CURRICULUM VITAE

Ariel Dinar

Business: Dept Of Environmental Sciences

University of California, Riverside

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PERSONAL

Birthdate: June 24, 1947
Birthplace: Rehovot, Israel
Marital status: Married, 3 children

Citizenship: Israel, USA

Specialization: Resource and Environmental Economics

Regional Cooperation Water resource Economics

Water Policy

Cooperative Game Theory Production Economics Operations Research

Extension

EDUCATION

Ph.D., The Hebrew University of Jerusalem, 1984 (Agricultural and Resource Economics).

Ms.C. with distinction, The Hebrew University of Jerusalem, 1974 (Agricultural Economics), with Distinction.

Bs.C., The Hebrew University of Jerusalem, 1972 (Agricultural Economics).

EXPERIENCE

Professor of Environmental Economics and Policy, Department of Environmental Sciences, University of California, Riverside, USA (December 1, 2008-)

Director Water Science and Policy Center, Department of Environmental Sciences, University of California, Riverside, USA (December 1, 2008-)

Lead Economist and Coordinator of Climate Change and Water Economics Research, Development Economics Research Group, The World Bank, Washington DC, USA, (2006-Nov 30, 2008).

Lead Economist, Agriculture and Rural Development Department, The World Bank, Washington DC, USA, (2000-2006).

Principal Economist, Rural Development Department, The World Bank, Washington DC, USA, (1998-2000).

- Adjunct Professor, School of Advanced Int'l Studies, Johns Hopkins University, Washington D.C., USA, (2000-2008).
 - Courses: (1) Int'l Water: Conflict, Negotiation and Cooperation (Graduate level). (2) Political Economy of Public Policy (Graduate level, 2006).
- Adjunct Professor, Department of Economics, George Washington University, Washington, D.C., USA, (1998-2000).
 - Course: Cost-Benefit Analysis (Graduate and Upper Under-graduate levels).
- Senior Economist, Rural Development Department, The World Bank, Washington DC, USA, (1996-1998).
- *Economist*, Agriculture and Natural Resources Department, Agricultural Policy Division, The World Bank, Washington DC, USA, (1993-96).
- Visiting Lecturer, Department of Economics, Ben-Gurion University of the Negev, Beer Sheva, Israel, (1992-93).
 - Courses: (1) Water and resource economics (Upper Undergraduate level).
 - (2) Water and environmental economics (Upper Undergraduate level).
- Senior Researcher (rank B), Institute for Desert Research, Ben-Gurion University of the Negev, Sede Boker, Israel, (1992-93).
- Visiting Scholar, Department of Agricultural Economics, College of Agricultural and Environmental Sciences, University of California, Davis, and USDA-ERS, (1990-92).
 - Research foci: Multicrop production decisions in irrigated agriculture. Regional modeling and economic incentives for water quality and quantity control. The economics of water quality cooperatives.
- Visiting Researcher, Department of Soils and Environmental Sciences, University of California, Riverside, and San Joaquin Valley Drainage Program, Sacramento, CA., (1988-90).
 - Research foci: Adoption of improved irrigation and drainage technologies. Pricing policies and institutions for regional regulation of drainage quality and quantity.
- Researcher (rank C), Agricultural Research Organization, Department of R&D Economics, The Volcani Center, Bet-Dagan, Israel, (1987-88).
 - Research foci: Economics of productivity and allocation of resources for research
- Researcher, The Hebrew University of Jerusalem, Department of Agricultural Economics and Management, Rehovot, Israel, (1985-88).
 - Research foci: Patterns of agricultural technology exchange and cooperation in similar ecosystem: the case of Egypt and Israel. Economic aspects of solutions to salinity and drainage problems in the Jeesreal Valley of Israel.
- Post Doctoral Research Associate, University of California, Riverside, Department of Soils and Environmental Sciences, Riverside, CA., (1983-85).
 - Research foci: Economics of agricultural drainage water reuse. Economic evaluation of solutions to drainage and salinity problems in irrigated agriculture. Crop water production functions for saline irrigation waters.
- *Instructor*, The Hebrew University of Jerusalem, Department of Agricultural Economics and Management, Rehovot, Israel, (1980-83).
 - Courses: Production Economics A and B (Undergraduate Level).
- Farm Management and Production Economics Specialist, Israel Ministry of Agriculture, The Extension Service, Rehovot, Israel, (1974-87).
 - Extension projects: Educational programs in economics and farm management. Introduction of computers at farm and regional levels for inter- and intra-farm analysis of agricultural production activities. Regional project for optimal allocation of irrigation waters on kibbutz farms during peak season of cotton irrigation.

