

Bibliography

- Abrahamson, D. E. (1989). *Challenge of Global Warming* (376 pp.). Island Press, Washington, DC.
- A Guide to World Resources 2000–2001* (2000). *People and Ecosystems: The Frying Web of Life* (389 pp). World Resources Institute, Washington, DC.
- Ahmad, A., Shfiee, M., Hassan, F., and Yaakub, A. (2004). Flood mapping using Radarsat SAR data: A Malaysian experience. *Proceedings of 25th Asian Conference on Remote Sensing, 22–26 November, Chiang Mai, Thailand* (pp. 587–595). AARS, Chiang Mai, Thailand.
- Aladin, N. V. and Kuznetsov, L. A. (1990). The present state of the Aral Sea under conditions of growing saltiness. *Proc. Ecological Inst. of the USSR Acad. Sci., Leningrad*, **223**, 123–130 [in Russian].
- Alcano, J., Leemans, R., and Kreileman, E. (eds) (2001). *Global Change Scenarios of the 21st Century* (232 pp.). Elsevier, Amsterdam.
- Alessio, S., Longhetto, A., and Richiardone, R. (2004). Evolutionary spectral analysis of European climatic series. *Il Nuovo Cimento C.*, **27**, Ser. 2, No. 1, 73–98.
- Alimov, A. F., Dmitriyev, V. V., Florinskaya, T. M., Khovanov, N. V., and Chistobayev, A. I. (1999). *Integral Assessment of the Ecological State and Environmental Quality of Urban Territories* (253 pp.). St Petersburg Sci. Centre of RAS, St Petersburg [in Russian].
- Allen, M. R., Stott, P. A., Mitchell, J. F. B., Schnur, R., and Delworth, T. L. (2000). Uncertainty in forecasts of anthropogenic climate change. *Nature*, **407**, 617–620.
- Alverson, K. (2000). Long-term biogeophysical controls on the carbon cycle and their relevance to human concerns. *International Human Dimensions Programme Update*, **3**, 1–4.
- Andronova, N. G. and Schlesinger, M. E. (2001). Objective estimation of the probability density function for climate sensitivity. *J. Geophys. Res.*, **106**(D19), 22605–22611.
- Aota, M., Shirasawa, K., Krapivin, V. F., and Mkrtychyan, F. A. (1993). A project of the Okhotsk Sea GIMS. *Proceedings of the Eighth International Symposium on Okhotsk Sea and Sea Ice and ISY/Polar Ice Extent Workshop, 1–5 February, Mombetsu, Japan* (pp. 498–500). Okhotsk Sea and Cold Ocean Research Association, Mombetsu, Japan.
- Aripov, S. L. (1973). Aral Sea water balance constituents and their impact on multi-year oscillations of its level. *Water Resources*, **5**, 29–40 [in Russian].

- Arsky, Yu. M., Zakharov, Yu. F., and Kalutskov, V. A. (1992). *Ecoinformatics* (520 pp.). Hydrometeoizdat, St Petersburg [in Russian].
- Bacastow, R. (1981). Numerical evaluation of the evasion factor. *Carbon Cycle Modelling* (SCOPE-16, pp. 95–101). John Wiley & Sons, New York.
- Baibakov, S. N. and Martynov, A. I. (1976). *From the Satellite's Orbit into the Eye of the Typhoon* (176 pp.). Nauka, Moscow [in Russian].
- Banerjee, P., Pollitz, F. F., and Bürgmann, R. (2005). The size and duration of the Sumatra–Andaman earthquake from far-field static offsets, *Science*, **308**(5729), 1769–1772.
- Barenbaum, A. S. (2002). *Galaxy. Solar System. The Earth: Subordinate Processes and Evolution* (393 pp.). GEOS, Moscow [in Russian].
- Barenbaum, A. S. (2004). Mechanism for the formation of gas and oil accumulation. *Annals of Acad. Sci.*, **399**(6), 1–4 [in Russian].
- Barnett, V. (2003). *Environmental Statistics* (320 pp.). John Wiley & Sons, London.
- Bartsev, S. I., Degermendji, A. G., and Erokhin, D. V. (2003). Global generalized models of carbon dioxide dynamics. *Problems of the Environment and Natural Resources*, **12**, 11–28 [in Russian].
- Bazhin, N. M. (2000). Methane emission from a residual layer. *Second International Methane Mitigation Conference, 18–23 June, Novosibirsk* (pp. 231–236). Novosibirsk State University, Novosibirsk, Russia.
- Bazilevich, N. I. and Rodin, L. E. (1967). Schematic maps of the productivity and biological cycle of first-priority-type land vegetation. *Proc. All-Union Geograph. Soc.*, **99**(3), 190–194 [in Russian].
- Beeby, A. and Brennan, A.-M. (2003). *First Ecology: Ecological Principles and Environmental Issues* (352 pp.). Oxford University Press, Oxford, UK.
- Bekoriukov, V. I. and Fedorov, V. V. (1987). An empirical model of the total ozone content over the Southern Hemisphere. *Meteorology and Hydrology*, **3**, 47–53 [in Russian].
- Bellman, R. and Dreifus, S. (1965). *Applied Problems of Dynamic Programming* (457 pp.). Nauka, Moscow [in Russian].
- Bellman, R. and Rous, R. S. (1971). Method of analysis of a broad class of biological systems. *Cybernetic Problems of Bionics* (pp. 158–169). Mir, Moscow [in Russian].
- Bengtsson, L. (1999). *Climate Modelling and Prediction: Achievements and Challenges* (Publication 954, pp. 59–73). World Climate Research Programme, World Meteorological Organization, Geneva.
- Berg, L. S. (1908). *The Aral Sea* (580 pp.). Hydrometeoizdat, St Petersburg [in Russian].
- Bernard, E. (ed.) (2005). *Developing Tsunami-resilient Communities: The National Tsunami Hazard Mitigation Program* (Vol. VI, 186 pp.). Springer-Verlag, Heidelberg, Germany.
- Berner, U. and Hollerbach, A. (2001). Klimasystem Erde – Überschätzen wir das Kohlenoxid? *Stahl und Eisen*, **121**(10), 35–40.
- Berz, G. (1999). Catastrophes and climate change: Concerns and possible countermeasures of the insurance industry. *Mitigation and Adaptation Strategies for Global Change*, **4**(3/4), 283–293.
- Bgatov, V. I. (1988). *The History of Oxygen of the Terrestrial Atmosphere* (87 pp.). Nedra, Moscow [in Russian].
- Bilham, R. (2005). A flying start, then a slow slip. *Science*, **308**, 1126–1127.
- Binenko, V. I., Khramov, G. N., and Yakovlev, V. V. (2004). *Extreme Situations in the Modern World and Their Threats to Life* (400 pp.). Scientific Centre for the Ecological Safety of RAS, St Petersburg [in Russian].
- Biutner, E. K. (1986). *Planetary Gas Exchange* (240 pp.). Hydrometeoizdat, Leningrad [in Russian].

- Björkstom, A. (1979). A model of CO₂ interaction between atmosphere, ocean, and land biota. *Global Carbon Cycle* (SCOPE-13, pp. 403–458). John Wiley & Sons, New York.
- Blackmore, P. and Tsokri, E. (2004). Windstorm damage to buildings and structures in the UK during 2002. *Weather*, **59**(12), 336–339.
- Blowers, A. and Hinchliffe, S. (2003). *Environmental Responses* (312 pp.). John Wiley & Sons, London.
- Bodenbender, J., Wassmann, R., Pape, H., and Renneberg, H. (1999). Temporal and spatial variation of sulfur–gas transfer between coastal marine sediments and the atmosphere. *Atmos. Env.*, **33**(21), 3487–3502.
- Bodri, L. and Čermák, V. (1999). Climate change of last millennium inferred from borehole temperatures: Regional patterns of climate changes in the Czech Republic, Part III. *Glob. Planet. Change*, **21**(4), 225–235.
- Boehmer-Christiansen, S. (1997). Who is driving climate change policy? *IEA Stud. Educ.*, **10**, 53–72.
- Boehmer-Christiansen, S. (2000). Who determines the policy concerning climate change and how is it determined? *Izv. Russ. Geogr. Soc.*, **132**(3), 6–22 [in Russian].
- Bohle, H. (2001). Vulnerability and criticality: Perspectives from social geography. *International Human Dimensions Programme Update*, **2**, 231–239.
- Bojkov, P. D. (1987). The 1983 and 1985 anomalies in ozone distribution in perspective. *Monthly Weather Review*, **115**(10), 2187–2201.
- Bolin, B. (1998). *The WCRP and IPCC: Research Inputs to IPCC Assessments and Future Needs* (Publication 904, pp. 27–36). World Climate Research Programme, World Meteorological Organization, Geneva.
- Bolin, B. (1999). *Global Environmental Change and the Need for International Research Programmes* (Publication 954, pp. 11–14). World Climate Research Programme, World Meteorological Organization, Geneva.
- Bond-Lamberty, B., Wang, C., and Gower, S. T. (2003). Annual carbon flux from woody debris for a boreal black spruce fine chronosequence. *J. Geophys. Res.*, **108**(3), WFX1/1–WFX1/10.
- Bondur, V. G., Kondratyev, K. Ya., Krapivin, V. F., and Savinykh, V. P. (2005). Problems of monitoring and prediction of natural disasters. *Research of the Earth from Space*, **1**, 3–14 [in Russian].
- Borodin, L. F. and Krapivin, V. F. (1998). Remote measurements of the Earth's surface characteristics. *Problems of the Environment and Natural Resources*, **7**, 38–54 [in Russian].
- Borodin, L. F., Krapivin, V. F., Krylova, M. S., Kuznetsov, N. T., Kulikov, Yu. N., and Minayeva, E. N. (1982). Multi-purpose flying laboratories to monitor the zones of impact of irrigation systems. *Geography and Natural Resources*, **3**, 31–37 [in Russian].
- Borodin, L. F., Krapivin, V. F., and Bui T. L. (1996). Application of GIMS technology to monitor the Aral–Kaspiy aquageosystem. *Problems of the Environment and Natural Resources*, **10**, 46–61 [in Russian].
- Borodin, L. F., Krapivin, V. F., Berezin, Yu. V., Levshin, I. P., and Chernikov, A. A. (1998). Ideal and sub-ideal sensors of composite-coded phase-manipulated signals. *Foreign Radioelectronics*, **8**, 15–22 [in Russian].
- Bortnik, V. N. and Chistiayeva, S. P. (1990). *The Aral Sea* (195 pp.). Hydrometeoizdat, Leningrad [in Russian].
- Bortnik, V. N. and Dauletiyarov, K. Zh. (1985). *Numerical Modelling of Circulation of Aral Sea Waters* (Preprint, 36 pp.). Computer Centre, USSR Academy of Sciences, Moscow [in Russian].

- Bortnik, V. N., Lopatina, S. A., and Krapivin, V. F. (1994). A simulation system to study the Aral Sea's hydrophysical fields. *Meteorology and Hydrology*, **9**, 102–106 [in Russian].
- Borwein, J., Bailey, D., and Girgensohn, R. (2004). *Experimentation in Mathematics: Computational Paths to Discovery* (29 pp.). A. K. Peters, Natick, MA.
- Boucher, O. (2002). Aerosol radiative forcing and related feedbacks: How do we reduce uncertainties? *IGACTivities Newsletter*, **26**, 8–12.
- Bounoua, L., Defries, R., Collatz, G. J., Sellers, P., and Khan, H. (2002). Effects of land cover conversion on surface climate. *Clim. Change*, **52**(1–2), 29–64.
- Bove, M. And Thráinsson, H. (eds) (2003). *Topics: Annual Review of North American Catastrophes 2002* (50 pp.). American Re, Princeton, NJ.
- Bowen, D. Q. (2000). Tracing climate evolution. *Earth Heritage Magazine*, Millennium Issue, 8–9.
- Boysen, M. (ed.) (2000). *Biennial Report 1998 and 1999* (130 pp.). Potsdam Institute for Climate Impact Research, Potsdam, Germany.
- Bozhinsky, A. N. and Losev, K. S. (1987). *Fundamentals of Avalanche Formation* (280 pp.). Hydrometeoizdat, Leningrad [in Russian].
- Braesicke, P. and Pyle, J. A. (2004). Sensitivity of dynamics and ozone to different representations of SSTs in the United Model. *Quart. J. Roy. Meteorol. Soc.*, **130**, Part B, No. 601, 2033–2045.
- Bras, R. L. (1990). *Hydrology* (643 pp.). Addison-Wesley, New York.
- Braswell, B. H., Schimel, D. S., Privette, J. L., Moore, B., Emery, W. J., Sultzman, E. W., and Hudak, A. T. (1996). Extracting ecological and biophysical information from AVHRR optical data: An integrated algorithm based on inverse modeling. *J. Geophys. Res.*, **101**(D18), 23335–23348.
- Braun, R. A., Todd, R. M., and Wallace, N. (1999). A general equilibrium interpretation of damage-contingent securities. *Journal of Risk and Insurance*, **66**(4), 583–595.
- Brebbia, C. A. (ed.) (2004). *Risk Analysis* (Vol. IV, 832 pp.). WIT Press, Southampton, UK.
- Breon, F.-M., Tanre, D., and Generoso, S. (2002). Aerosol effect on cloud droplet size monitored from satellite. *Science*, **295**(5556), 834–838.
- Brown, L. R. (ed) (2004). *State of the World 2004*. Worldwatch Institute, Washington, DC, 245 pp.
- Brown, L. R., Flavin, C., French, H., Sampat, P., Matton, A., Dunn, S., Sheehan, M. O., Abramovitz, J. N., Roodman, D. M., Gardner, G., and Masthy, L. (2001). *State of the World 2001* (275 pp.). Earthscan, London.
- Brown, R. A., Kaufman, C. A., and MacGorman, D. R. (2002). Cloud-to-ground lightning associated with the evolution of a multicell storm. *J. Geophys. Res.*, **107**(D19), ACL13/1–ACL13/13.
- Bulkeley, H. and Betsill, M. M. (2003). *Cities and Climate Change: Urban Sustainability and Global Environmental Governance* (237 pp.). Routledge, London.
- Bukatova, I. L. and Makrusev, V. V. (2004). *Theory of Integral–Evolutionary Intellectualization of Social Systems* (126 pp.). Moscow Institute for the National and Cooperative Management Publ., Moscow [in Russian].
- Bukatova, I. L., Mikhasev, Yu. I., and Sharov, A. M. (1991). *Evoinformatics: Theory and Practice of Evolutionary Modelling* (206 pp.). Nauka, Moscow [in Russian].
- Bunyard, P. (1999). Eradicating the Amazon rainforest will wreak havoc on climate. *Ecologist*, **29**(2), 81–84.
- Burt, C. C. (2004). *Extreme Weather: A Guide and Record Book* (304 pp.). W. W. Norton, New York.

