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CURRICULUM VITAE

Ecosystems Services & Management (ESM)

Tatiana Ermolieva

PERSONAL

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EDUCATION

1987-91 Ph.D. course at Glushkov's Institute of Cybernetics, Kiev, Ukraine: Adaptive constrained estimation and optimization of random fields. Defended in 1991.

1982-86 M. Sc. Degree in Applied Mathematics with specialization in applied mathematics, statistics, optimization, economics from Kiev's State University, Faculty of Cybernetics, Department of Applied Statistics and Theory of Probability.

EMPLOYMENT

2010–	International Institute for Applied Systems Analysis, Laxenburg, Austria: Ecosystems Services and Management (ESM), Research Scholar.
2003–2010	International Institute for Applied Systems Analysis, Laxenburg, Austria: Land Use Change Program (LUC), Research Scholar.
1997–2003	International Institute for Applied Systems Analysis, Laxenburg, Austria: Forestry Project; Social Security Reform Project: Research Assistant, Research Scholar.
1996– 97	Vienna University, Department of Economics and Statistics: Ph.D. course: Spatial and Inter-temporal Management of Extreme and Catastrophic Events.
1995–96	Technical University, Vienna: Temporary contract: Analysis and Modelling of Material Flow Systems. Uncertainty Analysis. constrained estimation and optimization of random fields: Research Staff.
1986–95	Glushkov's Institute of Cybernetics, Kiev, Ukraine: Research Staff.
1985–86	Kiev's State University, Faculty of Applied Mathematics, Department of Statistics and Theory of Probability: Research Assistant.

AWARDS

The Kjell Gunnarson's Risk Management Prize of the Swedish Insurance Society for , 1997.
Dr. Aurelio Peccei Award of International Institute for Applied Systems Analysis, 1997.

BIO-SKETCH

Dr. Tatiana Ermolieva is Research Scholar with Ecosystems Services & Management (ESM) program at IIASA. Her main research interests are analysis and modeling of complex socioeconomic, agricultural, environmental, and financial systems with explicit treatment of uncertainties, risks, extreme events, and spatial and temporal heterogeneities of regions and agents. She develops quantitative models and methods, including software and practical applications, for designing strategies ensuring robust system performance in the presence of uncertainties and risks, in particular of extreme catastrophic nature.

Recent methodological and practical studies cover the following topics:

1. Food security, stochastic and probabilistic modeling of multiple bread-basket failures, and adaptation under climatic uncertainties and risks;
2. Modeling and robust management of food-water-energy-… security nexus;
3. Risk-adjusted performance analysis of Common Agricultural Policies (CAP) for effective mainstreaming of climate change adaptation under uncertainties into CAP;
4. Fusion of probabilistic downscaling and GLOBIOM models;
5. Models linkage methodologies and practical implementation of algorithms for consistent linkage of sectorial and regional models under asymmetric information;
6. Treatment of systemic risks and potential tipping points with stochastic GLOBIOM;
7. Design of robust insurance programs (including cat bonds, contingent credits, mutual funds) against climatic disasters, e.g., floods;
8. Model-based approaches for robust conservation planning, invasive species control, and biodiversity preservation under uncertainties and risks;
9. Modeling and estimation of agricultural GHG emissions and pollutants;
10. Analysis of robust economic instruments (emission and agricultural pollution trading markets) under uncertainties;
11. Livestock epidemics and health risks;
12. Endogenous discounting under catastrophic risks, etc.

Dr. Ermolieva applies her skills in several European Union projects, in collaborative research with colleagues from IIASA programs, joint research with IIASA NMO and other institutions. Dr. Ermolieva is a co-principle investigator of an in-kind project between IIASA and NASU (National Academy of Science, Ukraine) “Integrated robust management of food-energy-water-land use nexus for sustainable development” (2017-2022), which is a new stage of the IIASA-NASU project “Integrated modeling of food, energy and water management for sustainable social, economic, and environmental developments” completed in the period from 2012 to 2016 (Options Magazine Winter 2016; IIASA Policy brief, 2017; Zagorodny et al., 2012, 2013, 2014). The goal of the 2017-2021 project is to develop further and implement novel systems analysis (SA) approaches addressing problems of common interest for Ukraine, IIASA and globally, emerging in designing solutions for robust sustainable Food-Energy-Water-Environmental-Social (FEWES) nexus management, which cannot be solved by traditional approaches.

Tatiana Ermolieva received a master's degree with specialization in applied mathematics and economics from National T. Shevchenko University of Kiev, Ukraine, 1986. From 1986 to 1995 she participated in agricultural and industrial projects on modeling and software development at the Glushkov Institute of Cybernetics, Kiev. In 1992 she received a Ph.D. in applied mathematics.

The topic of her thesis addressed problems related to spatio-temporal estimation and optimization of heterogeneous values and flows in complex dynamic and stochastic systems: "Adaptive constrained estimation and optimization of random fields" [25]. In 1995-1996 she had a contract with TU Vienna on modeling, spatial estimation, and optimal balancing of regional material flows (including uncertainty analysis and the design of decision support system [76-78]).

T. Ermolieva joined IIASA as a participant of the 1997 Young Scientists Summer Program to work with Risk, Modeling, and Society (RMS) Project. In 1997 she received the Dr. Aurelio Peccei Award from IIASA and the Kjell Gunnarson's Risk Management Prize of the Swedish Insurance Society for her research on optimal robust decisions for dealing with dependent catastrophic risks [74, 75].

From 1997 Dr. Ermolieva was affiliated with IIASA's Social Security Project (SSR) and worked on the development of economic-demographic multi-regional and multi-cohort social security model [15, 21, 45, 63, 68, 69, 70-72, 104, 105]. In particular, she analyzed robustness of economic-demographic models under structural changes emphasizing the macroeconomic impacts of age-structured savings and consumption behavior. In [15, 21, 63, 68, 69, 72], she investigated performance and optimal combination of regional social security systems under demographic and economic uncertainties. She participated in the project (jointly with Economic and Social Research Institute of the Japanese Cabinet Office as part of its Millenium Project) conducting a multidisciplinary study of population aging in Japan. As a result, she co-authored (jointly with L. MacKellar, D. Horlacher, L. Mayhew), a book "Economic Impacts of Population Aging in Japan, ESRI Studies Series on Aging".