- Distinguished Extension Economist, The Israeli Extension Service, Ministry of Agriculture, Tel-Aviv, Israel, 1976.
- Department Chair recognition for Excellence in teaching. Production Economics A and B, Department of Agricultural Economics and Management, Rehovot, Israel, 1982.
- 1997 Best Article of the Year in the Agriculture and Resource Economics Review. Dinar, A. and A. Wolf, "Economic and Political Considerations in Regional Cooperation Models".
- Teaching Stipend "Cooperative Game Theory in Water Resources" at the International Summer School on Game Theory and the Environment for Graduate Students organized by The CITG Interuniversity Centre for Game Theory and its Applications, the EAERE European Association of Environmental and Resource Economists and the FEEM Fondazione Eni Enrico Mattei, with the collaboration of the Department of Mathematics of the University of Genoa. Lavagna, Italy, September 2-14, 2002.
- Fulbright Foreign Scholarship Board and the U.S. Department of States. Fulbright Senior Specialists Program, Washington, DC, August 2003.

CONSULTING

California Department of Water Resources; U.S. Bureau of Reclamation; U.S. Department of Agriculture, Economic Research Service; The World Bank; California Energy Commission; Western Consortium for Public Health; California Cut Flower Commission.

TEACHING (at present)

Introduction to Environmental Economics (ENSC006/ECON006)

ADVISING

Ph.D. Students:

Chair/Co-Chair:

(1) Getachew Nigatu, Dept of Economics, UC Riverside Basin Water Transfer Market during Climate Change: A Case of Blue Nile River (2009-)

Committee member:

- (1) Apurva Sanghi, Dept of Economics, Yale University "Impact of Climate Change on Indian Agriculture", (Graduated May 1998).
- (2) Benjamin Simon, Dept of Economics, George Washington University "Devolution of Federally Constructed Irrigation Projects", (Graduated June 2001).
- (3) Pradeep Kurukulasuriya, Dept of Economics, Yale University ("Climate Change impact and Adaptation in Developing Countries", (Graduated May 2006).
- (4) Monobina Mukherjee, Dept of Environmental Sciences UC Riverside "Valuation of Natural Resources and Their Conservation Policies", (2009-).
- (5) Jingjing, Dept of Environmental Sciences UC Riverside, "Manure management at Confined Animal Feeding Operations", (2009-)
- (6) Brad Franklin, Dept of Environmental Sciences UC Riverside, A Regional Planning Model of Irrigated Agriculture in the Murray-Darling Basin (2009-).

SERVICES

Editorial Boards:

Technological Forecasting and Social Change, (1991-1997).

Journal of Environmental Economics and Management, (1997-2000).

American Journal of Agricultural Economics, (1997-2002).

Water Resources Research (2002-2004).

International Review of Environmental and Resource Economics (2006-)

Acta Oeconomica Pragensia (2007-)

Editor in Chief:

Strategic Behavior and the Environment, now Publishers, (2009-)

Committees and Boards:

California Department of Water Resources Sub-Committee on Water and Drainage, (1989-1992).

Rosenberg International Forum on Water Policy, (1996-)

Organizing Committee, 6th Meeting on Game Theory Practice Dedicated to Development, Natural Resources and the Environment, Zaragoza, Spain, July 10-12, 2006 (2005-2006).

Advisory Committee, 7th Meeting on Game Theory Practice Dedicated to 7th Meeting on Game Theory and Practice Dedicated to Energy, Environment and Natural Resources, May 28 - 30, 2007, HEC Montréal, (2006-2007).

Water Sector Board, World Bank, Washington DC, USA (9/2007-11/2008).

Advisory Board, International Center for Water Economics and Governance in Africa (IWEGA), Universidade Eduardo Mondlane, Maputo, Mozambique, (4/2009-).

Journal Reviews:

American Journal of Agricultural Economics, Water Resources Research, Western Journal of Agricultural Economics, Technological Forecasting and Social Change; Agricultural Systems; Contemporary Policy Issues, Resource and Energy Economics, Journal of Agribusiness, Land Economics, The Journal of Developing Areas, American Water Resources Association Journal, J. of Agricultural and Resource Economics, Annals of Operations Research, Water Policy, Agricultural and Resource Economics Review, Australian J. of Agricultural Economics, Environment and Development Economics, Chariers d'Economie et Sociologie Rurales, The European Journal of Political Economy, Southern Journal of Agricultural and Applied Economics, Journal of Environmental Management, Climatic Change, International Negotiation, Food Policy, Ecological Economics, Proceedings of the National Science Foundation of the United States of America.

Other Reviews

Bi-national Agricultural Research and Development Fund (BARD); California Water Resources Center; Pacific Basin Advisory Group at Hawaii; U.S. National Science Council, U.S. National Science Foundation, U.S. AID; Social Sciences and Humanities Research Council of Canada.