- Byakola, T. (2000). Technological options and policy measures for methane mitigation in Uganda: Possibilities and limitations. *Second International Methane Mitigation Conference, 18–23 June, Novosibirsk, Russia*, pp. 95–100.
- Canadel, I. G., Dickinson, R., Hibbard, K., Raupach, M., and Young, O. (eds) (2003). *Global Carbon Project: The Science Framework and Implementation* (Report No. 1, 69 pp.). Earth System Science Partnership, Canberra.
- Carlsson, H., Aspegren, H., Lee, N., and Hilmer, A. (1997). Calcium phosphate in biological phosphorus removal systems. *Water Research*, **31**(5), 1047–1055.
- Carpenter, G. (2001). *Natural Hazards: Review of the Year 2000* (17 pp.). The CAT-i Service, London.
- Chahine, M. T. (1992). The hydrological cycle and its influence on climate. *Nature (UK)*, **359**(6394), 373–380.
- Chang, C.-P., Zhang, Y., and Li, T. (2000). Interannual and interdecadal variations of the East Asian summer monsoon and tropical Pacific SSTs, Part 1: Roles of the subtropical ridge. *J. Climate*, **13**, 4310–4325.
- Changnon, S. A. (ed.) (1996). *The Great Flood of 1993: Causes, Impacts, and Responses* (321 pp.). Westview Press, Boulder, CO.
- Changnon, S. A. (2000). Flood prediction: Immersed in the quagmire of national flood mitigation strategy. In: D. Sarewitz, R. A. Pielke, Jr, and R. Byerly (eds), *Prediction: Science, Decision Making, and the Future of Nature* (pp. 85–106). Island Press, Washington, DC.
- Changnon, S. A. (2001). *Thunderstorms across the Nation: An Atlas of Storms, Hail, and Their Damage in the 20th Century* (93 pp.). Changnon Climatologist and Office of Global Programs, National Oceanic and Atmospheric Administration, Washington.
- Chen, J. M., Liu, J., Leblanc, S. G., Lacaze, R., and Roujean, J.-L. (2003). Multi-angular optical remote sensing for assessing vegetation structure and carbon absorption. *Remote Sensing of Environment*, **84**(5), 516–525.
- Chernavsky, D. S. (ed.) (2004). *Recognition, Autodiagnostics, Thinking: Synergetics and Human Science* (272 pp.). Radiotekhnika, Moscow [in Russian].
- Chernenko, D. S. (1981). Modelling the filtering of artesian water to the Aral Sea hollow. *High School Publ.: Geology and Exploring*, **10**, 82–88 [in Russian].
- Chinlon, L. (ed.) (1989). *Optoelectronic Technology and Lightwave Communications Systems* (766 pp.). Van Nostrand Reinhold, New York.
- Chock, D. P. and Winkler, S. L. (2000). A trajectory-grid approach for solving the condensation and evaporation equations of aerosols. *Atmospheric Environment*, **34**(18), 2957–2973.
- Chou, M.-D., Chan, P.-K., and Wang, M. (2002). Aerosol radiative forcing derived from SeaWiFS-retrieved aerosol optical properties. *J. Atmos. Sci.*, **59**(3), 748–757.
- Christensen, O. B. and Christensen, J. H. (2004). Intensification of extreme European summer precipitation in a warmer climate. *Global and Planetary Change*, **44**(1–4), 107–117.
- Christian, T. J., Kleiss, B., Yokelson, R. J., Holzinger, R., Crutzen, P. J., Hao, W. M., Saharjo, B. H., and Ward, D. E. (2003). Comprehensive laboratory measurements of biomass-burning emissions, 1: Emissions from Indonesian, African, and other fuels. *J. Geophys. Res.*, **108**(D23), ACH3/1–ACH3/13.
- Christopher, S. A. and Zhang, J. (2002). Daytime variation of shortwave direct radiative forcing of biomass burning aerosols from GOES imager. *J. Atmos. Sci.*, **59**(3), Part 2, 681–691.
- Christy J.R. and Spencer R.W. (2003). Reliability of satellite data sets. *Science*, **301**(5636), 1046–1047.

- Chronis, T. G. and Anagnostou, E. N. (2003). Error analysis for a long-range lightning monitoring network of ground-based receivers in Europe. *J. Geophys. Res.*, **108**(D24), ACL8/1–ACL8/10.
- Chukhlantsev, A. A., Golovachev, V. P., Krapivin, V. F., and Shutko, A. M. (2004). A remote sensing-based modelling system to study the Aral–Caspian water regime. *Proceedings of the 25th Asian Conference on Remote Sensing, 22–26 November, Chiang Mai, Thailand* (Vol. 1, pp. 506–511). AARS, Chiang Mai, Thailand.
- Clark, W. C. and Dickinson, N. M. (2003). Sustainability science: The emerging research program. *NAS Online*, **10**, 1–5.
- Clark, W. C., Crutzen, P. J., and Schellnhuber, H. J. (2005). *Science for Global Sustainability: Toward a New Paradigm* (Working Paper No. 120, 32 pp.). Center for International Development, Cambridge, MA.
- Coakley, J. A., Jr and Walsh, C. D. (2002). Limits to the aerosol indirect radiative effect derived from observations of ship tracks. *J. Atmos. Sci.*, **59**(3), Part 2, 668–680.
- Cocone, G. (2000). Methane gas emissions from the Romanian natural gas transport system. *Second International Methane Mitigation Conference, 18–23 June, Novosibirsk* (pp. 297–302). Novosibirsk State University, Novosibirsk, Russia.
- Coen, J., Mahalingam, S., and Daily, J. (2004). Infrared imagery of crown fire dynamics during FrostFire. *J. Appl. Meteorology*, **43**, 1241–1259.
- Cohard, J.-M., Pinty, J.-P., and Suhre, K. (2001). On the parameterization of activation spectra from cloud condensation nuclei microphysical properties. *J. Geophys. Res.*, **105**(D9), 11753–11766.
- Collatz, G. J., Berry, J. A., Farquhar, J. A., and Pierce, J. (1990). The relationship between the Rubisco reaction mechanism and models of leaf photosynthesis. *Plant Cell Environment*, **13**, 219–225.
- Collatz, G. J., Ball, G. J., Grivet, J. T., and Berry, J. A. (1991). Physiological and environmental regulation of stomatal conductance, photosynthesis and transpiration: A model that includes a laminar boundary layer. *Agricultural and Forest Meteorology*, **54**, 107–136.
- Collatz, G. J., Ribas-Carbo, M., and Berry, J. A. (1992). Couples photosynthesis stomatal conductance model for leaves of C₄ plants. *Aust. J. Plant Physiol.*, **19**, 519–538.
- Collatz, G. J., Bounoua, L., Los, S. O., Randall, D. A., Fung, I. Y., and Sellers, P. J. (2000). A mechanism for the influence of vegetation on the response of the diurnal temperature range to changing climate. *Geophys. Res. Lett.*, **27**(20), 3381–3384.
- Condie, K. C. (2005). *Earth as an Evolving Planetary System* (461 pp.). Elsevier Academic, Burlington, MA.
- Cox, P. M., Betts, R. A., Jones, G. D., Spall, S. A., and Totterdell, I. J. (2000). Acceleration of global warming due to carbon-cycle feedbacks in a coupled climate model. *Nature*, **408**, 184–187.
- Crawford, J., Davis, D., Olson, J., Chen, G., Liu, S., Fuelberg, H., Hannan, J., Kondo, Y., Anderson, B., Gregory, G. *et al.* (2000). Evolution and chemical consequences of lightning-produced NO_x observed in the North Atlantic upper atmosphere. *J. Geophys. Res.*, **105**(D15), 19795–19809.
- Crichton, M. (2005). *State of Fear* (503 pp.). Harper-Collins, London.
- Crowley, T. J. (2000). Causes of climate change over the past 1000 years. *Science*, **289**(5477), 270–277.
- Csiszar, I., Abuelgasim, A., Li, Z., Jin, J.-Z., Fraser, R., and Hao, W.-M. (2002). Interannual changes of active fire detectability in North America from long-term records of the advanced very high resolution radiometer. *J. Geophys. Res.*, **108**(D2), ACL19/1–ACL19/10.

- Danilov, L. D. and Karol, I. L. (1991). *Atmospheric Ozone: Sensation and Reality* (121 pp.). Hydrometeoizdat, Leningrad [in Russian].
- Davis, C. A. and Bosart, L. F. (2004). Forecasting the tropical transition of cyclones. *Bull. Amer. Meteorol. Soc.*, **85**(11), 1657–1662.
- Davis, I. (2003). The effectiveness of current tools for the identification, measurement, analysis and synthesis of vulnerability and disaster risk. In: O. D. Cardona (ed.), *IDB/IDEA Program on Indicators for Disaster Risk Management* (pp. 1–53). Universidad Nacional de Colombia, Manizales.
- De Boer, J. Z. and Sanders, D. T. (2004). *Earthquakes in Human History: The Far-Reaching Effects of Seismic Disruptions* (264 pp.). Princeton University Press, Princeton, NJ.
- De Boer, J. Z. and Sanders, D. T. (2005). *Volcanoes in Human History* (317 pp.). Princeton University Press, Princeton, NJ.
- Degermendji, A. G. and Bartsev, S. I. (2003). Global small-size models of biospheric dynamics and stability. *Problems of the Environment and Natural Resources*, **7**, 32–34 [in Russian].
- Delire, C., Foley, J. A., and Thompson, S. (2003). Evaluating the carbon cycle of a coupled atmosphere–biosphere model. *Global Biogeochemical Cycles*, **17**(1012), doi: 10.1029/2002GB001870.
- Del Frate, F., Ferrazzoli, P., and Schiavon, G. (2003). Retrieving soil moisture and agricultural variables by microwave radiometry using neural networks. *Remote Sensing of Environment*, **84**(2), 174–183.
- Delgado, J. P. (1998). *Encyclopedia of Underwater and Maritime Archaeology* (135 pp.). New Haven, London.
- Delworth, T. L. and Knutson, T. R. (2000). Simulation of early 20th century global warming. *Science*, **287**(5461), 2246–2250.
- Dementjeva, T. V. (2000). Emission of gases from peat-bog ecosystems. *Proceedings of Second International Methane Mitigation Conference, 18–23 June, Novosibirsk* (pp. 223–226). Novosibirsk State University, Novosibirsk, Russia.
- Demirchian, K. S. and Kondratyev, K. Ya. (1998). Development of energetics and the environment. *Proc. of RAS, Energetics*, **6**, 3–27 [in Russian].
- Demirchian, K. S. and Kondratyev, K. Ya. (2004). Global carbon cycle and climate. *Proc. of the Russian Geographical Society*, **136**(1), 16–25 [in Russian].
- Demirchian, K. S., Demirchian, K. K., Danilevich, Ya. B., and Kondratyev, K. Ya. (2002). Global warming, energetics, and geopolitics. *Proc. RAS, Energetics*, **3**, 221–235 [in Russian].
- De Rosnay, P., Bruen, M., and Polcher, J. (2000). Sensitivity of surface fluxes to the number of layers in the soil model used in GCMs. *Geophys. Res. Lett.*, **27**(20), 3329–3332.
- Derwent, R. G., Collins, W. J., Johnson, C. E., and Stevenson, D. S. (2001). Transient behaviour of tropospheric ozone precursors in a global 3D-CTM and their indirect greenhouse effects. *Clim. Change*, **49**(4), 463–487.
- Diadin, Yu. A. and Gushchin, A. D. (1998). Gas hydrates. *Soros Educational Journal. Biology. Chemistry. Earth sciences. Physics, Mathematics*, **3**, 55–64 [in Russian].
- Diamond, J. (2004). *Collapse: How the World Ends. How Societies Choose to Fail or Succeed* (575 pp.). Golden Penguin Audio Books, New York.
- Diamond, J. (2005). *Collapse: How Societies Choose to Fail or Succeed* (575 pp.). Viking, London.
- Dilley, M., Chen, R. S., Deichmann, U., Lerner-Lam, A. L., and Arnold, M. (2005). *Natural Disaster Hotspots: A Global Risk Analysis* (132 pp.). World Bank, New York.
- Dole, R. M. (2005). The May 2003 extended tornado outbreak. *Bull. Amer. Meteorol. Soc.*, **86**(4), 531–542.

- Dong, J., Kaufmann, R. K., Myneni, R. B., Tucker, C. J., Kauppi, P. E., Loski, J., Buermann, W., Alexeyev, V., and Hughes, M. K. (2003). Remote sensing estimates of boreal and temperate forests woody biomass: Carbon pools, sources, and sinks. *Remote Sensing of Environment*, **84**(3), 393–410.
- Dore, S. E., Likas, R., Sadler, D. W., and Karl, D. M. (2003). Climate-driven changes to the atmospheric CO₂ sink in the subtropical North Pacific Ocean. *Nature (UK)*, **424**(6950), 754–757.
- Douglass, D. H., Blackman, E. G., and Knox, R. S. (2004). Temperature response of Earth to the annual solar irradiance cycle. *Physics Letters A*, **323**(3–4), 315–322.
- Dufour, L. and Defay, R. (1963). *Thermodynamics of Clouds* (255 pp.). Academic Press, New York.
- Dukhovny, V. A. and Stulina, G. (2001). Strategy of trans-boundary return flow use in the Aral Sea basin. *Desalination*, **139**, 299–304.
- Dulnev, G. N. and Ushakovskaya, E. D. (1988). Analysis of the influence exerted by physico-geometric parameters on the temperature field of an object. *J. of Engineering Physics and Thermophysics*, **57**(6), 1487–1492.
- Duncan, B. N., Martin, R. V., Staudt, A. C., Yevich, R., and Logan, J. A. (2003). Inter-annual and seasonal variability of biomass burning emissions by satellite observations. *J. Geophys. Res.*, **108**(D2), ACH1/1–ACH1/11.
- Dziewonski, M. A. and Anderson, D. L. (1984). Seismic tomography of the Earth's interior. *American Scientist*, **5**, 483–493.
- Edmonds, J., Joos, F., Nakicenovic, N., Richels, R. G., and Sarmiento, J. L. (2004). Scenarios, targets, gaps, and costs. In: C. B. Field and M. R. Raupach (eds), *Global Carbon Cycle: Integrating Humans, Climate, and the Natural World* (pp. 77–102). Island Press, Washington, DC.
- Edward, B. (2005). *Natural Hazards* (328 pp.). Cambridge University Press, Cambridge, UK.
- Efremov, D. F. and Sapozhnikov, A. P. (1997). Far East forest biodiversity and succession dynamics. *Proceedings of the IGBP Siberian Transect Workshop "Spatial–Temporal Dimension of High-Latitude Ecosystem Change", 1–7 September, Krasnoyarsk* (pp. 13–14). V.N. Sukachev Institute of Forest Siberian Branch, Russian Academy of Science.
- Egan, W. G., Hogan, A. W., and Zhu, H. (1991). Physical variation of water vapor, and the relation with carbon dioxide. *Geophys. Res. Lett.*, **18**(12), 2245–2248.
- Ehhalt, D. H. (1981). Chemical coupling of the nitrogen, sulphur, and carbon cycles in the atmosphere. In: G. E. Likens (ed.), *Some Perspective of the Major Biogeochemical Cycles* (pp. 81–91). Elsevier, Amsterdam.
- Ehleringer, J. R., Cerling, T. E., and Dearing, M. D. (eds) (2005). *A History of Atmospheric CO₂ and Its Effects on Plants, Animals, and Ecosystems* (548 pp.). Springer-Verlag, New York.
- EPA (2001). *Non-CO₂ Greenhouse Gas Emissions from Developed Countries: 1990–2010* (EPA-430-R-01-007, 79 pp.). US Environmental Protection Agency, Washington, DC.
- Erust, W. G. (ed.) (2000). *Earth Systems: Processes and Issues* (566 pp.). Cambridge University Press, Cambridge, UK.
- Essenhigh, R. H. (2001). Does CO₂ really drive global warming? *Chem. Innovation*, **31**(5), 44–46.
- Essex C. and McKittrick R. (2002). *Taken by Storm. The Troubled Science, Policy and Politics of Global Warming*. Key Porter Books, Toronto, 320 pp.
- Feingold, G., Remer, L., Ramaprasad, J., and Kaufmann, Y. J. (2001). Analysis of smoke impact on clouds in Brazilian biomass burning region: An extension of Twomey's approach. *J. Geophys. Res.*, **106**(D19), 22907–22922.