While working with SSR, she continued close collaboration with RMS (RAV) Project developing models and methods to assist decision makers in dealing with endogenous catastrophic risks [9, 16-25, 32, 34, 36, 38, 41, 44, 47, 62, 64-67, 73-75, 94-101, 105]. She developed geographically explicit simulators of earthquakes [16, 22, 41, 43, 62, 64, 96, 99] and floods ([18, 47, 49, 94, 93, 98]; spatially and temporally explicit Monte Carlo optimization procedures, models and software [9, 19, 20, 23, 24, 74] deriving recommendations as to robust solutions for dealing with endogenous catastrophic risks; models and software with applications to seismic risks in Russia, Italy and catastrophic flooding in Hungary and Ukraine. She analyzed economic growth models under shocks (in particular, of extreme nature) [38, 42, 66, 97] justifying a proper trade-off between anticipative risk-averse (ex-ante) long-term decision and short term adaptive (ex-post) decisions. In her work, she (jointly with Ermoliev et al.) introduced a central for catastrophe risk management notion of stopping time events allowing to focus modeling efforts on the most distractive extreme events in order to analyze robust strategies ensuring the resilience of the system defined in terms of various safety indicators. Later, this idea was used to develop new path-breaking approaches to spatio-temporal endogenous discounting [3, 7, 32, 35, 51, 59, 93].

In 2002, Dr. Ermolieva worked with Forestry Program investigating the role of structural and financial (insurance) mechanisms for stabilization of long term economic growth under possible catastrophic shocks due to climate change and increasing variability of natural disasters (jointly with M. Obersteiner) [7, 17, 50, 55, 60, 91]. Together with M. Jonas and other colleagues, she developed the concept of stochastic detection technique for verification of emission changes under the Kyoto Protocol [84, 89]. This work inspired her interest to the performance of emission trading markets especially considering inherent emissions uncertainties (asymmetric, long-tailed) and risks ([4, 31, 79, 80, 81, 83, 84). She participated in preparation of projects analyzing different emission detection techniques in combination with emission trading schemes. She contributed to the development of a robust emission trading procedure which guarantees cost-effective and environmentally friendly core solutions. She (jointly with Ermoliev et al.) developed

new approaches to discounting related to projects dealing with long-term effects of climate changes. Dr. Ermolieva analyzed implications of discounting on catastrophic risks management ([3, 7, 32, 35, 51, 59, 93]). Advanced approaches to discounting were also applied in the emission trading procedure to impose safety constraints on emission targets to discount the reported emissions to their detectable levels [4].

From 2003 to 2010 she worked with Land Use Change and Agriculture (LUC) project on sustainable agricultural planning under risks and uncertainties, downscaling and data harmonization procedures, conducting major case studies in China, EU, Ukraine, etc. She summarized her work in numerous publications [125, 1, 2, 126, 5, 6, 10, 11, 12, 13, 14, 112, 114, 33, 39, 46, 52, 53, 54, 85, 86, …].

Since 2010 Dr. Ermolieva is affiliated with Ecosystems Services & Management (ESM) programs. Dr. Ermolieva applies her skills in several European Union projects, in collaborative research with colleagues from IIASA programs, and joint research with IIASA NMO and other institutions. She focuses on quantitative methods for robust treatment of systems' uncertainties, extreme events and spatial and temporal heterogeneities of regions and agents including appropriate methodological developments, algorithms, software, and practical applications.

PUBLICATIONS

During her work at IIASA, Dr. Ermolieva authored and co-authored more than 130 per-reviewed journal publications, about 25 book chapters, more than 30 Interim and Research Reports, and even more than 30 conference proceedings. Scopus h-index is 10.

She is a co-author of the book "Economic Impacts of Population Aging in Japan" (together with L. MacKellar, D. Horlacher, L. Mayhew, Edward Elgar Publishing, 136 West Street, Suite 202, Northampton, MA 01060, USA, 2004).

Together with A. Amendola, J. Linnerooth-Bayer, and R. Mechler, she is a co-editor of the book "Integrated Catastrophe Risk Modeling: Supporting Policy Processes", Springer, Dordrecht, Netherlands (2013).

Journal peer reviewed publications

2017

[139] Ermolieva T, Ermoliev Y, Havlik P, Mosnier A, Leclere D, Fritz S, Valin H, Obersteiner M, et al. (2017). *Dynamic Merge of the Global and Local Models for Sustainable Land Use Planning with Regard for Global Projections from GLOBIOM and Local Technical–Economic Feasibility and Resource Constraints.* Cybernetics and Systems Analysis 53 (2): 176-185. DOI:10.1007/s10559-017-9917-7.

[140] Ermoliev Y, Ermolieva T, Havlik P, Mosnier A, Leclere D, Fritz S, Obersteiner M, Kyryzyuk S, et al. (2017). *Robust downscaling approaches to disaggregation of data and projections under uncertainties: Case of land use and land use change systems.* Cybernetics

and Systems analysis 53 (1): 31-41.

[2017] IIASA Policy Brief (2017).
http://www.iiasa.ac.at/web/home/about/achievements/scientificachievementsandpolicyimpact/iiasa-nasu.html

2016

[138] Ermoliev, Y., Ermolieva, T., Havlik, P., Mosnier, A., Leclere, D., Fritz, S., Obersteiner, M., Kyryzyuk, S., Borodina, E. Robust downscaling approaches to disaggregation of data and projections under uncertainties: case of land use and land cover change, Cybernetics and Systems Analysis (In Press).

[137] Borodina, E., Kyryziuk, S., Yarovyi, V., Ermoliev, Y., Ermolieva, T. Modeling local land uses under the global change. Economics and forecasting, Institute of Econommics and Forecasting, Nat Academy of Sciences Ukraine, 1, Jan-March, 2016.

[136] Ermolieva, T., Havlík, P., Ermoliev, Y., Mosnier, A., Obersteiner, M., Leclère, D., Khabarov, N., Valin, H. and Reuter, W. (2016) Integrated Management of Land Use Systems under Systemic Risks and Security Targets: A Stochastic Global Biosphere Management Model. Journal of Agricultural Economics, 67 (3). pp. 584-601.

[135] Fricko, O., Havlik, P., Rogelj, J., Klimont, Z., Gusti, M., Johnson, N., Kolp, P., Strubegger, M., Valin, H., Amann, M., Ermolieva, T., Forsell, N., Herrero, M., Heyes, C., Kindermann, G., Krey, V., McCollum, D., Obersteiner, M., Pachauri, S., Rao, S., Schmid, E., Schöpp, W. and Riahi, K. (2016) The marker quantification of the Shared Socioeconomic Pathway 2: A middle-of-the-road scenario for the 21st century. Global Environmental Change. (In Press)

[134] Ermolieva, T., Biewald, A., Boere, E. and Havlik, P. (2016) Report on major uncertainties related to climate impacts and socio-economic costs, and policy recommendations related to the effectiveness of adaptation options. ECONADAPT Deliverable 7.3. ECONADAPT Project

[133] Cano, E.L., Moguerza, J.M., Ermolieva, T. and Yermoliev, Y. (2016) A strategic decision support system framework for energy-efficient technology investments. TOP. pp. 1-22.

[132] Ermolieva, T., Filatova, T., Ermoliev, Y., Obersteiner, M., de Bruijn, K. M. and Jeuken, A. (2016) Flood Catastrophe Model for Designing Optimal Flood Insurance Program: Estimating Location-Specific Premiums in the Netherlands. Risk Analysis. pp. 1-17.