PUBLICATIONS

Books

- [1] Dinar, A. and D. Zilberman (Editors), *The Economics and Management of Water and Drainage in Agriculture*. Kluwer Academic Publishers, Boston, MA, 1991.
- [2] Dinar, A. and E. Loehman (Editors), Water Quantity/Quality Management and Conflict Resolution: Institutions, Processes, and Economic Analysis. Greenwood Publishing Group, Westport, CT, 1995.
- [3] Dinar, A. and J. Letey, *Modeling Economic, Management and Policy Issues of Water in Irrigated Agriculture*. Praeger Publishers, Westpoint, CT, 1996.
- [4] Easter K. W., M. Rosegrant, and A. Dinar (Editors), *Markets for Water Potential and Performance*. Kluwer Academic Publishers, 1998.
- [5] Dinar, A. (Editor), The Political Economy of Water Pricing Reforms. Oxford University Press, 2000.
- [6] Dinar, A. and D. Zilberman (Eds.), *Economics of Water Resources: The Contributions of Dan Yaron.* Kluwer Academic Publishers, 2002.
- [7] Dinar, A. (Ed.) *The Political Economy of Water Pricing Reforms* (in Chinese). Beijing: WaterPub (The General Institute of Water Resources and Hydropower Planning and Design), 2003. 阿里-迪南(编), 水价改革与政治经济,中国水利水电出版社, 2003.
- [8] Tsur, Y., T. Roe, R. Doukkali, and A. Dinar, *Pricing Irrigation Water: Principles and Cases from Developing Countries*. Resources For the Future Press, 2004.
- [9] Palmieri, A., F. Shah, G. Annandale, and A. Dinar Economic and Engineering Evaluation of Alternative Strategies for Managing Sedimentation in Storage Reservoirs World Bank, 2003.
- [10] R. Maria Saleth and A. Dinar, *The Institutional Economics of Water: A Cross-Country Analysis of Institutions and Performance*. Cheltenham: Edward Elgar, 2004.
- [11] Kemper, K. B. Blomquist and A. Dinar (Eds.), *Integrated Riverbasin Management through Decentralisation*. Berlin: Springer, 2006.
- [12] Dinar, A., S. Dinar, S. McCaffrey, and D. McKinney, Bridges over Water: Understanding Transboundary Water Conflicts, Negotiation and Cooperation. World Scientific Publishers 2007.
- [13] Dinar, A., J. Albiac, and J. Sanchez-Soriano (Eds.), *Game Theory and Policy Making in Natural Resources and the Environment*. London: Routledge Publishing, 2008.
- [14] Dinar, A., R. Hassan, R. Mendelsohn, J. Benhin, and others, *Climate Change and Agriculture in Africa: Impact Assessment and Adaptation Strategies*. London: EarthScan, 2008.
- [15] Garrido, A. and A. Dinar (Eds.), *Managing Water Resources in a Time of Global Change: Mountains, Valleys and Flood Plains*. London: Routledge, 2009.
- [16] Dinar, A. and J. Albiac (Eds.), Policy and Strategic Behaviour in Water Resource Management, EarthScan, 2009.
- [17] Albiac, J. and A. Dinar (Eds.), *The Management of Water Quality and Irrigation Technologies*, EarthScan 2009.
- [18] Mendelsohn, R. and A. Dinar, *Climate Change and Agriculture: An Economic Analysis of Global Impacts, Adaptation, and Distributional Effects*. Cheltenham: Edward Elgar (forthcoming, 2009).
- [19] Mendelsohn, R. and A. Dinar, *Handbook of Climate Change and Agriculture*. Cheltenham: Edward Elgar (forthcoming, 2011).

Book Series

- [1] Dinar, A. and D. Zilberman (Series Editors), *Natural Resource Management and Policy*. Kluwer Academic Publishers (Starting January 2005—Springer), Boston, MA, 1992-2005.
- [2] Dinar, A. (Series Editor), *Issues in Water Resource Policy*. Resources for the Future Press, Washington, DC, 2003- 2009.

Special Journal Issues

- [1] Dinar, A. (Guest Editor), Technology and Innovation in Agriculture and Natural Resources. *Technological Forecasting and Social Change*, 43 (3-4), 1993.
- [2] Dinar, S., and A. Dinar (Guest Editors). Negotiating in International Watercourses: Water Diplmacy, Conflict and Cooperation. *International Negotiation*, 5(2), 2000.

