



RESUME of Prof Dr. Emad Al-Karablieh

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Emad K. Al-Karablieh: is Professor at the Dept. of Agricultural Economics and Agribusiness Management at the University of Jordan, Jordan. He was a former Director of Water and Environmental Research and Study Center (WERSC) at the University of Jordan and Head of Dept. of Agr. Econ.& Agribusiness Management. His academic interests include Natural Resource Economics, Project Appraisal, Financial Analysis, Water Economics, Environmental economics, Risk analysis and economics of Integrated Water Resource Management. His professional consultations cover financial analysis, investment appraisal environmental economics of natural resources, water and technology adoption. He published more than 45 articles appeared in peer reviewed international and regional journal such as *Agricultural Water Management*, *Water Resource Management*, *Water*, *Agricultural Systems*, *Journal of Arid Environment*, *Quarterly Journal of International Agriculture*, *Water Policy*. *Journal of Agricultural Sciences and Technology*.

He is a coauthor of the Arab Water Report-Towards Water Security in the Arab Region, Issues of cost effectiveness prepared for UNDP in 2011. Also he is a coauthor of the peer reviewed RTF book *Water Resources in Jordan (Evolving polices for development, the environment and conflict resolution)*, Edited by Munther J. Haddadin and published by Resources for The Future (RTF), Washington DC, and a contributor in the book *Liquid Asset An Economic Approach for Water Management and Conflict Resolution in the Middle East and Beyond* written by Franklin M. Fisher, the Professor of Microeconomics, Massachusetts Institute of Technology and published by Resources for The Future.

He has been recruited in many international funded research projects as a team leader or as researcher such as USAID-ISSP project, IFAD-dHRS project, GLOWA JR III, Meditate, GLOWA Jordan River II, SMART II and Harvard Middle East Water Project, UNDP-climate change project. He has worked with many international agencies such UNOEP, USAID, UNDP, World Bank, AFD, ICARDA, IFPRI, GTZ, IFAD and FAO. For five years, he served as team leader of the socio-economic component of ICARDA Badia Benchmark of water harvesting project.

He participate as a financial analyst in a conducting many water supply, and wastewater investment appraisal in Jordan and Yemen and other countries. In addition he participates, as a lecturer (trainer), in several training courses in finance organized by ESCWA, NENARACA, CARDNE, and NCARE, in Jordan, Syria, Lebanon, Tunis, Egypt, Libya and Morocco. The fields of training were environmental economics, water economics, agricultural finance, financial analysis, investment appraisal and agricultural policy. He has excellent computer programming skills, with primary expertise in mathematical programming and economic modeling, production theory and risk analysis.

RESUME of Prof Dr. Emad Al-Karablieh

Personal Information

Full Name: Emad Kamel Mohammad Al-Karablieh
Nationality: Jordanian
Languages: Arabic is a native language, Fluent in English & German
Date of Birth: Dec. 20. 1963
Place of Birth: Tarqumia
Martial Status: Married
Profession: Natural Resources Economist

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Education:

Ph.D. in Agribusiness Management, Department of Agricultural Economics. Faculty of Agriculture. Christian-Albrechts-University at Kiel. Germany. 1991 – 1995.
PNDS German Language Certificate, Goethe Institut, Mannheim, Germany. 1990 - 1991
M.Sc. in Agricultural Economics. Dept. of Agricultural Economics and Extension. Faculty of Agriculture. The University of Jordan, Jordan. 1987 - 1990
B.Sc. in Animal Production. Dept. of Animal Production. Faculty of Agriculture. The University of Jordan, Jordan. 1982 - 1986

Major and minor subjects in the Ph.D. Program

The Ph. D. dissertation is in the subject of Agricultural Business Management with the Title: "An Assessment of the Impact of Agricultural Technology on Output in the Rainfed Farming Areas in Jordan."