- Field, C. B. and Raupach, M. R. (eds) (2004). *Global Carbon Cycle: Integrating Humans, Climate, and the Natural World* (584 pp.). Island Press, Washington, DC.
- Field, J. G., Hempel, G., and Summerhayer, C. P. (eds) (2002). *Oceans 2020: Science Trends and the Challenge of Sustainability* (296 pp.). Island Press, Washington, DC.
- Filatov, N. N. (2004). *Climate of Karelia: Variability and Impact on Water Objects and Watersheds* (224 pp.). Karel Sci. Centre of RAS, Petrozavodsk, Russia [in Russian].
- Fleishman, B. S. (2003). *The Choice Is Yours* (120 pp.). Oecumene, New York.
- Flood, J. (1995). Indicators for the implementation and monitoring of agenda. *Habitat*, **1**(5), 13.
- Folland, C., Frich, P., Basnett, T., Rayner, N., Parker, D., and Horton, B. (2000). Uncertainties in climate datasets: A challenge for WMO. *WMO Bull.*, **49**(1), 59–68.
- Fong, H. and Liang, S. (2003). Retrieving leaf area index with a neural network method: Simulation and validation. *IEEE Trans. Geoscience. Remote Sensing*, **41**(9), 2052–2062.
- Fridlingstein, P., Bopp, L., Ciais, P., Dufresne, J.-L., Fairhead, L., LeTrent, H., Monfray, P., and Orr, J. (2001). Positive feedback between future climate change and the carbon cycle. *Geophys. Res. Lett.*, **28**, 1543–1546.
- Fulé, P. Z., Crouse, J. E., Cocke, A. E., Moore, M. M., and Covington, W. W. (2004). Changes in canopy fuels and potential fire behaviour 1880–2040: Grand Canyon, Arizona. *Ecological Modelling*, **175**(3), 231–248.
- Fung, Ch. Sh. and Le, D. H. (1997). Control of environmental pollution from industrial and domestic waste in key regions by means of economic development. *Proceedings of the Workshop on Environmental Technology and Management, Ho Chi Minh City, 28–29 May* (pp. 32–42). Institute of Applied Mechanics, Ho Chi Minh City, Vietnam [in Russian].
- Furiayev, V. V. (1996). *The Role of Fires in the Process of Forest Formation* (252 pp.). Science, Novosibirsk, Russia [in Russian].
- Gale, J. and Freund, P. (2000). Reducing methane emissions to combat global climate change: The role Russia can play. *Proceedings of the Second International Methane Mitigation Conference, 18–23 June, Novosibirsk* (pp. 73–80). Novosibirsk State University, Novosibirsk, Russia.
- García-Barrón, L. and Pita, M. F. (2004). Stochastic analysis of time series of temperatures in the south-west of the Iberian Peninsula. *Atmósfera*, **17**(4), 225–244.
- Gardner, J. S. (2002). Natural hazards risk in the Kullu District, Himachal Pradesh, India. *Geographical Review*, **92**, 172–177.
- Gedney, N. and Valdes, P. J. (2000). The effect of Amazonian deforestation on northern hemisphere circulation and climate. *Geophys. Res. Lett.*, **27**(19), 3053–3056.
- Geogdzhayev, I. V., Mishchenko, M. I., Terez, E. I., Terez, G. A., and Gushchin, G. K. (2005). Regional advanced very high resolution radiometer-derived climatology of aerosol optical thickness and size. *J. Geophys. Res.*, **110**(D23205), doi:10.1029/2005JD006170.
- Gerstengarbe, F.-W. (2002). *Angewandte Statistik* (PIK Report No. 75, 100 pp.). Potsdam Institute for Climate Research, Potsdam, Germany [in German].
- Gibson, R. B., Hassan, S., Holtz, S., Tansey, J., and Whitelaw, G. (2005). *Sustainability Assessment, Criteria, Processes, and Applications* (240 pp.). Earthscan, London.
- Gitz, V. and Ciais, P. (2004). Future expansion of agriculture and pasture acts to amplify atmospheric CO₂ levels in response to fossil-fuel and land-use change emissions. *Climatic Change*, **67**(1), 161–184.
- Glade, T., Anderson, M. G., and Crozier, M. J. (eds) (2005). *Landslide Hazard and Risk* (608 pp.). John Wiley & Sons, London.
- Gleick, P. H. (1993). *A Guide to the World's Fresh Water Resources* (473 pp.). Oxford Scientific, Oxford, UK.

- Gloersen, P., Parkinson, C. L., Cavalieri, D. J., Comiso, J. C., and Zwally, H. J. (1999). Spatial distribution of trends and seasonality in the hemispheric ice covers: 1978–1996. *J. Geophys. Res.*, **104**(C9), 20827–20835.
- Goldner, J. (2002). *Messages from Space* (132 pp.). Michael Wiese Production, Suite.
- Golitsyn, G. S. (1995). Rising of the Caspian Sea level as a problem of diagnosis and forecast of regional climate change. *Physics of the Atmosphere and Ocean*, **31**(3), 385–391 [in Russian].
- Golubov, B. N. and Kruchenitsky, G. M. (1999). *Study into the Degassing of the Cavities of Underground Nuclear Explosions as a Factor of Atmospheric Pollution in the Sakha Republic (Yakutia)* (178 pp.). Scientific Council on Biospheric Problems at RAS Presidium, Moscow [in Russian].
- Goody, R. (2002). Observing and thinking about the atmosphere. *Annu. Rev. Environ.*, **27**, 1–20.
- Gorny, V. I., Salman, A. G., Tronin, A. A., and Shilin, B. V. (1988). The outgoing IR radiation of the Earth as an indicator of seismic activity. *Reports of RAS*, **301**(1), 67–69 [in Russian].
- Gorshkov, V. G. (1990). *Energetics of the Biosphere and Environmental Stability* (237 pp.). ARISTI, Moscow [in Russian].
- Gorshkov, V. G. (1995). *Physical and Biological Bases of Life Stability: Man, Biota, Environment* (340 pp.). Springer-Verlag, Berlin.
- Gorshkov, V. G., Kondratyev, K. Ya., and Losev, K. S. (1998). Global ecodynamics and sustainable development: Natural–scientific aspects and the “human dimension”. *Ecology*, **3**, 163–170 [in Russian].
- Gorshkov, V. G., Gorshkov, V. V., and Makarieva, A. M. (2000). *Biotic Regulation of the Environment* (364 pp.). Springer/Praxis, Chichester, UK.
- Gorshkov, V., Makarieva, A., Mackey, B., and Gorshkov, V. (2002). Biological theory and global change science. *Global Change Newsletter*, **48**, 11–14.
- Goudsouzian, A. (2004). *The Hurricane of 1938*, (96 pp.). Commonwealth Editions, Boston.
- Graham, B., Guyon, P., Maenhaut, W., Taylor, P. E., Ebert, M., Matthias-Maser, S., Mayol-Bracero, O. L., Gedoi, R. H. M., Artaxo, P., Meixner, F. X. *et al.* (2003). Composition and diurnal variability of the natural Amazonian aerosol. *J. Geophys. Res.*, **108**(D24), AAC5/1–AAC5/16.
- Grankov, A. G. and Milshin, A. A. (1994). On the correlation of humidity and moisture content with water surface air temperature. *Research of the Earth from Space*, **10**, 78–81 [in Russian].
- Grant, J. A. (2004). Liquid compositions from low-pressure experimental melting of pelitic rock from Morton Pass, Wyoming, USA. *Journal of Metamorphic Geology*, **22**, 65–78.
- Grassl, H. (2000). Status and improvements of coupled general circulation models. *Science*, **288**, 1991–1997.
- Greenland, D., Goodin, D. G., and Smith, R. C. (2003). *Climate Variability and Ecosystem Response in Long-term Ecological Research Sites* (512 pp.). Oxford University Press, Oxford, UK.
- Grigoryev, A. A. (1987). Large-scale changes in the nature of Priaralye from space-borne observations. *Problems of Desert Mastering*, **1**, 16–22 [in Russian].
- Grigoryev, A. A. and Kondratyev, K. Ya. (2001). *Ecodynamocs and Geopolitics*, Vol. II: *Ecological Disasters* (688 pp.). St Petersburg Research Centre for Safety, RAS, St Petersburg [in Russian].
- Grigoryev, A. A. and Kondratyev, K. Ya. (2004a). Global urbanization, 1: General laws. *Proc. Russian Geographical Society*, **136**(4), 1–8 [in Russian].
- Grigoryev, A. A. and Kondratyev, K. Ya. (2004b). Global urbanization, 2: Ecodynamics of large cities. *Proc. Russian Geographical Society*, **136**(5), 1–11 [in Russian].

- Grigoryev, A. A. and Kondratyev, K. Ya. (2005). Natural and anthropogenic forest fires: Ecodynamics component and natural disasters. *Proc. Russian Geographical Society*, **137**(1), 3–40 [in Russian].
- Grigoryev, A. A. and Sychev, V. N. (2004). Systems of life support for cosmonauts based on biospheric mechanisms. *Herald of RAS*, **74**(8), 675–689 [in Russian].
- Grogan, P., Illeris, L., Michelsen, A., and Jonasson, S. E. (2001). Respiration of recently-fixed plant carbon dominates mid-winter ecosystem CO₂ production in sub-Arctic heath tundra. *Climatic Change*, **50**, 129–142.
- Grossi, P. and Kunreuther, H. (eds) (2005). *Catastrophe Modeling: A New Approach to Managing Risk* (252 pp.). Springer-Verlag, New York.
- Gurjar, B. R. and Leliveld, J. (2005). New directions: Megacities and global change. *Atmospheric Environment*, **39**(2), 391–393.
- Gutberlet, J. (2003). Cities, consumption and the generation of waste. *Aviso*, **11**, 12–19.
- Gyalistras, D. (2002). *How Uncertain Are Regional Climate Change Scenarios? Examples for Europe and the Alps* (PIK Report No. 75, pp. 85–100). Potsdam Institute for Climate Research, Potsdam, Germany.
- Haan, D., Zuo, Y., Gros, V., and Brenninkmeijer, C. A. M. (2001). Photochemical production of carbon monoxide in snow. *J. Atmos. Sci.*, **40**(3), 217–230.
- Haque, C. E. (ed.) (2005). *Mitigation of Natural Hazards and Disasters: International Perspectives* (200 pp.). Springer-Verlag, Heidelberg.
- Hales, B., Takahashi, T., and Bandstra, L. (2005). Atmospheric CO₂ uptake by a coastal upwelling system. *Global Biogeochemical Cycles*, **19**(GB1009), doi: 10.1029/2004GB002295, 1–11.
- Hamill, T. M., Schneider, R. S., Brooks, H. E., Forbes, G. S., Bluestein, H. B., Steinberg, M., Meléndez, D., and Dole, R. M. (2005). The May 2003 extended tornado outbreak. *Bull. Amer. Meteorol. Soc.*, **86**(4), 531–542.
- Han, Q., Rossow, W. B., Zeng, J., and Welch, R. (2002). Three different behaviours of liquid water path of water clouds in aerosol–cloud interactions. *J. Atmos. Sci.*, **59**(3), 726–735.
- Hansen, J. (1998). Book review of Sir John Houghton’s “Global Warming: The Complete Briefing”. *J. Atmos. Chem.*, **30**, 409–412.
- Hansen, J. and Sato, M. (2001). Trends of measured climate forcing agents. *Proc. Nat. Acad. Sci. USA*, **98**(26), 14778–14783.
- Hansen, J., Fung, I., Lacis, A., Rind, D., Lebedeff, S., Ruedy, R., Russell, G., and Stone, P. (1988). Global climate changes as forecast by Goddard Institute for Space Studies’ three-dimensional model. *J. Geophys. Res.*, **93**, 9341–9364.
- Hansen, J., Ruedy, R., Glascoe, J., and Sato, M. (1999). GISS analysis of surface temperature change. *J. Geophys. Res.*, **104**(D24), 30997–31022.
- Hansen, J., Sato, M., Lacis, A., Ruedy, R., Tegen, L., and Matthews, E. (1998). Climate forcing in the industrial era. *Proc. Nat. Acad. Sci. USA*, **95**(22), 12753–12758.
- Hansen, J. E., Sato, M., Ruedy, R., Lacis, A., and Oinas, V. (2000). Global warming in the twenty-first century: An alternative scenario. *Proc. Nat. Acad. Sci. USA*, **97**(18), 9875–9880.
- Hansen J., Sato M., Nazarenko L., Ruedy R., Laws A., Koch D., Tegen I., Hall T., Shindell D., Santer B., *et al.* (2002). Climate forcings in Goddard Institute for Space Studies SI 2000 simulations. *J. Geophys. Res.*, **107**(D18), ACL2–ACL37.
- Hanson, B. (2005). Learning from natural disasters. *Science*, **308**, 1125.
- Hardy, J. T. (2003). *Climate Change* (260 pp.). John Wiley & Sons, Washington, DC.
- Haritonova V. I. (2004). *Religious Factor in Present Life of the Northern and Siberian People* (39 pp.). Institute of Ethnology and Anthropology, RAS, Moscow.

- Harshvardhan, M., Schwartz, S. E., Benkovitz, C. V., and Guo, G. (2002). Aerosol influence on cloud microphysics examined by satellite measurements and chemical transport modeling. *J. Atmos. Sci.*, **59**(2), Part 2, 714–725.
- Hasegawa, Y. and Kasagi, N. (2001). The effect of Schmidt number on air–water interface mass transfer. *Proceedings of the Fourth International Conference on Multiphase Flow, New Orleans, 27 May–1 June, University of Nottingham, New Orleans, LA*, pp. 296–292.
- Hasegawa, Y. and Kasagi, N. (2005). Turbulent mass transfer mechanism across a contaminated air–water interface. *Proceedings of the Fourth International Symposium on Turbulence and Shear Flow Phenomena (TSFP-4), Williamsburg, VA, 27–29 June*, pp. 971–976.
- Hauglistaine, D. (2002). Trace gas radiative forcing and related climate feedbacks: How do we reduce the uncertainties? *IGACTivities Newsletter*, **26**, 20–26.
- Heans, K. A. (2001). Assessment of pre-industrial carbon dioxide content in the atmosphere using hydrochemical data. *Proceedings of the First International Conference on Global Warming and the Next Ice Age, 19–24 August, Halifax, Canada* (pp. 140–144). Dalhousie University, Halifax, Canada.
- Henderson, V. and Thisse, J. F. (eds) (2004). *Handbook in Regional and Urban Economics*, Vol. 4: *Cities and Geography* (1006 pp.). Elsevier, Amsterdam.
- Hide, R., McSharry, P. E., Finlay, C. C., and Peskett, G. D. (2004). Quenching Lorenzian chaos. *International Journal of Bifurcation and Chaos*, **14**(8), 2875–2884.
- Hinchliffe, S., Blowers, A., and Freeland, J. (2002). *Understanding Environmental Issues* (216 pp.). John Wiley & Sons, London.
- Hoelzemann, J. J., Schultz, M. G., Brasseur, G. P., Granier, C., and Simon, M. (2004). Global wildland fire emission model (GWEM): Evaluating the use of global area burnt satellite data. *J. Geophys. Res.*, **109**(14), D14504/1–D14504/18.
- Hoffmann, W. A. (1998). Post-burn reproduction of woody plants in a neotropical savanna: The relative importance of sexual and vegetative reproduction. *J. Appl. Ecology*, **35**(3), 422–433.
- Hoffmann, W. A., Orthen, B., and Nascimento, P. K. V. (2003). Comparative fire ecology of tropical savanna and forest trees. *Functional Ecology*, **17**(6), 720–726.
- Hoinka, K. P. and de Castro, M. (2005). A renaissance depiction of a tornado. *Bull. Amer. Meteorol. Soc.*, **86**(4), 543–552.
- Holdren, J. P. (2003). Environmental change and human condition. *Bull. Amer. Acad. Arts Sci.*, **57**(1), 25–31.
- Holweg, E.J. (2000). *Mariner's Guide for Hurricane Awareness in the North Atlantic Basin* (72 pp.). National Oceanic and Atmospheric Administration, Washington, DC.
- Honson, B. (2005). Learning from natural disasters. *Science*, **308**(5725), 1125.
- Houghton, J. (2000). Global climate and human activities. *Eilss Article*, **1**, 1–13.
- Houghton, J., Calander, B. A., and Varney, S. K. (eds) (1992). *Climate Change 1992* (7 pp.). Cambridge University Press, Cambridge, UK.
- Houghton, J. T., Ding, Y., Griggs, D. J., Noguer, M., van der Linden, P. J., Dai, X., Maskell, K., and Johnson, C. A. (2001). *Climate Change 2001: The Scientific Basis. Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel Group on Climate Change* (881 pp.). Cambridge University Press, Cambridge, UK.
- Hsu, S. M., Ni, C.-F., and Hung, P.-F. (2002). Assessment of three infiltration formulas based on model fitting on Richards equation. *Journal of Hydrologic Engineering*, **7**(5), 373–379.
- Huang, S., Pollack, H. N., and Shen, P.-Y. (2000). Temperature trends over the past five centuries reconstructed from borehole temperatures. *Nature*, **403**, 756–758.
- Hulme, M. and Parry, M. (1998). Adapt or mitigate? Responding to climate change. *Town and Country Planning*, **67**(2), 50–51.

