

Contents

1. Web Publications

1.1. EOLSS-online: ENCYCLOPEDIA OF LIFE SUPPORT SYSTEMS (EOLSS)

- UNESCO-EOLSS Joint Committee
- EOLSS International Editorial Council
- Motivation for Publication in the electronic Medium
- EOLSS Updating and Augmentation
- EOLSS in Official UN Languages
- United Nations DECADE OF EDUCATION FOR SUSTAINABLE DEVELOPMENT: 2005-2014
- A sample of opinions on the EOLSS project
- EOLSS-online (www.eolss.net) Subscription Rates

1.2. Compendium of Desalination and Water Resources (DESWARE), for details visit (www.desware.net)

2. EOLSS e-books and their full color print versions in subject categories

2.1. Prices of e-Books and their full color print versions

2.2. Fees for permission to reproduce/reprint parts from EOLSS e-books/print versions

- Outlines of Component Encyclopedias of the EOLSS in terms of e-books and their full color print versions
 1. EARTH AND ATMOSPHERIC SCIENCES
 2. MATHEMATICAL SCIENCES
 3. BIOLOGICAL, PHYSIOLOGICAL AND HEALTH SCIENCES
 4. BIOTECHNOLOGY
 5. LAND USE, LAND COVER AND SOIL SCIENCES
 6. TROPICAL BIOLOGY AND CONSERVATION MANAGEMENT
 7. SOCIAL SCIENCES AND HUMANITIES
 8. PHYSICAL SCIENCES, ENGINEERING AND TECHNOLOGY RESOURCES
 9. CONTROL SYSTEMS, ROBOTICS AND AUTOMATION
 10. CHEMICAL SCIENCES ENGINEERING AND TECHNOLOGY RESOURCES
 11. WATER SCIENCES, ENGINEERING AND TECHNOLOGY RESOURCES
 12. ENERGY SCIENCES, ENGINEERING AND TECHNOLOGY RESOURCES
 13. ENVIRONMENTAL AND ECOLOGICAL SCIENCES, ENGINEERING AND TECHNOLOGY RESOURCES
 14. FOOD AND AGRICULTURAL SCIENCES, ENGINEERING AND TECHNOLOGY RESOURCES
 15. HUMAN RESOURCES POLICY, DEVELOPMENT AND MANAGEMENT
 16. NATURAL RESOURCES POLICY AND MANAGEMENT
 17. DEVELOPMENT AND ECONOMIC SCIENCES
 18. INSTITUTIONAL AND INFRASTRUCTURAL RESOURCES
 19. TECHNOLOGY, INFORMATION AND SYSTEM MANAGEMENT RESOURCES
 20. AREA STUDIES (Africa, Brazil, Canada and USA, China, Europe, Japan, Russia)

DISCLAIMER

The information, ideas, and opinions presented in these publication are those of the authors and do not represent those of UNESCO and/or Eolss Publishers. UNESCO and/or Eolss Publishers make every effort to ensure, but do not guarantee, the accuracy of the information in these publications and shall not be liable whatsoever for any damages incurred as a result of its use. Hyperlinks to other web sites imply neither responsibility for, nor approval of, the information contained in those other web sites on the part of UNESCO and Eolss Publishers.

1. Web Publications

1.1. EOLSS-online: ENCYCLOPEDIA OF LIFE SUPPORT SYSTEMS (EOLSS)

A source of knowledge for sustainable development and global security to lead to fulfillment of human needs through simultaneous socio-economic and technological progress and conservation of the Earth's natural systems — a virtual dynamic library with contributions from thousands of scholars from over 100 countries and edited by well over 300 subject experts, for a wide audience: pre-university/university students, educators, professional practitioners, informed specialists, researchers, policy analysts, managers, and decision makers.

This archive is now available at <http://www.eolss.net> as an integrated compendium of twenty component encyclopedias

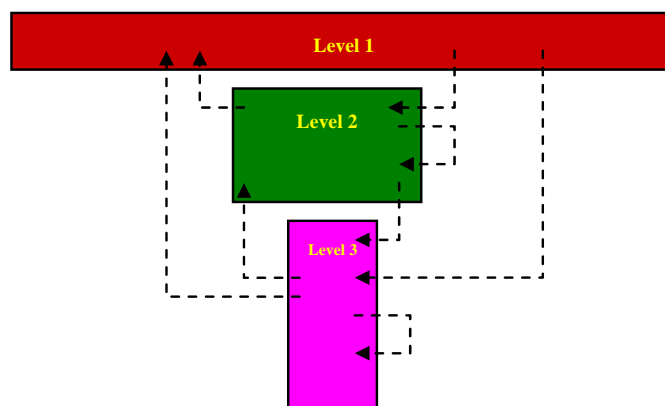
1. EARTH AND ATMOSPHERIC SCIENCES
2. MATHEMATICAL SCIENCES
3. BIOLOGICAL, PHYSIOLOGICAL AND HEALTH SCIENCES
4. BIOTECHNOLOGY
5. LAND USE, LAND COVER AND SOIL SCIENCES
6. TROPICAL BIOLOGY AND CONSERVATION MANAGEMENT
7. SOCIAL SCIENCES AND HUMANITIES
8. PHYSICAL SCIENCES, ENGINEERING AND TECHNOLOGY RESOURCES
9. CONTROL SYSTEMS, ROBOTICS AND AUTOMATION
10. CHEMICAL SCIENCES ENGINEERING AND TECHNOLOGY RESOURCES
11. WATER SCIENCES, ENGINEERING AND TECHNOLOGY RESOURCES
12. ENERGY SCIENCES, ENGINEERING AND TECHNOLOGY RESOURCES
13. ENVIRONMENTAL AND ECOLOGICAL SCIENCES, ENGINEERING AND TECHNOLOGY RESOURCES
14. FOOD AND AGRICULTURAL SCIENCES, ENGINEERING AND TECHNOLOGY RESOURCES
15. HUMAN RESOURCES POLICY, DEVELOPMENT AND MANAGEMENT
16. NATURAL RESOURCES POLICY AND MANAGEMENT
17. DEVELOPMENT AND ECONOMIC SCIENCES
18. INSTITUTIONAL AND INFRASTRUCTURAL RESOURCES
19. TECHNOLOGY, INFORMATION AND SYSTEM MANAGEMENT RESOURCES
20. AREA STUDIES (Africa, Brazil, Canada and USA, China, Europe, Japan, Russia)

Within these twenty on-line encyclopedias, there are about 235 Themes, each of which has been compiled under the editorial supervision of a recognized world expert or a team of experts such as an International Commission specially appointed for the purpose. Each of these 'Honorary Theme Editors' was responsible for selection and appointment of authors to produce the material specified by EOLSS. On average each Theme contains about thirty chapters. It deals in detail with *interdisciplinary* subjects, but it is also *disciplinary*, as each major core subject is covered in great depth by world experts.

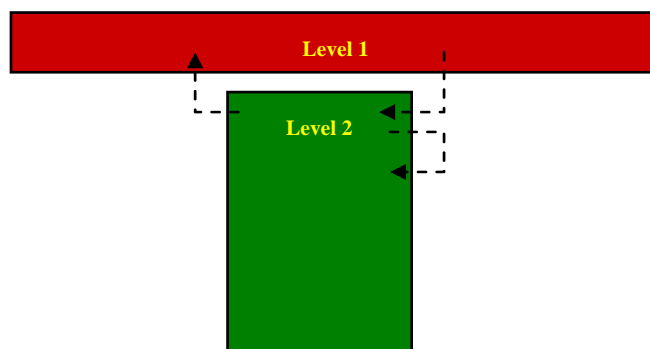
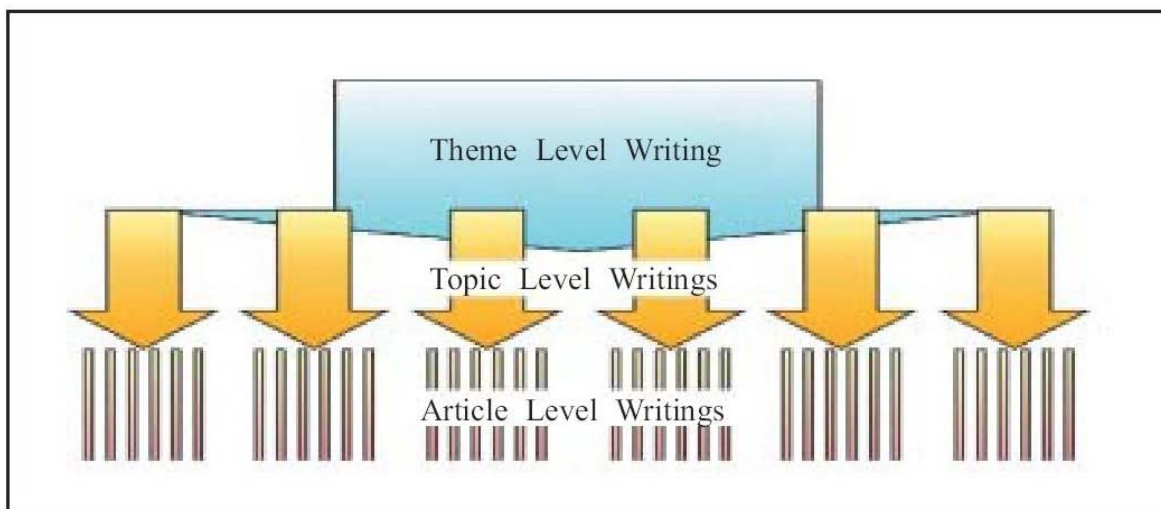
EOLSS Presentations are in gradually increasing depth.

- **Level 1 (Theme Level):** Presentations of broad perspectives of major subjects
- **Level 2 (Topic Level):** Presentations of perspectives of the special topics within the subjects
- **Level 3 (Article Level):** In-depth presentations of the subjects in various aspects

Some themes have a three level structure and some Two level structure. The EOLSS web of knowledge is woven over a hierarchical structure through cross reference links



The three level structure



The two level structure

EOLSS is the result of an unprecedented global effort involving the collective expertise of nearly 400 Subject Editors and 10000 Authors from over 100 countries.

The EOLSS project is coordinated by the UNESCO-EOLSS Joint Committee (http://www.eolss.net/eolss_international.aspx) and sponsored by Eolss Publishers, which is based in Oxford, United Kingdom. Through many and diverse consultation meetings around the world, the EOLSS has benefited immensely from the academic, intellectual, and scholarly advice of each and every member of a large International Editorial Council (http://www.eolss.net/eolss_international.aspx), which includes Nobel and UN Kalinga Laureates,

World Food Prize Laureates, and several fellows of academies of science and engineering of countries throughout the world.

From 1996 thousands of scientists, engineers and policy-makers began meeting just to define the scope of the project, before discussing the details of the contributions. Regional workshops were held in Washington DC, Tokyo, Moscow, Mexico City, Beijing, Panama, Abu Sultan (Egypt), and Kuala Lumpur, to develop a list of possible subjects and debate analytical approaches for treating them.

A UNESCO-EOLSS Joint Committee was established with the objectives of (a) seeking, selecting, inviting and appointing Honorary Theme Editors (HTEs)/International Commissions for the Themes, (b) providing assistance to them, (c) obtaining appropriate contributions for the different levels of the Encyclopedia, and (d) monitoring the text development. The membership of the Committee is as follows:

UNESCO-EOLSS JOINT COMMITTEE

Badran, A.	<i>President, Arab Academy of Sciences, (Co-Chairman)</i>
Al Gobaisi, D.	<i>EOLSS Editor-in-Chief (Co-Chairman)</i>
El Tayeb, M.	<i>Secretary General, Former Director, Division for Science Policy & Sustainable Development, UNESCO,(Secretary)</i>
Brito, Lidia	<i>Director SC/PSD, UNESCO</i>
Tolba, M.K.	<i>President, International Center for Environment and Development</i>
Sage, A.P.,	<i>USA (Chairman, EOLSS Configuration Control Board)</i>
Al Hallami, O. S. M.,	<i>UAE</i>
Marchuk, G.I.	<i>Russian Academy of Sciences</i>
Szollosi-Nagy, A.	<i>Rector, UNESCO-IHE Inst. for Water Education</i>
Johns, A.T.	<i>UK</i>
Talal, Younes	<i>International Union of Biological Sciences, France</i>
Dempsey, Jack	<i>UK</i>
Ganti, Prasada Rao	<i>India</i>
Joundi, S.	<i>France</i>
Makkawi, B.	<i>Sudan</i>
Woldai, A.	<i>Eritrea</i>
Hornby, R. J.	<i>UK</i>
Wall, Goran	<i>Sweden</i>
Watt, H.M.	<i>USA</i>
Kotchetkov, V.	<i>UNESCO</i>
Al-Radif A.	<i>Canada</i>
Damak, S.	<i>Canada</i>
Sasson, A.	<i>Former Assistant Director General of UNESCO</i>
Bruk, S.	<i>Consultant UNESCO</i>
Secretariat	
Huynh, H.	<i>Assistant Project Coordinator, SC/PSD, UNESCO</i>
Barbash A.	<i>Systems Manager, SC/PSD, UNESCO</i>

INTERNATIONAL EDITORIAL COUNCIL (IEC)

The EOLSS International Editorial Council was established thus: Board of General Advisors (BGA), Honorary Editorial Advisory Board (HEAB), and Honorary Academic Editorial Board (HAEB) as a large editorial advisory body with several hundreds of expert members chosen to advise on the development of the Encyclopedia. The Configuration Control Board is a high-level body with membership chosen from the International Editorial Council (IEC). Several individuals advised and contributed to the development of the EOLSS Body of Knowledge through meetings, discussions and communications. The list is given below with apologies for any inadvertent omissions

The Board of General Advisors (BGA) Laureates: Nobel Prize, Japan Prize, Kalinga Prize, and World Food Prize

Beachell, H. M.	<i>USA</i>	Knipling, E.F.	<i>USA</i>	Ramsey, N.F.	<i>USA</i>
Chandler, R. Jr	<i>USA</i>	Kurien, V	<i>India</i>	Richter, B.	<i>USA</i>
Charpak, G.	<i>Switzerland</i>	Lederberg, J.	<i>USA</i>	Scrimshaw, N	<i>USA</i>
Crutzen, P.J.	<i>Germany</i>	Lederman, L.M.	<i>USA</i>	Shull, C.G.	<i>USA</i>
Ernst, R.R.	<i>Switzerland</i>	Lee, Y.T	<i>China</i>	Swaminathan, M.S.	<i>India</i>
Fukui, K.	<i>Japan</i>	Lehn, J.-M	<i>France</i>	Yang Chen Ning	<i>USA</i>
Herren, H.	<i>Kenya</i>	Lions, J.	<i>France</i>	Zadeh, L.A	<i>USA</i>
Kapitza, S.	<i>Russia</i>	Niederhauser, J	<i>USA</i>		
Klein, L.R.	<i>USA</i>	Prigogine, I.	<i>Belgium</i>		

and other Members

Agnoletti, Mauro	<i>Italy</i>	Bawa, K. S.	<i>USA</i>
Aguirre, L.M.	<i>Chile</i>	Baydack, R. K.	<i>Canada</i>
Aharoni, A.	<i>Israel</i>	Bell, A.	<i>South Africa</i>
Ahenkan, Albert	<i>Belgium</i>	Bell, D.V.J.	<i>Canada</i>
Aidarov, I.P.	<i>Russia</i>	Bellavista, Paolo	<i>Italy</i>
Al Gobaisi, D.	<i>UAE</i>	Bennett, Brad	<i>USA</i>
Al Hallami, O. S. M.,	<i>UAE</i>	Bergles, A. E.	<i>USA</i>
Al Radif, Adil	<i>Canada</i>	Berovic, Marin	<i>Slovenia</i>
Albou, L.	<i>France</i>	Bertini, Ivano	<i>Italy</i>
Aluwihare, A. P. R.	<i>Sri Lanka</i>	Bhattacharya, S.C.	<i>Thailand</i>
Anas, S. M.	<i>India</i>	Bilgin, Pinar	<i>USA</i>
Angelini, M	<i>Italy</i>	Blakey, N.	<i>UK</i>
Araki, H.	<i>Japan</i>	Blancarte Pimentel, R.	<i>México</i>
Arata, A. A.	<i>USA</i>	Block de Behar, L.	<i>Uruguay</i>
Arima, A.	<i>Japan</i>	Blok, K.	<i>The Netherlands</i>
Arlt, H.	<i>Austria</i>	Bobrovnikskii, Y.I.	<i>Russia</i>
Arocena, J.	<i>Canada</i>	Bodini, A.	<i>Italy</i>
Arvanitis, R.	<i>France</i>	Bonet, Arturo	<i>México</i>
Assaad, K. A.	<i>Lebanon</i>	Boon, E.K.	<i>Belgium</i>
Atalay, M.	<i>Finland</i>	Bozena Czerny	<i>Poland</i>
Atherton, D.P.	<i>UK</i>	Brauer, G.W	<i>Canada</i>
Atkinson, P.	<i>UK</i>	Brauer, J.	<i>USA</i>
Attiga, A. A.	<i>Jordan</i>	Bridgwater, J.	<i>UK</i>
Aubin, J.-P.	<i>France</i>	Brij Gopal	<i>India</i>
Awadelkarim, Osama O.	<i>USA</i>	Brito, Lidia	<i>UNESCO, France</i>
Ayala Luis	<i>USA</i>	Burden, C.J.	<i>Australia</i>
Ayres, R. U.	<i>France</i>	Cakmak, I.	<i>Turkey</i>
Azzam, A.	<i>USA</i>	Caldarelli, Guido	<i>Italy</i>
Bai, Chunli	<i>China</i>	Caporaso, J.A.	<i>USA</i>
Baisden, Patricia A.	<i>USA</i>	Carabias, J.	<i>Mexico</i>
Barbieri-Masini, E.	<i>Italy</i>	Carpenter, A.	<i>New Zealand</i>
Barbiroli, G.	<i>Italy</i>	Carra, S.	<i>Italy</i>
Barbosa, Ana Angélica Almeida	<i>Brazil</i>	Carroll, R.G.	<i>USA</i>
Barbosa-Canovas, G.	<i>USA</i>	Carta, S.	<i>Italy</i>
Barlas, Y.	<i>Turkey</i>	Carvalho, Tania Franco	<i>Brazil</i>
Barritt, E. R.	<i>USA</i>	Catanzaro, E.	<i>USA</i>
Barron, E.J.	<i>USA</i>	Ceballos, G.	<i>Mexico</i>
Barthlott, W.	<i>Germany</i>	Centi, Gabriele	<i>Italy.</i>
Bassani, Roberto	<i>Italy</i>	Chaplin, R.	<i>Canada</i>
Bates, D.G.	<i>USA</i>	Chapman, D.	<i>Ireland</i>
Bauer, Branko	<i>Croatia</i>	Cheeseman, C.	<i>UK</i>
Bauzer Medeiros, C.M.	<i>Brazil</i>	Chen Jiaer	<i>China</i>