The major and minor subjects in the Ph.D program were:

Major Subject: Agribusiness Management
1. Minor Subject: Market Policy
2. Minor Subject: Quantitative Methods of Sector Analysis

Employment History

Feb 2012: Full Professor at Dept. Agricultural Economics & Agribusiness Faculty of Agriculture/ University of Jordan, Amman. Jordan

Job description: Full-time lecturer for the courses "Advanced Agribusiness Management, Agricultural Project Appraisal, Agricultural Accounting & Finance, supervisor of MSc. student

July 2010-Jan 2012: Associate Professor at Dept. Agricultural Economics & Agribusiness Faculty of Agriculture/ University of Jordan, Amman. Jordan

Job description: Full-time lecturer for the courses "Agribusiness Management, Agricultural Project Appraisal, Agricultural Accounting & Finance,

Oct 2009:- June 2010 the Director of Water and Environmental Research and Study Center at the University of Jordan

Job description: Coordinated water and environmental research at national, regional and international levels by getting the center efforts focused on water problems through research, education, training, community services, outreach and international cooperation

Nov 2007:- Nov 2009 Head of Department of Agricultural Economics & Agribusiness Department, Faculty of Agriculture/ University of Jordan, Amman. Jordan

Job description: Full-time Department Head & lecturer for the courses “Agribusiness Management, Agricultural Project Appraisal, Agricultural Accounting & Finance

Oct. 2005–to Nov 2007: Associate Professor at Dept. Agricultural economics & Agribusiness Faculty of Agriculture/ University of Jordan, Amman. Jordan

Job description: Full-time lecturer for the courses “Agribusiness Management, Agricultural Project Appraisal, Agricultural Accounting & Finance

Sept. 2000–to Sept. 2005: Assistant Professor at Dept. Agricultural economics & Agribusiness Faculty of Agriculture/ University of Jordan, Amman. Jordan

Job description: Full-time lecturer for the courses : Agribusiness Management, Advanced Production Economics, Agricultural Project Appraisal, Practical Training in Agricultural Economics”

Sept. 1997–Sept. 2000: Assistant Professor at Faculty of Agriculture/ Jerash Private University, Jerash. Jordan

Job description: Full-time lecturer for the courses “Agricultural Price Analysis, Production Economics, Agricultural System Analysis, Agricultural Project Appraisal, Mathematical Economics, Agricultural Finance and Practical Training in Agricultural Economics”

Jan.1996 - June 1997: National Professional Officer for Socio-Economics, West Asia Regional Program at the International Center for Agricultural Research in the Dry Areas (ICARDA). Amman Regional Office.

Job Description: National Professional Officer is mainly responsible to follow up the socio-economic research activities (including, sheep fertility, PMSG technology, injection of vitamin AD₃E, feed block, and early weaning technology) in the Mashreq countries and for establishment a Socio-Economics Network for West Asia countries. Also, assist ICARDA scientists and NARS specialists to implement, analyze and to produce reports and publications on the adoption and impact of barley and livestock technologies that are used in the Project.

Sept. 1995 - Jan. 1996: Part-time Lecturer at Faculty of Agriculture/ University of Science and Technology, Irbid. Jordan

Job description: Part-time Lecturer for the courses: “Farm Management, Rural Development and Agricultural Economics”.

Courses Taught

Agricultural Projects Appraisal	Agricultural Finance
Advanced Agricultural Finance	Agribusiness Management I
Agribusiness Management II	Farm Management
Production Economics	Advanced Production Economics
Practical Training in Agricultural Economics	Environmental Economics
Water Economics	

