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Volume 7

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Organized by Near East University

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Fax: +90 392 223 64 61

e-mail: info@neu.edu.tr

web: [www.neu.edu.tr](http://www.neu.edu.tr)

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**Editor:** Prof. Dr. Huseyin GOKCEKUS Near East University

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**PREFACE**

Creating a sustainable and a healthy environment is one of the most important global issues facing mankind today. Therefore, serious consideration should be given to environmental problems and concerted efforts should be made worldwide in order to respond and prevent present and future environmental risks and challenges.

The International Conference on Environment: Survival and Sustainability (ESS 2007) organized by the Near East University between the dates 19 and 24 February 2007 was held in Lefkosa, Turkish Republic of Northern Cyprus. The main objective of this multidisciplinary conference was to gather scientists from all over the world to discuss the overall issue of the environment, to find out sustainable solutions for environmental problems and to identify areas for future collaboration in this matter. The conference brought together 2,052 participants from 108 different countries. During the conference a total of 1,463 papers were presented under 21 different subtopics, representing various scientific disciplines. The topics included environmental law and ethics, environmental knowledge, technology and information systems, media, environmental awareness, education and lifelong learning, the use of literature for environmental awareness and the effects of the green factor in politics and in international relations.

The Scientific Committee of International Conference ESS2007 evaluated all of the 1,463 papers and selected among them 610 papers to be included in The Proceedings of Environment: Survival and Sustainability. The readers will notice the wide range of topics represented by the papers included in the Conference Proceedings.

It is hoped that this book will serve to contribute to increase in awareness towards various environmental issues as well as drawing more attention to the urgency of international cooperation and collaboration in pursuing sustainable environmental management.

Prof. Dr. Huseyin Gokcekus

President of the Conference and the Organizing Committee Vice Rector of the Near East University

Lefko~a-TRNC

18 February 2009

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**ACKNOWLEDGMENTS**

The Organizing Committee of the ESS2007 Conference would like to extend its sincere appreciation to Dr. Suat Gi.insel, the Founding Rector of the Near East University, to Prof. Dr. Ekmeleddin lhsanoglu, General Secretary of the Organization of Islamic Conference and to Prof. Dr. Walter W. Kofler, President of ICSD/IAS for their significant support and encouragement in the conference.

Appreciation is also extended to the chairpersons, the keynote speakers and the presenters of papers in the conference.

We are deeply grateful for the members of the editorial board who have carefully read and recommended the papers for publishing.

We also wish to express our gratitude to numerous individuals for their valuable contribution to the editing process.

Prof. Dr. Hi.iseyin Gokcekus

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*It* gives me *the utmost pleasure in welcoming you all to the lflflemational Conference* • *Environment: Survival and Sustainability" here* at *the Near East Unltlerslty* In *Tlllf<Jsh Republic of* Northern C)'ptus ID *be held* at *19-24 February* 2007.

The c:onl8f'elice aimed at *brlnflfllt together more than 2,000 scholars and researchers from over* 90 countries *lllOUlld* the *world* IO *discuss* envlt'onlnental issues *from a variety of perspectives;* iindetllne rtNtImportance *of* the *need for UIJ(enCy in taking steps by the intemationat* Of.......,..., --. *local* authorlries *and non-governmental organizations to* move *to a* sustelnable 8flWDr.menVdellelopment*model; and* thereby makes *Its contribution to worldwide debate effort on* .,.,\_,,..,,llilfChe brldfe .between tlleot)I *and* practJce *In* meeting *environmental threats/challenges.*

Since *our* last *lnlematlonal* cordMNICe on *environment. "EIMtonmentel* Problems *of* the Mediterranean *Regions•, worldwldaetMrorlmental disasters• well• local-~ mu/flplled and environmental degradation and polluflon has continued.* Whlle majorltrides INMI a-n made In the *world* In *analyzing. understandiflll and Informing* the *pub/le* **8llout** Ille ~ cllaHenges *we are facing. we* st/II *have* a IOnilf way to go. *Our way at* life Is *still far from•* ***8Ultaltlllble*** model *and our environment continues to degrade and deteriorate due* to *human activities. The* consequences *can be* seen *In worldwide environmental disasters* as *well* as *locally* In *our dally* /Ives.

*This* Is *fOlfll to be our third lntematiollal conference on Environment organized by our youn.r university* since *It* was *estBblished In 1988.*

Yours sincerely, **Pref.Dr . .....,...~** *Jlice Rector of the Near East Universitv*

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