Chen, C.T.A.	Taiwan	Fleisher, D.H.	USA
Chen, Han Fu	China	Fliedner, T.	Germany
Cheng, Y.F.	Canada	Ford, Paulette L.	USA
Cholakov, G. St.	Bulgaria	Fortes, M.	Mexico
Choppin, Gregory R.	USA	Fortes, M. D.	Philippines
Choucri, N.	USA	Francis, J. F.	USA
Christen, O.	Germany	Frangopoulos, C.	Greece
Cilek, V.	Czech Republic	Frank , Roesch	Germany
Cockfield, A. J.	Canada	Freire, José Luiz de França	Brazil.
Coelho, Lísias	Brazil	Frieze, Paul A.	UK
Colombo, U.	Italy	Frolov, K.V.	Russia
Consoli, Fernando Louis	Brazil	Fuentes Gustavo A.	Mexico
Contrafatto, G.	South Africa	Fujii, T.	Japan
Corazza, Giovanni E.	Italy	Fukuoka, K.	Japan
Cordani, U.	Brazil	Fukushima, Y.	Japan
Corti, C.	Italy	Fuleky, G.	Hungary
Costello, Julio Alberto	Argentina	Funabashi, M.	Japan
Costes, A.	France	Galbraith, J.K.	USA
Cote, R.P.	Canada	Gallart, F.	Spain
Cowling, R.M.	South Africa	Gallegos Crispulo	Spain
Crothers, C.	New Zealand	Galles, C.D.	Argentina
Cui, Weicheng	China	Galles, Carlos Delfino	Argentina
Cumo, M.	Italy	Gálvez, Julian Blanco	Spain
Czerny, Bozena	Poland	Gani, Rafiqul	Denamark
Da Silva, Andre Pires	USA	Ganti, Meenakshi	India
Dai Ruwei	China	Gao Congjie	China
Damak, Samir	Canada	Garzón, Francisco J. Morales	Colombia
Daniels, J.L.	USA	Gates, W. L.	USA
Danilevich, Y.B.	Russia	Geeraerts, G.	Belgium
Davies, A.M.	Israel	Gellings, C.	USA
de Behar, Lisa Block	Uruguay	Gerday, C.	Belgium
De Gaetano, Andrea	Italy	Ghabbour, Samir	Egypt
De Tombe, D.	The Netherlands	Ghazanfar, Shahina	UK
De Vivo, B.	Italy	Gherardi, F.	Italy
Del Campo, S.	Spain	Giegrich, J.	Germany
Del Claro, Kleber	Brazil	Glansdorff, N.	Belgium
Denemark, Robert A.	USA	Glazovsky, N.	Russia
Dent, L.	Australia	Gogus, Y.	Turkey
Derigs, U.	Germany	Goldberg, E.H.	USA
Diamandopoulos A.	Greece.	Goldemberg, J.	Brazil
Dickinson, R.	USA	Goldstein, R.	USA
Ding, Y.	China	Golitsyn, G.S.	Russia
Dixon, G.R.	UK	Golley, F.	USA
Djelal Kadir	USA	Gonzalez Osorio, L.,M.	Mexico
Djian, Jean-Michel	France	Gonzalez-Casanova, P.	Mexico
Djian, J-M.	France	Gorshkov, V.G.	Russia
Doblare, Manuel	Spain	Goulet, Denis	USA
Doelle, Horst W.	Australia	Gowdy, J.M.	USA
Dolphin, D. W.	USA	Grabow, W.O.K.	South Africa
Donarag, T. Y.	Malaysia	Grace, P.M.	Ireland
Donoso, M. C.	Panama	Gracia-Granda, Santiago	Spain
Dooge, J.C.I.	Ireland	Grasemann, B.	Austria
Downing, T.G.	South Africa	Grasso, D.	USA
Duarte, C.M.	Spain	Gray, Jeremy	UK
Dudley, W.	USA	Green, D.G.	Australia
Edelstein, Norman M.	USA	Gros, F.	France
Eide, A.R.	USA	Gruza, G.V.	Russia
El Ashry, M.	USA	Gualtieri, M.	Italy
El Gohary, Mohamed I.	Egypt	Guillermo, Ramirez	USA
El Kassas, M.	Egypt	Guruswamy, L.D.	USA
El-Kholy, O.A.	Egypt	Gyftopoulos, E.	USA
Elliot, R.C.	Australia	Haba, Hiromitsu	Japan
El-Shaarawi, A. H.	Canada	Haddane, Brahim	Morocco
Eser, Semih	USA	Hafez, S.	Egypt
Etkin, N. L.	USA	Haghighat, F.	Canada
Farrell, R. V.	USA	Hallberg, R.O.	Sweden
Favorsky, O.N.	Russia	Hamada, T.	USA
Feliu-Martinez, Juan M.	Spain	Hammond, A.	USA
Fellowes, M.	UK	Hanninen, O.O.P.	Finland
Filar, J.A.	Australia	Hansen, Vagn Lundsgaard	Denmark
Filho, Pedro de Alcantara Pessoa	Brazil	Hardege, J.D.	UK
Filippov, G.	Russia	Hardesty, D. L.	USA
Fisher, G.W.	USA	Harkin, M. E.	USA

Harl, N.H.	USA	Kok, J.N.	The Netherlands
Harrison, N. E.	USA	Kolmer, L.	USA
Hasan, S. E.	USA	Kondo, J.	Japan
Hashmi, M. U.	Pakistan	Kondratyev, K.Ya.	Russia
Hassan, P.	Pakistan	Koteles Gyorgy J.	Hungary
Hassan, S. Q.	USA	Kotlyakov, V.M.	Russia
Hassan, Y. A.	USA	Kralj, Slobodan	Croatia
Hasunuma, K.	Japan	Krashnoschokov, N.N.	Russia
Hatfield, J.L.	USA	Krawczyk, J.B.	New Zealand
Heden, C.-G.	Sweden	Kubota, S.	Japan
Helliwell, John R.	UK	Kumar, S.	Thailand
Herrera, I.	Mexico	Kunnath, Sashi K.	USA
Heurlin, B.	Denmark	Kupitz, J.	Austria
Himiyama, Y.	Japan	Kurzanski, A.B.	Russia
Hipel, K.W.	Canada	Kutting, G.M.	UK
Hirsch Hadorn, G.	Switzerland	Kwon, Yong W.	USA
Hoekstra, A. Y.	The Netherlands	Lagowski, J.J.	USA
Holdgate, M.	UK	Lal, R.	USA
Holness, Stephen	South Africa	Lam, Poh-Sang	USA
Holton, J.R.	USA	Lara, F.	Mexico
Holton, R.	Ireland	Last, J.	Canada
Honglie, Sun	China	Lastovicka, J.	Czech Republic
Horikawa, K.	Japan	Lasztity, R.	Hungary
Htun Nay	Myanmar	Lattanzio, John	Australia
Hu Ying	China	Laverov, N.P.	Russia
Huang, C.H.	Taiwan	Lee, Han Bee	Republic of Korea
Hudson, R.J.	Canada	Lee, S.	USA
Imura, H.	Japan	Leemans, R.	Netherlands
Inayatullah, S. T.	Australia	Lefevre, J. M.	France
Inyang, H. I.	USA	Lefevre, T.	Thailand
Iribarne, O.	Argentina	Leff, E.	Mexico
Ishida, M.	Japan	Leidl, R.	Germany
Ishii, R.	Japan	Levashov, V. K.	Russia
Isla, F. I.	Argentina	Levine, A.D.	USA
Izrael, Y. A.	Russia	Li, Yuguo	China
Jablensky, Assen	Australia	Lichnerovicz, A.	France
Jackson, M.	UK	Liebowitz, H.	USA
Jacobson, H. K.	USA	Lin, Qun	China
Jain, A.	India	Lin, Zhi-Qing	USA
Jakeman, A. J.	Australia	Lindsay Dent	Australia
Jancso Gabor	Hungary	Liss, P.	UK
Jeyaratnam, J.	Singapore	Liu, Bao	China
Jhunjhunwala A.	India	Liu, Xila S.	China
Jimeno, M.	Colombia	Livchits, V.N.	Russia
Jinsheng, G.	China	Llorens, P.	Spain
Jintai, Ding	USA	Lomnitz, C.	Mexico
Johan, Elizabeth	Austria	López, Dolores Romero	Spain
Jordaan, J.M.	South Africa	Lorenzano, Pablo	Argentina
Jureckova, J.	Czech Republic	Loyo, C.	Mexico
Kaeli, D.R.	USA	Lozano, F.	Mexico
Kakihana, H.	Japan	Lozano, M.	Mexico
Kanwar, R. S.	USA	Lu, G. Q. M.	Australia
Kanyar, Bela	Hungary	Lund, H. G.	USA
Kao, D.T.	USA	Luthra, R.	USA
Kapitsa, Sergey	Russia	Lüttge, Ulrich	Germany
Karoly Suvegh	Hungary	Lysenko, E. G.	Russia
Kawabe, T.	Japan	Macedo, Regina Helena Ferraz	Brazil
Kayis, A.B.	Australia	Macino, Paolo	Italy
Kazanjan, Arminee	Canada	Mack, A.	Australia
Kerekes, J.	Hungary	Mackey, B. G.	Australia
Kharkin, Valeri	Russia	Magara, Y.	Japan
Khosla, A.	India	Mageed, Y. A.	Sudan
Khublaryan, M. G.	Russia	Magill, Joseph	Germany
Kiel, L. D.	USA	Mahfouz, S.M.	Egypt
Kim, J. J.	USA	Majewski, H.	Australia
Kim, T. J.	USA	Majumdar, M.	USA
Kipng'etich, Julius	Kenya	Manciaux, M. R. G.	France
Kirby, R.	South Africa	Manciaux, M. R.G.	France
Kitney, R.	UK	Maniruzzaman, A. F. M.	UK
Klir, G.	USA	Mansourian, B.P.	Switzerland
Klotz, S.	Germany	Markandya, A.	UK
Knauth, Alfons	Germany	Marquardt, M.J.	USA
Kodama, Yoshiaki	Japan	Marquette, C.M.	Norway

Marquis, Robert J.	USA	Opara, Linus U.	Sultanate of Oman
Marquis, Robert J.	USA	Ortiz, Eduardo	UK
Martins, Rogério Parentoni	Brazil	Osipov, Yu.S.	Russia
Masdeu, José	Spain	Oswald Spring, U.	México
Maslov, B.S.	Russia	Oswaldo, Marçal Jr.	Brazil
Massuo Jorge Kato	Brasil	Oteiza, E.	Argentina
Mather, A.	UK	Owen, A.D.	Australia
Mayer, Klaus	Germany	Owens, J.N.	Canada
McCarthy, O.J.	New Zealand	Ozturk, Munir	Turkey
McDowell, D.	Switzerland	Oyebande, L.	Nigeria
McMichael, A.J.	UK	Pachauri, R. K.	India
McMullan, J.T.	UK	Padoch, C.	USA
McMurtry, J.	Canada	Paik, Jeom Kee	Korea
McNulty, P.	Ireland	Parra-Luna, F.	Spain
Medina, E.	Venezuela	Paterno, L.	Italy
Meissner, R.	South Africa	Payá, Victor Climent	Spain
Melero-Vara, Jose M.	Spain	Payne, W.A.	USA
Meller, F.	USA	Pellegrini, Alberto	Brasil
Menaut, J.C.	France	Petrov, R.V.	Russia
Mendes, C.	Brazil	Pezzuto, John M.	USA
Merodio, Jose	Spain	Pimentel, Roberto Blancarte	México
Merodio, José	Spain	Pironneau, O.	France
Mesarovic, M. D.	USA	Plate, N.A.	Russia
Mesini, Ezio	Italy	Pohorecki, Ryszard	Poland
Mildonian, Paola	Italy	Porembski, S.	Germany
Minelli, A.	Italy	Prinn, R. G.	USA
Mitchell, C.M.	USA	Puel, J. P.	France
Mitsumori, S.	Japan	Qi, L.	China
Modelski, George	USA	Qian, Y.	China
Mohamed Henini	UK	Quesada, Mauricio	Mexico.
Molyneux, David	Canada	Qureshy, M. N.	USA
Molzahn, M.	Germany	Rajeswar, J.	India
Momoh, A.	Lagos	Ramallo, L.I.	Spain
Moore, B. III	USA	Ramirez, Alonso	USA
Moran-Lopez, J. L.	Mexico	Ramirez, Nelson	Venezuela
Morris, Molly R.	USA	Rao, C. N. R.	India
Morss, Lester R.	USA	Rao, C.R.	USA
Muelbert, Monica M.C.	Brazil	Rao, Ganti Prasada	India
Muhammed, A.	Pakistan	Rao, Gollapudi Maruthi	India
Muhvi-Dimanovski, V	Croatia	Rao, Singeetham Srinivasa	India
Muller, P.	Germany	Rapport, D.J.	Canada.
Munasinghe, M.	Sri Lanka	Rasool, I.	France
Munter, Rein	Estonia	Raumolin, J.	Finland
Murphy, I.L.	USA	Rawlings, R.D.	UK
Nagy, Sándor	Hungary	Reddy, P.	Sweden
Naito, M.	Japan	Reza, F.	Canada
Nakajima, Jimi Naoki	Brazil	Rheinberger, Hans-Jörg	Germany
Napalkov, N.P.	Russia	Ricco, Bruno	Italy
Nasson, W.R.	South Africa	Rico-Gray, Victor	México
Nath, B.	UK	Rios, Mónica Palácios	México,
Natori, K.	Japan	Rodrigues, Silvio Carlos	Brazil
Navabi, Z.	Iran	Rodriguez, L. F.	USA
Nefedov, O.M.	Russia	Rokem, J. Stefan	Israel.
Newman, Lee	USA	Rúbio, Scarano Fábio	Brazil
Ng, Y.K.	Australia	Rudan, P.	Croatia
Nicotra, F.	Italy	Ruigómez, José Ma Goicolea	Spain
Nihoul, J.C.J.	Belgium	Rydzynski, K. J.	Poland
Nishizawa, J.	Japan	Sabljić, A.	Croatia
Nishizuka, Y.	Japan	Saccomandi, Giuseppe	Italy
Nkemdirim, L.C.	Canada	Safran, P.	Philippines
Nkwi, P.N.	Cameroon	Sajeev, V.	India
Novitsky, E.G.	Russia	Sala, M.	Spain
Obasi, G.O.P.	Switzerland	Sala, O.	Argentina
Oddbjørn, Engvold	Norway	Salim, E.	Indonesia
Odhiambo, T.	Kenya	Sampaio, Marcus Vinicius	Brazil
Ohta, T.	Japan	Sanchez, L.E.	Brazil
Ojo, S.O.	Nigeria	Santamouris, M.	Greece
Okada, N.	Japan	Santiago Gracia Granda	Spain
Oki, T.	Japan	Sassen, S.	USA
Olden, K.	USA	Satoh, T.	Japan
Olembo, R.	Kenya	Savenije, H.H.G.	The Netherlands
Oliveira, Paulo S.	Brazil	Sayers, B. McA.	UK
Onishi, A.	Japan	Scarano, Fábio Rúbio	Brazil