- [3] Dinar, A. (Section Convener). Transboudary Water Conflict and Cooperation. *Water Resources Research*. 40(5), 2004.
- [4] R. Maria Saleth, A. Dinar, and M. Samad (Guest Editors). Water Institutional Reforms: National and Global Perspectives, *Water Policy*. 7(1), 2005.
- [5] Patrone, F., J. Sanchez-Soriano, and A. Dinar (Guest Editors). Game Theory Practice in Natural Resources and the Environment. *International Game Theory Review* 10(3), September2008.
- [6] Sumaila, R., A. Dinar, and J. Albiac (Guest Editors) Game Theory Practice in Natural Resources and the Environment. *Environment and Development Economics* (2009).
- [7] Hassan, R., A. Dinar, and R. Mendelsohn. Climate Change and African Agriculture. *African Journal of Agricultural and Resource Economics* 2(1), March 2008.

Papers in Refereed Journals

- [117] Dinar, A., and D. McKinney, Realizing Conflict, Negotiation, and Cooperation Concepts in the Context of International Water Courses. Journal of Political Science Education, (Accepte for Publication September 22, 2009).
- [116] Saleth, Maria R., and A. Dinar, Impact Synergies and Institutional Roles in Development Processes: Modeling the Effects of Multiple Policy Interventions on Food Security. Journal of Policy Modeling, (Accepted for Publication, July 6, 2009).
- [115] Mendelsohn, R, and A. Dinar, Land Use and Climate Change Interactions, *Annual Review of Resource Economics* (Accepted for publication May 1, 2009).
- [114] Wang, J., R. Mendelsohn, A. Dinar, J. Huang, S. Rozelle, and L. Zhang, The Impact of Climate Change on China's Agriculture. *Agricultural Economics* 40(3):323-337, 2009.
- [113] Blomquist, W., A. Dinar, and K. Kemper. A Framework for Institutional Analysis of Decentralization Reforms in Natural Resource Management. *Society & Natural Resources* (Accepted for Publication November 27, 2008).
- [112] Larson, D. F., P. Ambrosi, A. Dinar, S. M. Rahman and R. Entler, A Review of Carbon Market Policies and Research. *International Review of Environment and Resource Economics* 2(3): 177-236, 2008. http://dx.doi.org/10.1561/101.00000016
- [111] Kempkey, N., M. Pinard, V. Pochat, A. Dinar, Negotiations over Water and other Natural Resources in The La Plata River Basin: A Model for other Transboundary Basins? *International Negotiation*, 14:253–279, 2009.
- [110] Seo, N. S., R. Mendelsohn, A. Dinar, and P. Kurukulasuriya, Adapting to Climate Change Mosaically: An Analysis of African Livestock Management by Agro-Ecological Zones. *The B.E. Journal of Economic Analysis & Policy*, The B.E. Journal of Economic Analysis & Policy, 9(2) (Contributions), Article 4, 2009. Available at: http://www.bepress.com/bejeap/vol9/iss2/art4.
- [109] Gilman, P., A. Dinar, and V. Pochat, Whither La Plata? Assessing the state of transboundary water resource cooperation in the basin. *Natural Resources Forum*, 32:203-214, 2008.
- [108] Seo N., R. Mendelsohn, A. Dinar, R. Hassan, and P. Kurukulasuriya, A Ricardian Analysis of the Distribution of Climate Change Impacts on Agriculture across Agro-Ecological Zones in Africa. *Environmental and Resource Economics*, 43:313–332, 2009.
- [107] Sumaila, R. U., A. Dinar, and J. Albiac, Game Theoretic Applications to Environmental and Natural Resource Problems. *Environment and Development Economics*, (accepted for Publication, March 15, 2008).
- [106] Murphy, J., A. Dinar, R. Howitt, S. Rassenti, V. Smith, and M. Weinberg, Incorporating Instream Flow Values into a Water Market, *Journal of Environmental Management*, 90(2):1089-1096, 2009.
- [105] Maria-Saleth, R. and A. Dinar, Linkages within Institutional Structure: An Empirical Analysis of Water Institutions, *Journal of Institutional Economics*, 4(3):375-401, 2008.
- [104] Patrone, F., J. Sanchez-Soriano, and A. Dinar, Does Game Theory Have a Role to Play in Policy Making in Natural Resources and the Environment, *International Game Theory Review*, 10(3): 221–228.
- [103] Dinar, A., K. Kemper, W. Blomquist and P. Kurukulasuriya, Whitewater: Process and Performance of Decentralization Reform of River Basin Water Resource Management, *Journal of Policy Modeling*, 29(6):851-867, 2007.