Participation in International Projects

1. **UNDP, Arab Water Report 2012- Towards Water Security in the Arab Region: Issues of Good Governance and Cost Effectiveness. UNDP-Dubi in 2011-2012. Water Governance Program for Arab States.** Co-authors with top Arab water specialists. This report outlines the importance of adopting good and effective water governance as an inevitable prerequisite for achieving water security and sustainable human development in the Arab region. Introducing concepts and approaches of effective water governance, an analysis of the water situation in Arab countries is provided from a holistic perspective that takes into account the economic, social and institutional frameworks as well as decision-making process
2. **USAID, Disaggregate Economic Value of Water in Irrigated Agriculture in Jordan from Perspective of Value Chain Analysis.**(June 2011-October 2012). Institutional Support and Strengthening Program (ISSP). Eco-Consult- Jordan. The main objective is to determine the value of water across the various sectors of Jordanian society and economy. It is expected that the results of the study will help to inform decision makers in governmental bodies and the private sector about their decisions regarding the use and allocation of this scarce and valuable resource
3. **EU (Pre-identification mission: support to agricultural development in Jordan).** Dec 2011-April 2012. Contract N° 2011/278635 – version 1. FRAMEWORK CONTRACT BENEFICIARIES 2009. EuropeAid/127054/C/SER/multi - LOT N°1 : Rural development & food security.
4. **AFD, JORDAN WATER DEMAND MANAGEMENT STUDY:**(June 2010-June 2011). Water demand management in Mediterranean countries: Thinking outside the water box!. Jordan case study. The French Development Agency (AFD). The main objective of the study is to bring economic analysis into Jordan water policy and help prioritizing actions according to their cost-effectiveness.
5. **IFAD- dRHS:** (2010-2012).The dRHS system is a Dupont proprietary subsurface irrigation technology that is driven by actual plant demand to actively provide the required amount of water. The water is delivered as a water vapor. Participation as core investigator for the preliminary economic feasibility for the future potential of producing and implementing the dRHS irrigation technology in Jordan.
6. **UNDP-Climate Change Project (2010-2011).** Macro-level Assessment of potential direct and indirect impacts of climate change on socio-economic factors for “Assessment of Direct and Indirect Impacts of Climate Change scenarios on water availability and quality in the Zarqa River Basin”. In cooperation between Queen Rania Al-Abdullah Center for Environmental Sciences & Technology (QRACEST) Jordan University of Science and Technology (JUST) & Water and Environment Research and Study Center (WERSC).University of Jordan.
7. **SMART Project Phase II (2010-2012):** SMART II Integrated Water Resources Management in the Lower Jordan Rift Valley: SMART II) Sustainable Management of Available Water Resources with Innovative Technologies with Karlsruhe Institute of Technology (KIT). Work package number 7 (Socio-Economic Analysis) Activity type: Research, Development and Implementation. Objectives of Socio-Economic Analysis. Quantify costs and benefits of SMART-IWRM technology lines, Rank technologies for the mobilization of additional water at local level in terms of cost-effectiveness, Evaluate alternative IWRM strategies by applying the cost-benefit analysis at watershed level, Assess the financial feasibility of alternative IWRM strategies, Integrate key technologies in quantitative economic models.
8. **GLOWA III: GLOWA: Jordan River Project Phase III (2009-2011).** Member of Steering Committee of GLOWA Jordan River Project Phase III for the period (2009-2011). Coordinator of the of GLOWA Jordan River Project Phase II and Phase III for Jordan for the following subprojects:

- Project 1: Integration and communication of strategies (Project 1.1: Scenario analysis of strategies, Project 1.2: WEAP analysis, and Project 1.3: Communication of results).
 - Project 2: New water: This project deals with the basic question, “What is the potential for new (blue) sources of water to address current and future needs of people and ecosystems in the region.
 - Project 3: Green water management: Water and land interactions in agricultural and natural systems, this project includes the following subprojects: Project 3.1: Climate and land use change effects on natural and semi-natural ecosystems and their feedback on the hydrological system, Project 3.2: Assessing the socio-economic benefits of ecological system services and their integration into models of optimal land-use under climate change, Project 3.3: Integrated modeling of land-use change and environmental impacts
9. **GLOWA II (2006-2008):** GLOWA Jordan River An integrated approach to sustainable management of water resources under global change. Implemented by Eberhard-Karls-University of Tübingen.
 - Member of Steering Committee of GLOWA Jordan River Project Phase II and for the period (2006-2008).
 - The Story and Simulation (SAS) approach, which combines expert and stakeholder knowledge with the scientific methods from the other projects in GLOWA JR, to derive comprehensive and coherent scenarios on global change impacts and possible adaptation strategies; and
 - The Water Evaluation and Planning tool (WEAP) with a GIS, for simulation and visualization of water availability, demand and quality for a range of global change scenarios and the consequences of various adaptation measures for the water system.
 - Sub-Project 8: Water quality issues, lower Jordan River
 10. **MEDITATE project** (2002-2006): Participation as core investigator for Cost-effectiveness analysis of **M**editerranean **D**evelopment of **I**nnovative **T**echnologies for integr**A**ted wa**T**Er management. BRGM. Water division, RMD Unit, Montpellier. Project co-funded by the European Commission within the Sixth Framework Programme (2002-2006) The MEDITATE project is about integrated water management for limited water resources in Mediterranean countries, considering specifically the use of alternative water resources such as submarine springs, desalination and/or water reuse including development of a decision support system that will allow to integrate different types of knowledge (from physical to socio-economic fields), inclusive all social actors, in a decision making processes
 11. **Harvard Middle East Water Project** (1998-2001): Participate in. Analyzing agricultural demand for water with an optimizing model. Lead development of decision support models of the water economies of Jordan. Participate in the development of the Agricultural Sub-model (AGSM), SAWAS which allocate Water in an optimal way using different water qualities for different seasons.
 12. **Badia Benchmark Project** (2000-2006): Team Leader of Socioeconomic components of Community-Based Optimization of the Management of Scare Water Resources in Agriculture in West Asia and North Africa implemented by International Center for Agricultural Research in the Dry Areas ICARDA. National Center for Agricultural Research And Technology Transfer NCARTT.
 13. **Mashreq-Maghreb Project II**, (1998-2001): Socioeconomic Team Leader. Community Approach to the Development of Integrated Crop/Livestock Production in the Low Rainfall Area. Implemented by the National Programs of Algeria, Iraq, Jordan, Lebanon, Libya, Morocco, Syria, and Tunisia. Coordination and Technical Support by

International Center for Agricultural Research in the Dry Areas (ICARDA) International Food Policy Research Institute (IFPRI)

14. **Mashreq-Maghreb Project I** (1995-1998): National socioeconomic officer: The Mashreq/Maghreb project (1995-1998) with the title “The Development of Integrated Crop/Livestock Production in low Rainfall Areas of the Mashreq and Maghreb regions.