Schmidt-Soltau, Kai	Cameroon	Teller, E.	USA
Schrire, R.A.	South Africa	Teng, T.	China
Schwabach, A.	USA	Thayamballi, Anil K.	USA
Seidler, R.	USA	Thiessen, Kathleen M.	USA
Sekiguchi, M.	Japan	Ting, K.C.	USA
Sen, G.	India	Titli, A.	France
Serageldine, I.	USA	Toschenko, J.T.	Russia
Serneri, Simone Neri	Italy	Tsipenyuk, Y.M.	Russia
Sgro, P.M.	Australia	Türmen, Tomris	Turkey
Shaib, B.	Nigeria	Ul Haq, M	Pakistan
Shaidurov, V.V.	Russia	Unbehauen, H.D.	Germany
Shen, Hayley	USA	Valero-Capilla, A.	Spain
Shidong, Z.	China	van den Haute, Peter	Belgium
Shiklomanov, I.A.	Russia	van der Beken, A.	Belgium
Shpilrain, E.E.	Russia	van Wyk, J.A.	South Africa
Shuttleworth, W.J.	USA	Vanek, Tomas	Czech Republic.
Siebel, Wolfgang	Germany	Varga, Kálmán	Hungary
Silva, Márcio Seligmann	Brazil	Vazquez, C.	Mexico
Silveira, L.	Uruguay	Verhasselt, Y. L. G.	Belgium
Silvio, Carlos Rodrigues	Brazil	Verheye, Willy	Belgium
Sinding-Larsen, R.	Norway	Viertl, R.	Austria
Singh, H.	New Zealand	Vigneswaran, S.	Australia
Singh, Prabhu N. P.	UK	Villarnovo, Glória Carrion	México
Sirageldin, I.	USA	Vishnevsky, A.G.	Russia
Siva Sivapalan, M.	Australia	Volgy, T.J.	USA
Sivov, N.A.	Russia	Von Wezsacker, E.U.	Germany
Sixto Malato, Rodríguez	Spain	Wallenius, Maria	Germany
Skogseid, H.	Norway	Wang, Ge (George)	USA
Smeers, Y.	Belgium	Wang, Mingxing	China
Smets, B.	USA	Wang, W.C.	USA
Smith, S.	UK	Wang, Xingyu	China
Socanac, Lelija	Croatia	Wang, Yuqing	USA
Sollars, C.J.	UK	Webster, L.	USA
Sonntag, H.	Venezuela	Weder, R.	Mexico
Soria Escoms, B.	Spain	Weffort, F.	Brazil
Sorour, K.	Egypt	Wei, Zhou	Hungary
Southwood, R.	UK	Weiss, T.G.	USA
Speight James G.	USA	Welch, R.M.	USA
Squires, V.R.	Australia	Wiener, J.	UK
Squires, Victor R.	Australia	Williams, Paul D.	UK
Stabell, Rolf	Norway	Wills, I.	Australia
Stepp, John Richard	USA	Wilson, P.A.	UK
Stuewe, K.	Austria	Wilson, S.R.	Australia
Sujoldzic, A.	Croatia	Wohnlich, S.	Germany
Sulayem, M.	Saudi Arabia	Wojnarovits, Laszlo	Hungary
Sullivan, L.	Australia	Wojtczak, A.M.	USA
Summy, Ralph V.	Australia	Wolanski, E.	Australia
Susheela, A.K.	India	Woldai, A.	Eritrea
Sydow, A.	Germany	Wong, K.P.	Australia
Szczerban, J.	Poland	Xila S. Liu	China
Takahasi, Y.	Japan	Yaa, Ntiamao-Baidu	Switzerland
Takeda, G.	Japan	Yagodin, G.A.	Russia
Takle, G.S.	USA	Yam, Kit Keith L.	USA
Tao, W-Q	China	Yan, S.	China
Tarasova, N. P.	Russia	Yi, Zeng	USA
Tarlock, A.D.	USA	Zhang, Wei-Bin	Japan

Motivation for Publication in Electronic Media

Print projects for such large publications are highly material and energy intensive, a consideration that is very important in the case of the EOLSS since it advocates minimal use of natural resources.

Another great advantage of the electronic medium for large publications, in addition to portability, is the search facility. For instance, information on any chosen aspect can be found by search with the click of a button from the huge body of knowledge. Parts of the information may be downloaded, organized, printed, or adapted to one's own academic needs such as research studies, course-packs, etc. This is not the case with the print versions.

EOLSS Updating and Augmentation

Efforts to update and augment the EOLSS body of knowledge: Editors and Authors are given free access to access their works and forward updates if any. New themes are added covering many additional subjects. Updating/augmenting is frequent- almost every month

EOLSS in Official UN Languages

THE UNIVERSAL NETWORKING DIGITAL LANGUAGE FOUNDATION (UNDL) is now active on the translation project. The 1st International Workshop on Natural Language Processing Using the Universal Networking Language (UNL), took place during 4-7 May 2007 at Alexandria, Egypt. UNDL started to work with the six official UN languages. Twelve UNL language centers situated in France, Russia USA, Cairo, Sao Paulo, Madrid, Tokyo, China, etc. are participating in this work.

United Nations DECADE OF EDUCATION FOR SUSTAINABLE DEVELOPMENT: 2005-2014

EOLSS is dedicated to contribute to the implementation of United Nations DESD: 2005-2014

A sample of opinions on the EOLSS project

“Scientific curiosity and technological endeavors are deeply rooted aspects of human nature. They are responsible for the development of human society and welfare. But they are also responsible for much of the environmental problems we are facing today. Solutions for these shortcomings are inconceivable without full scientific and technological support. EOLSS has the goal to provide a firm knowledge base for future activities to prolong the lifetime of the human race in a hospitable environment.” **Richard R. Ernst, Nobel Laureate-Chemistry**

“The EOLSS is not only appropriate, but it is imaginative and, to my knowledge, unique. Much of what we can write about science, about energy, about our far-ranging knowledge base, can indeed be found in major encyclopedias, but as I understand your vision, never as a central theme; the theme of humanity, embedded in nature and constrained to find ways of maintaining a relationship with nature based upon understanding and respect.” **Leon M. Lederman, Nobel Laureate in Physics**

“The population of our planet and its development over the ages sets the scene for considering all global problems and it is reasonable to begin their discussion with population growth. ... Thus we are dealing with an interdisciplinary problem in an attempt to describe the total human experience, right from its very beginning. But without this perspective of time it is not possible to objectively assess what is happening today and provide an objective view of the present state of development, the challenge now facing humanity.” **S.P. Kapitza, UNESCO Kalinga Prize Winner**

“Pursuit of knowledge and truth supersedes present considerations of what nature, life or the world are or should be, for our own vision can only be a narrow one. Ethical evaluation and rules of justice have changed and will change over time and will have to adapt. Law is made for man, not man for law. If it does not fit any more, change it.... Some think that it is being arrogant to try to modify nature; arrogance is to claim that we are perfect as we are! With all the caution that must be exercised and despite the risks that will be encountered, carefully pondering each step, mankind must and will continue along its path, for we have no right to switch off the lights of the future.... We have to walk the path from the tree of knowledge to the control of destiny.” **Jean-Marie Lehn, Nobel Laureate in Chemistry**

“Ecotechnology involving appropriate blends of traditional technologies and the ecological prudence of the past with frontier technologies such as biotechnology, information technology, space technology, new materials, renewable energy technology and management technology, can help us to promote global sustainable development involving harmony between humankind and nature on the one hand and tolerance and love of diversity and pluralism in human societies on the other. We need shifts in technology and public policy. This is a challenging task to which the Encyclopedia of Life Support Systems should address itself.” **M.S. Swaminathan, First World Food Prize winner**

“EOLSS is concerned with the Life Support Systems... Each of these systems is a very complex one. ...we have to think of all these “systems” as closely related “subsystems” of the Planet Earth System. ...Rational decisions will be more and more possible to envision if one will be able to couple the physical modeling to economic and financial models and to human factors...” **J.L. Lions, Japan Prize winner in Applied Mathematics**

“In the coming decades, the need for working together, across countries, is essential. We need to bring 3 billion poor into society and make it possible for them to lead healthy lives, to get the health interventions that we all take as something as self-evident. It can be done. It is within reach. We need to invest in the future. We need to invest in the health of all people worldwide.” **Gro Harlem Brundtland, Director General, WHO**, in an interview with Patricia Morales

“We must learn to live at one with nature. Nature does not bear grudges, but it must not be brought to the point where it can no longer sustain human society and the continuance of humankind on Earth. I believe that one of the most important things is the shaping of a new value system, because nature can live without us, but we cannot live without nature. Instead of a hedonic approach, we should promote an approach that reasonably limits consumerism and which promotes the virtue of enoughness. If we insist on consumerism as the new utopia, nature will reject such a system, as surely as cultural diversity rejected the totalitarian system. Our generation has to face a difficult challenge, but as recent history has proven, walls of difficulty, like the Berlin Wall, can fall.” **Mikhail Gorbachev, Nobel Laureate in Peace**, in an interview with Patricia Morales

“We live in an increasingly interdependent world. As a result, we must cooperate together across all boundaries of nation, culture, faith, and race, and at all levels—locally, nationally, regionally, and globally— if we are to achieve our basic environmental, economic and social goals. Furthermore, if we are to make wise choices and to cooperate together effectively, we urgently need a shared vision of fundamental ethical values to guide us. In other words, the development of global ethics is essential. Our very survival as a species is in doubt if we cannot clarify our ethics and develop common values around such basic issues as environmental protection, justice, human rights, cultural diversity, economic equity, eradication of poverty, and peace.” **Steven C. Rockefeller, Earth Charter Commissioner**, in an interview with Patricia Morales

EOLSS-online (www.eolss.net) Subscription Rates

Free trial up to 10 months is possible. The EOLSS is made available free of charge to universities in the UN list of least developed countries and disadvantaged individuals worldwide. Universities from developing countries also receive an appropriate discount. It is available to others at nominal subscription rates.

**Orders from the USA, Europe, and UK will be charged in \$ (US), €, £ (UK) respectively.
Orders from all other regions will be charged in \$.**

INDIVIDUALS (GENERAL)

License Fee	Features
€242/£210/\$329 per 2 years	Single User
€182/£158/\$248 per year	Single User
€121 /£105 /\$165 per 6 months	Single User

HIGH SCHOOL

License Fee	Features
€117/£276/\$431 per year	With FTE up to 1000
€173/£411/\$644 per year	With FTE 1001 to 2000

FTE: (Full-time enrollment in previous semester)
For High Schools (with unlimited simultaneous users) with FTE more than 2000, additional *\$80 or £51 or * €9 for each block of FTE 500. FTE's over 2000 will be rounded to the nearest 500. (i.e. FTE of 1100 will be rounded down to 1000. FTE of 1290 will be rounded to 1500.)
Institutions from Developing Countries are entitled for discount of 40% on the above rates

HIGHER EDUCATIONAL INSTITUTIONS AND RESEARCH ESTABLISHMENTS

License Fee	Features
€91/ *£514/ \$804 per year	With FTE up to 2000
€63/ £751/ \$1175 per year	With FTE 2001 to 4000
€103/ £959/ \$1501 per year	With FTE 4001 to 6000
€199/ £1043/ \$1632 per year	With FTE 6001 to 10,000

FTE: Full Time Equivalent (Faculty, Researchers and all Students in the case of educational institutions)
For Universities (with unlimited simultaneous users) with FTE more than 10,000, additional * €89 or £164 or *\$257 for each block of FTE 5000. FTE's over 10,000 will be rounded to the nearest 5000. (i.e. FTE of 26,735 will be rounded down to 25,000. FTE of 28,650 will be rounded to 30,000)
Institutions from Developing Countries are entitled for discount of 40% on the above rates

COMMUNITY COLLEGES

License Fee	Features
\$508 / £324 / €373 per year	With FTE up to 1000
\$634 / £405 / €466 per year	With FTE 1001 - 2000
\$762 / £487/ €560 per year	With FTE 2001 - 4000
\$1015 / £649/ €746 per year	With FTE 4001 - 6000
\$1270/ £812/ €933 per year	With FTE 6001 - 8000
\$1523/ £973/ €1119 per year	With FTE 8001 - 10000

FTE: Full Time Equivalent (Staff and all Students)
For Community Colleges (with unlimited simultaneous users) with FTE more than 10000, additional *\$101 or £64 or * €74 for each block of FTE 500. FTE's over 10,000 will be rounded to the nearest 500. (i.e. FTE of 11,200 will be rounded down to 11,000. FTE of 11,275 will be rounded to 11,500.)
Institutions from Developing Countries are entitled for discount of 40% on the above rates

GOVERNMENTAL AND PUBLIC SECTOR ORGANIZATIONS

License Fee	Features
€39 / £817 / \$1278 per year	Up to 2,000 FTEs
€463/£1272/ \$1991 per year	With 2,001 to 4,000 FTEs
€870/£1626/ \$2545 per year	With 4,001 to 6,000 FTEs

FTE: (Full-time enrollment in previous semester)
Additional * €297 or £258 or *\$404 for each block of 5000 full time employees over 10,000. FTE's over 10,000 will be rounded to the nearest 5000. (i.e. FTE of 26,735 will be rounded down to 25,000. FTE of 28,650 will be rounded to 30,000)
Institutions from Developing Countries are entitled for discount of 40% on the above rates

PRIVATE SECTOR ORGANIZATIONS

License Fee	Features
€985 / £857 / \$1341 per year	Up to 2,000 FTEs
€1534 / £1344 / \$2088 per year	With 2,001 to 4,000 FTEs
€1962 / £1706 / \$2671 per year	With 4,001 to 6,000 FTEs
€2128 / £1850 / \$2896 per year	With 6,001 up to 10,000 FTEs

Additional * €309 or £269 or *\$421 for each block of 5000 full time employees over 10,000. FTE's over 10,000 will be rounded to the nearest 5000. (i.e. FTE of 26,735 will be rounded down to 25,000. FTE of 28,650 will be rounded to 30,000)
Institutions from Developing Countries are entitled for discount of 40% on the above rates

PUBLIC LIBRARIES

License Fee	5% of Population Served of your legal service area
\$323 / £206 / €37 per year	2 to 500
\$534 / £341 / €92 per year	501 to 1000
\$854 / £545 / €67 per year	1001 to 2000
\$1281 / £818 / €91 per year	2001 to 4000
\$1537 / £982 / €129 per year	4001 to 6000
\$2133 / £1362 / €157 per year	6001 to 10,000

€206 or £179 or *\$280 for each additional block of 5000. Over 10,000 will be rounded to the nearest 5000. (i.e. 26,735 will be rounded to 25,000. 28,650 will be rounded to 30,000).
Institutions from Developing Countries are entitled for discount of 40% on the above rates
To calculate population served take 5% of your legal service area and apply this number to the corresponding population range.

For information concerning Consortia contact (helpdesk@eolssonline.net)

1.2. Compendium of Desalination and Water Resources (DESWARE)

Desalination And Water Resources (DESWARE) is an integrated compendium of thirty one printed volumes. It is a unique publication, the only one of its kind in the filed of desalination and water resources which puts together contributions from leaders from all over the world. For details visit (www.desware.net)

2. EOLSS e-books and their full color print versions in subject categories

For the convenience of users' special interests the EOLSS body of knowledge is being made available in e-book (pdf) format with the provision for Print on Demand. There is a wide gallery of e-books making up a virtual library and the sets of volumes classified under different component encyclopedias are outlined below. **The ISBN numbers are respectively eISBN for e-books and ISBN for print versions. Forthcoming items are without these numbers.**

2.1. Prices of e-Books and their full color print versions

Each e-book (Adobe Reader-single user) volume: **\$120/€95/£80**

Each print volume (Color Edition): **\$280/€216/£190**

Orders from the USA, Europe, and UK will be charged in \$, €, £ respectively.

Orders from all other regions will be charged in \$.

e-Book orders for multiple users will be entitled to get a discount: Five users-10%; Ten users-20%

To place your order visit <http://www.eolss.net/ebooklib/>

(Special discount on the prices of e-Books and Print volumes in celebration of the United Nations DECADE OF EDUCATION FOR SUSTAINABLE DEVELOPMENT, 2005-2014: 10%)

2.2. Fees for permission to reproduce/reprint parts from EOLSS e-books/print versions

Individual chapters or selected parts from the e-books/ their print versions can be reproduced for use in instructional materials in educational/training programs with permission from the publishers. The fees for reproduction are specified below. Upon payment of the fees, electronic files for the permitted material will be provided for reproduction at the users' end with the copyright permission statement.

Pages → Quantity ↓	1-10	10-20	21-30	31-40	41-50	51-60	61-70	71-80
50	€640	€17	€215	€470	€675	€900	€1110	€2294
100	€712	€1020	€350	€630	€862	€1117	€2345	€2550
200	€815	€180	€580	€915	€2190	€2500	€2770	€3020
300	€915	€1345	€810	€2200	€524	€2880	€3200	€3485
400	€1020	€1510	€2040	€486	€854	€262	€630	€960
500	€1122	€672	€269	€772	€185	€647	€1055	€4430
1000	€352	€2042	€783	€412	€932	€4500	€5020	€285

Additional pages above **80** and/or number of copies above **1000**= fee per page/per copy **€0.04**

Fee calculation examples:

(1) Fee for permission to reproduce **90** pages, **50** copies:

Fee for **80** pages, **50** copies from the table above= **€2294**

Fee for additional **10** pages, **50** copies: $0.04 * 50 * 10 =$ **€20**

Total fee for **90** pages, **50** copies= $2294+20=$ **€2314**

(2) Fee for permission to reproduce **17** pages, **3000** copies:

Fee for the first **1000** pages, **17** pages from the table above: **€2042**

Fee for the next **2000** copies **17** pages: 34000 pages= $34000 * 0.04 =$ **€1360**

Total fee for **3000** copies of **17** pages: $2042+1360=$ **€3392**

OUTLINES OF THE COMPONENT ENCYCLOPEDIAS OF THE EOLSS IN TERMS OF E-BOOKS AND THEIR FULL COLOR PRINT VERSIONS

(The bulleted items in the following pages represent Theme/Section/Topic titles. The size of a Theme may vary from about 10 Chapters to about 240 Chapters. The size of an entry (Chapter) may vary from about 5000 words to about 30000 words.)