- [102] Diao, X., A. Dinar, T. Roe and Y. Tsur, A General Equilibrium Analysis of Conjunctive Ground and Surface Water Use with an Application to Morocco, *Agricultural Economics* 38:117-135, 2008.
- [101] Dinar, A., H. Guerrero Garcia Rojas, A. Yunez Naude, and J. Medellín Azuara, El Agua en México: Politicas en el Sector Agua, Herramientaspara la Evaluecion de sus Implicaciones economicas y Ambientales: Una Vision Panoramica, *Fondo de Cultura Economica*, Lecturas de El Trimestre Economico N° 100. Ed. (July 2008).
- [100] Dinar, A. H. Guerrero, A. Yunez-Naude, J. Medellin-Azuara, and M. Asad, El agua en México: Reflexiones e Implicaciones de Política, *Fondo de Cultura Economica*, Lecturas de El Trimestre Economico N° 100. Ed. (July 2008).
- [99] Dinar, A., G. Karagiannis and V. Tzouvelekas Evaluating the Impact of Agricultural Extension on Farms Performance in Crete: A Non-Neutral Stochastic Frontier Approach, *Agricultural Economics*, 36(2):135–146, 2007 Lead Article.
- [98] Mendelsohn, R., A. Basist, A. Dinar, P. Kurukulasuriya and C. Williams, What Explains Agricultural Performance: Climate Normals or Climate Variance?, *Climatic Change* 81(1):85-99, 2007.
- [97] Mendelsohn, R., A. Basist, P. Kurukulasuriya and A. Dinar, Climate and Rural Income, *Climatic Change* 81(1):101-118, 2007.
- [96] Kurukulasuriya P., R. Mendelsohn, R. Hassan, J. Benhin, T. Deressa, M. Diop, H. Mohamed Eid, K.Yerfi Fosu, G. Gbetibouo, S. Jain, A. Mahamadou, R. Mano, J. Kabubo-Mariara, S. El-Marsafawy, E. Molua, S. Ouda, M. Ouedraogo, I. Sène, D. Maddison, S. Niggol Seo, and Ariel Dinar, Will African Agriculture Survive Climate Change? World Bank Economic Review, 20(3):367-388, 2006.
- [95] Dinar, A. and R. Maria Saleth, Can Water Institution Be Cured: A Water Institutions Health Index, Water Science and Technology: Water Supply Journal 5(6):17-40, 2005.
- [94] Roe, T. L., A. Dinar, Y Tsur, and X. Diao, Feedback Links Between Economy-Wide and Farm-Level Policies: With Application to Irrigation Water Management in Morocco, *Journal of Policy Modeling*, 27(8):905-928, 2005.
- [93] Maria-Saleth, R. and A. Dinar, Water Institutional Reforms: Theory and Practice, *Water Policy*, 7(1):1-19, 2005.
- [92] Mendelsohn, R., A. Dinar, and L. Williams, The Distributional Impact of Climate Change on Rich and Poor Countries Environment and Development Economics, 11(2):159-178, 2005. Lead Article. (Reproduced in: Fullerton, D. (Ed.), Distributional Effects of Environmental and Energy Policy. The International Library of Environmental Economics and Policy (Tietenberg, T. nd K. Seagerson (Eds.), Ashgate Publishing, Sept, 2009.)
- [91] Dinar, A. Exploring Transboundary Conflict and Cooperation Water Resources Research, 40, W05S01, 2004.
- [90] Dinar, A. and J. Mody, Irrigation Water Management Policies: Pricing and Allocation Principles and Implementation Experiences *Natural Resources Forum*, 28:112-122, 2004.
- [89] Tsur, Y., A. Dinar, R. Doukkali, and T. Roe, Irrigation Water Pricing: Policy Implications based on International Comparison *Environment and Development Economics*, 9(6):735–755, 2004.
- [88] Dinar, A., T. Balakrishnan, and J. Wambia, Politics of Institutional Reforms in the Water and Drainage Sector of Pakistan *Environment and Development Economics*, 9:409-445, 2004.
- [87] Dinar S. and A. Dinar, Recent Developments in the Literature on Conflict and Cooperation in International Shared Water, *Natural Resources Journal*, 43(4):1217-1287, 2003.
- [86] Mendelsohn, R. and A. Dinar, Climate Water and Agriculture, *Land Economics*, 79(3):328-341, 2003.
- [85] Zekri, Slim and Ariel Dinar, Welfare Consequences of Water Supply Alternatives in Rural Tunisia, *Agricultural Economics*, 28(1):1-12, 2003 (Lead artricle).
- [84] Sunding, D., D. Zilberman, R. Howitt, A. Dinar, and N. MacDougall, Measuring the Costs of Reallocating Water from Agriculture: A Multi-Model Approach, *Natural Resource Modeling*, Volume 15(2), Summer 2002.