Publications in International Journals

1. Taleb M. Abu-Sharar, **Emad K. Al-Karablieh** and Munther J. (2012). Role of Virtual Water in Optimizing Water Resources Management in Jordan. *Water Resources Management: Volume 26, Issue 14* (2012), Page 3977-3993
2. Wolff H. P., L. Wolf, A. Subah, J. Guttman, A. Tamimi, A. Jarrar, A. Salman and **E. K. Karablieh** (2012). Methodological challenges in evaluating performance, impact and ranking of IWRM strategies in the Jordan Valley. *Water Science and Technology*. Volume 66, Number 2, pp. 1406-1415.
3. **Al-Karablieh Emad**; Amer Salman, Abbas Al-Omari, Heniz-Peter Wolff, Tamer Al-Assa'd, Doukhi Hunaiti, Ali Subah (2012). Estimation of the Economic Value of Irrigation Water in Jordan. *Journal of Agricultural Science and Technology*. Volume 5, B2. pp. 487-497
4. Heinz Peter Wolff, **Emad Al-Karablieh**, Tamer Al-Assa'd, Ali Subah, Amer Z. Salman (2012). Jordan Water Demand Management Study. *Water Science and Technology: Water Supply*. Volume 12, No. (1) pp 38-44
5. Majdalawi, Mohammad, El-Habbab, M-S., **Emad, K. Al-Karablieh** and A. Al-Assaf (2012). Economic and Socioeconomics Impact of Biofuel Production in the Arab Region. *African Journal of Agricultural Research* Vol. 7(12), pp.2114- 2123,
6. Karsten Schacht , Sven Gönster, Elisabeth Jüschke, Yona Chen, Jorge Tarchitzky, Jawad Al-Bakri, **Emad Al-Karablieh** and Bernd Marschner (2011). Evaluation of Soil Sensitivity towards the Irrigation with Treated Wastewater in the Jordan River Region. *Water* , Volume 3, No (4), pp, 1092-1111. (www.mdpi.com/journal/water)
7. **E. K. Al-Karablieh**, A.S. Jabarin and M. A. Tabieh (2011). Jordanian Horticultural Export Competitiveness from Water Perspective *Journal of Agricultural Science and Technology*. Volume1, No 7B, pp. 964-974.
8. Jabarin, A. S. and **E. K. Al-Karablieh** (2011). Estimating the Fresh Vegetables Demand System in Jordan: A Linear Approximate Almost Ideal Demand System. *Journal of Agricultural Science and Technology*. Volume 5, No.3, pp. 322-331
9. **Al-Karablieh Emad** K. and Amer S. Jabarin (2010). Alternative Rangeland Management Options to Reduce Livestock Feeding Costs in Arid and Semi-Arid Areas in Jordan *Quarterly Journal of International Agriculture*. Vol. 49 (2), 91-110
10. Amer Salman, **Emad Al-Karablieh** , Hans-Jochen Regner, Heinz-Peter Wolff, and Munther Haddadin (2008) Participatory Irrigation Water Management in the Jordan Valley. *Water Policy*. Vol. 10. No 4, pp 305-322.
11. Amer Salman , **Emad AL-Karablieh** and Munther Haddadin (2008) Limits of Pricing Policy in Curtailing Household Water Consumption. *Water Policy*. Vol. 10. No 3, pp 295–304.
12. Amani Al-Assaf, Amer Z. Salman , Franklin M. Fisher, **Emad Al-Karablieh** (2007) A Trade-off Analysis for the Use of Different Water Sources for Irrigation (The Case of Southern Shounah in the Jordan Valley). *Water International*. Volume 32, Number 2, pages 244-253.
13. Ahmad Sh. Al-Rimawi, **Emad K. Karablieh**, Abdulfatah S. Al-Qadi and Hussein F. Al-Qudah, (2006). Farmers’ Attitudes and Skills of Farm Business Management in Jordan. *Journal of Agricultural Education and Extension*. Vol. 12, No. 3, 165-177, September 2006.