****Forthcoming**

EARTH AND ATMOSPHERIC SCIENCES

****Environmental Structure and Function: Earth System**

Editors: Nikita Glazovsky, *Institute of Geography, Russian Academy of Sciences, Russia*
Nina Zaitseva, *Department of Earth Sciences, Russian Academy of Sciences, Moscow, Russia*
eISBN:
ISBN:

Environmental Structure and Function: Climate System (Vols.1-2)

Editor: George Vadimovich Gruza, *Institute of Global Climate and Ecology, Russian Academy of Sciences, Russia*
eISBN: 978-1-84826-288-1, 978-1-84826-289-8
ISBN: 978-1-84826-738-1, 978-1-84826-739-8

Natural Disasters (Vols. 1-2)

Editor: Vladimir M. Kotlyakov, *Institute of Geography, Russian Academy of Sciences, Russia*
eISBN: 978-1-84826-309-3, 978-1-84826-310-9
ISBN: 978-1-84826-759-6, 978-1-84826-760-2

Geography (Vols. 1-2)

Editor: Maria Sala, *University of Barcelona, Spain*
eISBN: 978-1-905839-60-5, 978-1-905839-61-2
ISBN: 978-1-84826-960-6, 978-1-84826-961-3

Geology (Vols. 1-5)

Editors: Benedetto De Vivo, *Universita di Napoli "Federico II", Italy*
Bernhard Grasemann, *University of Vienna, Austria*
Kurt Stüwe, *Institut für Geologie und Paläontologie, Universitaet Graz, Austria*
eISBN: 978-1-84826-004-7, 978-1-84826-005-4, 978-1-84826-006-1, 978-1-84826-007-8, 978-1-84826-008-5
ISBN: 978-1-84826-454-0, 978-1-84826-455-7, 978-1-84826-456-4, 978-1-84826-457-1, 978-1-84826-458-8

Geophysics and Geochemistry (Vols. 1-3)

Editor: Jan Lastovicka, *Institute of Atmospheric Physics, Academy of Sciences of the Czech Republic, Czech Republic*
eISBN: 978-1-84826-245-4, 978-1-84826-246-1, 978-1-84826-247-8
ISBN: 978-1-84826-636-0, 978-1-84826-656-8, 978-1-84826-662-9

Oceanography (Vols. 1-3)

Editors: Jacques C.J. Nihoul, *University of Liege, Belgium*
Chen-Tung Arthur Chen, *National Sun Yat-Sen University, Taiwan*
eISBN: 978-1-905839-962-9, 978-1-905839-963-6, 978-1-905839-964-3
ISBN: 978-1-84826-962-0, 978-1-84826-963-7, 978-1-84826-964-4

Geoinformatics (Vols. 1-2)

Editor: Peter M. Atkinson, *University of Southampton, UK*
eISBN: 978-1-905839-87-2, 978-1-905839-86-5
ISBN: 978-1-84826-987-3, 978-1-84826-986-6

Advanced Geographic Information Systems (Vols. 1-2)

Editor: Claudia Maria Bauzer Medeiros, *Universidade Estadual de Campinas (UNICAMP), Brazil*
eISBN: 978-1-905839-91-9, 978-1-905839-92-6
ISBN: 978-1-84826-991-0, 978-1-84826-992-7

****Astronomy and Astrophysics**

Editors: Oddbjørn Engvold, *University of Oslo, Norway*
Rolf Stabell, *University of Oslo, Norway*
Bozena Czerny, *Copernicus Astronomical Center, Bartycycka 18, 00-716 Warsaw, Poland*
John Lattanzio, *Monash University, Victoria Australia*
eISBN:
ISBN:

****Tropical Meteorology**

Editor: Yuqing Wang, *Department of Meteorology and International Pacific Research Center, School of Ocean and Earth Science and Technology University of Hawaii at Manoa*
eISBN:
ISBN:

MATHEMATICAL SCIENCES

Environmetrics

Editors: Abdel H. El-Shaarawi, *National Water research Institute, Burlington Ontario Canada,*
Jana Jureckova *Charles University Sokolovska, Czech Republic*
eISBN: 978-1-84826-102-0
ISBN: 978-1-84826-552-3

Biometrics (Vols. 1-2)

Editors: Susan R. Wilson, *School of Mathematical Sciences, Australian National University, Australia*
Conrad Burden, *The Australian National University, Australia*
eISBN: 978-1-905839-36-0, 978-1-905839-37-7
ISBN: 978-1-84826-936-1, 978-1-84826-937-8

Mathematics: Concepts, and Foundations (Vols. 1-3)

Editor: Huzihiro Araki, *Research Institute of Mathematical Sciences, Kyoto University, Japan*
eISBN: 978-1-84826-130-3, 978-1-84826-131-0, 978-1-84826-132-7
ISBN: 978-1-84826-580-6, 978-1-84826-581-3, 978-1-84826-582-0

Probability and Statistics (Vols. 1-3)

Editor: Reinhard Viertl, *Technische Universität Wien, Austria*
eISBN: 978-1-84826-052-8, 978-1-84826-053-5, 978-1-84826-054-2
ISBN: 978-1-84826-502-8, 978-1-84826-503-5, 978-1-84826-504-2

Mathematical Models of Life Support Systems (Vols. 1-2)

Editors: Valeri I. Agoshkov, *Institute of Numerical Mathematics, Russian Academy of Sciences, Russia*
Jean-Pierre Puel, *Universitete Versailles St. Quentin, Versailles, France*
eISBN: 978-1-84826-128-0, 978-1-84826-129-7
ISBN: 978-1-84826-578-3, 978-1-84826-579-0

Mathematical Models (Vols. 1-3)

Editor: Jerzy A. Filar, *University of South Australia, Australia*
Jacek B. Krawczyk, *Victoria University of Wellington, New Zealand*
eISBN: 978-1-84826-242-3, 978-1-84826-243-0, 978-1-84826-244-7
ISBN: 978-1-84826-695-7, 978-1-84826-696-4, 978-1-84826-697-1

Computational Models (Vols. 1-2)

Editors: Vladimir V. Shaidurov, *Institute of Computational Modeling of the Russian Academy of Sciences, Russia*
Olivier Pironneau, *Universite de Paris 6, UFR France*
eISBN: 978-1-84826-035-1, 978-1-84826-036-8
ISBN: 978-1-84826-485-4, 978-1-84826-486-1

Optimization and Operations Research (Vols. 1-4)

Editor: Ulrich Derigs, *University of Cologne, Germany*
eISBN: 978-1-905839-48-3, 978-1-905839-49-0, 978-1-905839-50-6, 978-1-905839-51-3
ISBN: 978-1-84826-948-4, 978-1-84826-949-1, 978-1-84826-950-7, 978-1-84826-951-4

Systems Science and Cybernetics (Vols. 1-3)

Editor: Francisco Parra-Luna, *Universidad Complutense de Madrid, Spain*
eISBN: 978-1-84826-202-7, 978-1-84826-203-4, 978-1-84826-204-1
ISBN: 978-1-84826-652-0, 978-1-84826-653-7, 978-1-84826-654-4

History of Mathematics

Editors: Vagn Lundsgaard Hansen, *Technical University of Denmark, Denmark*
Jeremy Gray, *Centre for Mathematical Sciences, Open University, UK*
eISBN: 978-1-84826-221-8
ISBN: 978-1-84826-671-1

Mathematical Models in Economics (Vols. 1-2)

Editor: Wei-Bin Zhang, *Ritsumeikan Asia Pacific University, Japan*
eISBN: 978-1-84826-228-7, 978-1-84826-229-4
ISBN: 978-1-84826-678-0, 978-1-84826-679-7

****Mathematical Physiology**

Editor: Andrea de Gaetano, *CNR IASI Laboratorio di Biomatematica, Roma, Italy*
eISBN:
ISBN:

BIOLOGICAL, PHYSIOLOGICAL AND HEALTH SCIENCES

Global Perspectives in Health (Vols. 1-2)

Editor: B. P. Mansourian, *Research Policy & Cooperation, WHO, Switzerland*
eISBN: 978-1-84826-248-5, 978-1-84826-249-2
ISBN: 978-1-84826-698-8, 978-1-84826-699-5

Water and Health (Vols. 1-2)

Editor: W.O.K. Grabow, *University of Pretoria, South Africa*
eISBN: 978-1-84826-182-2, 978-1-84826-183-9
ISBN: 978-1-84826-632-2, 978-1-84826-633-9

Physical (Biological) Anthropology

Editor: P. Rudan, *Institute for Anthropological Research, University of Zagreb, Zagreb, Croatia*
eISBN: 978-1-84826-226-3
ISBN: 978-1-84826-676-6

Psychology (Vols. 1-3)

Editor: Stefano Carta, *University of Cagliari, Italy*
eISBN: 978-1-905839-65-0, 978-1-905839-66-7, 978-1-905839-67-4
ISBN: 978-1-84826-965-1, 978-1-84826-966-8, 978-1-84826-967-5

Genetics and Molecular Biology

Editor: Kohji Hasunuma, *Yokohama City University, Japan*
eISBN: 978-1-84826-123-5
ISBN: 978-1-84826-573-8

Physiology and Maintenance (Vols. 1-5)

Editors: Osmo Otto Päiviö Hänninen and Mustafa Atalay, *University of Kuopio, Finland*

Volume 1: Physiology and Maintenance

General Physiology
eISBN- 978-1-84826-039-9
ISBN- 978-1-84826-489-2

Volume 2: Physiology and Maintenance

Enzymes: The Biological Catalysts of Life Nutrition and Digestion
eISBN- 978-1-84826-040-5
ISBN- 978-1-84826-490-8

Volume 3: Physiology and Maintenance

Renal Excretion, Endocrinology, Respiration
Blood Circulation: Its Dynamics and Physiological Control
eISBN- 978-1-84826-041-2
ISBN- 978-1-84826-491-5

Volume 4: Physiology and Maintenance

Locomotion in Sedentary Societies

eISBN- 978-1-84826-042-9

ISBN- 978-1-84826-492-2

Volume 5: Physiology and Maintenance

Neurophysiology

Plant Physiology and Environment: A Synopsis

eISBN- 978-1-84826-043-6

ISBN- 978-1-84826-493-9

Medical and Health Sciences (Vols. 1-14)

Editors: Osmo Otto Päiviö Hänninen and Mustafa Atalay, *University of Kuopio, Finland*

B.P. Mansourian, *WHO (ret.) Switzerland*

A. Wojtczak, *Institute for International Medical Education, NY, USA*

S.M. Mahfouz, *Cairo University, Egypt* Members

Harry Majewski, *RMIT University, Victoria, Australia*

Elaine Elisabethsky, *Universidade Federal do Rio Grande do Sul, Brazil*

Nina L. Etkin, *University of Hawai'i, USA*

eISBN: 978-1-84826-380-2, 978-1-84826-381-9, 978-1-84826-382-6, 978-1-84826-383-3, 978-1-84826-384-0, 978-1-84826-385-7, 978-1-84826-386-4, 978-1-84826-387-1, 978-1-84826-388-8, 978-1-84826-389-5, 978-1-84826-390-1, 978-1-84826-391-8, 978-1-84826-392-5, 978-1-84826-393-2

ISBN: 978-1-84826-830-2, 978-1-84826-831-9, 978-1-84826-832-6, 978-1-84826-833-3, 978-1-84826-834-0, 978-1-84826-835-7, 978-1-84826-836-4, 978-1-84826-837-1, 978-1-84826-838-8, 978-1-84826-839-5, 978-1-84826-840-1, 978-1-84826-841-8, 978-1-84826-842-5, 978-1-84826-843-2

Biological Science Fundamentals and Systematics (Vols. 1-4)

Editors: Alessandro Minelli, *University of Padova, Italy*

Giancarlo Contrafatto, *University of Natal, South Africa*

eISBN: 978-1-84826-304-8, 978-1-84826-305-5, 978-1-84826-306-2, 978-1-84826-189-1

ISBN: 978-1-84826-754-1, 978-1-84826-755-8, 978-1-84826-756-5, 978-1-84826-639-1

Extremophiles (Vols. 1-3) (Life under extreme environmental conditions)

Editors: Charles Gerday, *University of Liege, Belgium*,

Nicolas Glansdorff, *Vrije Universiteit Brussel, Belgium*

eISBN: 978-1-905839-93-3, 978-1-905839-94-0, 978-1-905839-95-7

ISBN: 978-1-84826-993-4, 978-1-84826-994-1, 978-1-84826-995-8

Ethnopharmacology (Vols. 1-2)

Editors: Elaine Elisabethsky, *Universidade Federal do Rio Grande do Sul, Brazil*

Nina L. Etkin, *University of Hawai'i, USA*

eISBN: 978-1-905839-96-4, 978-1-905839-97-1

ISBN: 978-1-84826-996-5, 978-1-84826-997-2

Pharmacology

Editor: Harry Majewski, *RMIT University, Victoria, Australia*

eISBN: 978-1-84826-180-8, 978-1-84826-254-6

ISBN: 978-1-84826-630-8, 978-1-84826-704-6

Fundamentals of Biochemistry, Cell Biology and Biophysics

Editors: Ralph Kirby, *National Yang-Ming University, Taiwan*

T.G.Downing, *University of Port Elizabeth, South Africa*

Mohamed I.El Gohary, *Al Azhar University, Cairo, Egypt*

eISBN: 978-1-84826-407-6, 978-1-84826-408-3

ISBN: 978-1-84826-857-9, 978-1-84826-858-6

****Phytochemistry and Pharmacognosy**

Editors: John M. Pezzuto, *University of Hawaii, Hilo, 96720, Hawaii*

Massuo Jorge Kato, *University of Sao Paulo, Sao-Paulo, 05508-000, Brasil*

eISBN:

ISBN:

****Reproduction and Development Biology**

Editor: Andre Pires da Silva, *Department of Biology, The University of Texas at Arlington, USA*

eISBN:

ISBN:

BIOTECHNOLOGY

Editors: Horst W. Doelle, *MIRCEN-Biotechnology, Australia*

Edgar J. DaSilva, *Section of Life Sciences, Division of Basic and Engineering Sciences, UNESCO, France*
(The bulleted items in the following represent Topic titles. The total number of chapters is 240. The size of an entry (Chapter) may vary from about 5000 words to about 30000 words.)

Volume 1: Fundamentals in Biotechnology

eISBN 978-1-84826-255-3
ISBN 978-1-84826-705-3

Volume 2: Methods in Biotechnology

eISBN 978-1-84826-256-0
ISBN 978-1-84826-706-0

Volume 3: Methods in Gene Engineering

eISBN 978-1-84826-257-7
ISBN 978-1-84826-707-7

Volume 4: Bioprocess Engineering - Bioprocess Analysis

eISBN 978-1-84826-258-4
ISBN 978-1-84826-708-4

Volume 5: Industrial Biotechnology - Part I

eISBN 978-1-84826-259-1
ISBN 978-1-84826-709-1

Volume 6: Industrial Biotechnology - Part II

eISBN 978-1-84826-260-7
ISBN 978-1-84826-710-7

Volume 7: Special Processes for Products, Fuel and Energy

eISBN 978-1-84826-261-4
ISBN 978-1-84826-711-4

Volume 8: Agricultural Biotechnology

eISBN 978-1-84826-262-1
ISBN 978-1-84826-712-1

Volume 9: Marine Biotechnology

eISBN 978-1-84826-263-8
ISBN 978-1-84826-713-8

Volume 10: Environmental Biotechnology - Socio-Economic Strategies for Sustainability

eISBN 978-1-84826-264-5
ISBN 978-1-84826-714-5

Volume 11: Medical Biotechnology - Fundamentals and Modern Development – Part I

eISBN 978-1-84826-265-2
ISBN 978-1-84826-715-2

Volume 12: Medical Biotechnology - Fundamentals and Modern Development – Part II

eISBN 978-1-84826-266-9
ISBN 978-1-84826-716-9

Volume 13: Social, Educational and Political Aspects of Biotechnology - An Overview and an Appraisal of Biotechnology in a Changing World – Part I

eISBN 978-1-84826-267-6
ISBN 978-1-84826-717-6

Volume 14: Social, Educational and Political Aspects of Biotechnology - An Overview and an Appraisal of Biotechnology in a Changing World – Part II

eISBN 978-1-84826-268-3
ISBN 978-1-84826-718-3

Volume 15: The Role of microbial resources centers and UNESCO in the Development of Biotechnology

eISBN 978-1-84826-269-0
ISBN 978-1-84826-719-0

TROPICAL BIOLOGY AND CONSERVATION MANAGEMENT

International Commission on Tropical Biology and Conservation Management

President:

Kleber Del Claro, *Universidade Federal de Uberlândia, Uberlândia, MG, Brazil*

Vice Presidents:

Paulo S. Oliveira, *Universidade Estadual de Campinas, Brazil*

Victor Rico-Gray, *Instituto de Ecología, A.C., México*

Commissioners:

Ana Angélica Almeida Barbosa, *Universidade Federal de Uberlândia, Brazil*

Arturo Bonet, *Instituto de Ecología, A.C., Apartado, Veracruz, México.*

Fábio Rúbio Scarano, *Universidade Federal do Rio de Janeiro, Instituto de Biologia, Brazil*

Francisco José Morales Garzón, *International Center for Tropical Agriculture (CIAT), Cali, Colombia*

Marcus Vinicius Sampaio, *Universidade Federal de Uberlândia, Brazil*

Molly R. Morris, *Ohio University, USA*

Nelson Ramírez, *Universidad Central de Venezuela, Venezuela*

Oswaldo Marcal Júnior, *Universidade Federal de Uberlândia, Brazil*

Regina Helena Ferraz Macedo, *Universidade de Brasília, Brazil*

Robert J. Marquis, *University of Missouri, USA*

Lisias Coelho- *Federal University of Uberlândia – Agronomy Institute Brazil*

Rogério Parentoni Martins, *Universidade Federal de Minas Gerais, Brazil*

Silvio Carlos Rodrigues, *Universidade Federal de Uberlândia, Brazil*

Ulrich Lüttge, *University of: Technische Universität Darmstadt, Denmark*

(The bulleted items in the following represent Topic titles. The total number of chapters is 240. The size of an entry (Chapter) may vary from about 5000 words to about 30000 words.)