2015

[131] Zhang, X., Ermolieva, T., Balkovic, J., Mosnier, A., Kraxner, F. and Liu, J. (2015) Recursive cross-entropy downscaling model for spatially explicit future land uses: A case study of the Heihe River Basin. Physics and Chemistry of the Earth, Parts A/B/C, 89-90. pp. 56-64.

[132] Ermolieva, T.Y., Ermoliev, Y.M., Havlik, P., Mosnier, A., Leclere, D., Kraxner, F., Khabarov, N. and Obersteiner, M. (2015) Systems analysis of robust strategic decisions to plan secure food, energy, and water provision based on the stochastic GLOBIOM model. Cybernetics and Systems Analysis, 51 (1). pp. 125-133.

[133] Xu, X., Gao, J., Cao, G.-Y., Ermoliev, Y., Ermolieva, T., Kryazhimskii, A.V. and Rovenskaya, E. (2015) Systems analysis of coal production and energy-water-food security in China. Cybernetics and Systems Analysis, 51 (3). pp. 370-377.

[134] Fuss, S., Havlik, P., Szolgayova, J., Schmid, E., Reuter, W.H., Khabarov, N., Obersteiner, M., Ermolieva, T., Ermoliev, Y. and Kraxner, F. (2015) Global food security & adaptation under crop yield volatility. Technological Forecasting and Social Change, 98. pp. 223-233.

[135] Ermoliev, Y., Ermolieva, T., Jonas, M., Obersteiner, M., Wagner, F. and Winiwarter, W. (2015) Integrated model for robust emission trading under uncertainties: cost-effectiveness and environmental safety. Technological Forecasting and Social Change, 98. pp. 234-244.

2014

[124] Ermolieva T, Ermoliev Y, Jonas M, Obersteiner M, Wagner F, Winiwarter W (2014). Uncertainty, cost-effectiveness and environmental safety of robust carbon trading: Integrated approach. Climatic Change, 124(3):633-646 (June 2014) (Published online 22 August 2013)

[125] Cano EL, Moguerza JM, Ermolieva T, Ermoliev Y (2014). Energy efficiency and risk management in public buildings: Strategic model for robust planning. Computational Management Science, 11(1-2):25-44 (January 2014) (Published online 4 July 2013).

2013

[121] Golodnikov AN, Ermoliev YM, Ermolieva TY, Knopov PS, Pepelyaev VA (2013). Integrated modeling of food security management in Ukraine. II. Models for structural optimization of agricultural production under risk. Cybernetics and Systems Analysis, 49(2):217-228) (March 2013).

[122] Golodnikov AN, Ermoliev YM, Ermolieva TY, Knopov PS, Pepelyaev VA (2013).
Integrated modeling of food security management in Ukraine. I. Model for management of the economic availability of food. Cybernetics and Systems Analysis, 49(1):26-35 (January 2013)

2012

[123] Fischer G, Winiwarter W, Cao G-Y, Ermolieva T, Hizsnyik E, Klimont Z,Wiberg D, Zheng XY (2012). Implications of population growth and urbanization on agricultural risks in China Population & Environment, 33(2-3):243-258 (March 2012) (Published online 10 May 2011).

2011

[1] G. Fischer, W. Winiwarter, G.Y. Cao, T. Ermolieva, E. Hizsnyik, Z. Klimont, D. Wiberg, X.Y. Zheng (2011). Implications of population growth and urbanization on agricultural risks in China" (2010). *Population and Environment journal. Special Issue: China.* Springer Verlag, DOI 10.1007/s11111-011-0134-4.

[2] Kyryzyuk S, Ermolieva T, Ermoliev Y (2011). Planning sustainable agroproduction for food security under risks Economics of Agriculture, 9:145-151.

[126] Qiu H, Huang J, Keyzer M, van Ween W, Rozelle S, Fischer G, Ermolieva T(2011). Biofuel development, food security and the use of marginal land in China. Journal of Environmental Quality, 40(4):1058-1067 (July 2011).

2010

[3] Ermoliev Y, Ermolieva T, Fischer G, Makowski M (2010). Extreme events, discounting and stochastic optimization. Annals of Operations Research, 177(1):9-19 (June 2010).

[4] Emolieva T, Ermoliev Y, Fischer G, Jonas M, Makowski M, Wagner F (2010). Carbon emission trading and carbon taxes under uncertainties. Climatic Change, 103(1-2):277-289 (November 2010).

[5] Fischer G, Winiwarter W, Ermolieva T, Cao G-Y, Qui H, Klimont Z, Wiberg D, Wagner F (2010). Integrated modeling framework for assessment and mitigation of nitrogen pollution from agriculture: Concept and case study for China. Agriculture, Ecosystems and Environment, 136(1-2):116-124 (15 February 2010).

2009

[6] Fischer G, Ermolieva T, Ermoliev Y, Sun L (2009). Risk-adjusted approaches for planning sustainable agricultural development. Stochastic Environmental Research and Risk Assessment, 23(4):441-450 (May 2009).

2008

[7] Ermoliev Y, Ermolieva T, Fischer G, Makowski M, Nilsson S, Obersteiner M (2008). Discounting, catastrophic risks management and vulnerability modeling. Mathematics and Computers in Simulation, 79(4):917-924 (15 December 2008).

[8] Ermoliev Y, Ermolieva TY, Makowski M (2008). Scientific Bridge Building under Uncertainty. Options; IIASA, Laxenburg, Austria pp.22-23 [Winter 2008].

[9] Ermolieva TY, Sergienko IV (2008). Catastrophe risk management for sustainable development of regions under risks of natural disasters. Cybernetics and Systems Analysis, 44(3):1-13 [2008].

[10] Fischer G, Cao G-Y, Ermolieva T, Sun L (2008). Urbanization and livestock production projection: An approach to healthy and environmental risks. Population and Development, 14(6):1668-1674 [2008].

[11] Fischer G, Ermolieva T (2008). Problems of decision making in agriculture under risks and uncertainties. In: Statistics in Ukraine: Current Situation, Problems and Trends, State Statistics Committee of Ukraine, Kiev, Ukraine [2008].

[12] Yarovyy V, Fischer G, Ermolieva T (2008). Land pricing mechanisms for sustainable

agricultural land use planning in Ukraine. EUROPA XXI: New Functions of Rural and Industrial Space in Central and Eastern Europe, 17:109-119 [2008].

2006

[13] Fischer G, Ermolieva T, Ermoliev Y, van Velthuizen HT (2006). Livestock production planning under environmental risks and uncertainties. Journal of Systems Science and Systems Engineering, 15(4):399-418 [2006].

[14] Fischer G, Ermolieva T, Ermoliev Y, van Velthuizen HT (2006). Spatial recovering of agricultural values from aggregate information: Sequential downscaling methods. International Journal of Knowledge and Systems Sciences, 3(1): [2006].