- [83] Tiwari, Dirgha, and Ariel Dinar, Balancing Future Food Demand and Water Supply: The Role of Economic Incentives in Irrigated Agriculture. *Quarterly Journal of International Agriculture*, 41(1/2):77-97, 2002.
- [82] Johansson, Robert C., Yacov Tsur, Terry L. Roe, Rachid M. Doukkali, and Ariel Dinar, Pricing and Allocation of Irrigation Water: A Review of Theory and Practice. Water Policy, 4(2): 173-199, 2002.
- [81] Dinar, A. and A. Xepapadeas. Regulating Water Quantity and Quality in Irrigated Agriculture: Learning by Investing under Asymmetric Information. *Environmental Modeling and Assessment*, 7(1):17-27, 2002.
- [80] Dinar, A. and G. Keynan. The Economics of Paid-Extension: Lessons from Experience in Nicaragua. *American J. of Agricultural Economics*, 83(3):769-776, 2001 (August).
- [79] Dinar, A., Scale and Equity in Water Resources Development: A Nash Bargaining Model. *Natural Resources Modeling*, 14(4):477-494, 2001 (Lead article).
- [78] Kilgour, M. D. and A. Dinar, Flexible Water Sharing Within an International River Basin. *Environmental and Resource Economics*, 18(1):43-60, 2001.
- [77] Palmieri, A., F Shah, and A Dinar, Economics of Reservoir Sedimentation and Sustainable Management of Dams. *Journal of Environmental Management*, 61(2):149-163, 2001.
- [76] Maria-Saleth, R. and A. Dinar, Preconditions for Market Solutions to Urban Water Scarcity: Empirical Results from Hyderabad City, India, Water Resources Research, 37(1):119-132, 2001.
- [75] Mendelsohn, R., A. Dinar, and A. Sanghi, The Effect of Development on the Climate Sensitivity of Agriculture. *Environment and Development Economics*, 6:85-101,2001.
- [74] Dinar, S. and A. Dinar, Negotiating in International Water Courses: Diplomacy, Conflict and Cooperation. *International Negotiation*, 5(2):193-200, 2000.
- [73] Maria-Saleth, R. and A. Dinar, Institutional Change in Global Water Sector: Trends, Patterns and Implications. *Water Policy*, 2(3):175-199, 2000.
- [72] Murphy, J. J., A. Dinar, R. E. Howitt, S. J. Renzetti, and V. L. Smith, The Design of 'Smart' Water Market Institutions Using Laboratory Experiments. *Environmenalt and Resource Economics*, 17 (4):375-394, December 2000.
- [71] Dinar, A. and S. Alemu, The Process of Negotiation over International Water Disputes-The Case of the Nile Basin. *International Negotiation*, 5(2):311-330, 2000.
- [70] Dinar, A. Water Policy Reforms: Information Needs and Implementation Obstacles. *Water Policy*, 1(4):367-382, 1998. (Lead article).
- [69] Mendelsohn, R. and A. Dinar, Climate Change, Agriculture, and Developing Countries: Does Adaptation Matter? *World Bank Research Observer*, 14(2):277-293, 1999.
- [68] Dinar, A., G. Keynan, Medicion del Costo y Algunos Indicadores de Rendimiento de la Extension Pagada: El Caso de la Transferencia de Tecnologia Agricola en Nicaragua. *Debate Agrario*, 29/30, September 1999.
- [67] K. W. Easter, M. W. Rosegrant, and A. Dinar, Formal and Informal Markets for Water: Institutions, Performance and Constraints. *World Bank Research Observer*, 14(1):99-116, 1999.
- [66] Dinar, A. and A. Xepapadeas, Regulating Water Quantity and Quality in Irrigated Agriculture. *Journal of Environmental Management*, 54:273-289, 1998.
- [65] Dinar, A. and S. Alemu, The Dynamics of Negotiation Processes on International Water Disputes—The case of the Nile Basin. *Columbia International Affairs Online*, December, 1998.
- [64] Keynan, G., M. Olin, and A. Dinar, Extension Publica Cofinanciera en Nicaragua. *Debate Agrario*, 28:129-154, 1998.
- [63] Dinar, A. and A. Subramanian, Policy Implications from Water Pricing Experiences in Various Countries. *Water Policy*, 1(2):239-250, 1998.
- [62] Dinar, A., The Economics of *BINGO* Games: Leisure and Revenue. *Journal of Applied Recreational Research*, 22(2):107-121, July 1998.(Lead Article)
- [61] Keynan, G., M. Olin, and A. Dinar, Cofinanced Public Extension in Nicaragua. *World Bank Research Observer*, 12(2):225-247, 1997.
- [60] Dinar, A. and A. Wolf, Economic and Political Considerations in Regional Cooperation Models. *Agricultural and Resource Economics Review*, 26(1):7-22, 1997. (1997 best article)