- Hulme, M., Barrow, E. M., Arnell, N. W., Harrison, P. A., Johns, T. C., and Downing, T. E. (1999). Relative impacts of human-induced climate change and climate variability. *Nature*, **397**, 689–691.
- Iliadis, L. S. (2005). A decision support system applying an integrated fuzzy model for long-term forest fire risk estimation. *Environmental Modelling & Software*, **20**(5), 613–621.
- IPCC (2001). *Third Assessment Report*, Vol. 1: *Climate Change 2001. The Scientific Basis* (881 pp.). Cambridge University Press, Cambridge, UK.
- Ito, A. (2005). Climate-related uncertainties in projections of the twenty-first century terrestrial carbon budget: Off-line model experiments using IPCC greenhouse-gas scenarios and AO GCM climate projections. *Climate Dynamics*, **44**, 435–448.
- Ito, A. and Oikawa, T. (2002). A simulation model of the carbon cycle in land ecosystems (Sim-Cycle): A description based on dry-matter production theory and plot-scale validation. *Ecological Modelling*, **151**, 147–179.
- Irion, R. (2001). Fathoming the chemistry of the deep blue sea. *Science*, **293**(5531), 790–793.
- Ivanov-Rostovtsev, A. G., Kolotilo, L. G., Tarasiuk, Yu. F., and Sherstiankin, P. P. (2001). *Self-organization and Self-regulation of Natural Systems: Model, Method, and Fundamentals of the D-Self Theory* (216 pp.). Russian Geographical Society, St Petersburg [in Russian].
- Ivey, J. P. (2002) *Tropical Storm Allison*. Half Associates Inc., Allington, TX, 42pp.
- Jaeger, C. C., Ortwin, R., Rosa, E. A., and Webler, T. (2001). *Risk, Uncertainty, and Rational Action* (324 pp.). Earthscan, London.
- Jagovkina, S. V., Karol, I. L., Zubov, V. A., Lagun, V. E., Reshemikov, A. I., and Rosanov, E. V. (2000a). Estimation of gas deposit leakage into the total methane flux from the West Siberian region. *Proceedings of the Second International Methane Mitigation Conference, 18–23 June, Novosibirsk* (pp. 263–267). Novosibirsk State University, Novosibirsk, Russia.
- Jagovkina, S. V., Karol, I. L., Zubov, V. A., Lagun, V. E., Reshemikov, A. I., and Rosanov, E. V. (2000b). Reconstruction of methane fluxes from the west Siberia gas fields by the 3D regional chemical transport model. *Atmospheric Environment*, **34**(29), 5319–5328.
- Jarraud, M. (2005). Reducing the risk of nature disasters through early warnings. *WMO Bull.*, **86**(2), 155–156.
- Jelle Zeilinga de Boer and Sanders, D. T. (2005). *Earthquakes in Human History* (296 pp.). Princeton University Press, Princeton, NJ.
- Jenkins, G., Betts, R., Collins, M., Griggs, D., Lowe, J., and Wood, R. (2005). *Stabilising Climate to Avoid Dangerous Climate Change: A Summary of Relevant Research at the Hadley Centre* (19 pp.). Met Office Hadley Centre, Exeter, UK.
- Ji, Y. and Stocker, E. (2002). Seasonal, intraseasonal, and interannual variability of global land fires and their effects on atmospheric aerosol distribution. *J. Geophys. Res.*, **107**(D23), ACH10/1–ACH10/11.
- Johnson, D. E. and Ulyatt, M. I. (2000). Variations in the proportion of methane of total greenhouse gas emissions from US and NZ dairy production systems. *Proceedings of the Second International Methane Mitigation Conference, 18–23 June, Novosibirsk* (pp. 249–254). Novosibirsk State University, Novosibirsk, Russia.
- Jolliffe, I. T. and Stephenson, D. B. (2003). *Forecast Verification* (254 pp.). John Wiley & Sons, London.
- Jones, A., Roberts, D. L., Woodage, M. J., and Johnson, C. E. (2001). Indirect sulphate aerosol forcing in a climate model with an interactive sulphur cycle. *J. Geophys. Res.*, **106**(D17), 20293–20310.

- Jönsson, A. M., Linderson, M.-L., Stjernquist, I., Scglyter, P., and Barring, L. (2004). Climate change and the effect of temperature backlashes causing frost damage in *Picea abies*. *Global and Planetary Change*, **44**(1–4), 195–207.
- Jun, H. B. and Shin, H. S. (1997). Substrates transformation in a biological excess phosphorus removal system. *Water Research*, **31**(4), 893–899.
- Kanygin, A. (2004). Praises on catastrophes. *Science at First Hand*, **1**, 29–39 [in Russian].
- Karl, T. and Gleckler, P. J. (2001). Tracking changes in AMIP model performance. *Proceedings of the Eighth Scientific Assembly of IAMAS, Innsbruck, 10–18 July* (p. 8). International Association of Meteorology and Atmospheric Sciences, Innsbruck, Germany.
- Karley, M. J., Beven, K. J., and Oliver, H. R. (1993). A method for predicting spatial distribution of evaporation using simple meteorological data. *Proceedings of International Symposium “Ech. Proc. Land Surf. Range Space and Time Scales”*, Yokohama, 13–16 July (Vol. 212, pp. 619–626). International Association of Hydrological Sciences, Yokohama, Japan.
- Karol, I. L. (2000). Impact of transport aircraft flights on the ozonosphere and climate. *Meteorology and Hydrology*, **7**, 17–32 [in Russian].
- Kashapov, R. Sh. (2002). On the balance of organic carbon in the natural–economic system of Bashkortostan. *Proceedings of the Russian Geographical Society*, **134**(3b), 39–42 [in Russian].
- Kasperson, J. X. and Kasperson, R. E. (eds) (2001). *Global Environmental Risk* (324 pp.). Earthscan, London.
- Kasyanova M. A. (2003). *Ecological Risks and Geodynamics* (330 pp.). Sci. World, Moscow [in Russian].
- Keeling, R. F. and Visbeck, M. (2001). Antarctic stratification and glacial CO₂. *Nature*, **412**(6847), 605–606.
- Keigwin, L. D. and Boyle, E. A. (2000). Detecting Holocene changes in thermohaline circulation. *Proceedings of the National Academy of Sciences*, **97**(4), 1343–1346.
- Kendrick, T. D. (1957). *The Lisbon Earthquake* (255 pp.). Lippincott, Philadelphia.
- Kerr, R. A. (2000). Dueling models: Future US climate uncertain. *Science*, **288**, 2113.
- Khalil, M. A. K., Rasmussen, R. A., Ren, L., Wang, M. X., Shearer, M. J., Dalluge, R. W., and Duan, C.-L. (2000). Methane emissions from rice fields. *Proceedings of the Second International Methane Mitigation Conference, 18–23 June, Novosibirsk* (pp. 13–30). Novosibirsk State University, Novosibirsk, Russia.
- Kharitonova, V. I. (2004). *Religious Factor in Present Life of Northern and Siberian Peoples*. Institute for Ethnology and Anthropology, Russian Academy of Sciences, Moscow, 39 pp.
- Kharkina, M. A. (2000). Ecological consequences of natural disasters. *Energy*, **1**, 1–6 [in Russian].
- Kharkina, M. A. (2003). Volcanic eruptions: Danger or blessing. *Energy*, **9**, 48–53 [in Russian].
- Kiehl, J. T. and Gent, P. R. (2004). The Community Climate System Model, Version 2. *J. Clim.*, **17**, 3666–3682.
- Kim, W., Arai, T., Kanae, S. Oki, T., and Musiaka, K. (2001). Application of the Simple Biosphere Model (SiB2) to a paddy field for a period of growing season in GAME-Tropics. *J. Meteorol. Soc. Japan*, **79**(18), 387–400.
- King, C. (2004). *Without Warning: The Great Storm of 1953* (78 pp.). Ian Henry Publications, Romford, UK.
- Kirchner, I., Stenchikov, G., Graf, H.-F., Robock, A., and Antuna, J. (1999). Climate model simulation of winter warming and summer cooling following the 1991 Mount Pinatubo volcanic eruption, *J. Geophys. Res.*, **104**, 19039–19055.

- Kirchner, J. W. (2003). The Gaia hypothesis: Conjectures and refutations. *Clim. Change*, **58**(1–2), 21–45.
- Klyuev V. V. (ed.) (2000). *Safety of Russia: Ecological Diagnostics* (496 pp.). Knowledge, Moscow [in Russian].
- Knutson, T. R., Delworth, T. U., Dixon, K. W., and Stouffer, R. J. (1999). Model assessment of regional temperature trends (1949–1997). *J. Geophys. Res.*, **104**(D24), 30981–30996.
- Köhler, U. (1999). A comparison of the new Filter Ozonometer Microtops II with Dobson and Brewer Spectrometers at Hohenspeissenberg. *Geophys. Res. Lett.*, **26**(10), 1385–1388.
- Koike, T. (2004). The Coordinated Enhanced Observing Period: An initial step for integral global water cycle observation. *WMO Bull.*, **53**(2), 2–8.
- Kokkola, H., Romakkaniemi, S., and Laaksonen, A. (2003). Köhler theory for a polydisperse droplet population in the presence of a soluble trace gas, and an application to stratospheric STS droplet growth. *Atmospheric Chemistry Physics Discussions*, **3**, 3241–3266.
- Kondratyev, K. Ya. (1982). *The World Climate Research Programme: State, Perspectives and the Role of Space-borne Observational Means* (Progress in Science and Engineering: Meteorology and Climatology No. 8, 274 pp.). ARISTI, Moscow [in Russian].
- Kondratyev, K. Ya. (1990). *Key Problems of Global Ecology* (454 pp.). ARISTI, Moscow [in Russian].
- Kondratyev, K. Ya. (1991). Priorities of global ecology. *Proceedings of RAS: Geography*, **6**, 21–30 [in Russian].
- Kondratyev, K. Ya. (1992). *Global Climate* (359 pp.). Science, St Petersburg [in Russian].
- Kondratyev, K. Ya. (1993). Ecology and politics. *Proceedings of the Russian Geographical Society*, **125**(2), 78–91 [in Russian].
- Kondratyev, K. Ya. (1996). Global changes and demographic dynamics. *Proceedings of the Russian Geographical Society*, **128**(3), 1–12 [in Russian].
- Kondratyev, K. Ya. (1998). *Multidimensional Global Change* (771 pp.). Wiley/Praxis, Chichester, UK.
- Kondratyev, K. Ya. (1999). *Ecodynamics and Geopolitics*, Vol. 1: *Global Problems* (1040 pp.). St Petersburg State University, St Petersburg [in Russian].
- Kondratyev, K. Ya. (2000a). Global changes of nature and society on the verge of two millennia. *Proceedings of the Russian Geographical Society*, **5**, 3–19 [in Russian].
- Kondratyev, K. Ya. (2000b). Studying the Earth from space: The EOS scientific plan. *Research of the Earth from Space*, **3**, 82–91 [in Russian].
- Kondratyev, K. Ya. (2001). Key issues of global change at the end of the second millennium. In: M. K. Tolba (ed.), *Our Fragile World: Challenges and Opportunities for Sustainable Development* (No. 1, pp. 147–165). Eolls, Oxford, UK.
- Kondratyev, K. Ya. (2002). Global climate change: Reality, hypotheses, and fiction. *Research of the Earth from Space*, **1**, 3–23 [in Russian].
- Kondratyev, K. Ya. (2003). Radiative forcing due to aerosol. *Optics of the Atmosphere and Ocean*, **16**(1), 1–14 [in Russian].
- Kondratyev, K. Ya. (2004a). Global climate change: Observational data and numerical modelling results. *Research of the Earth from Space*, **1**, 3–25 [in Russian].
- Kondratyev, K. Ya. (2004b). Global climate change: Unsolved problems. *Meteorology and Hydrology*, **4**, 93–102 [in Russian].
- Kondratyev, K. Ya. (2004c). Uncertainties in observational data and numerical climate modeling. *Meteorology and Hydrology*, **4**, 103–119 [in Russian].
- Kondratyev, K. Ya. (2004d). Priorities of global climatology. *Proceedings of the Russian Geographical Society*, **136**(2), 3–25 [in Russian].

- Kondratyev, K. Ya. (2005a). Key aspects of the global climate change problem. *Proceedings of the Russian Geographical Society*, **5**, 92–99 [in Russian].
- Kondratyev, K. Ya. (2005b). *Processes of Formation, Properties, and Climatic Impacts of Aerosol* (450 pp.). St Petersburg State University, St Petersburg [in Russian].
- Kondratyev, K. Ya. and Binenko, V. I. (2000). On radiative forcing of clouds and aerosols. *Meteorology and Hydrology*, **1**, 33–41 [in Russian].
- Kondratyev, K. Ya. and Cracknell, A. P. (1999). *Observing Global Climate Change* (592 pp.). Taylor & Francis, London.
- Kondratyev, K. Ya. and Demirchian, K. S. (2001). Global climate and the Kyoto Protocol. *Problems of the Environment and Natural Resources*, **6**, 2–15 [in Russian].
- Kondratyev, K. Ya. and Galindo, I. (2001). *Global Change Situations: Today and Tomorrow* (164 pp.). Universidad de Colima, Colima, Mexico.
- Kondratyev, K. Ya. and Grassl, S. H. (1993). *Global Climate Change in the Context of Global Ecodynamics* (195 pp.). St Petersburg Research Centre for Ecological Safety of RAS, St Petersburg [in Russian].
- Kondratyev, K. Ya. and Grigoryev, Al. A. (2004). Forest fires as a global ecodynamics component. *Optics of the Atmosphere and Ocean*, **136**(4), 279–292 [in Russian].
- Kondratyev, K. Ya. and Johannessen, O. (1993). *Arctic and Climate* (140 pp.). Propo, St Petersburg [in Russian].
- Kondratyev, K. Ya. and Krapivin, V. F. (2003a). Global change: Real and possible in the future. *Research of the Earth from Space*, **4**, 1–10 [in Russian].
- Kondratyev, K. Ya. and Krapivin, V. F. (2003b). Global carbon cycle and climate. *Research of the Earth from Space*, **1**, 3–15 [in Russian].
- Kondratyev, K. Ya. and Krapivin, V. F. (2004b). *Modelling the Global Carbon Cycle* (335 pp.). Physics-Mathematics, Moscow [in Russian].
- Kondratyev, K. Ya. and Krapivin, V. F. (2004a). Global carbon cycle: State, problems and perspectives. *Research of the Earth from Space*, **3**, 12–21 [in Russian].
- Kondratyev, K. Ya. and Moskalenko, N. I. (1984). *The Greenhouse Effect of the Atmosphere and Climate* (Progress in Science and Engineering: Meteorology and Climatology, Vol. 12, 262 pp.). ARISTI, Moscow [in Russian].
- Kondratyev, K. Ya. and Varotsos, C. A. (2000). *Atmospheric Ozone Variability: Implications for Climate Change, Human Health, and Ecosystems*. (758 pp.). Springer/Praxis, Chichester, UK.
- Kondratyev, K. Ya., Vasilyev, O. B., Ivlev, L. S., Nikolsky, G. A., and Smokty, O. I. (1973). *Impact of Aerosol on Radiation Transfer: Possible Climatic Implications* (266 pp.). LSU, Leningrad [in Russian].
- Kondratyev, K. Ya., Grigoryev, A. A., Pokrovsky, O. M., and Shalina, E. V. (1983). *Remote Sounding of Aerosol from Space* (216 pp.). Hydrometeoizdat, Leningrad [in Russian].
- Kondratyev, K. Ya., Ortner, J., and Preining, O. (1992). Priorities of global ecology now and in the next century. *Space Policy*, **8**(1), 39–48.
- Kondratyev, K. Ya., Moreno-Pena, F., and Galindo, I. (1994). *Global Change: Environment and Society* (47 pp.). Universidad de Colima, Colima, Mexico.
- Kondratyev, K. Ya., Moreno-Pena, F., and Galindo, I. (1997). *Sustainable Development and Population Dynamics* (128 pp.). Universidad de Colima, Colima, Mexico.
- Kondratyev, K. Ya., Krapivin, V. F., and Pshenin, E. S. (2000). Concept of the regional geoinformation monitoring. *Research of the Earth from Space*, **6**, 1–8 [in Russian].
- Kondratyev, K. Ya., Losev, K. S., Ananicheva, M. D., and Chesnokova, I. V. (2001). Some problems of landscape science and ecology in the context of biotic regulation. *Annals of the Russian Geographical Society*, **133**(5), 22–29 [in Russian].