2005

[15] Ermolieva T (2005). Simulation-based optimization of social security systems under uncertainty. European Journal of Operations Research, 166(3): 782-793 [2005].

[16] Romaniuk M, Ermolieva T (2005). Application of EDGE software and simulations for integrated catastrophe management. International Journal of Knowledge and Systems Sciences, 2(2):1-9 [2005].

2004

[17] Ermolieva T, Obersteiner M (2004). Abrupt climate change: Lessons from integrated catastrophic risks management. World Resource Review, 16 (1):57-82 [2004].

2003

[18] Ermolieva T, Ermoliev Y, Fischer G, Galambos I (2003). The role of financial instruments in integrated catastrophic flood management. Multinational Finance Journal, 7(3&4):207-230 [2003].

2001

[19] Ermoliev Y, Ermolieva T, MacDonald GJ, Norkin VI (2001). Problems of catastrophic risks insurance. Kibernetika i sistemnyi analiz, 2:99-110 [2001].

[20] Ermoliev YM, Ermolieva TY, MacDonald GJ, Norkin VI (2001). Optimization of catastrophic risk processes. Cybernetics and Systems Analysis, 2:90-110 [2001].

[21] Ermolieva TY, MacKellar FL, Westlund A (2001). On long-term forecasting of social security: A robustness analysis. Quality and Quantity, 35(1):33-48 [2001].

2000 and before

[22] Amendola A, Ermoliev YM, Ermolieva TY, Gitis V, Koff G, Linnerooth-Bayer J (2000). A systems approach to modeling catastrophic risk and insurability. Natural Hazards, 21(2-3):381-393 [2000].

[23] Ermoliev YM, Ermolieva TY, MacDonald GJ, Norkin VI (2000). Insurability of catastrophic risks: The stochastic optimization model. Optimization, 47(3-4):251-265 [2000].

[24] Ermoliev YM, Ermolieva TY, MacDonald GJ, Norkin VI (2000). Stochastic optimization of

insurance portfolios for managing exposure to catastrophic risks. Annals of Operations Research, 99:207-225 [2000].

[25] Ermoliev YM, Ermolieva TY, MacDonald GJ, Norkin VI, Amendola A (2000). A systems approach to management of catastrophic risks. European Journal of Operational Research, 122(2):452-460 [2000].

[26] Ermolieva T. (1991) Optimization in Statistics. Cybernetics and Systems Analysis 91/53.

Book chapters

2015

[137] Ermolieva, T., Havlik, P., Yermoliev, Y., Mosnier, A., Obersteiner, M., Leclere, D., Khabarov, N., Valin, H. and Reuter, W. (2015) *Integrated Management of Land-use Systems under Systemic Risks and Food-(bio)energy-water-environmental Security Targets: A Stochastic Global Biosphere Management Model*. In: Systems Analysis 2015 - A Conference in Celebration of Howard Raiffa, 11 - 13 November, 2015, Laxenburg, Austria.

[138] Ermolieva, T., Yermoliev, Y., Atoyev, K.L., Golodnikov, O.M., Gorbachuk, V.M., Kiriljuk, V.S. and Knopov, P.S. (2015) *Development of Robust Land-use Decisions in Eastern Europe under Technology, Climate, and System Change: The Case of Ukraine*. In: Systems Analysis 2015 - A Conference in Celebration of Howard Raiffa, 11 -13 November, 2015, Laxenburg, Austria.

[139] Gao, J., Sun, C., Xiangyang, X., Cao, G.-Y., Yermoliev, Y., Ermolieva, T., Mosnier, A. and Rovenskaya, E. (2015) *Advanced Stochastic Optimization Modeling of the Water-energy-food Nexus for Robust Energy and Agricultural Development: Coal Mining Industry in Shanxi province, China*. In: Systems Analysis 2015 - A Conference in Celebration of Howard Raiffa, 11 -13 November, 2015, Laxenburg, Austria.

[140] Havlik, P., Valin, H., Mosnier, A., Forsell, N., Frank, S., Leclere, D., Palazzo, A., Ermolieva, T., Gusti, M., Balkovic, J., Skalsky, R., Schmid, E., Herrero, M., Kraxner, F. and Obersteiner, M. (2015) Integrated Multi-scale Modeling Framework for Assessment of Land-use Related Challenges under Global Change. In: Systems Analysis 2015 - A Conference in Celebration of Howard Raiffa, 11 -13 November, 2015, Laxenburg, Austria.

[141] Yermoliev, Y., Ermolieva, T., Havlik, P., Mosnier, A., Obersteiner, M., Leclere, D., Fritz, S., Kyryzyuk, S. and Kostyuchenko, Y. (2015) Robust Rescaling Methods for Integrated Water, Food, and Energy Security Management under Systemic Risks and Uncertainty. In: Systems Analysis 2015 - A Conference in Celebration of Howard Raiffa, 11 -13 November, 2015, Laxenburg, Austria.

2014

[128] Ermolieva, T., Ermoliev, Y., Havlik, P., Mosnier, A., Fuss, S., Leclere, D., Khabarov, N. and Obersteiner, M. (2014) Systems analysis of strategic decisions for planning secure food, energy, water provision based on stochastic GLOBIOM. In: Integrated Management, Security and Robustness. NASU & Innovation Center of the NASU. ISBN 978-966-02-7376-4

[129] Ermoliev, Y., Ermolieva, T., Havlik, P., Mosnier, A., Leclere, D., Obersteiner, M. and Kostyuchenko, Y. (2014) Estimating global-local dynamics of land use systems by downscaling from GLOBIOM model. In: Integrated Management, Security and Robustness. NASU & Innovation Center of the NASU. ISBN 978-966-02-7376-4

[130] Atoyev, K.L., Ermoliev, Y.M. and Ermolieva, T.Y. (2014) The mathematical problems of complex management and effective utilization of food, energy and water resources under increased uncertainties. In: Integrated Management, Security and Robustness. NSU & Innovation Center of the NASU. ISBN 978-966-02-7376-4

2013

[115] Ermoliev Y, Ermolieva T, Galambos I (2013). Optimizing public private risk transfer systems for flood risk management in the Upper Tisza Region. In Integrated Catastrophe Risk Modeling: Supporting Policy Processes, A Amendola, T Ermolieva, J Linnerooth-Bayer, R Mechler (Eds), Springer, Dordrecht, Netherlands pp.245-262.

[116] Ermoliev Y, Ermolieva T (2013). Economic growth under catastrophes. In Integrated Catastrophe Risk Modeling: Supporting Policy Processes, A Amendola, T Ermolieva, J Linnerooth-Bayer, R Mechler (Eds). Springer, Dordrecht, Netherlands pp.103-117.

[117] Ermolieva T, Ermoliev Y (2013). Modeling catastrophe risk for designing insurance systems.
In Integrated Catastrophe Risk Modeling: Supporting Policy Processes, A Amendola, T. Ermolieva, J Linnerooth-Bayer, R Mechler (Eds). Springer, Dordrecht, Netherlands pp.29-52.