14. Ahmad Sh. Al-Rimawi, ***Emad K. Karablieh*** and Abdulfatah S. Al-Qadi (2004). An investigation into the perceived farm management and marketing educational needs of farm operators in Jordan. *Journal of Agricultural Education*. Volume 45. Number (3). pages 34-43.
15. Amer Z. Salman and ***Emad Al-Karablieh*** (2004). Measuring the willingness of farmers to pay for groundwater in the highland areas of Jordan. *Agricultural Water Management*. Volume 68, Issue 1, pages 61-76.
16. R. E. Nasr, S. G. Haddad and ***Emad K. Al-Karablieh*** (2002). "Economic Assessment of Hormonal and Nutritional Treatments for Improvement of Awassi Sheep Production in Jordan". *The Asian-Australasian Journal of Animal Sciences*. Volume 15 (8), 1110-1114.
17. Al-Rimawi A. and ***Emad Karablieh*** (2002). The Agricultural Private Firms' Willingness to Cooperate With Public Research and Extension in Jordan. *The Journal of International Agricultural and Education Extension*. Volume 9 (3), pp. 5-13.
18. Werner Doppler, Amer Z. Salman, ***Emad K. Al-Karablieh*** and Heinz-Peter Wolff (2002). The impact of water price strategies on irrigation water allocation under risk: the case of Jordan Valley. *Agricultural Water Management*. Volume 55 (3), pp. 171-182.
19. Amer Z. Salman, ***Emad K. Al-Karablieh*** (2001). An early warning system for wheat production in low rainfall areas of Jordan. *Journal of Arid Environment*. Volume 49 (3), pp 631-642.
20. ***Emad K. Al-Karablieh*** , Amer Z. Salman, and Franklin M. Fisher (2002) "Forecasting Wheat Production: the case of the Irbid Region in Jordan". *Quarterly Journal of International Agriculture*. Volume 41 (3), pp. 191-206.
21. Al-Rimawi A. and ***Emad Karablieh*** (Fall 2001) "The Role of the Commercial Sector in Agricultural Extension in Jordan". *Journal of International Agricultural and Education Extension*. Volume 8 (3), pp. 13-20.
22. Amer Z. Salman, ***Emad K. Al-Karablieh***, Franklin M. Fisher (2001) "An Inter-Seasonal Agricultural Water Allocation System (SAWAS)" *Agricultural Systems*. 68 (3), pp. 233-252

Publications in International Conferences

1. Wolff, H-P., A. Subah, J. Guttman, A. Tamimi, J. Bensabat, , A. Jarrar, A. Salman, and ***E. Karablieh*** .(2011). Performance, impact and ranking of IWRM strategies in the Jordan Valley. International Conference on Integrated Water Resources Management. Management of Water in a Changing World: Lessons Learnt and Innovative Perspectives. 12-13 October 2011, Dresden, Germany. Helmholtz Centre for Environmental Research-UFZ
2. Al-Omar, A., A. Salman , and ***E. Al-Karablieh*** (2011) The Red Dead Canal Project: An Adaptation to Climate Change in Jordan. 1st Water and Environment International Conference, WATEIC-2011, October 26 - 29, 2011, Marrakech- Morocco
3. ***Emad K. Al-Karablieh***, Amer Z. Salman, Abbas Al-Omari, Heniz-Peter Wolff, Tamer Al-Assa'd, Ali Subah (2011). Estimation of the Economic Value of Irrigation Water in Jordan. 1st Water and Environment International Conference, 26-29 October, 2011, Marrakech, Morocco,
4. Tamer A. Al-Assa'd, ***Emad K. Al-Karablieh***, Amer Z. Salman, Heniz-Peter Wolff (2011) Recognizing the Economic Value of Domestic Water in Jordan as a Way for Appropriate Setting of Water Pricing, 1st Water and Environment International Conference, 26-29 October, 2011, Marrakech, Morocco

