tackle the climate problem and the good progress continues. The need for green and low carbon development has been well internalized in the Government. China is investing strongly in energy saving projects including oil saving and alternatives, CHP, green lighting and waste heat recycling.

The biggest potential for lowering emissions is in the power sector, where coal is being replaced by renewable energy sources and the small and inefficient power plants are being shut down. Financial steering is also used when a price will be introduced to all usage

of coal: local emission trading systems have been launched already in seven cities and the national carbon market will be built up within three years. Taxation is also tightened for vehicle fuels and for larger engines in vehicles. Energy efficiency is another key possibility and it is being improved widely in buildings, vehicles and electric appliances.

Blue sky is the dream for many in China, but currently it is an unfortunately rare sight in Beijing due to different kinds of emissions. However, China is now on a fast track to a low carbon society and the dream can prevail if the good efforts can be sustained. ●

Text: Pertti Suomela

Dr. Ying Chen

Research Fellow at the Institute of Urban and Environmental Studies (IUES), the Chinese Academy of Social Sciences (CASS)

Deputy Director of the CASS Research Center for Sustainable Development (RCSD)

Professor at the CASS Graduate School, China



Beware of the Used Futures – Sohail Inayatullah

Highlighting the Best Foresight Practices



Based on his long career as futures educator, researcher and foresight practitioner, Professor **Sohail Inayatullah** gave a keynote presentation on the practice of foresight: what works – and what doesn't.

The future is an asset, a resource and a narrative to be employed. The future, in a way, is a domain of unlimited potential, and everything is hyperlinked. The future is essentially seen and reflected between conceptual loops.

Firstly, there is a zero loop, which is pretending, practically an imitation of something else – it is not productive, only overwhelming with present data. In the second place, there is a single loop, which tries to reflect – it means taking away some critical foresight data and doing, being productive at some level. In the third place, there is a double loop, the attempt of going outside the paradigm, entering the unknown knowings to learn from the unknown. This is knowing and produces knowledge – knowing something new by confronting something different. Foresight is actually what we do when we are confronted with a world that is problematic and puzzles us and urges us to make sense of it. What is needed for this kind of sense-making through foresight is not more data but a radical change in viewing the world. Finally, in the fourth place, there is narrative learning, finding and creating your story, which in practice means being as a process.

According to Sohail Inayatullah, the deepest learning is narrative foresight. What is your core narrative? This is the question you should ask yourself and your clients. It is a crucial question both in understanding the present and in exploring futures. Cultures mediate

through language. Narratives are vehicles for understanding.

New ways of thinking lead us to the preferred futures

You should constantly challenge assumptions. It is not enough to just observe, you need to transform. The future is not an empty space. Futures thinking is challenging the old factory model that is too often still persisting in education and urban planning. Cities could redesign their spaces by providing silent, emotional or meditative spaces. For example, the concept of library could be transformed to profile as direct brain download-amazing new places, one-stop-shop that facilitates co-creation, or as a new publisher using trust and connection.

Inayatullah reminds us that the old modes of learning are slow to change and this happens probably in relation with the "oldness".

The most common thing to see, because of this, is perceived in the concept of the "used future". Old behaviors die hard and they can lock us into the used futures, missing new opportune futures. The used future consists of things we do, just because we've always done so. The used future often does not fit in the preferred future. We should learn to see the world differently. For example, instead of holding to the present failing economic system, companies could look at the new co-operative economy, based on co-creation by crowdsourcing innovations.

What keeps us in our old modes of thinking is the risks involved with all kinds of alternative futures. Risks are essentially embedded in all kinds of changes, and in a sense, future is full of emerging issues and full of dangers in the sense that it represents change from the present. Future inevitably means change. Change is alleviated through foresight. Grass is green

er where you water it. Anticipation means you just have to make sure you have water.

Sohail Inayatullah recommends the following eight points for best foresight practices:

1. Challenge the used future
2. Scan the environment for emerging issues and weak signals
3. Create alternative futures
4. Ensure the worst case is addressed
5. Make the vision real
6. Link the story to strategy
7. Focus on change agents
8. Include everyone – learn from all because they can make your future more robust

Make your own plausible future

Dealing with the future is partly hard if we are unable to distance ourselves from the past. Many Vietnam war veterans have told that they do not want a future, they want a different past. The problem with this is that when we are attached to the past, we also lose our future, and in this situation, for them, there is nothing. The real change is, however, not in the past or present or in the future. The real change which directs and puts us on the right path lies in ourselves. Only by changing ourselves we can achieve a plausible future. Data is different from story. Both are needed for successful foresight. Inayatullah challenges us: You just have to find your own metaphor. ●

Want to know more of Professor Sohail Inayatullah's thoughts? Please see his website at www.meta-future.org.