[118] Compton KL, Ermolieva T, Linnerooth-Bayer J, Amendola A, Faber R,Nachtnebel H. (2013).
Modeling risk and uncertainty: Managing flash flood risk in Vienna. In Integrated Catastrophe Risk Modeling: Supporting Policy Processes, A Amendola, T Ermolieva, J Linnerooth-Bayer, R Mechler (Eds). Springer, Dordrecht, Netherlands pp.13-28.

[119] Ermolieva T, Ermoliev Y, Obersteiner M, Makowski M, Fischer G(2013). Dams and catastrophe risk: Discounting in long term planning. In Integrated Catastrophe Risk Modeling: Supporting Policy Processes, A Amendola, T Ermolieva, J Linnerooth-Bayer, R Mechler (Eds). Springer, Dordrecht, Netherlands pp.73-92.

[120] Amendola A, Ermolieva T, Linnerooth-Bayer J, Mechler R (2013). Catastrophe models for informing risk management policy: An introduction In Integrated Catastrophe Risk Modeling: Supporting Policy Processes, A Amendola, T Ermolieva, J Linnerooth-Bayer, R Mechler (Eds). Springer, Dordrecht, Netherlands pp.3-12.

2012

[110] Ermolieva T, Ermoliev Y, Fischer G, Makowski M, Obersteiner M (2012). Discounting and catastrophic risk management. In Risk Assessment and Management, Z Zhiyong (ed.). Academy Publish, Wyoming, USA.

[111] Nowak P, Romaniuk M, Ermolieva T (2012). Evaluation of portfolio of financial and insurance instruments: Simulation of uncertainty. In Managing Safety of Heterogeneous Systems, Y Ermoliev, M Makowski, K Marti (eds). Springer, Heidelberg, Germany pp.351-366 (February 2012).

[112] Fischer G, Winiwarter W, Ermolieva T, Cao G-Y, van Velthuizen H,Klimont Z, Schoepp W, van Veen W, Wiberg D, Wagner F (2012). Sustainable agriculture in China: Estimation and reduction of nitrogen impacts. In Managing Safety of Heterogeneous Systems,

Y Ermoliev, M Makowski, K Marti (eds). Springer, Heidelberg, Germany pp.327-350 (February 2012).

[113] Kiczko A, Ermolieva T (2012). Multiple-criteria decision support system for Siemianowka Reservoir under uncertainties. In Managing Safety of Heterogeneous Systems, Y Ermoliev, M Makowski, K Marti (eds). Springer, Heidelberg, Germany pp.187-201 (February 2012).

[114] Borodina O, Borodina E, Ermolieva T, Ermoliev Y, Fischer G, Makowski M, van Velthuizen H (2012). Sustainable agriculture, food security, and socio-economic risks in Ukraine. In Managing Safety of Heterogeneous Systems, Y Ermoliev, M Makowski, K Marti (eds). Springer, Heidelberg, Germany pp.169-185 (February 2012).

2011

[109] Ermolieva T, Ermoliev Y, Fischer G, Jonas M, Makowski M, Wagner F(2011). Carbon emission trading and carbon taxes under uncertainties. In Greenhouse Gas Inventories: Dealing With Uncertainty, T White, M Jonas, Z Nahorski, S Nilsson (eds). Springer, Dordrecht, Netherlands pp.277-289.

2010

[31] Ermolieva T, Ermoliev Y, Fischer G, Jonas M, Makowski M (2010). Cost effective and environmentally safe emission trading under uncertainty. In: Coping with Uncertainty: Robust Solutions, K. Marti, Y. Ermoliev, M. Makowski (eds), Springer-Verlag, Heidelberg, Germany, pp. 79-99.

[32] Ermolieva T, Ermoliev Y, Fischer G, Makowski M (2010). Induced discounting and risk management. In: Coping with Uncertainty: Robust Solutions, K. Marti, Y. Ermoliev, M. Makowski (eds), Springer-Verag, Heidelberg, Germany, pp. 59-77.

[33] Fischer, G., Ermolieva, T., Sun, L. (2010) Planning sustianable agricultural development under risks. In: *Coping with Uncertainty: Robust Solutions*, K. Marti, Y. Ermoliev, M. Makowski (eds), Springer-Verlag, Heidelberg, Germany, pp. 209-226.

2009

[34] Ermolieva T, Ermoliev Y, Fischer G, Makowski M (2009). Integrated modeling for management of catastrophic risks: Spatial stochastic optimization model. In: Simulation and Optimization Methods in Risk and Reliability Theory, P.S. Knopov, P.M. Pardalos (eds), Nova Science Publishers, New York, USA, pp. 45-68.

[35] Ermolieva T, Makowski M, Fischer G, Ermoliev Y (2009). Economic evaluation of dams for flood protection: An integrated safety approach. In: Dam-break Problems, Solutions and Case Studies, D. de Wrachien, S. Mambretti (eds), WIT Press, Southampton, UK, pp. 241-272.

2007

[36] Ermolieva T, Ermoliev Y, Fischer G, Makowski M (2007). Catastrophic risks, vulnerability, and land use. In: Integrated Risk Management Approaches for Planning Sustainable Agriculture, C. Huang, C. Frey, J. Feng (eds), Atlantis Press, Paris, France [2007].

Ermolieva T, Ermoliev Y, Fischer G, Makowski M (2007). Induced Discounting and Risk Management. IIASA Interim Report IR-07-040 [2007, 29 pp].

[37] Fischer G, Ermolieva T, Ermoliev Y, Sun L (2007). Integrated risk management approaches for planning sustainable agriculture. In: Advances in Studies on Risk Analysis and Crisis Response, C. Huang, C. Frey, J. Feng (eds), Atlantis Press, Paris, France, pp. [2007].

2006

[38] Ermoliev YM, Ermolieva TY, Norkin VI (2006). Economic Growth Under Shocks: Path Dependencies and Stabilization. IIASA Reprint RP-06-001, from MICRO MESO MACRO: Addressing Complex Systems Couplings; H. Liljenstroem, U. Svedin (eds), World Scientific Publishing Co. Pte. Ltd, Singapore, pp 289-302 [2006].

[39] Fischer G, Ermolieva T, Ermoliev Y, van Velthuizen HT (2006). Sequential downscaling methods for estimation from aggregate data. In: Coping with Uncertainty, Modeling and Policy Issues, K. Marti, Y. Ermoliev, M. Makowski, G. Pflug (eds), Springer-Verlag, Berlin, Germany pp. 155-169.

[40] O'Neill BC, Ermoliev Y, Ermolieva T (2006). Endogenous risks and learning in climate change decision analysis. In: Coping with Uncertainty, Modeling and Policy Issues, K. Marti, Y. Ermoliev, M. Makowski, G. Pflug (eds), Springer-Verlag, Berlin, Germany pp. 283-300 [2006].