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- [58] Dinar, A. and A. Keck, Private Irrigation Investment in Colombia: Effect of Violence, Macroeconomic Policy, and Environmental Conditions, *Agricultural Economics*, 16:1-15, 1977, (Lead article).
- [57] Lee, D. and A. Dinar, Integrated Approaches of River Basin Planning, Development, and Management, *Water International*, 21:213-222, 1996.
- [56] Tsur, Y. and A. Dinar, On the Relative Efficiency of Alternative Metods for Pricing Irrigation Water and their Implementation. *World Bank Economic Review*, 11(2):243-262, 1997.
- [55] Massad, S. and A. Dinar, Economic Aspects of Jet Fuel Spill During Air force Activity, Illustrated Using a Case Study from Israel. *Journal of Environmental Systems*, 25(1):65-80, 1996
- [54] Zeitouni, N. and A. Dinar, Mitigating Negative Water Quantity and Quality Externalities by Joint Management of Adjacent Aquifers, *Environmental and Resource Economics*, 9:1-20, 1997, (Lead article).
- [53] Dinar, A. And R. E. Howitt, Mechanisns for Allocation of Environmental Cost: Empirical Tests of Acceptability and Stability. *Journal of Environmental Management*, 49:183-203, 1997.
- [52] Dinar, A., Extension Commercialization: How Much to Charge for Extension Services. *American Journal of Agricultural Economics*, 78(1):1-12 February, 1996 (Lead article).
- [51] Moore, M. and A. Dinar, Water and Land as Quantity-Rationed Inputs in California Agriculture: Empirical Tests and Water Policy Implictions. *Land Economics*, 71(4):445-461, November 1995
- [50] Zilberman, D., D. Sunding, R. Howitt, A. Dinar, and N. Mac Dougall, Water For California Agriculture, Lessons from the Drought and New Water Market Reform. *Choices*, Fourth Quarter, 25-28, 1994.
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- [46] Dinar, A. and A. Wolf, Economic Potential and Political Considerations of Regional Water Trade: The Western Middle East Example. *Resources and Energy Economics*, 16:335-356, 1994.
- [45] Dinar, A. and A. Wolf, International Markets for Water and the Potential for Regional Cooperation: Economic and Political Perspectives in the Western Middle East. *Economic Development and Cultural Change*, 43(1):43-66, 1994.
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- [2] Dinar, A., Adoption of Improved Irrigation and Drainage Reduction Technologies in the West Side of the San Joaquin Valley. U.S. Bureau of Reclamation #'s 9-PG-20-03010 and 9-PG-20-03380 (\$120,000), 1988-1990. (with Mark Campbell a Social Scientist)
- [3] Dinar, A and R. E. Howitt, *The Economics of Water Quality Cooperation*. University of California Center for Cooperatives (\$17,854), 1991-1992.
- [4] Howitt, R., A. Dinar, E. Loehman, D. Zilberman, M. Aillery, E. Hoffman, *Regional Modeling and Economic Incentives for Water Quality and Quantity Control*. U.S. Geological Survey #14-08-001-G2084 (\$91,949), 1991-1993. (With Mark Grismer a Hydrologist)
- [5] Dinar, A and A. Xepapadeas, *Policy Implications of Environmental Regulations: The Case of Doing and Learning in a Non-Point Source Pollution*. Foundazione ENI Enrico Mattei, Millan, Italy #041-93 (26,000,000Lit.), 1992-1993.