- Kondratyev, K. Ya., Grigoryev, A. A., and Varotsos, C. A. (2002a). *Environmental Disasters: Anthropogenic and Natural* (484 pp.). Springer/Praxis, Chichester, UK.
- Kondratyev, K. Ya., Krapivin, V. F., and Phillips, G. W. (2002b). *Global Environmental Change: Modelling and Monitoring*, (319 pp.). Springer-Verlag, Berlin.
- Kondratyev, K. Ya., Krapivin, V. F., and Varotsos, C. A. (2003a). *Global Carbon Cycle and Climate Change* (372 pp.). Springer/Praxis, Chichester, UK.
- Kondratyev, K. Ya., Krapivin, V. F., and Savinykh, V. P. (2003b). *Perspectives of Civilization Development: Multidimensional Analysis* (574 pp.). Logos, Moscow [in Russian].
- Kondratyev, K. Ya., Losev, K. S., Ananicheva, M. D., and Chesnokova, I. V. (2003c). *Natural-Scientific Foundations of Life Stability* (240 pp.). CAGL, Moscow [in Russian].
- Kondratyev, K. Ya., Losev, K. S., Ananicheva, M. D., and Chesnokova, I. V. (2003d). Price of ecological service in Russia. *Herald of RAS*, **73**(1), 3–10 [in Russian].
- Kondratyev, K. Ya., Losev, K. S., Ananicheva, M. D., and Chesnokova, I. V. (2003e). *Stability of Life on Earth* (152 pp.). Springer/Praxis, Chichester, UK.
- Kondratyev, K. Ya., Fedchenko, P. P., and Fedchenko, K. P. (2004a). Solar radiation spectrum and evolution of the biosphere. *Problems of the Environment and Natural Resources*, **11**, 31–51 [in Russian].
- Kondratyev, K. Ya., Fedchenko, P. P., and Fedchenko, K. P. (2004b). Fraunhofer lines in the solar spectrum and immunodeficiency problems. *Problems of the Environment and Natural Resources*, **12**, 66–77 [in Russian].
- Kondratyev, K. Ya., Krapivin, V. F., and Nitu, C. (2004c). An application of global simulation model to the study of CO₂ greenhouse effect. *Proceedings International Conference "World Energy Systems", 15-17 May* (pp. 467–472). University Oradea, Oradea, Romania.
- Kondratyev, K. Ya., Krapivin, V. F., Savinykh, V. P., and Varotsos, C. A. (2004d). *Global Ecodynamics: A Multidimensional Analysis* (658 pp.). Springer/Praxis, Chichester, UK.
- Kornakov, V. I., Borovets, S. A., and Bostandzhoglo, A. A. (1968). *Water Balance and Forecast for a Drop in the Aral Sea Level* (103 pp.). Hydroproject, Tashkent, Uzbekistan [in Russian].
- Kosarev, A. N. (1975). *Hydrology of the Caspian and Aral Seas* (271 pp.). MSU, Moscow [in Russian].
- Kotelnikov, V. A. (1956). *Theory of Potential Noise Immunity* (156 pp.). Gosenergoizdat, Moscow [in Russian].
- Kotlyakov, V. M. (1993). Geographic approach to the theory of disasters. *Proc. of RAS, Ser. Geography*, **5**, 7–17 [in Russian].
- Kraabol, A. G. and Stordal, F. (2000). Modelling chemistry in aircraft plumes, 2: The chemical conservation of NO_x to reservoir species under different conditions. *Atmospheric Environment*, **34**(23), 3951–3962.
- Kramer, H. J. (1995). *Observation of the Earth and Its Environment* (832 pp.). Springer-Verlag, Berlin.
- Krapivin, V. F. (1978). *On the Theory of Complex Systems' Survivability* (248 pp.). Science, Moscow [in Russian].
- Krapivin, V. F. (1993). Mathematical model for global ecological investigations. *Ecological Modelling*, **67**(2–4), 103–127.
- Krapivin, V. F. (1996). The estimation of the Peruvian current ecosystem by a mathematical model of biosphere. *Ecological Modelling*, **91**(1), 1–14.
- Krapivin, V. F. (2000a). Radio-wave ecological monitoring. In: V. V. Klyuev (ed.), *Ecological Diagnostics* (pp. 295–311). Knowledge, Moscow [in Russian].
- Krapivin, V. F. (2000b). A simulation model of the biogeochemical cycle of phosphorus in the biosphere. *Problems of the Environment and Natural Resources*, **10**, 26–30 [in Russian].

- Krapivin, V. F. and Chukhlantsev, A. A. (2004). Remote UHF radiometric sounding of soil and vegetation in the context of the global environmental change. *Ecological Systems and Devices*, **9**, 37–45 [in Russian].
- Krapivin, V. F. and Kondratyev, K. Ya. (2002). *Global Environmental Change: Ecoinformatics* (724 pp.). St Petersburg State University, St Petersburg [in Russian].
- Krapivin, V. F. and Mkrtchyan, F. A. (2002). Efficiency of the monitoring systems of detection. *Ecological Systems and Devices*, **6**, 3–5 [in Russian].
- Krapivin, V. F. and Nazaryan, N. A. (1997). Mathematical model for investigations of the global sulphur cycle. *Mathematical Modelling*, **9**(8), 36–50 [in Russian].
- Krapivin, V. F. and Phillips, G. W. (2001). A remote sensing-based expert system to study the Aral–Caspian aquageosystem water regime. *Remote Sensing of Environment*, **75**, 201–215.
- Krapivin, V. F. and Potapov, I. I. (2002). *Methods of Ecoinformatics* (496 pp.). ARISTI, Moscow [in Russian].
- Krapivin, V. F. and Vilkova, L. P. (1990). Model estimation of excess CO₂ distribution in biosphere structure. *Ecological Modelling*, **50**, 57–78.
- Krapivin, V. F., Svirezhev, Yu. M., and Tarko, A. M. (1982). *Numerical Modelling of Global Biospheric Processes* (272 pp.). Science, Moscow [in Russian].
- Krapivin, V. F., Shutko, A. M., Chukhlantsev, A. A., and Potapov, I. I. (2004). Information systems of the ecological monitoring. *Ecological Systems and Devices*, **4**, 3–8 [in Russian].
- Krebs, C. J., Boutin, S., and Boonstra, R. (eds.) (2001). *Ecosystem Dynamics of the Boreal Forest* (536 pp.). Oxford Univ. Press, Oxford.
- Krimmer, R. W. and Lake, F. K. (2001). The role of indigenous burning in land management. *J. Forest*, **99**(11), 36–41.
- Krishnamurti, T. N., Pattniak, S., Stefanova, L., Kumar, T. S. V. V., Mackey, B. P., O'Shay, A. J., and Pasch, R. J. (2005). The hurricane intensity issue. *Monthly Weather Review*, **133**(7), 1885–1912.
- Krupchatnikov, V. N. (1998). Simulation of CO₂ exchange processes in the atmosphere–surface biomes system by the climate model ECSSib. *Russ. J. Numer. Anal. Math. Modelling*, **13**(6), 479–492.
- Kuksa, V. I. (1994). *The Southern Seas under Conditions of Anthropogenic Stress* (369 pp.). Hydrometeoizdat, St Petersburg [in Russian].
- Kurbatsky, N. P. (1964). On the forest fire in the region of impact of the Tungus Meteorite. *Forest Economy*, **2**, 59–61 [in Russian].
- Kurz, C. and Grewe, V. (2002). Lightning and thunderstorms, Part 1: Observational data and model results. *Meteorol. Z.*, **11**(6), 379–392.
- Kussell, E. and Leibler, S. (2005). Phenotypic diversity, population growth, and information in fluctuating environments. *Science*, **309**, 2075–2078.
- Kuznetsov, O. L. and Bolshakov, B. E. (2002). *Sustainable Development: Scientific Basis of Planning Nature–Society–Man System* (615 pp.). Humanistics, St Petersburg [in Russian].
- Lal, M. and Yarasawa, H. (2001). Future climate change scenarios for Asia as inferred from selected coupled atmosphere–ocean global climate models. *J. Meteorol. Soc. Japan*, **79**(1), 219–227.
- Landsea, C. W., Franklin, J. L., McAdie, C. J., Beven, J. L., II, Gross, J. M., Jarvinen, B. R., Pasch, R. J., Rappaport, E. N., Dunion, J. P., and Dodge, P. P. (2004). A re-analysis of Hurricane Andrew's intensity. *Bull. Amer. Meteorol. Soc.*, **85**(11), 1699–1712.
- Langmann, B. (2000). Numerical modeling of regional scale transport and photochemistry directly together with meteorological processes. *Atmos. Env.*, **34**(21), 3585–3598.
- Lawford, R. (2004). Earth observations: A renewed opportunity area for GEWEX. *GEWEX News*, **14**(3), 2.

- Lawrence, D. P. (2003). *Environmental Impact Assessment: Practical Solutions to Recurrent Problems* (562 pp.). John Wiley & Sons, New York.
- Le Corbusier (1977). *Architecture of the 20th Century* (304 pp.). Progress, Moscow [in Russian].
- Ledley, T. S., Sundquist, E. T., Schwartz, S. E., Hall, D. K., Fellows, J. D., and Killen, T. L. (1999). Climate change and greenhouse gases. *Earth Observations from Space*, **80**(39), 453.
- Legendre, P. and Legendre, L. (1998). *Numerical Ecology* (853 pp.). Elsevier, Amsterdam.
- Lenton, T. M. and Wilkinson, D. M. (2003). Developing the Gaia theory: A response to the criticism of Kirchner and Volk. *Clim. Change*, **58**(1–2), 1–12.
- Levesque, J. and King, D. J. (2003). Spatial analysis of radiometric fractions from high-resolution multispectral imagery for modeling individual tree crown and forest canopy structure and health. *Remote Sensing of Environment*, **84**(4), 589–602.
- Levinson, D. H. and Waple, A. M. (2004). State of the climate in 2003. *Bull. Amer. Meteorol. Soc.*, **85**(6), 1–72.
- Levitus, S., Antonov, J. I., Boyer, T. P., and Stephens, C. (2000). Warming of the World Ocean. *Science*, **287**, 2225–2229.
- Leyborne, B.A. (1998). Can El Niño be controlled by tectonic vortex structures and explained with surge tectonics? *New Concepts in Global Tectonics*, **4**, 5–6.
- Lim, A., Liew, S. C., and Kwoh, L. K. (2004). A new method of active fire detection based on subpixel retrieval of fire temperature using atmospherically corrected MODIS thermal infrared data. *Proceedings of 25th ACRS, 22–26 November, Chiang Mai, Thailand* (pp. 606–609). AARS, Chiang Mai, Thailand.
- Lindenmayer, D. B., Foster, D. R., Franklin, J. F., Hunter, M. L., Noss, R. F., Schmiegelow, F. A., and Perry, D. (2004). Salvage harvesting policies after natural disturbance. *Science*, **303**(5662), 1303.
- Lindzen, R. S. (2003). The Interaction of waves and convection in the Tropics. *J. Atmos. Sci.*, **60**, 3009–3020.
- Liping, G., Erda, L., and Zhongpei, L. (2000). Methane emission flux and mitigation options and its relationship with N₂O emission from paddy soils. *Proceedings of the Second International Methane Mitigation Conference, 18–23 June, Novosibirsk* (pp. 217–222). Novosibirsk State University, Novosibirsk, Russia.
- Lisienko, V. G., Druzhinina, O. G., Zobnin, B. B., Rogovich, V. I., and Morozova, V. A. (2002). *Control of Resources: Estimation and Reduction of Ecologic–Economic Damage* (306 pp.). Ural State Technical University, Ekaterinburg, Russia [in Russian].
- Löfstedt, R. and Frewer, L. (eds) (1998). *The Earthscan Reader in Risk and Modern Society* (288 pp.). Earthscan, London.
- Lohmann, G. and Sirocko, F. (2004). Paleoclimatic research within DEKLIM. *Pilot Analysis of the Global Ecosystems News*, **112**(12), 6–7.
- Lohmann, G., Butzin, M., Dima, M., Grosfeld, K., Knorr, G., Könnecke, L., Romanova, V., Schubert, S., and Zech, S. (2004). Climate transitions: Forcing and feedback mechanisms of glacial–interglacial and recent climate change. *Pilot Analysis of the Global Ecosystems News*, **12**(2), 21–22.
- Logofet, D. O. (2002). Matrix population models: Construction, analysis, and interpretation. *Ecological Modelling*, **148**(3), 307–310.
- Lomborg, B. (2001). *The Skeptical Environmentalist: Measuring the Real State of the World* (539 pp.). Cambridge University Press, Cambridge, UK.
- Lomborg, B. (2005). *Global Crisis, Global Solution* (670 pp.). Cambridge University Press, Cambridge, UK.
- Losev, K. S. (2001). *Ecological Problems and Perspectives of Sustainable Development of Russia in the 21st Century* (400 pp.). Kosmoinform, Moscow [in Russian].

- Lovelock, J. E. (2003). GAIA and emergence: A response to Kirchner and Volk. *Clim. Change*, **57**(1–2), 1–7.
- Lu Hung (1993). Change in the natural conditions of the Aral Sea region under conditions of anthropogenic load (211 pp.). PhD thesis, Moscow State University, Faculty of Geography [in Russian].
- Lundlum, D. M. (1963). *Early American Hurricanes 1492–1870* (198 pp.). American Meteorological Society, Boston.
- Luo, C., Mahowald, N. M., and del Corral, J. (2003). Sensitivity study of meteorological parameters on mineral aerosol mobilization, transport, and distribution. *J. Geophys. Res.*, **108**(D15), AAC5/11–AAC5/21.
- Lutz, W., Sanderson, W. C., and Scherbov, S. (eds) (2004). *The End of World Population Growth in the 21st Century: New Challenges for Human Capital Formation and Sustainable Development* (351 pp.). Earthscan, London.
- Mahlman, J. D. (1998). Science and nonscience concerning human-caused climate warming. *Ann. Rev. Energy and Environ.*, **23**, 83–105.
- Maki, M., Ishihara, M., and Tamura, M. (2004). Estimation of leaf water status to monitor the risk of forest fires by using remotely sensed data. *Remote Sensing of Environment*, **90**(4), 441–450.
- Maksudova, L. G., Savinykh, V. P., and Tsvetkov, V. Ya. (2000). Integration of environmental sciences in geoinformatics. *Research of the Earth from Space*, **1**, 46–50 [in Russian].
- Malinetskiy, G. G. (2002). Scenarios, strategic risks, information technologies. *Information Technologies and Computation Systems*, **4**, 83–108 [in Russian].
- Malinetskiy, G. G., Podlazov, A. V., and Kuznetsov, I. V. (2005). On a national system of scientific monitoring. *Herald of RAS*, **75**(7), 592–606 [in Russian].
- Malinnikov, V. A., Savinykh, V. P., Sladkoyev, S. A., and Tsykina, E. M. (2000). *Geography from Space* (224 pp.). Moscow State University for Geodesy and Cartography, Moscow [in Russian].
- Mansell, E. R., MacGorman, D. R., Ziegler, C. L., and Starka, J. M. (2002). Simulated three-dimensional branch lightning in a numerical thunderstorm model. *J. Geophys. Res.*, **107**(D9), ACL2/1–ACL2/14.
- Manwell, J. F., McGowan, J. G. and Rogers, A. L. (2002). *Wind Energy Explained* (590 pp.). John Wiley & Sons, New York.
- Marakushev, A. A. (1995). The nature of native mineral formation. *Reports of RAS*, **341**(6), 807–812 [in Russian].
- Marchuk, G. I. and Kondratyev, K. Ya. (1992). *Priorities of Global Ecology* (264 pp.). Nauka, Moscow [in Russian].
- Marshall, T. C. and Stolzenburg, M. (2002). Electrical energy constraints on lightning. *J. Geophys. Res.*, **107**(D7), ACL1/1–ACL1/13.
- Mascarenhas, F. C. B., Toda, K., Miguez, M. G., and Inone, K. (2005). *Flood Risk Simulation* (456 pp.). WIT Press, Southampton, UK.
- Masure, P. (2003). Variables and indicators of vulnerability and disaster risk for land-use and urban or territorial planning. In: O. D. Cardona (ed.), *BID/IDEA Program on Indicators for Disaster Risk Management* (pp. 1–53). Universidad Nacional de Colombia, Manizales, Colombia. Available at <http://idea.unalmz.edu.co>
- Mayers, J. C. (2004). London's wettest summer and wettest year: 1903. *Weather*, **59**(10), 274–278.
- McBean, G. A. (1998). *The Climate Agenda: The Role of the WCRP as the Research Thrust* (WCRP/WMO Publ. 904, pp. 11–18). World Climate Research Programme, World Meteorological Organization, Geneva