Volume 1: Natural History of Tropical Plants

eISBN 978-1-84826-272-0

ISBN 978-1-84826-722-0

Volume 2: Human Impact on Tropical Ecosystems

eISBN 978-1-84826-273-7

ISBN 978-1-84826-723-7

Volume 3: Agriculture

eISBN 978-1-84826-274-4

ISBN 978-1-84826-724-4

Volume 4: Botany

eISBN 978-1-84826-275-1

ISBN 978-1-84826-725-1

Volume 5: Ecology

eISBN 978-1-84826-276-8

ISBN 978-1-84826-726-8

Volume 6: Phytopathology and Entomology-I

eISBN 978-1-84826-277-5

ISBN 978-1-84826-727-5

Volume 7: Phytopathology and Entomology-II

eISBN 978-1-84826-278-2

ISBN 978-1-84826-728-2

Volume 8: Zoology

eISBN 978-1-84826-279-9

ISBN 978-1-84826-729-9

Volume 9: Desert Ecosystems

eISBN 978-1-84826-280-5

ISBN 978-1-84826-730-5

Volume 10: Savannah Ecosystems

eISBN 978-1-84826-281-2

ISBN 978-1-84826-731-2

Volume 11: Case Studies

eISBN 978-1-84826-282-9

ISBN 978-1-84826-732-9

SOCIAL SCIENCES AND HUMANITIES

Peace, Literature, and Art (Vols. 1-2)

Editor: Ada Aharoni, *Technion - Israel Institute of Technology, and Communications Commission of IPRA, Israel*

eISBN: 978-1-84826-076-4, 978-1-84826-077-1

ISBN: 978-1-84826-526-4, 978-1-84826-527-1

Peace Studies, Public Policy and Global Security (Vols. 1-11)

Editors: Ursula Oswald Spring, *National Autonomous University of Mexico-UNAM/CRIM*

Ada Aharoni, *Technion - Israel Institute of Technology, and Communications Commission of IPRA, Israel,*

Ralph V. Summy, *The University of Queensland, Australia*

Robert Charles Elliot, *Sunshine Coast University, Australia*

eISBN: 978-1-84826-344-4, 978-1-84826-345-1, 978-1-84826-346-8, 978-1-84826-347-5, 978-1-84826-348-2, 978-1-84826-349-9, 978-1-84826-350-5, 978-1-84826-351-2, 978-1-84826-352-9, 978-1-84826-353-6, 978-1-84826-354-3

ISBN: 978-1-84826-794-7, 978-1-84826-795-4, 978-1-84826-796-1, 978-1-84826-797-8, 978-1-84826-798-5, 978-1-84826-799-2, 978-1-84826-800-5, 978-1-84826-801-2, 978-1-84826-802-9, 978-1-84826-803-6, 978-1-84826-804-3

Global Security and International Political Economy (Vols. 1-6)

Editors: Pinar Bilgin, *Fellow, Woodrow Wilson International Center for Scholars, Washington, DC USA*

Paul D. Williams, *George Washington University, USA*

Masashi Sekiguchi, *Tokyo Metropolitan University, Japan*

James K. Galbraith, *Lyndon B. Johnson School of Public Affairs, The University of Texas at Austin, Jerome Levy Economics Institute and Chair of Economics Allied for Arms Reduction, USA*

Jurgen Brauer, *Augusta State University, USA*

Lucy L. Webster, *Economists Allied for Arms Reduction (ECAAR), USA*

Sohail Tahir Inayatullah, *University of the Sunshine Coast, Maroochydore; Tamkang University, Taiwan; and, Queensland University of Technology, Australia*

Jarrod Wiener, *University of Kent at Canterbury, UK*

Robert A. Schrire, *University of Cape Town, South Africa*

Irene Lyons Murphy, *Consultant, USA*

eISBN: 978-1-84826-338-3, 978-1-84826-339-0, 978-1-84826-340-6, 978-1-84826-341-3, 978-1-84826-342-0, 978-1-84826-343-7

ISBN: 978-1-84826-788-6, 978-1-84826-789-3, 978-1-84826-790-9, 978-1-84826-791-6, 978-1-84826-792-3, 978-1-84826-793-0

Linguistic Anthropology

Editor: Anita Sujoldzic, *University of Zagreb, Zagreb, Croatia*

eISBN: 978-1-84826-225-6

ISBN: 978-1-84826-675-9

Archaeology (Vols. 1-2)

Editor: Donald L. Hardesty, *University of Nevada, Reno, USA*

eISBN: 978-1-84826-002-3, 978-1-84826-003-0

ISBN: 978-1-84826-452-6, 978-1-84826-453-3

Culture, Civilization and Human Society (Vols. 1-2)

Editors: Herbert Arlt, *Research Institute for Austrian and International Literature and Cultural Studies (INST), Austria,*

Donald G. Daviau, *University of California, Riverside CA, USA*

eISBN: 978-1-84826-190-7, 978-1-84826-191-4

ISBN: 978-1-84826-640-7, 978-1-84826-641-4

Literature and the Fine Arts

Editors: Herbert Arlt, *Research Institute for Austrian and International Literature and Cultural Studies (INST), Austria,*

Donald G. Daviau, *University of California, Riverside CA, USA*

Peter Horn, *University of Cape Town, Cape Town, South Africa*

eISBN: 978-1-84826-122-8

ISBN: 978-1-84826-572-1

Philosophy and World Problems (Vols. 1-3)

Editor: John McMurtry, *University of Guelph, Canada*

eISBN: 978-1-84826-174-7, 978-1-84826-401-4, 978-1-84826-402-1

ISBN: 978-1-84826-624-7, 978-1-84826-851-7, 978-1-84826-852-4

Fundamental Economics (Vols. 1-2)

Editor: Mukul Majumdar, *Cornell University, USA*

Ian Wills, *Monash University, Australia*

Pasquale Michael Sgro, *Deakin University, Australia*

John M. Gowdy, *Rensselaer Polytechnic Institute, USA*

eISBN: 978-1-84826-315-4, 978-1-84826-765-7

ISBN: 978-1-84826-316-1, 978-1-84826-766-4

Law

Editors: Aaron Schwabach, *Thomas Jefferson School of Law, USA,*

Arthur J. Cockfield *Queen's University, Canada*

eISBN: 978-1-905839-68-1

ISBN: 978-1-848269-68-2

Government and Politics (Vols. 1-2)

Editor: Masashi Sekiguchi, *Tokyo Metropolitan University, Japan*

eISBN: 978-1-905839-69-8, 978-1-905839-70-4

ISBN: 978-1-84826-969-9, 978-1-84826-970-5

Journalism and Mass Communication (Vols. 1-2)

Editor: Rashmi Luthra, *University of Michigan, USA*

eISBN: 978-1-905839-71-1, 978-1-905839-72-8

ISBN: 978-1-84826-971-2, 978-1-84826-972-9

Unity of Knowledge (in Transdisciplinary Research for Sustainability) (Vols. 1-2)

Editor: Gertrude Hirsch Hadorn, *Federal Institute of Technology, ETH Zurich Zentrum, Switzerland*

eISBN: 978-1-905839-82-7, 978-1-905839-83-4

ISBN: 978-1-84826-982-8, 978-1-84826-983-5

Comparative Literature: Sharing Knowledges for Preserving Cultural Diversity (Vols. 1-3)

International Commission:

President: Lisa Block de Behar, *University of Republica, Montevideo, Uruguay* (Former President: Tania Franco Carvalhal, *Federal University of Rio Grande do Sul, Porto Alegre, Brazil* who has passed away in 2006)

Vice Presidents: Paola Mildonian, *Universita Ca Foscari di Venezia, Venezia, Italy*

Jean-Michel Djian, *University of Paris 8, France*

Djelal Kadir, *Pennsylvania State University, University Park, PA, USA*

Alfons Knauth, *Ruhr University of Bochum, Germany*

Dolores Romero Lopez, *Universidad of Complutense de Madrid, Spain*

Márcio Seligmann Silva, *University of Campinas, Sao Paulo, Brazil*

eISBN: 978-1-84826-175-4, 978-1-84826-394-9, 978-1-84826-395-6

ISBN: 978-1-84826-625-4, 978-1-84826-844-9, 978-1-84826-845-6

History and Philosophy of Science and Technology (Vols. 1-4)

Editors: Pablo Lorenzano, *Universidad Nacional de Quilmes, Argentina*

Eduardo Ortiz, *Imperial College, London,, UK*

Hans-Jorg Rheinberger, *Max Planck Institute fur Wissenschaftsgeschichte, Berlin, 14195, Germany*

Carlos Delfino Galles, *FCEIA-UNR, Pellegrino 250, Rosario 2000, Argentina*

eISBN: 978-1-84826-323-9, 978-1-84826-324-6, 978-1-84826-325-3, 978-1-84826-326-0

ISBN: 978-1-84826-773-2, 978-1-84826-774-9, 978-1-84826-775-6, 978-1-84826-776-3

Linguistics

Editor: Vesna Muhvic-Dimanovski, *University of Zagreb,*

Lelija Socanac, *Department of Language Research of the Croatian Academy of Sciences*

eISBN: 978-1-84826-287-4

ISBN: 978-1-84826-737-4

Religion, Culture, and Sustainable Development (Vols. 1-3)

Editors: Roberto Blancarte Pimentel, *El Colegio de Mexico, México*

Robert Charles Elliot, *Sunshine Coast University, Australia*

Robert Holton, *Trinity College, University of Dublin, Dublin, Ireland*

eISBN: 978-1-84826-328-4, 978-1-84826-329-1, 978-1-84826-330-7

ISBN: 978-1-84826-778-7, 978-1-84826-779-4, 978-1-84826-780-0

World System History

Editors: George Modelski, *University of Washington, Settle, Washington WA, USA*

Robert A. Denemark, *University of Delaware, USA*

eISBN: 978-1-84826-218-8

ISBN: 978-1-84826-668-1

World Civilizations

Editor: Robert Holton, *Trinity College, University of Dublin, Dublin, Ireland*
eISBN: 978-1-84826-213-3
ISBN: 978-1-84826-663-6

Historical Developments and Theoretical Approaches in Sociology (Vols. 1-2)

Editor: Charles Crothers, *Auckland University of Technology, New Zealand*
eISBN: 978-1-84826-331-4, 978-1-84826-332-1
ISBN: 978-1-84826-781-7, 978-1-84826-782-4

Nonviolent Alternatives for Social Change

Editor: Ralph V. Summy, *The University of Queensland, Australia*
eISBN: 978-1-84826-220-1
ISBN: 978-1-84826-670-4

Demography (Vols. 1-2)

Editor: Zeng Yi, *Duke University, Durham, USA; Peking University, China*
eISBN: 978-1-84826-307-9, 978-1-84826-308-6
ISBN: 978-1-84826-757-2, 978-1-84826-758-9

PHYSICAL SCIENCES, ENGINEERING AND TECHNOLOGY RESOURCES

Development of Physics

Editor: Gyo Takeda, *University of Tokyo and Tohoku University, Japan*
eISBN: 978-1-84826-201-0
ISBN: 978-1-84826-651-3

Fundamentals of Physics (Vols. 1-3)

Editor: José Luis Morán López, *Instituto Potosino de Investigación Científica y Tecnológica, Mexico*
eISBN: 978-1-905839-52-0, 978-1-905839-53-7, 978-1-84826-223-2
ISBN: 978-1-84826-952-1, 978-1-84826-953-8, 978-1-84826-673-5

Physical Methods, Instruments and Measurements (Vols. 1-4)

Editor: Yuri Mikhailovitch Tsipenyuk, *P.L. Kapitza Institute for Physical Problems (RAS), Russia*
eISBN: 978-1-905839-54-4, 978-1-905839-55-1, 978-1-905839-56-8, 978-1-905839-57-5
ISBN: 978-1-84826-954-5, 978-1-84826-955-2, 978-1-84826-956-9, 978-1-84826-957-6

Mechanical Engineering, Energy Systems and Sustainable Development (Vols. 1-5)

Editors: Konstantin V. Frolov, *Mechanical Engineering Research Institute, Russian Academy of Sciences, Russia*
R.A. Chaplin, *University of New Brunswick, Canada*
Christos Frangopoulos, *National Technical University of Athens, Greece*
eISBN: 978-1-84826-294-2, 978-1-84826-295-9, 978-1-84826-296-6, 978-1-84826-297-3, 978-1-84826-298-0
ISBN: 978-1-84826-744-2, 978-1-84826-745-9, 978-1-84826-746-6, 978-1-84826-747-3, 978-1-84826-748-0

Materials Science and Engineering (Vols. 1-3)

Editor: Rees D. Rawlings, *Imperial College of Science, Technology and Medicine, UK*
eISBN: 978-1-84826-032-0, 978-1-84826-033-7, 978-1-84826-034-4
ISBN: 978-1-84826-482-3, 978-1-84826-483-0, 978-1-84826-484-7

Civil Engineering (Vols. 1-2)

Editors: Kiyoshi Horikawa, *Musashi Institute of Technology, Japan*
Qizhong Guo, *Rutgers, The State University of New Jersey, USA*
eISBN: 978-1-905839-73-5, 978-1-905839-74-2
ISBN: 978-1-84826-973-6, 978-1-84826-974-3

Electrical Engineering (Vols. 1-3)

Editor: Kit Po Wong, *Hong Kong Polytechnic University, Hong Kong*
eISBN: 978-1-905839-77-3, 978-1-905839-78-0, 978-1-905839-79-7
ISBN: 978-1-84826-977-4, 978-1-84826-978-1, 978-1-84826-979-8

Transportation Engineering and Planning (Vols. 1-2)

Editor: Tschangho John Kim, *University of Illinois at Urbana-Champaign, USA*
eISBN: 978-1-905839-80-3, 978-1-905839-81-0
ISBN: 978-1-84826-980-4, 978-1-84826-981-1

Telecommunication Systems and Technologies (Vols. 1-2)

Editor: Paolo Bellavista, *DEIS-LIA, Universita degli Studi di Bologna, Italy*
eISBN: 978-1-84826-000-9, 978-1-84826-001-6
ISBN: 978-1-84826-450-2, 978-1-84826-451-9

****Structural Engineering and Structural Mechanics**

Editor: Xila S. Liu, *Tsinghua University, Beijing, CHINA*
eISBN:
ISBN:

****Structural Engineering and Geomechanics**

Editor: Sashi K. Kunnath, *University of California, DAVIS, USA*
eISBN:
ISBN:

****Crystallography**

Editors: John R. Helliwell, *The University of Manchester, Manchester, UK*
Santiago Gracia Granda, *University of Oviedo, Spain*
eISBN:
ISBN:

****Nanoscience and Nanotechnologies**

Editors: Valeri Nikolayevich Harkin, *International Commission, Moscow, 115419, Russia*
Chunli Bai, *Institute of Chemistry, Chinese Academy of Sciences, Beijing, 100864, China*
Sae-Chul Kim, *International Union of Pure and Applied Chemistry, South Korea*
eISBN:
ISBN:

Continuum Mechanics (Vols. 1-2)

Editors: José Merodio, *Universidad Politécnica de Madrid, Madrid, Spain*
Giuseppe Saccomandi, *Sezione di Ingegneria Industriale, Dipartimento di Ingegneria dell'Innovazione, niversita degli Studi di Lecce, Via per Monteroni, 73100 Lecce, Italy*
eISBN: 978-1-84826-372-7, 978-1-84826-373-4, 978-1-84826-374-1
ISBN: 978-1-84826-822-7, 978-1-84826-823-4, 978-1-84826-824-1

****Biomechanics**

Editors: Manuel Doblare, *Universidad de Zaragoza, Spain*
Jose Merodio, *Universidad Politécnica de Madrid, Madrid, Spain*
José Ma Goicolea Ruigómez, *Ciudad Universitaria, Madrid, Spain*
eISBN:
ISBN:

****Pressure Vessels and Piping Systems**

Editors: Yong W.Kwon, *Naval Postgraduate School, Monterey, CA 93943 USA*
Poh-Sang Lam, *Savannah River National Laboratory, Aiken, South Carolina 29808, USA*
eISBN:
ISBN:

****Welding Engineering and Technology**

Editors: Slobodan Kralj, *Faculty of Mechanical Engineering and Naval Architecture, Zagreb, Croatia*
Branko Bauer, *Dept. of Welded Structures, Zagreb, Zagreb, 10000, Croatia*
eISBN:
ISBN:

****Ships and Offshore Structures**

Editors: Jeom Kee Paik, *Pusan National University, Geumjeong-Gu, Busan 609-735, Korea*
Ge(George) Wang, *American Bureau of Shipping Technology,, USA*
International Editorial Advisory Board (IEAB): Weicheng Cui, *China*; Paul A. Frieze, *UK*; Yoshiaki Kodama, *Japan*; David Molyneux, *Canada*; Anil K. Thayamballi, *USA*; P.A. Wilson, *UK*
eISBN:
ISBN:

****Cold Regions Science and Marine Technology**

Editor: Hayley Shen, *Clarkson University, Potsdam, USA*
eISBN:
ISBN:

****Experimental Mechanics**

Editor: José Luiz de França Freire, *Endereço profissional Pontifícia Universidade Católica do Rio de Janeiro, Brasil.*
eISBN:
ISBN:

CONTROL SYSTEMS, ROBOTICS, AND AUTOMATION

(Vols. 1-22)

Editor: Heinz Unbehauen, *Ruhr-Universität Bochum, Germany*
(The bulleted items in the following represent Topic titles. The total number of chapters is 240. The size of an entry (Chapter) may vary from about 5000 words to about 30000 words.)