5. Amer Salman, **Emad Al-Karablieh** , Abbas Al-Omar, Iyad Hussein & Tamer Al-Assad (2011). Water Allocation Model (WAM). 1st Water and Environment International Conference, 26-29 October, 2011, Marrakech, Morocco.
6. Amer Salman and **Emad Al-Karablieh** (2010). The Economics of Using Different Qualities of Irrigation Water in the Down Stream of Amman-Zarqa Basin. 15th Annual Jordanian Science Week, 2010. (10-12 May, 2010), Jordan
7. Arwa Hamaideh, **Emad K. Al-Karablieh**, Amer Salman and Faten O. Al-Najjar (2011). Consumer's Participatory Approach in Municipal Water Demand Management for Greater Amman. The sixth IWA Specialist Conference on Efficient Use and Management of Water. Dead Sea, Jordan. 29 March- 2 April 2011. IWA, USAID, Ministry of Water & Irrigation, Jordan
8. Wolff, H.-P., **Al-Karablieh E.**, Al-Assa'd T., Subah A (2011). Jordan Water Demand Management Study. The sixth IWA Specialist Conference on Efficient Use and Management of Water Dead Sea, Jordan. 29 March- 2 April 2011. IWA, USAID, Ministry of Water & Irrigation, Jordan.
9. Marc Haering, **Emad Al-Karablieh** and Amer Salman (2011). Unmet irrigation water demands due to climate change in the lower Jordan river basin. In Solh, M. and Saxena, M.C. (eds) 2011. Food security and climate change in dry areas: proceedings of an International Conference, 1-4 February 2010, Amman, Jordan. PO Box 5466, Aleppo, Syria: International Center for Agricultural Research in the Dry Areas (ICARDA). viii + 369 pp.
10. Marc Haering, **Emad Al-Karablieh** and Amer Salman (2009). Predicting Unmet Irrigation Demands due to Climate Change –An integrated Approach in WEAP. Jordan G-Wadi International Workshop. “Climate Change Impact on Water Resources: Risk, Assessment and Management in Arid and Semi- Arid Regions 25th of November, 2009. Amman, Jordan.
11. Amer Salman, **Emad Al-Karablieh**, and Munjed Al-Sharif, (2009). An Assessment of the Potential Consequences of Water Supply Variability on the Socioeconomics of the Northern Jordan Valley. Jordan G-Wadi International Workshop. “Climate Change Impact on Water Resources: Risk, Assessment and Management in Arid and Semi- Arid Regions”. 25th of November, 2009. Amman, Jordan
12. Amer Jabarin and **Emad Al-Karablieh**. (2009). The Water Perspective in the Export Competitiveness “An Analysis of the Jordanian Agricultural Products”. 14th Jordan Science Week. Accepted for Publication
13. Stéphanie Aulong, Madjid Bouzit Nathalie Dorfliger, Fadi Comair, **Emad Al-Karablieh** and Amer Salman (2008). Integrating water balance and cost-effectiveness analysis for water management: An application in Jordan and Lebanon. 13th IWRA World Water Congress, 1–4 September 2008, Montpellier, France
14. Wolff, H.-P. Wolff, W. Doppler, M. Shechter, A.Fleischer, A.Salman, **Al-Karablieh E.**, T. Hijawi , I. Kan, (2007). Socio-Economic Impacts of Water Allocation under Climate Change. GLOWA Jordan River. Dead Sea, Jordan. November 26th - 28th, 2007.
15. Wolff, H-P. Wolff, H-P, M. Shechter, T. Hijawi, A. Salman, A. Fleischer, **E. Al-Karablieh**, I. Kan (2008). Change in Natural Resources vs. Socio-economic Development-Identification of Bottlenecks for Exploiting Future Agricultural Potentials in the Jordan Valley. Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag, October 7-9, 2008, Hohenheim. Germany
16. Wolff, H.-P. Wolff, M.Shechter, A. Fleischer, A. Salman, **Emad Al-Karablieh**, T. Hijawi, I. Kan, N. Becker (2007). Socio-economic consequences of changes in frame conditions for the agricultural sector.
17. Ph. Ker Rault; M. Bouzit; P. Jeffrey; A. Salman ; **Emad Al-Karablieh**; .O. Attila ; S. Yüzereroğlu (2006), Application of a participatory foresight methodology at river basin scale in Jordan and Turkey. International Conference: Integrated Water Resource Management and Challenges of the Sustainable Development. Marrakech 23-25 May 2006.