- McConnel, W. J. (2004). Forest cover change: Tales of the unexpected. *Global Change Newsletter*, **57**, 8–11.
- McIntyre, A. D. (1999). The environment and the oil companies. *Marine Pollution Bulletin*, **38**(3), 155–156.
- McIntyre, S. and McKittrick, R. (2003). Corrections to the Mann *et al.* (1998). proxy data base and Northern Hemisphere temperature series. *Energy and Environment*, **14**(6), 751–757.
- McNulty, S. G. (2002). Hurricane impacts on US forest carbon sequestration. *Environmental Pollution*, **116**, S17–S25.
- Meadows, D. H., Meadows, D. L., Randers, J., and Behrens, W. W. (1972). *The Limits to Growth* (208 pp.). Potomac Associates, New York.
- Meadows, M. (2000). United Kingdom methane emissions: Trends, projections, and mitigation options. *Proceedings of the Second International Methane Mitigation Conference, 18–23 June, Novosibirsk* (pp. 37–44). Novosibirsk State University, Novosibirsk, Russia.
- Mearns, L. O., Bogardi, L., Giorgi, F., Matyasovsky, I., and Palecki, M. (1999). Comparison of climate change scenarios generated from regional climate model experiments and statistical downscaling. *J. Geophys. Res.*, **104**(D6), 6603–6621.
- Meijer, E. W. and Velthoven, P. (1997). The effect of the conversion of nitrogen oxides in aircraft exhaust plumes in global models. *Geophys. Res. Lett.*, **24**(23), 3013–3016.
- Meloni, D., Di Sarra, A., Fiocco, G., and Junkermann, W. (2003). Tropospheric aerosols in the Mediterranean, 3: Measurements and modelling of actinic radiation profiles. *J. Geophys. Res.*, **108**(D10), AAC6/1–AAC6/12.
- Menon, S., Del Genio, A. D., Koch, D., and Tselioudis, G. (2002). GCM simulations of the aerosol indirect effect: Sensitivity to cloud parameterization and aerosol burden. *J. Atmos. Sci.*, **59**(3), Part 2, 692–743.
- Merrifield, M. A., Firing, Y. L., Aarup, T., Agricole, W., Brundrit, G., Chang-Seng, D., Farre, R., Kilonsky, B., Knight, W., Kong, L. *et al.* (2005). Tide gauge observations of the Indian Ocean tsunami, December 26, 2004. *Geophys. Res. Lett.*, **32** L09603, doi: 10.1029/2005GL022610.
- Micklin, P. (2002). Water in the Aral Sea basin of Central Asia: Cause of conflict and cooperation? *Eurasian Geography and Economics*, **43**(7), 505–528.
- Mikhailov, V. N. (1999). Why did the Aral Sea become shallow? *Soros Educational Collection*, **2**, 85–90 [in Russian].
- Miki, M., Rakov, V. A., Rambo, K. J., Schnetzer, G. H., and Uman, M. A. (2002). Electric fields near triggered lightning channels measured with Pockels sensors. *J. Geophys. Res.*, **107**(D16), ACL2/1–ACL2/11.
- Mikolajewicz, U., Gröger, M., Maier-Reimer, F., Schurgers, G., Vizcaino, M., and Winguth, A. (2004). Climcyc: Modeling of the Last Glacial cycle: Response of climate and vegetation to insolation forcing between 132–112 ka BP. *Pilot Analysis of the Global Ecosystems News*, **12**(2), 24–25.
- Milne, A. (2004). *Doomsday: The Science of Catastrophic Events* (194 pp.). Praeger, Westport, CT.
- Mintzer, I. M. (1987). *A Matter of Degrees: The Potential for Controlling the Greenhouse Effect* (Research Report No. 15, 70 pp.). World Resources Institute, Washington, DC.
- Mischchenko, M., Penner, J., and Anderson, D. (2002). Global Aerosol Climatology Project. *J. Atmos. Sci.*, **59**(1), 249–250.
- Mo, Q., Helsdon, J. H., and Winn, W. P. (2002). Aircraft observations of the creation of lower positive charges in thunderstorms. *J. Geophys. Res.*, **107**(D22), ACL4/1–ACL4/15.
- Mock, G. (ed.) (2005). *World Resources 2005. The Wealth of the Poor: Managing Ecosystems to Fight Poverty* (266 pp.). World Resources Institute, Washington, DC.

- Monin, A. S. and Krasitsky, V. P. (1985). *Phenomena on the Ocean Surface* (375 pp.). Hydrometeoizdat, Leningrad [in Russian].
- Monin, A. S. and Shishkov, Yu. A. (1991). Warming dilemmas in the 20th century. In: A. S. Monin (ed.), *Man and Chaos* (pp. 47–49), Hydrometeoizdat, St Petersburg [in Russian].
- Monmonier, M. (1997). *Cartographies of Danger: Mapping Hazards in America* (363 pp.). University of Chicago Press, Chicago.
- Morén, L. and Pässe, T. (2001). *Climate and Shoreline in Sweden during Weichsel and the next 150,000 year* (70 pp.). Swedish Nuclear Fuel and Waste Management, Stockholm.
- Moron, V., Vautard, R., and Ghil, M. (1998). Trends, interdecadal and interannual oscillations in global sea-surface temperatures. *Climate Dynamics*, **7–8**, 545–569.
- Morris, D., Freeland, J., Hinchcliffe, S., and Smith, S. (2003). *Changing Environments* (344 pp.). John Wiley & Sons, London.
- Morris, J. (1997). Introduction: Climate change – prevention or adaptation? *International Energy Agency Stud. Educ.*, **10**, 13–37.
- Mosier, A. R., Syers, J. K., and Freney, J. R. (2004). *Agriculture and the Nitrogen Cycle* (318 pp.). Island Press, Washington, DC.
- Mukherjee, M., Vilela, M., and McDermott, B. (eds) (2004). *Earth Charter Initiative: Annual Report 2004* (28 pp.). ECYI Press, San José, Costa Rica.
- Munich Re (1998). *Annual Review of Natural Catastrophes 1997, 1998* (132 pp.). Münchener Ruckversicherungs-Gesellschaft, Munich, Germany. Available at <http://www.munichre.com>
- Munich Re (1999). *Topics 2000: Natural Catastrophes – the Current Position* (126 pp.). Münchener Ruckversicherungs-Gesellschaft, Munich, Germany.
- Munich Re (2005a). *Annual Report 2004: Advancing Innovation* (220 pp.). Münchener Ruckversicherungs-Gesellschaft, Munich, Germany.
- Munich Re (2005b). *Topic Geo. Annual Review: Natural Catastrophes 2004* (60 pp.). Münchener Rückversicherungs-Gesellschaft, Munich, Germany.
- Murayama, S., Taguchi, S., and Hiquchi, K. (2004). Interannual variation in the atmospheric CO₂ growth rate: Role of atmospheric transport in the Northern Hemisphere. *Journal of Geophysics Research*, **109**(D02305), doi: 10.1029/2003JD003729, 1–14.
- Murnane, R. J. and Liu K.-B. (eds) (2004). *Hurricanes and Typhoons: Past, Present, and Future* (476 pp.). Columbia University Press, New York.
- Naidenov, V. I. and Kozhevnikova, I. A. (2003). Why are floods so frequent? *Nature*, **9**, 1–14 [in Russian].
- Naidenov, V. I. and Kozhevnikova, I. A. (2005). The law of catastrophic floods. *Herald of RAS*, **75**(1), 46–55 [in Russian].
- Najam, A. and Sagar, A. (1998). Avoiding a cop-out: Moving towards systematic decision-making under the Climate Convention. *Clim. Change*, **39**(4), III–IX.
- Nakamura, H., Lin, G., and Yamagata, T. (1997). Decadal climate variability in the North Pacific during the recent decades. *Bull. Amer. Meteorol. Soc.*, **78**, 2215–2225.
- Negli, A. J., Burkardt, N., Golden, J. H., Halverson, J. R., Huffman, C. J., Larsen, M. C., McGinley, J. A., Updike, R. G., Verdin, J. P., and Wiczorek, G. F. (2005). The hurricane–flood–landslide continuum. *Bull. Amer. Meteorol. Soc.*, **86**(9), 1241–1247.
- Nepomniashchy, N. N. (2002). *Natural Disasters* (456 pp.). Detsky Mir, Moscow [in Russian].
- Nerushev, A. F. (1995). The impact of tropical cyclones on the ozonosphere. *Proc. of RAS: Physics of the Atmosphere and Ocean*, **31**(1), 46–52 [in Russian].
- New Priorities for the 21st Century (2003). *NOAA's Strategic Plan for FY 2003: FY 2008 and Beyond* (16 pp.). National Oceanic and Atmospheric Administration, Washington, DC.

- Newland, J. A. and De Luca, T. H. (2000). Influence of fire on native nitrogen-fixing plants and soil nitrogen status in ponderosa pine–Douglas-fir forests in western Montana. *Can. J. Forest Res.*, **30**(2), 274–282.
- Nicolis, C. and Nicolis, G. (1995). From short-scale atmospheric variability to global climate dynamics: Toward a systematic theory of averaging. *J. Atmos. Sci.*, **52**(11), 1903–1913.
- Nilsson, S., Jonas, M., and Obersteiner, M. (2002). COP-6: A healing shock? An editorial essay. *Clim. Change*, **52**(1–2), 25–28.
- Nishida, K., Nemani, R. R., Glassy, J. M., and Running, S. W. (2003). Development of an evapotranspiration index from Aqua/MODIS for monitoring surface moisture status. *IEEE Trans on Geosci. and Remote Sensing*, **41**(2), 493–501.
- Nitu, C., Krapivin, V. F., and Bruno, A. (2000a). *Intelligent Techniques in Ecology* (150 pp.). Printech, Bucharest.
- Nitu, C., Krapivin, V. F., and Bruno, A. (2000b). *System Modelling in Ecology* (260 pp.). Printech, Bucharest.
- Nitu, C., Krapivin, V. F., and Pruteanu, E. (2004). *Ecoinformatics: Intelligent Systems in Ecology* (411 pp.). Magic Print, Onesti, Bucharest.
- Notron, R. (2002). *Early Eighteen-Century Newspaper Reports: A Sourcebook “Natural Catastrophes”* (25 pp.). Available at <http://www.infopt.demon.co.uk/grub/catastro.htm>
- Novelli, P. C., Masarie, K. A., Lang, P. M., Hall, B. D., Myers, R. C., and Elkins, J. W. (2003). Reanalysis of tropospheric CO trends: Effects of the 1997–1998 wildfires. *J. Geophys. Res.*, **108**(D15), 4464, doi: 10.1023/2002 JD 003031.
- O’Brien, K. R., Kelkar, U., Venema, H., Aandahl, G., Tompkins, H., Javed, A., Bhadwal, S., Barg, S., Nygaard, L., and West, J. (2004). Mapping multiple stressors: Climate change and economic globalization in India. *Global Environmental Change*, **14**(4), 364–370.
- Oganecian, V. V. (2004). Change of Moscow climate from 1879 to 2002 in temperature and precipitation extrema. *Meteorology and Hydrology*, **9**, 31–37 [in Russian].
- Oppenheimer, C. (1996). Volcanism. *Geography*, **81**(1), 65–81.
- Osipov, V. I. (1997). Natural disasters and sustainable development. *Geocology*, **2**, 5–18 [in Russian].
- Osipov, V. I. (2004). The history of natural disasters on the Earth. *Herald of RAS*, **74**(11), 998–1005 [in Russian].
- Ougolnitsky, G. A. (1999). *Control of the Ecologic–Economic Systems* (132 pp.). High School Books, Moscow [in Russian].
- Our Changing Planet (2004). *The US Climate Change Science Program for Fiscal Years 2004 and 2005* (159 pp.). US Department of Energy, Washington, DC.
- Palmer, T. N., Alessandri, A., Anderson, U., Cantelaube, P., Davey, M., Délecluse, P., Déqué, M., Diez, E., Doblas-Reyes, F. J., Feddersen, H. *et al.* (2004). Development of a European multimodel ensemble system for seasonal-to-interannual prediction (DEMETER). *Bull. Amer. Meteorol. Soc.*, **85**(6), 853–872.
- Palutikof, J. P., Goodess, C. M., Watkins, S. J., and Burgess, P. E. (1999). Long-term climate change. *Progr. Environ. Sci.*, **1**(1), 89–96.
- Parkinson, C. L. (2003). Aqua: An Earth-observing satellite mission to examine water and other climate variables. *IEEE Trans. on Geosci. and Remote Sensing*, **41**(2), 173–183.
- Parrish, D. and Law, K. (2003). Intercontinental Transport and Chemical Transformation (ITCT-Lagrangian – 2k4). *J. Geophys. Res.*, **108**(D15), 8–13.
- Parson, E. A., and Fisher-Vander, K. (1997). Integrated assessment models of global climate change. *Ann. Rev. Energy Environ.*, **22**, 589–628.
- Pauer, J. J. and Auer, M. T. (2000). Nitrification in the water column and sediment of a hypereutrophic lake and adjoining river system. *Water Research*, **34**(4), 1247–1254.

- Perrie, W., Zhang, W., Ren, X., and Long, Z. (2004). The role of midlatitude storms on air–sea exchange of CO₂. *Geophys. Res. Lett.*, **31**(L09306), doi: 10.1029/2003GL019212, 1–4.
- Pervaniuk, V. S. and Tarko, A. M. (2001). Modelling the global carbon cycle in the atmosphere–ocean system. *Numerical Modelling*, **13**(11), 13–22 [in Russian].
- Phelan, J. P. (2003). *Topics: Annual Review of North American Natural Catastrophes* (50 pp.). American Re, Princeton, NJ.
- Phelan, J. P. (2004). *Topics: Annual Review of North American Natural Catastrophes* (48 pp.). American Re, Princeton, NJ.
- Phothero, J. W. (1979). Maximal oxygen consumption in various animals and plants. *Comp. Biochem. and Physiol.*, **A64**(4), 461–466.
- Pielke, R. A., Sr. (2001a). Carbon sequestration: The need for an integrated climate system approach. *Bull. Amer. Meteorol. Soc.*, **82**(11), 20–21.
- Pielke, R. A., Sr. (2001b). Earth system modeling: An integrated assessment tool for environmental studies. In: T. Matsuno and H. Kida (eds), *Present and Future of Modeling Global Environmental Change: Toward Integrated Modeling* (pp. 311–337). Terrapub, Tokyo.
- Pielke, R. A., Sr. (2002). Overlooked issues in the US national climate and IPCC assessments. *Clim. Change*, **52**(1–2), 1–11.
- Pinder, G. F. (2002). *Groundwater Modeling* (248 pp.). John Wiley & Sons, New York.
- Pinter, N. (2005). One step forward, two steps back on US floodplains. *Science*, **308**(57), 207–208.
- Podgorny, I. A. and Ramanathan, V. (2001). A modeling study of the direct effect of aerosols over the tropical Indian Ocean. *J. Geophys. Res.*, **106**(D20), 24097–24105.
- Podlazov, A. V. (2001). The self-organized criticality and analysis of the risk. *Proc. of High School. Applied Non-linear Dynamics*, **9**(1), 49–88 [in Russian].
- Pogorelov, A. V. (1998). The stable snow cover regime at the Great Caucasus Ridge. *Data of Glaciological Studies*, **84**, 170–175 [in Russian].
- Popovicheva, O. B., Starik, A. M., and Favorsky, O. N. (2000). Problems of the impact of aviation on the gas and aerosol composition of the atmosphere. *Proc. of RAS: Physics of the Atmos. and Ocean*, **2**, 163–176 [in Russian].
- Porvari, P. and Verta, M. (2003). Total and methyl mercury concentrations and fluxes from small boreal forest catchments in Finland. *Environmental Pollution*, **123**(2), 181–191.
- Posner, R. A. (2004). *Catastrophe: Risk and Response* (332 pp.). Oxford University Press, Oxford, UK.
- Qi, F., Guoduong, C., and Masao, M. (2001). The carbon cycle of sandy lands in China and its global significance. *Clim. Change*, **48**(4), 535–549.
- Rakov, V. A. and Tuni, W. G. (2003). Lightning electric field intensity at high latitudes: Inferences for production of elves. *J. Geophys. Res.*, **108**(D20), ACL8/1–ACL8/16.
- Ramsley, G. (1978). Snow avalanches in Norway. In: S. B. Lavrov and L. G. Nikiforova (eds), *Natural Disasters: Study and Methods of Struggle* (pp. 204–211). Progress, Moscow [in Russian].
- Rasch, D., Kubinger, K., Schmidtke, J., and Häusler, J. (2004). The misuse of asterisks in hypothesis testing. *Psychology Science*, **46**(2), 227–242.
- Rayner, P. (2001). “Flying Leap” becomes C4MIP. *Res. International Energy Agency*, **4**, 8–12.
- Remer, L. A., Kaufman, Y. J., Levin, Z., and Ghan, S. (2002). Model assessment of the ability of MODIS to measure top-of-atmosphere direct radiative forcing from smoke aerosols. *J. Atmos. Sci.*, **59**(3), Part 2, 657–667.
- Remizov, L. T. (1985). *Natural Radionoise* (196 pp.). Nauka, Moscow [in Russian].
- Richter, C. F. (1969). Earthquakes. *Natural History*, **78**, 37–45.