Volume 1: System Analysis and Control: Classical Approaches I

- *Control Systems, Robotics and Automation-Introduction and Overview*
- *Elements of Control Systems*
- *Stability Concepts*
eISBN 978-1-84826-140-2
ISBN 978-1-84826-590-5

Volume 2: System Analysis and Control: Classical Approaches II

- *Classical Design Methods for Continuous LTI-Systems*
- *Digital Control Systems*
eISBN 978-1-84826-141-9
ISBN 978-1-84826-591-2

Volume 3: System Analysis and Control: Classical Approaches III

- *Design of State Space Controllers (Pole Placement) for SISO Systems*
- *Basic Nonlinear Control Systems*
eISBN 978-1-84826-142-6
ISBN 978-1-84826-592-9

Volume 4: Modeling and System Identification I

- *Modeling and Simulation of Dynamic Systems*
eISBN 978-1-84826-143-3
ISBN 978-1-84826-593-6

Volume 5: Modeling and System Identification II

- *Frequency Domain System Identification*
- *Identification of Linear Systems in Time Domain*
eISBN 978-1-84826-144-0
ISBN 978-1-84826-594-3

Volume 6: Modeling and System Identification III

- *Identification of Nonlinear Systems*
- *Bound-based Identification*
- *Practical Issues of System Identification*
eISBN 978-1-84826-145-7
ISBN 978-1-84826-595-0

Volume 7: Advanced Control Systems I

- *Control of Linear Multivariable Systems-1*
eISBN 978-1-84826-146-4
ISBN 978-1-84826-596-7

Volume 8: Advanced Control Systems II

- *Control of Linear Multivariable Systems-2*
eISBN 978-1-84826-147-1
ISBN 978-1-84826-597-4

Volume 9: Advanced Control Systems III

- *Robust Control*
eISBN 978-1-84826-148-8
ISBN 978-1-84826-598-1

Volume 10: Advanced Control Systems IV

- *Adaptive Control*
eISBN 978-1-84826-149-5

ISBN 978-1-84826-599-8

Volume 11: Advanced Control Systems V

- *Model-based Predictive Control*
- *Control of Large-Scale Systems*
- *Control of Stochastic Systems*

eISBN 978-1-84826-150-1

ISBN 978-1-84826-600-1

Volume 12: Nonlinear, Distributed, and Time Delay Systems I

- *Control of Nonlinear Systems*

eISBN 978-1-84826-151-8

ISBN 978-1-84826-601-8

Volume 13: Nonlinear, Distributed, and Time Delay Systems II

- *Control of Chaos and Bifurcations*

eISBN 978-1-84826-152-5

ISBN 978-1-84826-602-5

Volume 14: Nonlinear, Distributed, and Time Delay Systems III

- *Distributed Parameter Systems: An Overview*
- *Control of 2-D Systems*

eISBN 978-1-84826-153-2

ISBN 978-1-84826-603-2

Volume 15: Discrete Event and Hybrid Control Systems

- *Discrete Event Systems*
- *Hybrid Control Systems*

eISBN 978-1-84826-154-9

ISBN 978-1-84826-604-9

Volume 16: Fault Diagnosis and Fault-tolerant Control

eISBN 978-1-84826-155-6

ISBN 978-1-84826-605-6

Volume 17: Fuzzy and Intelligent Control Systems

- *Fuzzy Control Systems*
- *Neural Control Systems*
- *Expert Control Systems*
- *Genetic Algorithms in Control Systems Engineering*

eISBN 978-1-84826-156-3

ISBN 978-1-84826-606-3

Volume 18: Industrial Applications of Control Systems I

- *Architectures and Methods for Computer-based Automation*
- *Supervisory Distributed Computer Control Systems*
- *Automation and Control of Thermal Processes*
- *Automation and Control of Electrical Power Generation and Transmission Systems*

eISBN 978-1-84826-157-0

ISBN 978-1-84826-607-0

Volume 19: Industrial Applications of Control Systems II

- *Automation and Control in Process Industries*
- *Automation and Control in Production Processes*

eISBN 978-1-84826-158-7

ISBN 978-1-84826-608-7

Volume 20: Industrial Applications of Control Systems III

- *Automation and Control in Traffic Systems*

eISBN 978-1-84826-159-4

ISBN 978-1-84826-609-4

Volume 21: Elements of Automation and Control

eISBN 978-1-84826-160-0

ISBN 978-1-84826-610-0

Volume 22: Robotics

eISBN 978-1-84826-161-7

ISBN 978-1-84826-611-7

CHEMICAL SCIENCES, ENGINEERING AND TECHNOLOGY RESOURCES

Fundamentals of Chemistry (Vols. 1-2)

Editor: Sergio Carra, *Politecnico di Milano, Italy*
eISBN: 978-1-905839-58-2, 978-1-905839-59-9
ISBN: 978-1-84826-958-3, 978-1-84826-959-0

Environmental and Ecological Chemistry (Vols. 1-3)

Editor: Aleksandar Sabljic, *Rudjer Boskovic Institute, Croatia*
eISBN: 978-1-84826-186-0, 978-1-84826-206-5, 978-1-84826-212-6
ISBN: 978-1-84826-692-6, 978-1-84826-693-3, 978-1-84826-694-0

Chemical Engineering and Chemical Process Technology (Vols. 1-5)

Editors: Ryszard Pohorecki, *Warsaw University of Technology*,
John Bridgwater, *University of Cambridge*,
Rafiqul GANI, *Technical University of Denmark*
eISBN: 978-1-84826-396-3, 978-1-84826-397-0, 978-1-84826-398-7, 978-1-84826-399-4, 978-1-84826-400-7
ISBN: 978-1-84826-846-3, 978-1-84826-847-0, 978-1-84826-848-7, 978-1-84826-849-4, 978-1-84826-850-0

Chemical Ecology

Editor: Jorg D. Hardege, *University of Hull, UK*
eISBN: 978-1-84826-179-2
ISBN: 978-1-84826-629-2

Inorganic and Bio-inorganic Chemistry (Vols. 1-2)

Editor: Ivano Bertini, *University of Florence, Florence, Italy*
eISBN: 978-1-84826-214-0, 978-1-84826-215-7
ISBN: 978-1-84826-664-3, 978-1-84826-665-0

Organic and Bio-molecular Chemistry (Vols. 1-2)

Editor: Francesco Nicotra, *University of Milano Bicocca, Italy*
eISBN: 978-1-905839-98-8, 978-1-905839-99-5
ISBN: 978-1-84826-998-9, 978-1-84826-999-6

Radiochemistry and Nuclear Chemistry (Vols. 1-2)

Editor: Sándor Nagy, *Eotvos Lorand University, Hungary*
eISBN: 978-1-84826-126-6, 978-1-84826-127-3
ISBN: 978-1-84826-576-9, 978-1-84826-577-6

**Electrochemistry

Editors: Juan M. Feliu-Martinez, *Universidad de Alicante, Departamento de Química Física, Spain*
Victor Climent Payá, *Universidad de Alicante, Departamento de Química Física, Spain*
eISBN:
ISBN:

**Catalysis

Editor: Gabriele Centi, *Universita di Messina, Salita Sperone, Messina, Italy*.
eISBN:
ISBN:

Rheology (Vols. 1-2)

Editor: Crispulo Gallegos, *Universidad de Huelva, Spain*
eISBN: 978-1-84826-319-2, 978-1-84826-320-8
ISBN: 978-1-84826-765-9, 978-1-84826-770-1

**Phytochemistry and Pharmacognosy

Editors: John M. Pezzuto, *University of Hawaii at Hilo, Hawaii, USA*
Massuo Jorge Kato, *Instituto de Química USP, Av. Prof. Lineu Prestes, São Paulo, Brasil*
eISBN:
ISBN:

WATER SCIENCES, ENGINEERING AND TECHNOLOGY RESOURCES

The Hydrological Cycle (Vols. 1-4)

Editor: Igor Alekseevich Shiklomanov, *State Hydrological Institute (SHI), Russia*
eISBN: 978-1-84826-024-5, 978-1-84826-025-2, 978-1-84826-026-9, 978-1-84826-193-8
ISBN: 978-1-84826-474-8, 978-1-84826-475-5, 978-1-84826-476-2, 978-1-84826-643-8

Types and Properties of Water (Vols. 1-2)

Editor: Martin Gaikovich Khublaryan, *Water Problems Institute, Russian Academy of Science, Russia*
eISBN: 978-1-90583-922-3, 978-1-90583-923-0
ISBN: 978-1-84826-922-4, 978-1-84826-923-1

Fresh Surface Water (Vols. 1-3)

Editor: James C.I. Dooge, *University College Dublin, Ireland*
eISBN: 978-1-84826-011-5, 978-1-84826-012-2, 978-1-84826-013-9
ISBN: 978-1-84826-461-8, 978-1-84826-462-5, 978-1-84826-463-2

Groundwater (Vols. 1-3)

Editors: Luis Silveira, Eduardo J. Usunoff, *Uruguay Instituto de Hidrologia de Llanuras, Argentina*
eISBN: 978-1-84826-027-6, 978-1-84826-028-3, 978-1-84826-029-0
ISBN: 978-1-84826-477-9, 978-1-84826-478-6, 978-1-84826-479-3

Water Storage, Transport, and Distribution (Vols. 1-2)

Editor: Yutaka Takahasi, *University of Tokyo, Japan*
eISBN: 978-1-84826-176-1
ISBN: 978-1-84826-626-1

Wastewater Recycling, Reuse, and Reclamation (Vols. 1-2)

Editor: Saravanamuthu (Vigi) Vigneswaran, *University of Technology, Sydney, Australia*
eISBN: 978-1-90583-924-7, 978-1-90583-925-4
ISBN: 978-1-84826-924-8, 978-1-84826-925-5

Hydraulic Structures, Equipment and Water Data Acquisition Systems (Vols. 1-4)

Editors: Jan Malan Jordaan, *University of Pretoria, South Africa*
Alexander Bell, *Bell & Associates, South Africa*
eISBN: 978-1-84826-049-8, 978-1-84826-050-4, 978-1-84826-051-1, 978-1-84826-192-1
ISBN: 978-1-84826-499-1, 978-1-84826-500-4, 978-1-84826-501-1, 978-1-84826-642-1

Water Resources Management (Vols. 1-2)

Editors: Hubert H.G. Savenije and Arjen Y. Hoekstra, *International Institute for Infrastructural, Hydraulic and Environmental Engineering (IHE - Delft), The Netherlands*
eISBN: 978-1-84826-177-8, 978-1-84826-224-9
ISBN: 978-1-84826-627-8, 978-1-84826-674-2

Water Quality and Standards (Vols. 1-2)

Editors: Shoji Kubota, *Kyushyu University, Japan*
Yoshiteru Tsuchiya, *Kogakuin University, Tokyo, Japan*
eISBN: 978-1-84826-030-6, 978-1-84826-031-3
ISBN: 978-1-84826-480-9, 978-1-84826-481-6

Environmental and Health Aspects of Water Treatment and Supply

Editors: Shoji Kubota, *Kyushyu University, Japan*
Yasumoto Magara, *Hokkaido University, Japan*
eISBN: 978-1-84826-178-5
ISBN: 978-1-84826-628-5

Water-Related Education, Training and Technology Transfer

Editor: Andre van der Beken, *Vrije Universiteit Brussel (VUB), Belgium*
eISBN: 978-1-84826-015-3
ISBN: 978-1-84826-465-6

Water Interactions with Energy, Environment and Food & Agriculture (Vols. 1-2)

Editor: Maria Concepcion Donoso, *Water Center for the Humid Tropics of Latin America and the Caribbean*

(CATHALAC), Panama

eISBN: 978-1-84826-172-3, 978-1-84826-196-9

ISBN: 978-1-84826-622-3, 978-1-84826-646-9

Water and Development (Vols. 1-2)

Editor: Catherine M. Marquette, *Christian Michelsen Institute, Development Studies and Human Rights, Norway*

eISBN: 978-1-84826-173-0, 978-1-84826-197-6

ISBN: 978-1-84826-623-0, 978-1-84826-647-6

Future Challenges of Providing High-Quality Water (Vols. 1-2)

Editors: Jo-Ansie van Wyk, *University of South Africa (UNISA), South Africa*

Richard Meissner, *University of Pretoria, South Africa*

Hannatjie Jacobs, *Independent Research Consultant, South Africa*

eISBN: 978-1-84826-209-6, 978-1-84826-230-0

ISBN: 978-1-84826-659-9, 978-1-84826-680-3

Hydrological Systems Modeling (Vols. 1-2)

Editors: Lev S. Kuchment, *Water Problems Institute, Russian Academy of Sciences, Moscow, Russia*

Vijay P. Singh, *Texas A & M University*

eISBN: 978-1-84826-198-3, 978-1-84826-187-7

ISBN: 978-1-84826-648-3, 978-1-84826-637-7

Wastewater Treatment Technologies (Vols. 1-3)

Editor: Saravanamuthu (Vigi) Vigneswaran, *University of Technology, Sydney, Australia*

eISBN: 978-1-84826-188-4, 978-1-84826-194-5, 978-1-84826-250-8

ISBN: 978-1-84826-638-4, 978-1-84826-644-5, 978-1-84826-700-8

Compendium of Desalination and Water Resources (DESWARE)

History, Development and Management of Water Resources (Vols. 1-2)

eISBN: 978-1-84826-419-9, 978-1-84826-420-5

ISBN: 978-1-84826-869-2, 978-1-84826-870-8

Common Fundamentals and Unit Operations in Thermal Desalination Systems (Vols. 1-3)

eISBN: 978-1-84826-421-2, 978-1-84826-422-9, 978-1-84826-423-6

ISBN: 978-1-84826-871-5, 978-1-84826-872-2, 978-1-84826-873-9

Physical, Chemical and Biological Aspects of Water

eISBN: 978-1-84826-424-3

ISBN: 978-1-84826-874-6

Thermal Desalination Processes (Vols. 1-2)

eISBN: 978-1-84826-425-0, 978-1-84826-426-7

ISBN: 978-1-84826-875-3, 978-1-84826-876-0

Membrane Processes (Vols. 1-2)

eISBN: 978-1-84826-427-4, 978-1-84826-428-1

ISBN: 978-1-84826-877-7, 978-1-84826-878-4

Renewable Energy Systems and Desalination (Vols. 1-4)

eISBN: 978-1-84826-429-8, 978-1-84826-430-4, 978-1-84826-431-1, 978-1-84826-432-8

ISBN: 978-1-84826-879-1, 978-1-84826-880-7, 978-1-84826-881-4, 978-1-84826-882-1

Material Selection and Corrosion

eISBN: 978-1-84826-433-5

ISBN: 978-1-84826-883-8

Plant Operation, Maintenance and Management

eISBN: 978-1-84826-434-2

ISBN: 978-1-84826-884-5

Ancillary Equipment and Electrical Equipment

eISBN: 978-1-84826-435-9

ISBN: 978-1-84826-885-2

Process Instrumentation, Control and Automation

eISBN: 978-1-84826-436-6
ISBN: 978-1-84826-886-9

The Desalination Site and Civil Works

eISBN: 978-1-84826-437-3
ISBN: 978-1-84826-887-6

Thermal Power Plant and Co-generation Planning (Vols. 1-3)

eISBN: 978-1-84826-438-0, 978-1-84826-439-7, 978-1-84826-440-3
ISBN: 978-1-84826-888-3, 978-1-84826-889-0, 978-1-84826-890-6

Water and Wastewater Treatment Technologies (Vols. 1-3)

eISBN: 978-1-84826-441-0, 978-1-84826-442-7, 978-1-84826-443-4
ISBN: 978-1-84826-891-3, 978-1-84826-892-0, 978-1-84826-893-7

Water Health (Vols. 1-2)

eISBN: 978-1-84826-444-1, 978-1-84826-445-8
ISBN: 978-1-84826-894-4, 978-1-84826-895-1

Environmental and Health Aspects of Water Treatment and Supply

eISBN: 978-1-84826-446-5
ISBN: 978-1-84826-896-8

Water Quality and Standards (Vols. 1-3)

eISBN: 978-1-84826-447-2, 978-1-84826-448-9, 978-1-84826-449-6
ISBN: 978-1-84826-897-5, 978-1-84826-898-2, 978-1-84826-899-9

ENERGY SCIENCES, ENGINEERING AND TECHNOLOGY RESOURCES

Coal, Oil Shale, Natural Bitumen, Heavy Oil and Peat (Vols. 1-2)

Editor: Gao Jinsheng, *East China University of Science and Technology(ECUST), China*
eISBN: 978-1-84826-017-7, 978-1-84826-018-4
ISBN: 978-1-84826-467-0, 978-1-84826-468-7

Nuclear Energy Materials and Reactors (Vols. 1-2)

Editors: Yassin A. Hassan, *Texas A&M University, USA*
Robin A. Chaplin, *University of New Brunswick, Canada*
eISBN: 978-1-84826-311-6, 978-1-84826-761-9
ISBN: 978-1-84826-312-3, 978-1-84826-762-6

Renewable Energy Sources Charged with Energy from the Sun and Originated from Earth-Moon Interaction (Vols. 1-2)

Editor: Evald Emilievich Shpilrain, *IVTAN Institute for High Temperatures, Russian Academy of Sciences, Russia*
eISBN: 978-1-84826-019-1, 978-1-84826-020-7
ISBN: 978-1-84826-469-4, 978-1-84826-470-0

Thermal Power Plants (Vols. 1-3)

Editor: Robin A. Chaplin, *University of New Brunswick, Canada*
eISBN: 978-1-905839-26-1, 978-1-905839-27-8, 978-1-905839-28-5
ISBN: 978-1-84826-926-2, 978-1-84826-927-9, 978-1-84826-928-6

Thermal to Mechanical Energy Conversion(Vols. 1-3)