2005

[41] Amendola A, Ermoliev Y, Ermolieva T (2005). Catastrophe risk management: vulnerability and equity. In: Integrated Risk and Vulnerability Management Assisted by Decision Support Systems, A.V. Gheorghe (ed), Springer, Dordrecht, Netherlands pp. 383-401 [2005].

[42] Ermoliev Y, Ermolieva T, Norkin VI (2005). Economic growth under shocks: path dependencies and stabilization. In: Micro-Meso-Macro: Addressing Complex Systems Couplings, H. Liljenstroem, U. Svedin, World Scientific, London, UK pp. 289-304 [2005].

[43] Ermolieva T, Ermoliev Y (2005). Catastrophic risk management: flood and seismic risks case studies. In: Applications of Stochastic Programming, S.W. Wallace, W.T. Ziemba (eds), MPS-SIAM Series on Optimization, Philadelphia, PA, USA [2005].

2004

[44] Romaniuk M, Ermolieva T (2004). Pricing of catastrophic bonds: Application of simulation methods. In: Scientific Series on Contemporary Science, Theory and Applications: System Operation Research. Assn. of Systems and Operation Research, Warsaw School for Information, Technology and Management, Z. Budnicki, O. Hryniewicz, J. Weglarz (eds), EXIT Academic Publishing House, Warsaw, Poland, pp. 109-120 [2004].

2000

[45] Westlund A, Ermolieva TY, MacKellar FL (2000). Analysis and forecasting of social security: A study of robustness. In: Financial Modeling, M. Bonilla, T. Casasus, R. Sala (eds), Physica-Verlag, Heidelberg, Germany, pp. 401-427 [2000].

Research reports

[127] Ermolieva, T., Havlik, P., Mosnier, A., Obersteiner, M., Yermoliev, Y. (2013). Dynamic recursive procedure for downscaling land cover changes from GLOBIOM model. IIASA Interim Report IR-13-005.

[107] Ermolieva T, Ermoliev Y, Jonas M, Obersteiner M, Wagner F,Winiwarter W. (2013) Uncertainty, Cost-effectiveness and Environmental Safety of Robust Carbon Trading: Integrated Approach. IIASA Interim Report IR-13-003 (July 2013).

[108] Ermolieva T, Filatova T, de Bruijn K, Jeuken A, Obersteiner M, Ermoliev Y(2013). Integrated Catastrophic Flood Model for Designing Robust Flood Insurance Program. Case Study in Rijnmond-Drechtsteden Area, The Netherlands. IIASA Interim Report IR-13-002 (July 2013).

[46] Borodina, O., Borodina, E., Ermolieva, T., Ermoliev, Y., Fischer, G., Makowski, M., van Velthuizen, H. (2010): Integrated modeling approach to the analysis of food security and sustainable rural developments: Ukrainian case study. IIASA Interim Report IR-10-017, Int. Inst. for Applied Systems Analysis, Laxenbburg, Austria.

2009

[47] Compton KL, Faber R, Ermolieva TY, Linnerooth-Bayer J, Nachtnebel H-P (2009). Uncertainty and Disaster Risk Management: Modeling the Flash Flood Risk to Vienna and Its Subway System. IIASA Research Report RR-09-002 [October 2009, 97 pp].

[48] Ermolieva T, Winiwarter W, Fischer G, Cao GY, Klimont Z, Schoepp W, Li Y, Asman WAH (2009). Integrated Nitrogen Management in China. IIASA Interim Report IR-09-005 [August 2009, 59 pp].

2008

[49] Compton KL, Faber R, Ermolieva T, Linnerooth-Bayer J, Nachtnebel H-P (2008). Development of a Catastrophe Model for Managing the Risks of Urban Flash Flooding in Vienna. IIASA Interim Report IR-08-001 [January 2008, 90 pp].

[50] Ermoliev Y, Ermolieva T, Fischer G, Makowski M, Nilsson S, Obersteiner M (2008). Discounting, catastrophic risks management and vulnerability modeling. Mathematics and Computers in Simulation, 79(4):917-924 (15 December 2008).

2007

[51] Ermolieva T, Ermoliev Y, Fischer G, Makowski M (2007). Induced Discounting and Risk Management. IIASA Interim Report IR-07-040 [2007, 29 pp].

2006

[52] Fischer G, Ermolieva T, Ermoliev Y, van Velthuizen HT (2006). Sequential Downscaling Methods for Estimation from Aggregate Data. IIASA Interim Report IR-06-002 [January 2006, 12 pp].

[53] Fischer G, Ermolieva T, Ermoliev Y, van Velthuizen HT (2006). Spatial Recovering of Agricultural Values from Aggregate Information: Sequential Downscaling Methods. IIASA Reprint RP-06-009, from International Journal of Knowledge and Systems Sciences (IKSS), 3(1):1-6 [2006].

2005

[54] Ermolieva T, Fischer G, van Velthuizen HT (2005). Livestock Production and Environmental Risks in China. Scenarios to 2030. FAO-IIASA Report.

[55] Ermolieva T, Obersteiner M (2005). Global Change, Catastrophic Risks and Sustained Economic Growth: Model-based Analysis. IIASA Interim Report IR-05-014 [March 2005, 29 pp].

[56] Koenig M, Schentz H, Schleidt K, Ermolieva TY, Jonas M (2005). Weiterfuehrung und Ausbau von MEDEA and MEDEA V1.1 Handbuch (Continuation and Expansion of MEDEA and MEDEA V1.1 Handbook). Report: StartClim2004.F; University of Natural Resources and Applied Life Sciences, Vienna, Austria pp. 19 and pp. 103 [2005].

[57] Koenig M, Schentz H, Schleidt K, Jonas M, Ermolieva T (2005). Continuation and Further Development of the MEDEA Event Data Base. In: H. Kromp-Kolb, I. Schwarzl (eds.); StartClim2004. Analyses of Heat and Drought and their Impacts in Austria; University of Natural Resources and Applied Life Sciences, Vienna, Austria pp. 24-27 [2005].

[58] O'Neill BC, Ermoliev Y, Ermolieva T (2005). Endogenous Risks and Learning in Climate Change Decision Analysis. IIASA Interim Report IR-05-037 [October 2005, 20 pp].

2003

[59] Ermolieva TY, Ermoliev YM, Hepburn C, Nilsson S, Obersteiner M (2003). Induced Discounting and Its Implications to Catastrophic Risk Management. IIASA Interim Report IR-03-029 [July 2003, 19 pp].

[60] Ermolieva TY, Obersteiner M (2003). Abrupt Climate Change: Lessons from Integrated Catastrophic Risk Management. IIASA Interim Report IR-03-017 [May 2003, 25 pp].