- Ridley, B., Ott, L., Pickering, K., Emmons, L., Montzka, D., Weinheimer, A., Knopp, D., Grahek, F., Li, L., Heymsfield, G. *et al.* (2004). Florida thunderstorms: A faucet of reactive nitrogen to the upper troposphere. *J. Geophys. Res.*, **109**(17), D17305/1–D17305/19.
- Rizzolio, D. (2005). Environmental issues in disaster preparation and response. *Division of Early Warning and Assessment/GRID Resource Information Database – Europe Quarterly Bulletin*, **7**(1), 1–2.
- Robock, A. and Oppenheimer, C. (eds) (2003), *Volcanism and the Earth's Atmosphere* (360 pp.). American Geophysical Union, Washington, DC.
- Roch, P. (ed.) (2002). *Environment Switzerland 2002* (239 pp.). International Energy Agency, Zurich, Switzerland.
- Roda, F., Avila, A., and Rodrigo, A. (2002). Nitrogen deposition in Mediterranean forests. *Environmental Pollution*, **118**(2), 205–213.
- Rojstaczer, S., Sterling, S. M., and Moore, N. J. (2001). Human appropriation of photosynthesis products. *Science*, **294**, 2549–2552.
- Ronner, U. (1983). *Biological nitrogen transformations in marine ecosystems with emphasis on denitrification* (165 pp.). Department of Marine Microbiology, University of Goteborg, Goteborg, Sweden.
- Roy, A. S. (2004). Remote sensing: A new tool for environmental monitoring and surveillance for disaster control in Ganga–Brahmaputra basin. *Proceedings of 25th Asian Conference on Remote Sensing, 22–26 November, Chiang Mai, Thailand* (pp. 596–599), AARS, Chiang Mai, Thailand.
- Rubanov, I. V., Ishniyazov, D. P., Baskakova, M. A., and Chistiakov, P. A. (1987). *Aral Sea Geology* (241 pp.). Fan, Tashkent, Uzbekistan [in Russian].
- Ruck, M. (2002). *Natural Catastrophes 2002: Annual Review* (50 pp.). Munich Re Topics, Dresden.
- Russo, G., Eva, C., Palau, C., Caneva, A., and Saechini, A. (2000). The recent abrupt increase in the precipitation rate, as seen in an ultra-centennial series of precipitation. *Il Nuovo Cimento C*, **23**(1), 39–51.
- Santer, B. D., Wigley, T. M. L., Boyle, J. S., Gaffen, D. J., Hnilo, J. J., Nychka, D., Parker, D. E., and Taylor, K. E. (2000). Statistical significance of trends and trend differences in layer average atmospheric temperature time series. *J. Geophys. Res.*, **105**(D6), 7337–7356.
- Satake K. (2005). *Tsunamis: Case Studies and Recent Developments* (343 pp.). Springer-Verlag, Heidelberg, Germany.
- Savinykh, V. P. and Tsvetkov, V. Ya. (2001). *Geoinformation Analysis of the Remote Sounding Data* (228 pp.). Geodeoizdat, Moscow [in Russian].
- Schlesinger, M. E., Ramankutty, N., and Andronova, N. (2000). Temperature oscillations in the North Atlantic. *Science*, **289**(5479), 547–548.
- Schlüter, M., Savitsky, A. G., McKinney, D. C., and Lieth, H. (2005). Optimizing long-term water allocation in the Amudarya river delta: A water management model for ecological impact assessment. *Environmental Modelling & Software*, **20**(5), 529–545.
- Schminke, H. U. (2004). *Volcanism* (324 pp.). Springer-Verlag, New York.
- Schneider, D. (1995). Global warming is still a hot topic. *Scientific American*, **272**(2), 13–14.
- Schneider, R. R., Kim, J.-H., Rimbu, N., Lorenz, S., Lohmann, G., Cubasch, U., Pätzold, J., and Wefew, G. (2004). GHOST (Global Holocene Spatial and Temporal Climate Variability): Combination of paleotemperature records, statistics, and modeling. *PAGES News*, **12**(2), 25–26.
- Schrope, M. (2001). Consensus science or consensus politics? *Nature*, **412**(6843), 112–114.

- Schröter, R. (2005). Where was God when the tsunami came? *Guardian Weekly*, 11 January. Available at <http://www.spotlight-online.de/CoCoCMS/generator/viewDocument.php?doc=16170&archive=1>
- Scott, K. (2005). *Carbon Sequestration* (28 pp.). US Department of Energy, Washington, DC.
- Seidov, D. G. (1987). Numerical models of the ocean circulation. *Earth and Universe*, **5**, 28–34 [in Russian].
- Sellers, P. J., Los, S. O., Tucker, C. J., Justice, C. O., Dazlich, D. A., Collatz, G. J., and Randall, D. A. (1996a). A revised land surface parameterization (SiB2) for atmospheric GCMs, Part II: The generation of global fields of terrestrial biophysical parameters from satellite data. *J. of Climate*, **9**(4), 708–737.
- Sellers, P. J., Randall, D. A., Collatz, G. J., Berry, J. A., Field, C. B., Dazlich, D. A., Zhang, C., Collelo, G. D., and Bounona L. (1996b). A revised land surface parameterization (SiB2) for atmospheric GCMs, Part I: Model formulation. *J. of Climate*, **9**(4), 676–705.
- Semenov, S. M. (2004). *Greenhouse Gases and the Present Climate of the Earth* (175 pp.). Meteorology and Hydrology Center, Moscow [in Russian].
- Semmler, T. and Jacob, D. (2004). Modeling extreme precipitation events: A climate change simulation for Europe. *Global and Planetary Change*, **44**(1–4), 119–127.
- Shutko, A. M. (1987). *Microwave Radiometry of Water Surface and Soils* (190 pp.). Nauka, Moscow [in Russian].
- Sidorov, A. (1999). First there were volcanoes. *Science and Life*, **2**, 51–55 [in Russian].
- Singer, S. F. (1997). *Hot Talk, Cold Science* (111 pp.). Independent Institute, Oakland, CA.
- Sinha, P., Hobbs, P. V., Yokelson, R. J., Blake, D. R., Gao, S., and Kirchstetter, T. W. (2004). Emissions from miombo woodland and dambo grassland savanna fires. *J. Geophys. Res.*, **109**(4). D11305/1–D11305/13.
- Sirocko, F., Cubash, U., Kaspar, F., von Storch, H., Widmann, M., Litt, T., Kühl, N., Mangini, A., Pachur, H.-J., Claussen, N. *et al.* (2004). Climate change at the very end of a warm stage: First results from the Last Glacial inception at 117,000 yr BP. *International Energy Agency News*, **12**(2), 18–20.
- Sirotenko, O. D. (2000). The future of agriculture in Russia in connection with expected climate change. *Problems of Ecological Monitoring and Ecosystems Modelling*, **XVII**, 258–274 [in Russian].
- Slovic, P. (2000). *The Perception of Risk* (265 pp.). Earthscan, London.
- Smith, W. K., Kelly, R. D., Welker, J. M., Fahnestock, J. T., Reiners, W. A., and Hunt, E. R. (2003). Leaf-to-aircraft measurements of net CO₂ exchange in a sagebrush steppe ecosystem. *J. Geophys. Res.*, **108**(3), ACH15/1–ACH15/9.
- Sobrino, J. A., Jiménez-Muñoz, J. C., and Paolini, L. (2004). Land surface temperature retrieval from LANDSAT TM 5. *Remote Sensing of Environment*, **90**(5), 434–440.
- Sofronov, M. A. and Vakurov, A. D. (1981). *Fire in a Forest* (128 pp.). Nauka, Novosibirsk, Russia [in Russian].
- Solanki, S. K., Usoskin, I. G., Kromer, B., Schorsler, M., and Beer, J. (2004). Unusual activity of the Sun during recent decades compared to the previous 11,000 years. *Nature*, **431**(7012), 1084–1087.
- Solozhentsev, E. D. (2004). *Hierarchical Risk Control in Business and Engineering* (416 pp.). Business Press, St Petersburg [in Russian].
- Soon, W., Postmentier, E., and Baliunas, S. (2000). Climate hypersensitivity to solar forcing? *Ann. Geophysics*, **18**, 583–588.
- Sorjamaa, R., Raatikainen, T., and Laaksonen, A. (2004). The role of surfactants in Köhler theory reconsidered. *Atmospheric Chemistry Physics Discussions*, **4**, 2781–2804.

- Sorokhtin, O. G. (2001). The greenhouse effect: Myth and reality. *Herald of RAS*, **1**(1), 8–21 [in Russian].
- Sorokhtin, O. G. and Ushakov, S. A. (1996). Drifting of the continents in the geological history of the Earth. In: S. A. Ushakov (ed.), *Life of the Earth: Structure and Evolution of the Lithosphere* (pp. 66–71). Moscow State University, Moscow [in Russian].
- Spedicato, E. (1991). A catastrophic scenario for discontinuities in human history. *Journal of New England Antiquities Research Association*, **26**, 1–14.
- Starke, L. (ed.) (2004). *State of the World – 2004: Progress towards a Sustainable Society* (246 pp.). Earthscan, London.
- Steffen, W. and Tyson, P. (eds.) (2001). *Global Change and the Earth System: A Planet under Pressure* (32 pp.). IGBP Science 4, Stockholm.
- Steffen, W., Sanderson, A., Tyson, P. D., Jäger, J., Matson, P. A., Moore, B., III, Oldfield, F., Richardson, K., Schellnhuber, H.-J., Turner, B. L., II, and Wasson, R. J. (2004). *Global Change and the Earth System: A Planet under Pressure* (336 pp.). Springer-Verlag, New York.
- Stein, A. F. and Lamb, D. (2000). The sensitivity of sulphur wet deposition to atmospheric oxidants. *Atm. Env.*, **34**(11), 1681–1690.
- Stempell, D. (1985). *Weltbevölkerung* (205 pp.). Springer-Verlag, Berlin.
- Stephens, B. B. and Keeling, R. F. (2000). The influence of Antarctic sea ice on glacial–interglacial CO₂ variations. *Nature*, **404**(6774), 171–174.
- Stevens, C. and Verne, R. (2004). *Renewable Bioresources* (320 pp.). John Wiley & Sons, New York.
- Stevens, N. F. and Scott, B. (2002). *Changes in the Ngauruhoe Summit Fumarole Field 1999–2001 from Landsat Data* (Science Report No. 2002/30, 9 pp.). Institute of Geological & Nuclear Science, Lower Hutt, New Zealand.
- Stevens, N. F. and Wadge, G. (2003). Towards operational repeat-pass SAR interferometry at active volcanoes. *Natural Hazards*, **00**, 1–30.
- Stevens, N. F., Wadge, G., and Williams, C. A. (2001a). Post-emplacement lava subsidence and the accuracy of ERS InSAR digital elevation models of volcanoes. *International Journal of Remote Sensing*, **22**, 818–828.
- Stevens, N. F., Wadge, G., Williams, C. A., Morley, J. G., Muller, J.-P., Murray, J. B., and Upton, M. (2001b). Surface movements of emplaced lava flows measured by synthetic aperture radar interferometry. *J. Geophys. Res.*, **106**(B6), 11293–11313.
- Stevens, N. F., Glassey, P., and Lyttle, B. S. (2003). *Assessment of Urban Slope Instability in Dunedin, New Zealand, Using Orbital Differential Synthetic Aperture Radar Interferometry* (Client Report 2003/150, 42 pp.). Institute of Geological & Nuclear Science, Dunedin, New Zealand.
- Stevens, N. F., Garbeil, H., and Mouginiis-Mark, P. J. (2004). NASA EOS Terra ASTER: Volcanic topographic mapping and capability. *Remote Sensing of Environment*, **90**, 405–414.
- Stohl, A., Eckhardt, S., Forster, C., James, P., and Spichtinger, N. (2003). On the pathways and timescales of intercontinental air pollution transport. *J. Geophys. Res.*, **108**(D23), ACH6/1–ACH6/17.
- Strong, A. E., Kearns, E. J., and Gjovig, K. K. (2000). Sea surface temperature signals from satellite updates. *Geophys. Res. Lett.*, **27**(11), 1667–1670.
- Sumarokova, V. V., Babkina, L. P., and Kriventsova, V. E. (1991). The landscape parameterization of the lower Amu-Darya based on decoding of aerospace information. In: E. M. Gluchova (ed.), *Monitoring of the Environment in the Aral Sea Basin* (pp. 200–208). Hydrometeoizdat, Leningrad [in Russian].

- Summer, M., Michael, K., Bradshaw, C. J. A., and Hindell, M. A. (2003). Remote sensing of Southern Ocean sea surface temperature: Implications for marine biophysical models. *Remote Sensing of Environment*, **84**(2), 196–213.
- Suni, T., Berninger, F., Markkanen, T., Keronen, P., Rannik, Ü., and Vesala, T. (2003). Interannual variability and timing of growing: Season CO₂ exchange in a boreal forest. *J. Geophys. Res.*, **108**(9), ACL2/1–ACL2/8.
- Svirezhev, Yu. M. (2002). Simple spatially distributed model of the global carbon cycle and its dynamic properties. *Ecological Modelling*, **155**(1), 53–69.
- Syvorotkin, V. L. (2002). *Deep Degassing of the Earth and Global Catastrophes* (250 pp.). Geoinformcenter, Moscow [in Russian].
- Szathmáry, E. and Griesemer, J. (2003). *The Principles of Life* (220 pp.). Oxford University Press, Oxford, UK.
- Takemura, T. (2002). *A Study of Aerosol Distribution and Optical Properties with a Global Climate Model* (Report No. 16, 113 pp.). CCSR University of Tokyo, Tokyo.
- Tareyeva, A. M. and Seliverstov, Yu. G. (2004a). *Byrranga Mountains* (11 pp.). Available at <http://www.geogr.msu.ru> [in Russian].
- Tareyeva, A. M. and Seliverstov, Yu. G. (2004b). *Putorana Mountains* (10 pp.). Available at <http://www.geogr.msu.ru> [in Russian].
- Tarko, A. M. (2001). Investigation of global biosphere processes with the aid of a global spatial carbon dioxide cycle model. *Sixth International Carbon Dioxide Conference* (Extended Abstract No. 2, pp. 899–902). Tokohu University, Sendai, Japan.
- Tarko, A. M. (2005). *Numerical Modelling of Anthropogenic Changes in Global Biospheric Processes* (278 pp.). Physics-Mathematics, Moscow [in Russian].
- Tett, S. F. B., Stott, P. A., Allen, M. R., Ingram, W. J., and Mitchell, J. F. B. (1999). Causes of twentieth-century temperature change near the Earth's surface. *Nature*, **399**, 569–572.
- The World Climate Research Programme Strategy 2005–2015* (2004). *Coordinated Observation and Prediction of the Earth System (COPEs): A Discussion Document* (31 pp.). World Meteorological Organization, Geneva.
- Thuong Thuy Vu, Masashi Matsuoka, and Fumio Yamazaki (2004). Lidar signatures to update Japanese building inventory database. *Proceedings of the 25th ACRS, 22–26 November 2004, Chiang Mai (Thailand)*, Asian Association on Remote Sensing, Chiang Mai, Thailand, 2004, pp. 624–629.
- Tianhong, L., Yanxin, S., and An, X. (2003). Integration of large scale fertilizing models with GIS using minimum unit. *Environmental Modelling*, **18**(3), 221–229.
- Tie, X., Brasseur, G., Emmons, L., Horowitz, L., and Kinnison, D. (2001). Effects of aerosol on tropospheric oxidants: A global model study. *J. Geophys. Res.*, **106**(D19), 22931–22964.
- Timmermann, A., Oberhuber, J., Bacher, A., Esch, M., Latif, M., and Roeckner, E. (1999). Increased El Niño frequency in a climate model forced by future greenhouse warming. *Nature*, **398**, 684–687.
- Timofeyev-Resovsky, N. V. (1961). On some principles of classification of biochorological units. *Proc. of USSR Acad. Sci.*, **27**, 290–311 [in Russian].
- Timoshevsky, A., Yeregin, V., and Kalkuta, S. (2003). New method for ecological monitoring based on the method of self-organizing mathematical models. *Ecological Modelling*, **162**(2–3), 1–13.
- Titov, V., Rabinovich A. B., Mofield, H. O., Thompson R. E., and González, F. I. (2005). The global reach of the 26 December 2004 Sumatra tsunamis. *Science*, **309**, 2045–2048.
- Travis, J. (2005). Scientist's fears come true as hurricane floods New Orleans. *News*, **309**, 1656–1659.