- [6] Huffman, E., S. Rassenti, V. Smith, A. Dinar, and R. Howitt, *Environmental Change and Adaptive Resource Markets: Computer Assisted Markets for Water Allocation*. National Science Foundation, U.S. (\$846,600), 1996-2000. (Steve Rassenti software engineer)
- [7] Dinar, A., E. Kaufman, J. Oppenhaimer, and A. Wolf, *International Fresh Water Disputes and Conflict Resolution An Integrated Approach*. World Bank Research Support Budget (\$15,000 for Grant Preparation), 1996. (Edy Kaufman a Political Scientist; Aaron Wolf a Geographer)
- [8] Dinar, A., R. Mendelsohn, R. Evenson, S. Lonergan, and Jyote Parikh, **Measuring the Impact of Climate Change on Indian Agriculture**. World Bank Research Support Budget (\$40,000), Electric Power Research Institute (\$45,000), 1996-1997. (Steve Lonergan a Geographer/Hydrologist)
- [9] Dinar, A. and R. Maria Saleth, *Comparative Analysis of Water Institutions and Their Impct on the Performance of the Water Sector in Various Countries*. World Bank Research Support Budget, DECRG, Norvegian TF, Swiss TF, and Dutch TF (\$212,500), 1997-2001.
- [10] Dinar, A. and Y. Tsur, Guidelines for Pricing Irrigation Water Based on Efficiency and Implementation Costs (with Considerations of Fairness, Property Rights and Income Distribution), World Bank Research Preparation Budget (\$18,000), 1997-1998.
- [11] Dinar, A. and S. Zekri, *Impact of Climate Change on Tunisian Agriculture*, Norwegian Trust Fund (\$30,000), 1999-2000.
- [12] Dinar, A. and R. Doukkali,, *Impact of Climate Change on Moroccan Agriculture*, Dutch Trust Fund (\$25,000), 1999-2000.
- [13] Dinar, A., Y. Tsur, T. Roe, and R. Doukkali, *Guidelines for Pricing Irrigation Water Based on Efficiency, Implementation Costs, and Equity*. World Bank Research Support Budget (\$147,000), 1999-2001.
- [14] Palmieri A, F. Shah, and A. Dinar, *Economic and Engineering Evaluation of Alternative Strate*gies for Managing Sedimentation in Storage Reservoirs. World Bank Research Support Budget (\$176,400), 2000-2002. (Alessandro Palmieri a Dam Engineer, World Bank)
- [15] Kemper, K., A. Dinar and G. Alaerts, *Integrated Riverbasin Management and the Principle of Manageing Water Resources at the Lowest Appropriate Level—When and Why Does it (Not) Work in Practice?* World Bank Research Support Budget, Research Preparation Grant, (\$33,000), 2001.
- [16] Kemper, K., A. Dinar William Blomquist, and G. Alaerts, *Integrated Riverbasin Management* and the Principle of Managing Water Resources at the Lowest Appropriate Level—When and Why Does it (Not) Work in Practice? World Bank Research Support Budget, (\$350,000), 2002-2005. (William Blomquist a Political Scientist)
- [17] Dinar, A., Mendelsohn, R., *Climate and Rural Poverty-Incorporating Climate into Rural Development Strategies*. World Bank Research Support Budget, Research Preparation Grant, (\$430,000), 2003-2006. (With Alan Basist a satellite data scientist)
- [18] Dinar, A., GEF medium size targeted research-*Climate, Water and Agriculture: Impacts on and Adaptation of Agro-Ecological Systems in Africa*, (GEF-\$700,000; TFs-\$620,000), (2002-2005) (Project includes two Hydrologists Matthew McCartney from IWMI; and a plant scientist, Giovanni Munoz from FAO).
- [19] Dinar, A., T. Roe, Y. Tsur, R. Doukkali, R. Hassan, and E. Cakmak. *Macro-Micro Linkages of Irrigation Water Management*. (\$110,000), 2003.
- [20] Dinar, A., F. Patrone, C. Carraro. *Cooperative Arrangements for Allocation of Water among Production and Environmental Uses under Stochastic Supply Conditions*. World Bank Research Support Budget, Research Preparation Grant and the Italian TF (\$105,000), 2003-2004.
- [21] Dinar, A. and M. Asad. *Economic Assessment of Policy Interventions in the Water Sector of Mexico*. World Bank Mexico Department, Economic Sector Work (\$265,000) 2005-2006. (Project includes an Agronomist, Fernando Pizaro from FAO).
- [22] Dinar, A. and Rita Cestti. *Developing Tools and Methodologies to Support the Preparation of the a River Basin Management Plan in the Maritza River Basin, Bulgaria*. BNWPP TF (\$106,000), 2005-2006. (Project includes Ian Calder, a hydrologist from University of New Castle, UK).

- [23] Dinar A. *Cooperative Arrangements to Water Quantity and Quality in the West Delta Region of Egypt*. (\$25,000), 2006. Pilot Project to test the concept. (Project includes Safwat Abdel-Dayem, a Drainage Engineer from Egypt; Fioravante Ptrone, Game theorist from University of Genova, Italy).
- [24] Dinar, A., R. Maria Saleth and Susanne Neubert. *The Institutional Matrix of the Millennium Development Goals: An Empirical Study of Food Security Goals in Kalaoya Basin, Sri Lanka*. World Bank Research Committee (\$30,000), 2006. (Project includes Susanne Neubert, a sociologist from the German Development Institute)
- [25] Dinar, A. T. Roe, Y. Tsur, R. Hassan, and E. Cakmak. *Macro-Micro Feedback Links of Irrigation Water Management: phase 2 applied in South Africa and Turkey*. World Bank Research Committee (\$295,000) 2006-2008.
- [26] Dinar, A. Long Term Sustainability of Hydropower-based Energy Generation and Water Allocation Multilateral Agreements within Changing Climate Scenarios. World Bank, Knowledge for Change Program (KCP) (\$150,000) 2008-2009. (Project includes Aaron Wolf a Geographer from Oregon State University).
- [27] Dinar, A., P. Ambrosi and D. Larson, *Local Actions for Global Impact: Inference of the Role of the Flexible Mechanisms in Reducing GHGs*. World Bank, Knowledge for Change Program (KCP) (\$80,000) 2007-2008.