Text: Lauri Leponiemi, Amos Taylor and Sirkka Heinonen

Professor Sohail Inayatullah

A political scientist/futurist at

Tamkang University, Taiwan;

Faculty of Arts and Business, the University of the Sunshine Coast and

the Centre of Policing, Intelligence and Counter Terrorism, Macquarie University, Sydney.

An associate with Mt Eliza Executive Education, Melbourne Business School.

One of 2010 Laurel award winners for all time best futurists as voted by the Shaping Tomorrow foresight network, an association of foresight professionals.



Hydropower Construction, Complex Climate Governance, Lack of Research Capacity, Withdrawn Funds – Contested Futures in the Mekong Region



Prior to the FFRC annual conference, climate change mitigation and adaptation, renewable energy production and Finland's role in the Mekong region were discussed with local researchers and Finnish experts.

The Mekong seminar was organized by the FFRC, Development studies at the University of Helsinki and Siemenpuu Foundation, on 9 June 2014. The event gathered a wide audience of NGO and private sector representatives, universities and development policy officials. One of the key topics on the agenda was possible benefit sharing schemes and possibilities in the context of hydropower development and social impacts to the locals in the region.

The seminar was opened by Research Director **Jyrki Luukkanen**, who gave a compact insight into the recent developments in the region with Laos and Cambodia under focus. Even though still among the LDC's, both are developing rapidly with massive needs for more intensive energy production. Luukkanen argued that whilst the amount of investments is growing, funds are not used for national social development such as education. The balance of economic growth with positive development impacts to the poor while protecting the environment is yet to be achieved.

In his presentation Dr. **Louis Lebel** (Director at the Unit for Social and Environmental Research (USER), University of Chiang Mai, Thailand), presented a case study from Sirikit Dam, Thailand, to demonstrate several framings of benefit sharing schemes that should initially mitigate the negative impacts of hydropower developments. The idea of benefit sharing is that often the profit of such projects does not trickle down to locals who, inevitably, need to deal with the negative impacts of dams, or to the environment and local biodiversity that are degraded because of logging, distraction in ecosystems and sedimentation. Negative social impacts would be loss of livelihoods, loss

of land and loss of social networks, which are often not adequately compensated. Dr. Lebel argued that whilst more benefit sharing programs are needed and they can contribute significant wealth to locals and protect the environment, they need to be properly planned and carried out.

Cambodian researchers from Royal University of Phnom Penh, Ms. **Dany Va** and Mr. **Try Thuon**, gave their findings on local research capacity related to climate change, and more insights on benefit sharing opportunities and their suggested focus. Ms. Va pointed out that local institutions and universities lack funding, capacity and cross-cutting coordination, and climate change related research in Cambodia is often donor driven and thus not empowering from within. Mr. Thuon suggested a tool to measure which benefit sharing method would be the most suitable in each case, underlining the fact that while there is now an interest to apply them in Cambodia, not all schemes work in every context. However, there is an undeniable demand to allocate profits back to the affected people.

Timo Kuronen and **Liisa Uimonen** from Siemenpuu Foundation focused on the controversial role of mainstream Mekong dams and Finland's indirect role in such developments, highlighting the case with Xayaburi dam and Pöyry's consultation. The case did leave a stain on Pöyry's reputation, but has not prevented it from being involved with new hydropower projects in the region.

This topic was followed by a closing panel with **Maria Notley**, Ministry for Foreign Affairs; **Timo Räsänen**, Aalto University; **Otto Bruun**, Siemenpuu Foundation and Ms. Dany Va. The complex situation with diminishing ODA, rapid growth, prevailing inequality and climate change seem to create a platform that is impossible to enter from only one point of view. While providing the access to energy and electricity that will promote growth even further, the countries easily fail to address the poor and the minorities who would need socially sustainable development benefits the

most. Questions on Finland's foreign policy and funding allocations in the Mekong, future of the region, and hydropower development provoked several comments also from the audience. Ms. Va pointed out that developing countries such as Cambodia should prefer quality over quantity when it comes to growth, and this could easily work as a guideline in tackling many other development issues too. ●

Text: Noora Stenholm



The Mekong seminar gathered NGO and private sector representatives, university and development policy officials to Helsinki.

Visit the website
www.mekong.fi
and read about the Finland Futures
Research Centre's activities
in the Mekong region.