- Trenberth, K. (2005). Uncertainty in hurricane and global warming. *Science*, **308**(5729), 1753–1754.
- Troshkina, E. S. (1992). *The Avalanche Regime of Mountain Territories of the USSR* (196 pp.). ARISTI, Moscow [in Russian].
- Tsushima, Y. and Manabe, S. (2001). Influence of cloud feedback on annual variation of global mean surface temperature. *J. Geophys. Res.*, **106**(D19), 22646–22655.
- Tuomi, J. (2004). Commentary: Genetic heterogeneity within organisms and the evolution of individuality. *Journal of Evolutionary Biology*, **17**, 1182–1183.
- Tuong Thuy, Matsuoka, M. and Yamazaki, F. (2004). Lidar signatures to update Japanese building inventory database. *Proceedings of 25th Asian Conference on Remote Sensing, 22–26 November, Chiang Mai, Thailand* (pp. 624–629). AARS, Chiang Mai, Thailand.
- Tupper, A., Carn, S., Davey, J., Kamada, Y., Pott, R., Prata, F., and Tokuno, M. (2004). An evaluation of volcanic cloud detection technique during recent significant eruptions in the western ring of fire. *Remote Sensing of Environment*, **91**(1), 27–46.
- Tsytsarin, A. G. (1991). The present state of the elements of the Aral Sea hydrological regime. *Proc. of the State Oceanographic Institute*, **183**, 72–92 [in Russian].
- UNEP Science Initiative (2004). *Environmental Change and Human Needs: Assessing Interlinkages. An Input to the Fourth Global Environment Outlook* (Concept Paper GEO-4, 36 pp.). United Nations Environment Programme, Nairobi, Kenya.
- Vaganov, E. A., Furiyev, V. V., and Sukhinin, A. I. (1998). Fires in the Siberian taiga. *Nature*, **7**, 51–62 [in Russian].
- Vakulenko, N. V., Kotliakov, V. M., Monin, A. S., and Sonechkin, D. M. (2004). Evidence of the leading role of temperature variations with respect to variations of greenhouse gas concentration from data of ice core from the station “Vostok”. *Annals of RAS*, **397**(5), 663–667 [in Russian].
- Valiela, I. and Bowen, J. L. (2002). Nitrogen sources to watersheds and estuaries: Role of land cover mosaics and losses within watersheds. *Environmental Pollution*, **118**(2), 239–248.
- Vansarochana, A. (2004). Synthetic interpolative facies mapping model for landslide susceptibility map. *Proceedings of 25th Asian Conference on Remote Sensing, 22–26 November, Chiang Mai, Thailand* (pp. 612–617). AARS, Chiang Mai, Thailand.
- Varotsos, C. A. and Kondratyev, K. Ya. (1998). Dynamics of the total ozone content at middle latitudes of the Northern Hemisphere. *Annals of RAS*, **359**(6), 821–822 [in Russian].
- Vernadsky, V. I. (1944a). Some words about the noosphere. *Progress in Modern Biology*, **18**(2), 49–93 [in Russian].
- Vernadsky, V. I. (1944b). A few words about the noosphere. *Successes Mod. Biol.*, **18**(2), 49–93 [in Russian].
- Victor, D. G. (2001). *The Collapse of the Kyoto Protocol and the Struggle to Slow Global Warming* (178 pp.). Princeton University Press, Princeton, NJ.
- Victor, D. G. (2004). *Climate Change: Debating America's Policy Options* (165 pp.). Council of Foreign Relations, New York.
- Vilkova, L. P. (2003). Modelling the global carbon cycle. *Problems of the Environment and Natural Resources*, **7**, 34–48 [in Russian].
- Villagrán, H. L. (2003). El fenómeno “El Niño” y políticas públicas: Un desafío científico, tecnológico e institucional. *Diálogo Andino*, **22**, 23–34 [in Spanish].
- Vinogradov, B. V. (1983). A quantitative presentation of the function of the remote sensing of soil moisture. *Annals of RAS*, **272**(1), 247–250 [in Russian].
- Vinogradov, M. E., Gitzelzan, I. I., and Sorokin, J. I. (1970). The vertical structure of a pelagic community in the tropical ocean. *Marine Biology*, **6**(4), 261–268.

- Vital Signs, 2003–2004 (2003). *The Trends that Are Shaping Our Future* (149 pp.). Worldwatch Institute/Earthscan, London.
- Vladimirov, V. A., Vorobyev, Yu. L., Salov, S. S., Faleyev, M. I., Arkhipova, N. I., Kapustin, M. A., Kashchenko, S. A., Kosiachenko, S. A., Kuznetsov, I. V. *et al.* (2000). *Risk Control: Risk and Sustainable Development* (431 pp.). Nauka, Moscow [in Russian].
- Vogel, C. and O'Brien, K. (2004). Vulnerability and global environmental change: Rhetoric and reality. *Aviso* (an international bulletin on global environmental change and human security), **13**, 1–8.
- Voitkovsky, K. F. and Korolkov, V. G. (1998). *Water–Snow Fluxes onto the Putorana Plateau* (Data of Glaciological Studies No. 84, pp. 92–94). Moscow State University, Moscow [in Russian].
- Volk, T. (2003a). *Gaia's Body: Toward a Physiology of Earth* (296 pp.). MIT Press, Cambridge, MA.
- Volk, T. (2003b). Natural selection, Gaia, and inadvertent by-products: A reply to Lenton and Wilkinson's response. *Clim. Change*, **58**(1–2), 13–19.
- Von Oosteron, P., Zlatanova, S., and Fendel, E. M. (eds) (2005). *Geo-information for Disaster Management* (1434 pp.). Springer-Verlag, Heidelberg, Germany.
- Vorobyev, Yu. L., Gusev, A. V., Zalokhanov, M. Ch., Kuznetsov, I. V., Kulba, V. V., Levashov, V. K., Lvov, D. S., Mayevsky, V. I., Malinetsky, G. G., Makhov, S. A. *et al.* (2003). A project of the scientific monitoring system and crises in present-day Russia. *Herald of RAS*, **3**(4), 71–79 [in Russian].
- Wagner, F., Muller, D., and Ansmann, A. A. (2001). Comparison of the radiative impact of aerosols derived from vertically resolved (lidar) and vertically integrated (Sun photometer) measurements: Example of an Indian aerosol plume. *J. Geophys. Res.*, **106**(D19), 22861–22870.
- Wainwright, J. and Mulligan, M. (2003). *Environmental Modelling* (412 pp.). John Wiley & Sons, London.
- Walker, G. (2003). *Snowball Earth: The Story of the Great Global Catastrophe that Spawned Life as We Know It* (269 pp.). Crown Publishers, New York.
- Wallace, J. M. (1998). Observed climatic variability: Spatial structure. In: D. L. T. Anderson and J. Willebrand (eds), *Decadal Climate Variability: Dynamics and Predictability* (NATO ASI Series I 44, pp. 31–81). Springer-Verlag, Berlin.
- Wang, C., Bond-Lamberty, B., and Gower, S. T. (2003). Soil surface CO₂ flux in a boreal black spruce fire chronosequence. *J. Geophys. Res.*, **108**(3), WFX5/1–WFX5/8.
- Wang, L. K., Vielkind, D., and Mu Hao Wang (1978). Mathematical models of dissolved oxygen concentration in fresh water. *Ecological Modelling*, **5**(2), 115–123.
- Wang, Y. and Wu, C.-C. (2004). Current understanding of tropical cyclone structure and intensity changes: A review. *Meteorology and Atmospheric Physics*, **1**, 1–22.
- Wang, G. and Archer, D. J. (2003). Evaporation of groundwater from arid playas measured by C-band SAR. *IEEE Trans. on Geosci. and Remote Sensing*, **41**(7), 1641–1650.
- Watson, R. T., Noble, I. R., Bolin, B., Ravindranath, N. H., Verardo, D. J., and Dokken, D. J. (eds.) (2000). *Land Use, Land-use Change, and Forestry* (377 pp.). Cambridge University Press, Cambridge, UK.
- Wauben, W. M. F., van Velthoven, P. F. J., and Kelder, H. M. (1997). A 3-D chemistry transport model study of changes in Atmospheric ozone due to aircraft emissions. *Atmos. Environ.*, **31**, 1819–1836.
- Weaver, C., Ginoux, P., Chou, M.-D., and Joiner, J. (2002). Radiative forcing of Saharan dust: GOCART model simulations compared with ERBE data. *J. Atmos. Sci.*, **59**(3), Part 2, 736–747.

- Weber, G. R. (1992). *Global Warming: The Rest of the Story* (188 pp.). Dr Boettiger Verlag, Wiesbaden, Germany.
- Webster, P. J., Holland, G. J., Curry, J. A., and Chang, H.-R. (2005). Changes in tropical cyclone number, duration, and intensity in a warming environment. *Science*, **309**, 1844–1846.
- Weisenstein, D. K., Ko, M. K. W., Dyominov, I. G., Pitarui, G., Riccardully, L., Visconti, G., and Bekki, S. (1998). The effect of sulfur emissions from HSCT aircraft: A 2D model intercomparison. *J. Geophys. Res.*, **103**(D1), 1527–1547.
- White, G. F. (ed.) (1974). *Natural Hazards: Local, National, Global* (437 pp.). University of Colorado, New York.
- Widmann, M., Jones, J. M., and von Storch, H. (2004). Reconstruction of large-scale atmospheric circulation and data assimilation in paleoclimatology. *Pilot Analysis of the Global Ecosystems News*, **12**(2), 12–13.
- Wigley, T. M. L. (1999). *The Science of Climate Change: Global and US Perspectives* (48 pp.). Pew Center on Global Climate Change, Arlington, VA.
- Wigley, T. M. L. and Raper, S. C. B. (2001). Interpretation of high projections for global-mean warming. *Science*, **293**(5529), 451–455.
- Wilby, R. L. (2003). Weekly warming. *Weather*, **58**(11), 446–447.
- Wilderer, P. A., Schroeder, E. D., and Kopp, H. (eds.) (2005). *Global Sustainability* (266 pp.). Wiley/VCH, Hoboken, N.J.
- Williams, S. E., Bolitho, E. E., and Fox, S. (2003). Climate change in Australian tropical rainforests: An impending environmental catastrophe. *Proc. Biol. Sci.*, **270**(1527), 1887–1892.
- Wofsy, S. C. (2001). Climate change: Where has all the carbon gone? *Science*, **292**(5525), 2261–2262.
- Wofsy, S. C., Goulden, M. L., Munger, J. W., Pyle, E. H., Urbanski, S. P., Hutyrá, L., Saleska, S. R., Fitzjarrald, D., and Moore, K. (2001). Factors controlling long- and short-term sequestration of atmospheric CO₂ in a mid-latitude forest. *Science*, **294**(5547), 1688–1691.
- Woo, G. (1999). *The Mathematics of Natural Catastrophes* (304 pp.). World Scientific, New York.
- Woodcock, A. (1999a). Global warming: A natural event? *Weather*, **54**(5), 162–163.
- Woodcock, A. (1999b). Global warming: The debate heats up. *Weather*, **55**(4), 143–144.
- Woodbury, P. B., Beloin, R. M., Swaney, D. P., Gollands, B. E., and Weinstein, D. A. (2002). Using the ECLPSS software environment to build a spatially explicit component-based model of ozone effects on forest ecosystems. *Ecological Modelling*, **150**(3), 211–238.
- Woodworth, P. L., Blackman, D. L., Foden, P., Holgate, S., Horsburgh, K., Knight, P. J., Smith, D. E., Macleod, E. A., and Bradshaw, E. (2005). Evidence for the Indonesian tsunami in British tidal records. *Weather*, **60**(9), 263–267.
- Wotawa, G., Kroger, H., and Stohl, A. (2000). Transport of ozone towards the Alps: Results from trajectory analyses and photochemical model studies. *Atmospheric Environment*, **34**(9), 1367–1377.
- Wright, E. L. and Erickson, J. D. (2003). Incorporating catastrophes into integrated assessment: Science, impacts, and adaptation. *Climatic Change*, **57**, 265–286.
- Xu, Y. and Carmichael, G. R. (1999). An assessment of sulfur deposition pathways in Asia. *Atmospheric Environment*, **33**(21), 3473–3486.
- Yakovlev, O. I. (1998). *Cosmic Radiophysics* (432 pp.). Russian Fund for Basic Research, Moscow [in Russian].
- Yakovlev, O. I. (2001). *Space Radio Science* (320 pp.). Taylor & Francis, London.

- Yamagata, T., Behera, S. K., Luo, J. J., Masson, S., Jury, M. R., and Rao, S. A. (2004). Coupled ocean–atmosphere variability in the tropical Indian Ocean. In: C. Wang, X.-P. Xie, and J. A. Carton (eds), *Earth Climate: The Ocean–Atmosphere Interactions* (pp. 189–212). Springer-Verlag, Berlin.
- Yano, Y. and Yamazaki, F. (2004). Building damage detection of the 2003 Bam, Iran earthquake using Quickbird images. *Proceedings of 25th Asian Conference on Remote Sensing, 22–26 November, Chiang Mai, Thailand* (pp. 618–623). AARS, Chiang Mai, Thailand.
- Yano Y., Yamazaki, F., Matsuoka, M., and Vu, T. T. (2004). Building damage detection of the 2003 Bam, Iran earthquake using quickbird images. *Proceedings of the 25th ACRS, 22–26 November 2004, Chiang Mai (Thailand), Asian Association on Remote Sensing, Chiang, Thailand, 2004*, pp. 618–623.
- Yanovsky, R. G. (1999). *Global Changes and Social Safety* (358 pp.). Academia, Moscow [in Russian].
- Yasanov, N. A. (2003). Climate of Phanerozoic and the greenhouse effect. *Herald of the Moscow State University, Ser. 4: Geology*, **6**, 3–11 [in Russian].
- Year-book UNEP GEO-2003 (2004). *Nairobi, Kenya* (76 pp.). United Nations Environment Programme, Zurich, Switzerland.
- Yu, R., Zhang, M., and Cess, R. D. (1999). Analysis of the atmosphere energy budget: A consistency study of available data sets. *J. Geophys. Res.*, **104**(D8), 9655–9661.
- Zagorin, G. K. (1998). Polarization characteristics (Stocks' parameters) of self- and scattered microwave radiation in rain (150 pp.). PhD thesis, Institute of Radioengineering and Electronics of RAS, Moscow [in Russian].
- Zalimkhanov, M. Ch. (1981). *The Snow–Avalanche Regime and Perspectives for Mastering the Great Caucasus Ridge* (376 pp.). Rostov-Don State University, Rostov-Don, Russia [in Russian].
- Zanetti, A., Schwartz, S., and Enz, R. (2005). Natural catastrophes and man-made disasters. *Sigma*, **1**, 1–40.
- Zavarzin, G. A. (2003). Antipode to the noosphere. *Herald of RAS*, **73**(7), 627–636 [in Russian].
- Zavarzin, G. A. and Kolotilova, N. N. (2001). *Introduction to Natural History of Microbiology* (256 pp.). Book Yard “University”, Moscow [in Russian].
- Zerchaninova, I. L. and Potapov, I. I. (2001). Study of the list of technologies of the IPCC in the context of Russian progress. *Problems of the Environment and Natural Resources*, **4**, 3–22 [in Russian].
- Zhang, H., Henderson-Sellers, A., and McGuffie, K. (2001). The compounding effects of tropical deforestation and greenhouse warming on climate. *Clim. Change*, **49**, 309–338.
- Zhang, X., Helsdon, J. H., Jr., and Farley, R. D. (2003a). Numerical modeling of lightning-produced NO_x using an explicit lightning scheme, 1: Two-dimensional simulation as a “proof of concept”. *J. Geophys. Res.*, **108**(D18), 4579, doi: 10.1029/2002 ID003224.
- Zhang, X., Helsdon, J. H., Jr., and Farley, R. D. (2003b). Numerical modeling of lightning-produced NO_x using an explicit lightning scheme, 2: Three-dimensional simulation and expanded chemistry. *J. Geophys. Res.*, **108**(D18), 4580, doi: 10.1029/2002 ID003225.
- Zhu Xiaoxiang, Liu Ruixia, and Zhang Yeping (2004). Application study on drought monitoring with time-series satellite data. *Proceedings of 25th Asian Conference on Remote Sensing, 22–26 November, Chiang Mai, Thailand* (pp. 600–605). AARS, Chiang Mai, Thailand.
- Zillman, J. W. (2000). The challenges ahead. *WMO Bull.*, **49**(1), 8–13.
- Zimmerli, P. (2003). *Natural Catastrophes and Reinsurance* (48 pp.). Swiss Re, Zurich.

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