[61] Koenig M, Schentz H, Weigl J, Ermolieva T, Jonas M (2003). Ereignis-Datenbank fuer meteorologische Extremereignisse - MEDEA (Event Database for Meteorological Extreme Events - MEDEA). In: H. Kromp-Kolb, I. Schwarzl (eds); StartClim2003: Erste Analysen extremer Wetterereignisse und ihrer Auswirkungen in Oesterreich; Federal Environment Agency, Vienna, Austria, StartClim3c 1-36 [2003].

2002

[62] Baranov S, Digas BV, Ermolieva TY, Rozenberg VL (2002). Earthquake Risk Management: A Scenario Generator. IIASA Interim Report IR-02-025 [April 2002, 27 pp].

[63] Ermolieva TY (2002). Optimization of Social Security Systems Under Uncertainty. IIASA Interim Report IR-02-077 [December 2002, 20 pp].

2001

[64] Rozenberg VL, Ermolieva TY, Blizorukova M (2001). Modeling Earthquakes via Computer Programs. IIASA Interim Report IR-01-068 [December 2001, 27 pp].

2000

[65] Amendola A, Ermoliev YM, Ermolieva TY, Gitis V, Koff G, Linnerooth-Bayer J (2000). A Systems Approach to Modeling Catastrophic Risk and Insurability. IIASA Reprint RP-00-025, from Natural Hazards, 21(2-3):381-393 [2000].

[66] Ermoliev YM, Ermolieva TY, MacDonald GJ, Norkin VI (2000). Catastrophic Risk Management and Economic Growth. IIASA Interim Report IR-00-058 [November 2000, 16 pp].

[67] Ermoliev YM, Ermolieva TY, MacDonald GJ, Norkin VI, Amendola A (2000). A Systems Approach to Management of Catastrophic Risks. IIASA Reprint RP-00-008, from European Journal of Operational Research, 122:452-460 [2000].

[68] MacKellar L, Ermolieva T, Westlund A (2000). A Social Security Forecasting and Simulation Model. IIASA Interim Report IR-00-055 [September 2000, 56 pp].

1999

[69] Ermolieva T, MacKellar L, Westlund A (1999). Robustness to Stochastic Shocks of Alternative Old-Age Pension Arrangements: Macroeconomic Stability. IIASA Interim Report IR-99-024 [June 1999, 21 pp].

[70] MacKellar L, Ermolieva T (1999). The IIASA Social Security Reform Project Multiregional Economic-Demographic Growth Model: Policy Background and Algebraic Structure. IIASA Interim Report IR-99-007 [February 1999, 51 pp].

[71] MacKellar L, Ermolieva T, Reisen H (1999). Globalization, Social Security, and International Transfers. IIASA Interim Report IR-99-056 [October 1999, 33 pp].

[72] Westlund A, Ermolieva T, MacKellar L (1999). Analysis and Forecasting of Social Security: A Study of Robustness. IIASA Interim Report IR-99-004 [February 1999, 31 pp].

1998

[73] Ermoliev YM, Ermolieva TY, MacDonald GJ, Norkin VI (1998). On the Design of Catastrophic Risk Portfolios. IIASA Interim Report IR-98-056 [August 1998, 16 pp].

1997 and before

[74] Ermolieva TY (1997). The Design of Optimal Insurance Decisions in the Presence of Catastrophic Risks. IIASA Interim Report IR-97-068 [October 1997, 52 pp].

[75] Ermolieva TY, Ermoliev YM, Norkin VI (1997). Spatial Stochastic Model for Optimization Capacity of Insurance Networks Under Dependent Catastrophic Risks: Numerical Experiments. IIASA Interim Report IR-97-028 [June 1997, 30 pp].

[76] Ermolieva, T. (1996). On Optimal Balancing of Material Flows in the Presence of Uncertainties, Report to the Department of Water Management, Technical University, Vienna.

[77] Ermolieva, T. (1995). Interactive Analysis and Simulation of Material Flows: Special Application Tool. Technical Report to the Department of Water Management, Technical University, Vienna.

[78] Ermolieva, T., Gritsevskii, A. (1995). Modeling and Analysis of Material Flow Systems: A Proposal for Software Development, Report to the Department of Water Management, Technical University, Vienna, Austria.

Selected proceedings

2012

[106] Cano EL, Moguerza JM, Siddiqui A, Ermolieva T, Ermoliev Y. (2012). Strategic model for energy systems optimisation: Aspects of energy efficiency and risk management. Proceedings of the eceee 2012 Summer Study on Energy Efficiency in Industry, 11-14 September 2012, Arnhem, Netherlands pp.603-610.

2010

[79] Ermolieva T, Ermoliev Y, Jonas M, Fischer G, Makowski M (2010). A model for robust emission trading under uncertainties. Proceedings of the 3rd International Workshop on Uncertainty in Greenhouse Gas Inventories, 22-24 September 2010, Lviv, Ukraine pp.57-64 (September 2010).

2009

[80] Ermoliev Y, Ermolieva T, Makowski M (2009). Effective coping with uncertainties in evaluation of the compliance to international treaties (Abstract). In: ISS09 Book of Abstracts, International Scientific Studies Conference, 10-12 June 2009, Hofburg, Vienna, Austria, p. 133.

[81] Ermolieva T, Ermoliev Y, Fischer G, Jonas M, Makowski M, Wagner F (2009). Carbon emissions trading and carbon taxes under uncertainties (Abstract). In: CwU'2009: IIASA/GAMM Workshop on Coping with Uncertainty: Managing Safety of Heterogeneous Systems -- Abstracts, 14-16 December 2009, IIASA, Laxenburg, Austria, p. 9.

[82] Liu S, Han L, Ermoliev Y, Ermolieva T (2009). Catastrophe bond pricing based on behavior model. Proceedings of the IASTED International Conference on Modelling, Simulation, and Identification, H. Ma, S. Narayanan (eds.), MSI 2009, 12-14 October 2009, Beijing, China.

2008

[83] Ermoliev Y, Ermolieva T, Jonas M, Makowski M, Fischer G (2008). Emission trading under uncertainties. In: Statistics in Ukraine: Current Situation, Problems and Trends, State Statistics Committee of Ukraine, Kiev, Ukraine pp.9-15 [2008].

[84] Ermoliev Y, Ermolieva T, Jonas M, Makowski M, Fischer G (2008). Robust emission trading schemes under uncertainties. Proceedings of International Workshop: Problems of Decision Making Under Uncertainties, 22-27 September 2008, Novy Svit, Ukraine pp. 16-22 [2008].

[85] Fischer G, Ermolieva T (2008). Decision making under risks and uncertainties in agriculture. Proceedings of International Workshop: Problems of Decision Making under Uncertainties, 22-27 September 2008, Crimea, Ukraine, Taras Shevchenko National University of Kiev, Ukraine pp. 21-23 [2008].

[86] Fischer G, Ermolieva T (2008). Problems of decision making in agriculture under risks and uncertainties. In: Statistics in Ukraine: Current Situation, Problems and Trends, State Statistics Committee of Ukraine, Kiev, Ukraine [2008].

