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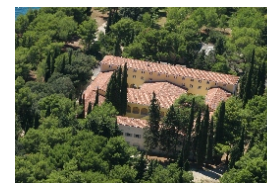
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NATO
ADVANCED RESEARCH WORKSHOP

Energy Options Impact
on **Regional Security**



17-20 June 2009

MedILS - Mediterranean Institute for Life Sciences

SPLIT

Croatia

Energy Options Impact *on* Regional Security

Based on the results of the previous Workshop (ARW on Sustainable Energy Production and Consumption and Environmental Costing, Naples, Italy July 1-4, 2007) this Workshop will continue to deal with energy, environment and sustainability issues, but in light of the energy options that the European and Mediterranean countries are facing and try to identify what economic, environmental, societal and regional security issues may come out of those options.

Urgent issues of energy security call for increased reliance on local resources, with special focus to development of cost effective solar and wind technologies for electricity production as well as to the role of agriculture for biomaterials and "green" energy supply. The use of thermal solar modules and devices should also be explored in depth, since a large part of energy demand occurs locally in the form of low and medium temperature heat. Energy security also calls for diversification of import supplies both in terms of quality and nature of energy resources (oil, natural gas, coal, etc) and areas from which resources come from. How such a diversification can be achieved and what are safe and effective infrastructures for this to happen is matter of urgent debate. This Workshop will address the technological, financial, legal and institutional barriers to a transition to an economy characterized by energy efficiency, increased use of renewable energies, increased matching of supply with use quality, globalization of energy market, higher security of energy supply as well as increased safety of energy generation facilities, transportation devices, energy use.

TENTATIVE PROGRAM

1st day

Wednesday, 17. June 2009.

09:00 a.m.: Opening session by the Course Co-Directors.

Session on Energy Options

9:30 a.m.: **Hans Schnitzer**, Zero emission systems and technologies
10:15 a.m.: **Franco Barbir**, Role of hydrogen in renewable energy future
11:00 a.m.: **Khalid Benhamou**, Energy options for regional integration and development
11:45 a.m.: **Sifeddine Labed**, Large scale rural electrification programs in desert regions
12:30 p.m. *Lunch break*
2:00 p.m.: **Goran Majstrovic**, The key aspects of electricity and natural gas supply in Croatia
2:45 p.m.: Research Papers (2 selected Papers)
3:15 p.m.: Discussion on energy options

2nd day

Thursday, 18. June 2009.

Session on multi-criteria analyses

9:00 a.m.: **Sergio Ulgiati**, Multicriteria analysis of energy options
9:45 a.m.: **Eden Mamut**, Multicriterial & Multiscale Modeling of the Impact of R E S on Regional Sustainable Development
10:30 a.m.: **Joachim H. Spangenberg**, Critical analysis of biomass options
11:15 a.m.: **Sandrine Nonhebel**, Agriculture for energy and/or food
12:00 p.m. *Lunch break*
1:00 p.m.: Research Papers (2 selected Papers)
2:00 p.m.: Discussion on multi-criteria analyses
3:00 p.m.: *Field trip*
8:00 p.m.: *Dinner*

3rd day

Friday, 19. June 2009.

Session on regional issues and security

9:00 a.m.: **Tariq Muneer**, Energy supply and demand and security issues for developed and emerging economies
9:45 a.m.: **Francesca Allievi** and **Burkhard Auffermann**, Changing Energy Production, Emerging Technologies and Regional Security
10:30 a.m.: **Oleg Udovyyk**, Analysis of energy options impact on regional security
11:15 a.m.: **Damjan Krajnc** and **Peter Glavic**, Development of strategic scenarios and optimal structures for sustainable production of biofuels in Slovenia
12:00 p.m. *Lunch break*
1:00 p.m.: **Alexander Gorobets**, Development in Ukraine, Energy and Security
1:45 p.m.: Research Papers (3 selected Papers)
3:15 p.m.: Discussion on regional issues and security
04:00 p.m.: *Free time*
8:00 p.m.: *Farewell Dinner*

4th day

Saturday, 20. June 2009.

Session on sustainability and societal issues

9:00 a.m.: **Mario Giampietro**, Societal Metabolism
9:45 a.m.: **Cornelia Ohi**, Merging of socio-economic and environmental research
10:30 a.m.: **James Greyson**, Inability of current policies to resolve worsening regional and global problems, including energy security
11:15 a.m.: **Igor Matutinovic**, Lifestyles, energy, and sustainability: exploration of constraints
12:00 noon: *Lunch break*
1:00 p.m.: Research Papers (2 selected Papers)
2:00 p.m.: Discussion on sustainability and societal issues
2:30 a.m.: Closing remarks