Editor: Oleg N. Favorsky, *Department of Physical and Technical Problems of Energetics, Russian Academy of Sciences, Russia*
eISBN: 978-1-84826-021-4, 978-1-84826-022-1, 978-1-84826-023-8
ISBN: 978-1-84826-471-7, 978-1-84826-472-4, 978-1-84826-473-1

Energy Carriers and Conversion Systems with Emphasis on Hydrogen (Vols. 1-2)

Editor: Tokio Ohta, *Yokohama National University and Chairman of Frontier Information and Learning Organization (FILO), Japan*
eISBN: 978-1-905839-29-2, 978-1-905839-30-8
ISBN: 978-1-84826-929-3, 978-1-84826-930-9

Energy Storage Systems (Vols. 1-2)

Editor: Yalsin Gogus, *Middle East Technical University Ankara, Turkey*
eISBN: 978-1-84826-162-4, 978-1-84826-163-1
ISBN: 978-1-84826-612-4, 978-1-84826-613-1

Air Conditioning - Energy Consumption and Environmental Quality

Editor: Matheos Santamouris, *University of Athens, Greece*
eISBN: 978-1-84826-169-3
ISBN: 978-1-84826-619-3

Efficient Use and Conservation of Energy (Vols. 1-2)

Editor: Clark W. Gellings, *Technology Initiatives Electric Power Research Institute (EPRI), USA*
eISBN: 978-1-905839-31-5, 978-1-905839-32-2
ISBN: 978-1-84826-931-6, 978-1-84826-932-3

Exergy, Energy System Analysis, and Optimization (Vols. 1-3)

Editor: Christos A. Frangopoulos, *National Technical University of Athens, Greece*
eISBN: 978-1-84826-164-8, 978-1-84826-165-5, 978-1-84826-166-2
ISBN: 978-1-84826-614-8, 978-1-84826-615-5, 978-1-84826-616-2

Energy Policy

Editor: Anthony David Owen, *The University of New South Wales, Australia*
eISBN: 978-1-905839-33-9
ISBN: 978-1-84826-933-0

Solar Energy Conversion and Photoenergy System: Thermal Systems and Desalination Plants (Vols. 1-5)

Editors: Julian Blanco Gálvez and Sixto Malato Rodríguez, *Plataforma Solar de Almería, Spain*
E. Delyannis, and Vassilis G. Belessiotis, *National Center for Scientific Research (NCSR), Greece*
eISBN: 978-1-84826-375-8, 978-1-84826-376-5, 978-1-84826-377-2, 978-1-84826-378-9, 978-1-84826-379-6
ISBN: 978-1-84826-825-8, 978-1-84826-826-5, 978-1-84826-827-2, 978-1-84826-828-9, 978-1-84826-829-6

****Petroleum Engineering – Downstream**

Editor: Pedro de Alcantara Pessoa Filho, *University of Sao Paulo, Brazil*
eISBN:
ISBN:

Petroleum: Chemistry, Refining, Fuels and Petrochemicals

Editor: James G. Speight, *Western Research Institute, Laramie, WY, USA*
eISBN: 978-1-84826-403-8
ISBN: 978-1-84826-853-1

****Pipeline Engineering**

Editor: Yufeng F. Cheng, *University of Calgary, Calgary, Alberta, Canada*
eISBN:
ISBN:

****Petroleum Engineering – Upstream**

Editors: Ezio Mesini and Paolo Macini, *University of Bologna, Italy*
eISBN:
ISBN:

****Energy and Fuel Sciences**

Editor: Semih Eser, *Pennsylvania State University, Pennsylvania, USA*
eISBN:
ISBN:

ENVIRONMENTAL AND ECOLOGICAL SCIENCES, ENGINEERING AND TECHNOLOGY RESOURCES

Hazardous Waste

Editors: Domenico Grasso, Timothy M. Vogel and Barth Smets, *Smith College, USA*
eISBN: 978-1-84826-055-9
ISBN: 978-1-84826-505-9

Natural and Human Induced Hazards and Environmental Waste Management (Vols. 1-4)

Editor: Domenico Grasso, *Smith College, USA*

eISBN: 978-1-84826-299-7, 978-1-84826-300-0, 978-1-84826-301-7, 978-1-84826-302-4

ISBN: 978-1-84826-749-7, 978-1-84826-750-3, 978-1-84826-751-0, 978-1-84826-752-7

Coastal Zones and Estuaries

Editors: Federico Ignacio Isla, and Oscar Iribarne, *Universidad Nacional de Mar del Plata, Argentina*

eISBN: 978-1-84826-016-0

ISBN: 978-1-84826-466-3

Marine Ecology

Editors: Carlos M. Duarte, *CSIC-Univ. Illes Balears, Spain*

Antonio Lot, *Universidad Nacional Autonoma de Mexico (UNAM), México*

eISBN: 978-1-84826-014-6

ISBN: 978-1-84826-464-9

Point Sources of Pollution: Local Effects and Their Control (Vols. 1-2)

Editor: Qian Yi, *Tsinghua University, China*

eISBN: 978-1-84826-167-9, 978-1-84826-168-6

ISBN: 978-1-84826-617-9, 978-1-84826-618-6

Environmental Toxicology and Human Health (Vols. 1-2)

Editor: Tetsuo Satoh, *Biomedical Research Institute and Chiba University, Japan*

eISBN: 978-1-84826-251-5, 978-1-84826-252-2

ISBN: 978-1-84826-701-5, 978-1-84826-702-2

Waste Management and Minimization

Editors: Stephen R. Smith, Chris Cheeseman, and Nick Blakey, *Imperial College, UK.*

eISBN: 978-1-84826-119-8

ISBN: 978-1-84826-569-1

Pollution Control Technologies (Vols. 1-3)

Editor: Georgi Stefanov Cholakov, *University of Chemical Technology and Metallurgy, Bulgaria*

Bhaskar Nath, *European Centre for Pollution Research, UK*

eISBN: 978-1-84826-116-7, 978-1-84826-117-4, 978-1-84826-118-1

ISBN: 978-1-84826-566-0, 978-1-84826-567-7, 978-1-84826-568-4

Environmental Systems (Vols. 1-2)

Editor: Achim Sydow, *GMD FIRST, Berlin, Germany*

eISBN: 978-1-84826-210-2, 978-1-84826-211-9

ISBN: 978-1-84826-660-5, 978-1-84826-661-2

Environmental Regulations and Standard Setting

Editor: Bhaskar Nath, *European Centre for Pollution Research, UK*

eISBN: 978-1-84826-103-7

ISBN: 978-1-84826-553-0

Interactions: Energy/Environment

Editor: Jose' Goldemberg, *The University of Sao Paulo, Brazil*

eISBN: 978-1-84826-090-0

ISBN: 978-1-84826-540-0

Biodiversity: Structure and Function (Vols. 1-2)

Editors: Wilhelm Barthlott, *Rheinische Friedrich-Wilhelms-Universität Bonn, Germany*

K. Eduard Linsenmair, *Universität Würzburg, Germany*

Stefan Porembski, *Universität Rostock, Germany*

eISBN: 978-1-905839-34-6, 978-1-905839-35-3

ISBN: 978-1-84826-934-7, 978-1-84826-935-4

Environmental Monitoring (Vols. 1-2)

Editors: Hilary I. Inyang and John L. Daniels, *The University of North Carolina at Charlotte, USA*

eISBN: 978-1-905839-75-9, 978-1-905839-76-6

ISBN: 978-1-84826-975-0, 978-1-84826-976-7

Environmental and Engineering Geology (Vols. 1-4)

Editors: Syed E. Hasan, *University of Missouri, USA*
Benedetto De Vivo, *Universita di Napoli "Federico II", Italy*
Bernhard Grasmann, *University of Vienna, Austria*
Kurt Stüwe, *Institut für Geologie und Paläontologie, Universitaet Graz, Austria*
Jan Lastovicka, *Institute of Atmospheric Physics, Academy of Sciences of the Czech Republic, Czech Republic*
Syed M. Hasan, *Canada*
Chen Yong, *China Seismological Bureau, China*
eISBN: 978-1-84826-355-0, 978-1-84826-356-7, 978-1-84826-357-4, 978-1-84826-358-1
ISBN: 978-1-84826-805-0, 978-1-84826-806-7, 978-1-84826-807-4, 978-1-84826-808-1

Ecology (Vols. 1-2)

Editors: Antonio Bodini, *University of Parma, Italy*
Stefan Klotz, *Centre for Environmental Research Leipzig-Halle Ltd., Germany*
eISBN: 978-1-84826-290-4, 978-1-84826-291-1
ISBN: 978-1-84826-740-4, 978-1-84826-741-1

****Ethnobiology**

Editor: John Richard Stepp, *University of Florida, USA*
eISBN:
ISBN:

****Economic Botany**

Editor: Brad Bennett, *Florida International University, Miami, Florida, USA*
eISBN:
ISBN:

****Air, Water, Sediment and Soil Pollution Modeling**

Editor: Bhaskar Nath, *European Center for Pollution Research, UK*
eISBN:
ISBN:

****Phytotechnologies solutions for sustainable land management**

Editor: Tomas Vanek, *Institute of Experimental Botany Academy of Sciences of the Czech Republic and Research Institute of Crop Sciences, Prague Czech Republic.*
eISBN:
ISBN:

****World Environmental History**

Editors: Mauro Agnoletti, *University of Florence, Florence Italy; Università degli Studi di Firenze, Italy*
Elizabeth Johann, *International Union of Forest Research Organization, Vienna, 1130, Austria*
Simone Neri Serneri, *University of Siena, 10-53100, Italy*
eISBN:
ISBN:

Environmental Laws and Their Enforcement (Vols. 1-2)

Editors: A. Dan Tarlock, *Illinois Institute of Technology, USA*
John C. Dernbach, *Widener University Law School, USA*
Aaron Schwabach, *Thomas Jefferson School of Law, USA*
Arthur John Cockfield, *Queen's University, Canada*
eISBN: 978-1-84826-113-6, 978-1-84826-293-5
ISBN: 978-1-84826-563-9, 978-1-84826-743-5

FOOD AND AGRICULTURAL SCIENCES, ENGINEERING AND TECHNOLOGY RESOURCES

Soils, Plant Growth and Crop Production (Vols. 1-3)

Editor: Willy H. Verheye, *University of Gent, Belgium*
eISBN: 978-1-84826-367-3, 978-1-84826-368-0, 978-1-84826-369-7
ISBN: 978-1-84826-817-3, 978-1-84826-818-0, 978-1-84826-819-7

Interactions: Food and Agriculture and Environment (Vols. 1-2)

Editor: G.Lysenko, *Division of Economics and Landscape Relationships, RAS, Moscow, Russia*
Victor R. Squires, *Dry Land Management Consultant, Australia*

Willy H. Verheye, *University of Gent, Belgium*
eISBN: 978-1-84826-333-8, 978-1-84826-334-5
ISBN: 978-1-84826-783-1, 978-1-84826-784-8

The Role of Food, Agriculture, Forestry and Fisheries in Human Nutrition (Vols. 1-4)

Editor: Victor R. Squires, *Dry Land Management Consultant, Australia*
eISBN: 978-1-84826-134-1, 978-1-84826-135-8, 978-1-84826-136-5, 978-1-84826-195-2
ISBN: 978-1-84826-584-4, 978-1-84826-585-1, 978-1-84826-586-8, 978-1-84826-645-2

Cultivated Plants, Primarily as Food Sources (Vols. 1-2)

Editor: Gyorgy Fuleky, *University of Agricultural Sciences, Hungary*
eISBN: 978-1-84826-100-6, 978-1-84826-101-3
ISBN: 978-1-84826-550-9, 978-1-84826-551-6

Forests and Forest Plants (Vols. 1-3)

Editors: John N. Owens, *Centre for Forest Biology, University of Victoria, Canada*
H. Gyde Lund, *Forest Information Services, USA*
eISBN: 978-1-905839-38-4, 978-1-905839-39-1, 978-1-905839-40-7
ISBN: 978-1-84826-938-5, 978-1-84826-939-2, 978-1-84826-940-8

Fisheries and Aquaculture (Vols. 1-5)

Editor: Patrick Safran, *Centre de Coopération Internationale en Recherche Agronomique pour le Développement (CIRAD), Paris, France, France*
eISBN: 978-1-84826-108-2, 978-1-84826-109-9, 978-1-84826-110-5, 978-1-84826-111-2, 978-1-84826-112-9
ISBN: 978-1-84826-558-5, 978-1-84826-559-2, 978-1-84826-560-8, 978-1-84826-561-5, 978-1-84826-562-2

Food Quality and Standards (Vols. 1-3)

Editor: Radomir Lasztity, *Budapest University of Technology and Economics, Hungary*
eISBN: 978-1-905839-41-4, 978-1-905839-42-1, 978-1-905839-43-8
ISBN: 978-1-84826-941-5, 978-1-84826-942-2, 978-1-84826-943-9

Agricultural Land Improvement: Amelioration and Reclamation (Vols. 1-2)

Editor: Boris Stepanovich Maslov, *Russian Academy of Agriculture Sciences, Russia*
eISBN: 978-1-84826-098-6, 978-1-84826-099-3
ISBN: 978-1-84826-548-6, 978-1-84826-549-3

Food Engineering (Vols. 1-4)

Editor: Gustavo V. Barbosa-Cánovas, *Washington State University, USA*
eISBN: 978-1-905839-44-5, 978-1-905839-45-2, 978-1-905839-46-9, 978-1-905839-47-6
ISBN: 978-1-84826-944-6, 978-1-84826-945-3, 978-1-84826-946-0, 978-1-84826-947-7

Agricultural Mechanization & Automation (Vols. 1-2)

Editors: Paul McNulty and Patrick M. Grace, *University College Dublin, Ireland*
eISBN: 978-1-84826-096-2, 978-1-84826-097-9
ISBN: 978-1-84826-546-2, 978-1-84826-547-9

Management of Agricultural, Forestry and Fisheries Enterprises (Vols. 1-2)

Editor: Robert J. Hudson, *University of Alberta, Canada*
eISBN: 978-1-84826-199-0, 978-1-84826-200-3
ISBN: 978-1-84826-649-0, 978-1-84826-650-6

Animal and Plant Productivity

Editor: Robert J. Hudson, *University of Alberta, Canada*
eISBN: 978-1-84826-317-8
ISBN: 978-1-84826-767-1

Systems Analysis and Modeling in Food and Agriculture

Editors: K. C. Ting, *The Ohio State University, USA*
David H. Fleisher, *United States Department of Agriculture, Alternate Crops and Systems Laboratory, USA*
Luis F. Rodriguez, *National Research Council, NASA Lyndon B. Johnson Space Center, USA*
eISBN: 978-1-84826-133-4
ISBN: 978-1-84826-583-7

Public Policy in Food and Agriculture

Editor: Azzeddine Azzam, *University of Nebraska, Lincoln, USA*
eISBN: 978-1-84826-095-5
ISBN: 978-1-84826-545-5

Impacts of Agriculture on Human Health and Nutrition (Vols. 1-2)

Editors: Ismail Cakmak, *Sabanci University, Turkey*
Ross M. Welch, *Cornell University, USA*
eISBN: 978-1-84826-093-1, 978-1-84826-094-8
ISBN: 978-1-84826-543-1, 978-1-84826-544-8

Interdisciplinary and Sustainability Issues in Food and Agriculture (Vols. 1-3)

Editors: Olaf Christen, *Martin-Luther-University, Germany*
Victor R. Squires, *Dry Land Management Consultant, Australia*
Rattan Lal, *The Ohio State University, USA*
Robert J. Hudson, *University of Alberta, Canada*
eISBN: 978-1-84826-335-2, 978-1-84826-336-9, 978-1-84826-337-6
ISBN: 978-1-84826-785-5, 978-1-84826-786-2, 978-1-84826-787-9

Veterinary Science

Editors: Robert J. Hudson, *University of Alberta, Canada*
Ole Nielson, *University of Guelph, Canada*
J. Bellamy, *University of Prince Edward Island, Canada*
Craig Stephen, *University of Calgary, Canada*
eISBN: 978-1-84826-318-5
ISBN: 978-1-84826-768-8

Agricultural Sciences (Vols. 1-2)

Editor: Rattan Lal, *The Ohio State University, USA*
eISBN: 978-1-84826-091-7, 978-1-84826-092-4
ISBN: 978-1-84826-541-7, 978-1-84826-542-4

Range and Animal Sciences and Resources Management (Vols. 1-2)

Editor: Victor R. Squires, *Dry Land Management Consultant, Australia*
eISBN: 978-1-84826-370-3, 978-1-84826-371-0
ISBN: 978-1-84826-820-3, 978-1-84826-821-0

Shaaka Paakam- Vegetarian Culinary Culture of Telugu (Andhra) Draavida Community of South India

Author: Meenakshi Ganti, *PO Box 2623, Abu Dhabi, UAE*
eISBN: 978-1-84826-253-9
ISBN: 978-1-84826-703-9

HUMAN RESOURCES POLICY, DEVELOPMENT AND MANAGEMENT

Human Resources and Their Development (Vols. 1-2)

Editor: Michael J. Marquardt, *The George Washington University, USA*
eISBN: 978-1-84826-056-6, 978-1-84826-057-3
ISBN: 978-1-84826-506-6, 978-1-84826-507-3

Social and Cultural Development of Human Resources

Editor: Tomoko Hamada, *College of William and Mary, USA*
eISBN: 978-1-84826-087-0
ISBN: 978-1-84826-537-0

Quality of Human Resources: Education (Vols. 1-3)

Editors: Natalia Pavlovna Tarasova, *D. Mendeleev University of Chemical Technology of Russia, Russia*
eISBN: 978-1-905839-07-0, 978-1-905839-08-7, 978-1-905839-09-4
ISBN: 978-1-84826-907-1, 978-1-84826-908-8, 978-1-84826-909-5