2007

[87] Ermolieva T, Jonas M, Ermoliev Y, Makowski M (2007). The difference between deterministic and probabilistic detection of emission changes: Toward the use of the probabilistic verification time concept. Proceedings. 2nd International Workshop on Uncertainty in Greenhouse Gas Inventories, 27-28 September, Laxenburg, Austria pp. 49-57 [2007].

[88] Ermolieva T, Romaniuk M, Makowski M (2007). Integrated model-based decision support for management of weather-related agricultural losses. Proceedings, 21st Conference on Informatics for Environment Protection (ENVIROINFO 2007), 12-15 September 2007 Warsaw, Poland [2007].

[89] Makowski M, Ermolieva T, Jonas M, Ermoliev Y, Fischer G (2007). Stochastic techniques for the design of robust and efficient emission trading mechanisms. Abstracts. IFIP/IIASA/GAMM Workshop on Coping with Uncertainty: Robust Decisions, 10-12 December, Laxenburg, Austria p. 22 [2007].

2006

[90] Fischer G, Ermolieva T, Ermoliev Y (2006). Land use, vulnerability and catastrophes. Proceedings of the 3rd International Symposium on Systems & Human Science: Complex Systems Approaches for Safety, Security and Reliability (SSR 2006), 6-8 March 2006, Vienna, Austria [2006].

2005

[91] Fischer G, Ermolieva T, Ermoliev Y, van Velthuizen HT (2005). Spatial recovering of agricultural values from aggregate information: Sequential downscaling methods. Proceedings of the Sixth International Symposium on Knowledge and Systems Sciences (KSS2005), M. Makowski, Z.Wang, Y. Nakamori, J. Wu (eds), August 29-31, 20005, IIASA, Laxenburg, Austria [2005].

2004

[92] Fischer G, Ermolieva T, van Velthuizen HT, Ermoliev Y (2004). On Sequential Downscaling Methods for Spatial Estimation of Production Values and Flows. Paper presented at DARE 2004 - Workshop on Data Assimilation and Recursive Estimation. Methodological Issues and Environmental Applications. Venice, Italy, 20-21 September 2004 [2004].

2003

[93] Ermolieva TY, Ermoliev YM, Hepburn C, Nilsson S, Obersteiner M (2003). Coping with regional vulnerability: Implications of induced discounting. Proceedings of the Third DPRI-IIASA International Symposium on Integrated Disaster Risk Management - Coping with Regional Vulnerability, 3-5 July 2003, Kyoto International Conference Hall, Kyoto, Japan [2003].

2002

[94] Compton KL, Ermolieva TY, Linnerooth-Bayer J (2002). Integrated flood risk management for urban infrastructure: Managing the flood risk to Vienna's heavy rail mass rapid transit system. Proceedings of the Second Annual IIASA-DPRI Meeting "Integrated Disaster Risk Management: Megacity Vulnerability and Resilience", 29-31 July 2002, IIASA, Laxenburg, Austria [2002].

[95] Ermolieva T, Ermoliev Y, Linnerooth-Bayer J, Vari A, Amendola A (2002). Design of Flood-loss Sharing Programs in the Upper Tisza Region, Hungary: A dynamic multi-agent adaptive Monte Carlo approach. Proceedings of the Second Annual IIASA-DPRI Meeting "Integrated Disaster Risk Management: Megacity Vulnerability and Resilience", 29-31 July 2002, IIASA, Laxenburg, Austria [2002].

2001

[96] Amendola A, Ermoliev YM, Ermolieva TY (2001). Earthquake risk management: A case study for an Italian region. Towards a Safer World - Proceedings of the ESREL Conference, E. Zio, M. Demichela, N. Piccinini (eds), 16-20 September 2001, Turin, Italy, Vol. 3, pp. 1875-1882 [2001].

[97] Ermoliev YM, Ermolieva TY, MacDonald GJ, Norkin VI (2001). Catastrophic risk management and economic growth. New Management Trends in New Century, Proc. ICM'2001, 4th International Conference on Management, Xi Youmin, Huang Haijun, Liang Lei, Wang Kanliang (eds), 5-7 May 2001, Xi'an, China, China Higher Education Press Beijing (CHEP) and Springer-Verlag, pp. 881-890 [2001].

[98] Ermolieva TY, Ermoliev YM, Linnerooth-Bayer J, Galambos I (2001). The role of financial instruments in integrated catastrophic flood management. Proceedings of the 8th Annual Conference of the Multinational Financial Society, 23-27 June 2001, Garda, Italy, pp. 121-122 [2001].

2000

[99] Amendola A, Ermoliev YM, Ermolieva TY (2000). Earthquake risk management: A case study for an Italian region. Proceedings of the EuroConference on Global Change and Catastrophe Risk Management: Earthquake Risks in Europe, A. Amendola, J. Linnerooth-Bayer (eds), 6-9 July 2000, IIASA, Laxenburg, Austria [2000].

[100] Ermoliev YM, Ermolieva TY, MacDonald GJ, Norkin VI (2000). Catastrophic risk management and economic growth. Proceedings of the EuroConference on Global Change and Catastrophe Risk Management: Earthquake Risks in Europe, A. Amendola, J. Linnerooth-Bayer (eds), 6-9 July 2000, IIASA, Laxenburg, Austria [2000].

1999

[101] Ermoliev YM, Ermolieva TY, MacDonald GJ, Norkin VI (1999). Optimization of catastrophic risk portfolios. Proceedings of the 24th Meeting of the EURO Working Group on Financial Modeling, 8-10 April 1999, Valencia, Spain, pp. 251-271 [1999].

[102] Ermolieva TY, MacKellar FL, Westlund A (1999). Robustness to stochastic shocks of alternative old-age pension arrangements: Macroeconomic stability. Proceedings of the 25th Meeting of the EURO Working Group on Financial Modeling, 18-20 November 1999, Vienna, Austria [1999].

[103] MacKellar FL, Freeman PK, Ermolieva TY (1999). Estimating natural catastrophic risk exposure and the benefits of risk transfer in developing countries. Proceedings of the EuroConference on Global Change and Catastrophe Risk Management: Flood Risks in Europe, A. Amendola, J. Linnerooth-Bayer (eds), 6-9 June 1999, IIASA, Laxenburg, Austria [1999].

[104] Westlund A, Ermolieva TY, MacKellar FL (1999). Analysis and forecasting of social security: A study of robustness. Proceedings of the 24th Meeting of the EURO Working Group on Financial Modeling, 8-10 April 1999, Valencia, Spain [1999].

1997

[105] Ermolieva TY, Ermoliev YM, Norkin VI (1997). On the role of advanced modeling in managing catastrophic risks. Proceedings of the 1997 Annual Meeting of the Society for Risk Analysis - Europe: New Risk Frontiers, 15-18 June 1997, Stockholm, Sweden [1997].