FINLAND FUTURES RESEARCH CENTRE
Sustainable Energy
RESEARCH AND CAPACITY-BUILDING
IN THE MEKONG REGION

About FFRC | Projects | Publications | Current Events | Staff | Blog | Column | Photo Galleries | Partners | Links

PROJECTS

- HEHO-SUCCESS**
Sustainable Climate Change and Energy Education Development
- WELJALA**
Renovating Energy and Climate Policy in the Least Developed Countries
- DIAMOND**
Development Impacts

Finland Futures Research Centre is conducting energy and climate research and designing and implementing capacity-building in the Mekong region in Southeast Asia. The Mekong region gets its name from the Mekong River which winds its way through Yunnan province in China, Vietnam, Thailand, Myanmar, Lao PDR and Cambodia.

The Mekong region has high biological and cultural diversity, and the areas vary in terms of economic development and political systems. What is common to the Mekong countries is that the

VISIT OUR BLOG!
Take and share from the World View, sustainability view.

The Next Wave: Tackling Sustainability by Becoming Smarter

There are huge new job and wealth creation opportunities in understanding better the value chain, says Senior Advisor **Markku Wilenius**.

In Europe, we are using annually 100 billion plastic bags made from imported synthetic materials. This means many detrimental things: huge add-on to environmental pressure, terrible waste of nonrenewable resources but also loss of jobs, loss of business opportunities. In fact, nothing good comes with that, unless you count the immediate pleasure of using bag.

We are stupid enough to continue the old ways because we have stopped thinking systematically, or more hands-on, in value-chains. Just consider this: The value chain of bio-plastics is rather impressive: replacing one thousand tons of petrol-based polymers by natural polymers locally sourced equals the creation of 60 jobs. Raw materials could be obtained from the agricultural sector, either

from waste streams like low quality potatoes or from weeds that are invading every corner of our land.

We can go on endlessly with this list of stagnation and loss of vision that could be turned into wealth and jobs. An example from Finland: Finland's net import of fossil fuels equals 8.5 billion euros. If we would start to produce this imported energy locally from renewable materials, which is totally possible and price competitive, we could produce another 30 000 jobs for our country. But since our energy policy has had no other real focus than producing energy for big users with lowest possible price, it has not harnessed this opportunity.

It is amazing to think what sort of new job and wealth creation opportunities lies in understanding better the value chain. Fortunately, European Commission is now coming with its proposal to promote radically more material and energy efficient circular economy. The giant is awakening. ●

Dr. Markku Wilenius

Senior Advisor, Finland Futures Research Centre, 2012–

Professor of Futures Studies, Turku School of Economics, 2004–2012

Senior Advisor, Allianz SE, Jan 2010 – Jan 2011

Senior Vice President, Allianz SE, Munich, Germany, Dec 2007 – Nov 2009

Director, Finland Futures Research Centre, 1999–2001, 2003–2004



World Futures Conference 2015:

FUTURES STUDIES TACKLING WICKED PROBLEMS:

Where Futures Research, Education and Action Meet

11–12 June 2015, Turku, Finland

The World Futures Conference 2015 leads the way in combining academic conference tradition with new ways of participation. We are happy to organize a forum for the philosophies, ideas, methods and concrete examples of what's happening on the field of futures thinking and acting.

Sub-themes:

- Philosophy of Futures Science
- Futures Education and Learning
- Evolving Identity of Futures Research
- Methodology
- Studies on Futures Research
- Emerging New Futures Research Approaches

We invite you to have an impact on the topics and create opportunities for learning and networking: Call for Abstracts opening in October 2014!

Conference website: www.futuresconference.fi/2015

Organisers:

Finland Futures Research Centre (FFRC, University of Turku), Finland Futures Academy (FFA), World Futures Studies Federation (WFSF), Otava Folk High School Co-Operative Society, the Finnish Society for Futures Studies and Turku University of Applied Sciences.

The Finland Futures Research Centre

is a department at the Turku School of Economics, University of Turku.

The FFRC specializes in futures research and foresight. It refines visionary knowledge regarding alternative futures and the challenges and possibilities included in them.

The FFRC has offices in Turku, Helsinki and Tampere, and employs more than 50 experts.

Futuuri is the FFRC's newsletter, published four times a year. Except for this special conference issue, Futuuri is usually published in Finnish.

Editing Board of Futuuri

Anne Arvonen, Hanna-Kaisa Aalto, Juha Kaskinen, Johanna Kärki, Ville Lauttamäki, Juho Ruotsalainen ja Visa Tuominen.

Layout Anne Arvonen

Orders, cancellations and change of address
tutu-info@utu.fi

Printed
AS Spin Press, 400 copies

On-line
www.utu.fi/fi/yksikot/ffrc/ajankohtaista/futuuri

ISSN 1795-9462