Population and Development: Challenges and Opportunities

Editor: Anatoly G. Vishnevsky, *Institute for Economic Forecasting, Russian Academy of Sciences, Russia*
eISBN: 978-1-84826-086-3
ISBN: 978-1-84826-536-3

Quality of Human Resources: Gender and Indigenous Peoples

Editor: Eleonora Barbieri-Masini, *Faculty of Social Sciences, Gregorian University, Italy*

eISBN: 978-1-905839-10-0
ISBN: 978-1-84826-753-4

Environmental Education and Awareness (Vols. 1-2)

Editor: Bhaskar Nath, *European Centre for Pollution Research, UK*
eISBN: 978-1-84826-114-3, 978-1-84826-115-0
ISBN: 978-1-84826-564-6, 978-1-84826-565-3

Sustainable Human Development in the Twenty-First Century (Vols. 1-2)

Editor: Ismail Sirageldin, *The Johns Hopkins University, USA*
eISBN: 978-1-905839-84-1, 978-1-905839-85-8
ISBN: 978-1-84826-984-2, 978-1-84826-985-9

Education for Sustainability

Editors: Robert V. Farrell, *Florida International University (FIU), USA*
eISBN: 978-1-84826-124-2
ISBN: 978-1-84826-574-5

NATURAL RESOURCES POLICY AND MANAGEMENT

Earth System: History and Natural Variability (Vols. 1-4)

Editor: Vaclav Cilek, *Geological Institute, Czech Academy of Sciences, Czech Republic*,
eISBN: 978-1-84826-104-4, 978-1-84826-105-1, 978-1-84826-106-8, 978-1-84826-107-5
ISBN: 978-1-84826-554-7, 978-1-84826-555-4, 978-1-84826-556-1, 978-1-84826-557-8

Climate Change, Human Systems and Policy (Vols. 1-3)

Editor: Antoaneta Yotova, *National Institute of Meteorology and Hydrology, Bulgaria*
eISBN: 978-1-905839-02-5, 978-1-905839-03-2, 978-1-905839-04-9
ISBN: 978-1-84826-902-6, 978-1-84826-903-3, 978-1-84826-904-0

Oceans and Aquatic Ecosystems (Vols. 1-2)

Editor: Eric Wolanski, *FTSE, Australian Institute of Marine Science, Australia*
eISBN: 978-1-905839-05-6, 978-1-905839-06-3
ISBN: 978-1-84826-905-7, 978-1-84826-906-4

Natural and Human Induced Hazards (Vols. 1-2)

Editor: Chen Yong, *China Seismological Bureau, China*
eISBN: 978-1-84826-231-7, 978-1-84826-232-4
ISBN: 978-1-84826-681-0, 978-1-84826-682-7

Biodiversity Conservation and Habitat Management (Vols. 1-2)

Editors: Francesca Gherardi, Claudia Corti, and Manuela Gualtieri, *Universita di Firenze, Italy*
eISBN: 978-1-905839-20-9, 978-1-905839-21-6
ISBN: 978-1-84826-920-0, 978-1-84826-921-7

****Wildlife Conservation and Management in Africa**

International Commission

President: Emmanuel K. Boon, *Free University of Brussels, Laarbeeklaan 103, Brussels, Belgium*

Vice Presidents:

Stephen Holness, *South African National Parks, South Africa*

Kai Schmidt-Soltau, *Cameroon*

Julius Kipng'etich, *Director of the Kenya Wildlife Service, Kenya*

Yaa Ntiamoah-Baidu, *Switzerland*

eISBN:

ISBN:

DEVELOPMENT AND ECONOMIC SCIENCES

Social and Economic Development (Vols. 1-8)

Editors: Salustiano del Campo, *Universidad Complutense, Spain*
Tomoko Hamada, *College of William and Mary, USA*
Giancarlo Barbiroli, *University of Bologna, Italy*
Saskia Sassen, *The University of Chicago, USA*

Eleonora Barbieri-Masini, *Faculty of Social Sciences, Gregorian University, Italy*

Paul Nchoji Nkwi, *PAAA Yaounde, Cameroon*

Owen Sichone, *University of Capetwon, South Africa*

Abubakar Momoh, *Lagos Center for Demography and Development, Nigeria*

eISBN: 978-1-84826-359-8, 978-1-84826-360-4, 978-1-84826-361-1, 978-1-84826-362-8, 978-1-84826-363-5, 978-1-84826-364-2, 978-1-84826-365-9, 978-1-84826-366-6

ISBN: 978-1-84826-809-8, 978-1-84826-810-4, 978-1-84826-811-1, 978-1-84826-812-8, 978-1-84826-813-5, 978-1-84826-814-2, 978-1-84826-815-9, 978-1-84826-816-6

Welfare Economics & Sustainable Development (Vols. 1-2)

Editors: Yew-Kwang Ng and Ian Wills, *Monash University, Australia*

eISBN: 978-1-84826-009-2, 978-1-84826-010-8

ISBN: 978-1-84826-459-5, 978-1-84826-460-1

International Economics, Finance and Trade (Vols. 1-2)

Editor: Pasquale Michael Sgro, *Deakin University, Australia*

eISBN: 978-1-84826-184-6, 978-1-84826-185-3

ISBN: 978-1-84826-634-6, 978-1-84826-635-3

Global Transformations and World Futures (Vols. 1-2)

Editor: Sohail Tahir Inayatullah, *University of the Sunshine Coast, Maroochydore; Tamkang University, Taiwan; and,*

Queensland University of Technology, Australia

eISBN: 978-1-84826-216-4, 978-1-84826-217-1

ISBN: 978-1-84826-666-7, 978-1-84826-667-4

Introduction to Sustainable Development

Editors: David V. J. Bell, *York University, Canada*

Yuk-kuen Annie Cheung, *York Centre for Applied Sustainability (YCAS); The University of Toronto, York University - Joint Centre for Asia Pacific Studies, Canada*

eISBN: 978-1-84826-222-5

ISBN: 978-1-84826-672-8

Principles of Sustainable Development (Vols. 1-3)

Editor: Giancarlo Barbiroli, *University of Bologna, Italy*

eISBN: 978-1-84826-079-5, 978-1-84826-080-1, 978-1-84826-081-8

ISBN: 978-1-84826-529-5, 978-1-84826-530-1, 978-1-84826-531-8

Dimensions of Sustainable Development (Vols. 1-2)

Editors: Kamaljit S. Bawa and Reinmar Seidler, *University of Massachusetts, Boston, USA*

eISBN: 978-1-84826-207-2, 978-1-84826-208-9

ISBN: 978-1-84826-657-5, 978-1-84826-658-2

Environment and Development (Vols. 1-2)

Editors: Teng Teng and Ding Yifan, *Chinese Academy of Social Sciences, China*

eISBN: 978-1-84826-270-6, 978-1-84826-271-3

ISBN: 978-1-84826-720-6, 978-1-84826-721-3

The Evolving Economics of War and Peace

Editors: James K. Galbraith, *The University of Texas at Austin, USA*

Jurgen Brauer, *Augusta State University, USA*

Lucy L. Webster, *Economists Allied for Arms Reduction (ECAAR), USA*

eISBN: 978-1-84826-048-1

ISBN: 978-1-84826-498-4

Economics Interactions with Other Disciplines (Vols. 1-2)

Editor: John M. Gowdy, *Rensselaer Polytechnic Institute, USA*

eISBN: 978-1-84826-037-5, 978-1-84826-038-2

ISBN: 978-1-84826-487-8, 978-1-84826-488-5

International Sustainable Development Law (Vols. 1-2)

Editors: A. F. Munir Maniruzzaman, *University of Kent at Canterbury, UK*

Aaron Schwabach, *Thomas Jefferson School of Law, USA*

Arthur John Cockfield, *Queen's University, Canada*

A. Dan Tarlock, *Illinois Institute of Technology, USA*

John C. Dernbach, *Widener University Law School, USA*

Gabriela Maria Kütting, *University of Aberdeen, UK*
eISBN: 978-1-84826-314-7, 978-1-84826-406-9
ISBN: 978-1-84826-764-0, 978-184826-856-2

INSTITUTIONAL AND INFRASTRUCTURAL RESOURCES

Human Settlement Development (Vols. 1-4)

Editor: Saskia Sassen, *The University of Chicago, USA*
eISBN: 978-1-84826-044-3, 978-1-84826-045-0, 978-1-84826-046-7, 978-1-84826-047-4
ISBN: 978-1-84826-494-6, 978-1-84826-495-3, 978-1-84826-496-0, 978-1-84826-497-7

Public Administration and Public Policy (Vols. 1-2)

Editor: Krishna K. Tummala, *Kansas State University, USA*
eISBN: 978-1-84826-064-1, 978-1-84826-065-8
ISBN: 978-1-84826-514-1, 978-1-84826-515-8

International Relations (Vols. 1-2)

Editors: Jarrod Wiener, *University of Kent at Canterbury, UK*
Robert A. Schrire, *University of Cape Town, South Africa*
eISBN: 978-1-84826-062-7, 978-1-84826-063-4
ISBN: 978-1-84826-512-7, 978-1-84826-513-4

International Law and Institutions

Editors: Aaron Schwabach, *Thomas Jefferson School of Law, USA*
Arthur John Cockfield, *Queen's University, Canada*
eISBN: 978-1-84826-078-8
ISBN: 978-1-84826-528-8

Institutional Issues Involving Ethics and Justice (Vols. 1-3)

Editor: Robert Charles Elliot, *Sunshine Coast University, Australia*
eISBN: 978-1-905839-14-8, 978-1-905839-15-5, 978-1-905839-16-2
ISBN: 978-1-84826-914-9, 978-1-84826-915-6, 978-1-84826-916-3

International Security, Peace, Development, and Environment (Vols. 1-2)

Editor: Ursula Oswald Spring, *National Autonomous University of Mexico-UNAM/CRIM,*
eISBN: 978-1-84826-082-5, 978-1-84826-083-2
ISBN: 978-1-84826-532-5, 978-1-84826-533-2

Conflict Resolution (Vols. 1-2)

Editor: Keith William Hipel, *University of Waterloo, Canada*
eISBN: 978-1-84826-120-4, 978-1-84826-121-1
ISBN: 978-1-84826-570-7, 978-1-84826-571-4

Democratic Global Governance

Editor: Irene Lyons Murphy, *Consultant, USA*
eISBN: 978-1-84826-181-5
ISBN: 978-1-84826-631-5

National, Regional and Global Institutions, Infrastructures and Governance (Vols. 1-2)

Editors: Neil Edward Harrison, *University of Wyoming, USA*
Irene Lyons Murphy, *Consultant, USA*
eISBN: 978-1-84826-404-5, 978-1-84826-405-2
ISBN: 978-1-84826-854-8, 978-1-84826-855-5

Conventions, Treaties and other Responses to Global Issues (Vols. 1-2)

Editor: Gabriela Maria Kütting, *University of Aberdeen, UK*
eISBN: 978-1-84826-233-1, 978-1-84826-234-8
ISBN: 978-1-84826-683-4, 978-1-84826-684-1

TECHNOLOGY, INFORMATION, AND SYSTEMS MANAGEMENT RESOURCES

Information Technology and Communications Resources for Sustainable Development

Editor: Ashok Jhunjunwala, *Indian Institute of Technology, Madras, India*

eISBN: 978-1-84826-313-0
ISBN: 978-1-84826-763-3

Systems Analysis and Modeling of Integrated World Systems (Vols. 1-2)

Editors: Veniamin N. Livchits, *Institute for Systems Analysis, Russian Academy of Sciences, Russia*
Vladislav V. Tokarev, *Moscow State University, Russia*
eISBN: 978-1-84826-088-7, 978-1-84826-089-4
ISBN: 978-1-84826-538-7, 978-1-84826-539-4

Systems Engineering and Management for Sustainable Development (Vols. 1-2)

Editor: Andrew P. Sage, *George Mason University, USA*
eISBN: 978-1-905839-00-1, 978-1-905839-01-8
ISBN: 978-1-84826-900-2, 978-1-84826-901-9

Knowledge Management, Organizational Intelligence and Learning, and Complexity (Vols. 1-3)

Editor: L. Douglas Kiel, *The University of Texas at Dallas, USA*
eISBN: 978-1-905839-11-7, 978-1-905839-12-4, 978-1-905839-13-1
ISBN: 978-1-84826-911-8, 978-1-84826-912-5, 978-1-84826-913-2

Science and Technology Policy (Vols. 1-2)

Editor: Rigas Arvanitis, *IRD - France & Zhongshan (Sun Yatsen) University, Guangzhou,*
eISBN: 978-1-84826-058-0, 978-1-84826-059-7
ISBN: 978-1-84826-508-0, 978-1-84826-509-7

Globalization of Technology

Editor: Prasada Reddy, *Lund University, Sweden*
eISBN: 978-1-84826-084-9
ISBN: 978-1-84826-534-9

Sustainable Built Environment (Vols. 1-2)

Editors: Fariborz Haghghat *Concordia University, Canada*
Jong-Jin Kim, *The University of Michigan, USA*
eISBN: 978-1-84826-060-3, 978-1-84826-061-0
ISBN: 978-1-84826-510-3, 978-1-84826-511-0

Integrated Global Models of Sustainable Development (Vols. 1-3)

Editor: Akira Onishi, *Centre for Global Modeling, Japan*
eISBN: 978-1-905839-17-9, 978-1-905839-18-6, 978-1-905839-19-3
ISBN: 978-1-84826-917-0, 978-1-84826-918-7, 978-1-84826-919-4

Artificial Intelligence

Editor: Joost Nico Kok, *Leiden University, The Netherlands.*
eISBN: 978-1-84826-125-9
ISBN: 978-1-84826-575-2

Computer Science and Engineering

Editors: Zainalabedin Navabi, *University of Tehran, Iran*
David R. Kaeli, *Northeastern University,*
eISBN: 978-1-84826-227-0
ISBN: 978-1-84826-677-3

System Dynamics (Vols. 1-2)

Editor: Yaman Barlas, *Bogazici University, Turkey*
eISBN: 978-1-84826-137-2, 978-1-84826-138-9
ISBN: 978-1-84826-587-5, 978-1-84826-588-2

Complex Networks

Editor: Guido Caldarelli, *Università "La Sapienza", Italy*
eISBN: 978-1-84826-322-2
ISBN: 978-1-84826-772-5

LAND USE, LAND COVER AND SOIL SCIENCES

(Vols. 1-7)

Editor: Willy H. Verheye, *University of Gent, Belgium*

(Each Volume in the following covers a set of chapters, the total number of which is 78. The size of a chapter may vary

from about 5000 words to about 30000 words.)

Volume 1: Land Cover, Land Use and the Global Change

eISBN: 978-1-84826-235-5
ISBN: 978-1-84826-685-8

Volume 2: Land Evaluation

eISBN: 978-1-84826-236-2
ISBN: 978-1-84826-686-5

Volume 3: Land Use Planning

eISBN: 978-1-84826-237-9
ISBN: 978-1-84826-687-2

Volume 4: Land Use Management and Case Studies

eISBN: 978-1-84826-238-6
ISBN: 978-1-84826-688-9

Volume 5: Dry Lands and Desertification

eISBN: 978-1-84826-239-3
ISBN: 978-1-84826-689-6

Volume 6: Soils and Soil Sciences - I

eISBN: 978-1-84826-240-9
ISBN: 978-1-84826-690-2

Volume 7: Soils and Soil Sciences - II

eISBN: 978-1-84826-241-6
ISBN: 978-1-84826-691-9

AREA STUDIES (REGIONAL SUSTAINABLE DEVELOPMENT REVIEWS)

Area Studies (Regional Sustainable Development Review): Africa (Vols. 1-2)

Editor: Emmanuel Kwesi Boon, *Free University Brussels, Belgium*
eISBN: 978-1-84826-066-5, 978-1-84826-067-2
ISBN: 978-1-84826-516-5, 978-1-84826-517-2

Area Studies (Regional Sustainable Development Review): Brazil

Editor: Luis Enrique Sanchez, *University of Sao Paulo, Brazil*
eISBN: 978-1-84826-171-6
ISBN: 978-1-84826-621-6

Area Studies (Regional Sustainable Development Review): USA (Vols. 1-2)

Editors: Lawrence C. Nkemdirim, *University of Calgary, Canada*
eISBN: 978-1-84826-069-6, 978-1-84826-070-2
ISBN: 978-1-84826-519-6, 978-1-84826-520-2

Area Studies (Regional Sustainable Development Review): China (Vols. 1-3)

Editor: Sun Honglie, *Chinese Academy of Sciences, China*
eISBN: 978-1-84826-071-9, 978-1-84826-072-6, 978-1-84826-073-3
ISBN: 978-1-84826-521-9, 978-1-84826-522-6, 978-1-84826-523-3

Area Studies (Regional Sustainable Development Review): Europe

Editors: Alexander Mather and John Bryden, *University of Aberdeen, UK*
eISBN: 978-1-84826-068-9
ISBN: 978-1-84826-518-9

Area Studies (Regional Sustainable Development Review): Japan

Editor: Yukio Himiyama, *Hokkaido University of Education, Japan*
eISBN: 978-1-84826-170-9
ISBN: 978-1-84826-620-9

Area Studies (Regional Sustainable Development Review): Russia (Vols. 1-2)

Editor: Nicolay Pavlovich Laverov, *RAS, Russia*
eISBN: 978-1-84826-074-0, 978-1-84826-075-7
ISBN: 978-1-84826-524-0, 978-1-84826-525-7

EOLSS Publications
e-mail: books@eolssonline.net
(url: <http://www.eolss.net>)