18. Amer Salman; ***Emad Al-Karablieh*** (2006), Socioeconomic factors influencing the households water demand function in Jordan. International Conference: Integrated Water Resource Management and Challenges of the Sustainable Development. Marrakech 23-25 May 2006.
19. ***Emad Al-Karablieh*** and Amer Salman (2006). Measuring the Profitability of Different Irrigation Water Qualities in the Down Stream of Amman Zarqa Basin in Jordan. An International Congress on: Integrated Water Resources Management and Challenges of the Sustainable Development. Marrakech, May 23-24-25, 2006
20. ***Emad Al-Karablieh***, Amer Salman, and Abbas Al-Omari, Mohammad E. Osman. (2006). Water Allocation Model in Ghor Al-Safi in Jordan. The 3rd International Conference on the "Water Resources in the Mediterranean Basin" WATMED 3. Tripoli-Lebanon, 1-3 November 2006.
21. ***Emad Al-Karablieh***, Amer Salman, and Abbas Al-Omari (2006). The Residential Water Demand Function in Amman-Zarka Basin in Jordan. The 3rd International Conference on the "Water Resources in the Mediterranean Basin" WATMED 3. Tripoli-Lebanon, 1-3 November 2006.
22. Al-Omari, A, Courtois, N., Lanini, S., Al-Fares, W., Al-Charideh, A., Salman, A., ***Al-Karablieh Emad***, Ekmekci, M., and Levant, T (2006) Development of Water Management Support Systems for Mediterranean Countries. The 3rd International Conference on the "Water Resources in the Mediterranean Basin" WATMED 3. Tripoli-Lebanon, 1-3 November 2006.
23. Regner, H.J.; Salman, A.Z.; Wolff, H.P. ***Karablieh, Emad***. (2006): Approaches and Impacts of Participatory Irrigation Management (PIM) in Complex Centralized Irrigation Systems - Experiences and Results from the Jordan Valley. In: Asch, F.; Becker, M. (ed.) Tropentag 2006: Prosperity & Poverty in a globalized world: Challenges for Agricultural Research, University of Bonn, Oct. 11-13, 2006, Book of Abstracts. p.511, online-version of full paper (status Oct. 16, 2006): <http://www.tropentag.de/abstracts/full/213.pdf>.
24. ***Emad Al-Karablieh***, Amer Salman, Abbas Al-Omari, (2007). Water Allocation Model in ghor Al-Safi in Jordan. The Sixth Jordanian Agricultural Scientific Conference 9-12 April 2007. Amman, Jordan.

Publications in Regional or Local Journals

1. Faten O. Al-Najjar, ***Emad K. Al-Karablieh*** and Amer Salman (2011). Residential Water Demand Elasticity in Greater Amman Area. Jordan Journal of Agricultural Sciences. Volume 7. No. (1), pp. 93-103
2. ***Al-Karablieh, Emad*** (2010). Effects of Socioeconomics Factor on Rangeland Institutional Options on the semi-arid Regions in Jordan. Jordan Journal of Agricultural Sciences. Jordan Journal of Agricultural Sciences Volume (6) No. 3, pp 387-409. Deanship of Academic Reserach, The University of Jordan.
3. Faten O. Al-Najjar, ***Emad K. Al-Karablieh*** and Amer Salman (2011). Residential Water Demand Elasticity in Greater Amman Area. . Jordan Journal of Agricultural Sciences. Volume 7. No. (1), pp. 93-103.
4. ***Al-Karablieh, Emad***, Ahmad Sh. Al-Rimawi and Doukhi A, Hunaiti (2009). Logit Models for Identifying the Factors that Influence the Adoption of Barley Production Technologies in Low Rainfall Areas. Jordan Journal of Agricultural Sciences. Volume 5, No. (3): 251-265
5. Hunaiti, Doukhi A. ***Emad Al-Karablieh***, Emad (2007), Study of the Relationship Between Unemployment and Poverty rate in Remote Communities. Survey Study in Southern Jordan Region, *Alexandria Journal of Agricultural Research*, Volume 51, No (2), pages 2-17.
6. Hunaiti, Doukhi A., Amer Salman, ***Emad Al-Karablieh*** (2007), The Effect of Poverty on Healthy Conditions and House Modernity Level in Jordanian Rural (Survey Study for

- Southern Jordan Rural). *Alexandria Journal of Agricultural Research*, Volume 51, No (1), pages 31-46.
7. ***Al-Karablieh, Emad*** and Amer Z. Salman (2004). Measures of Variation in Net Returns and their Impact on Regional Cropping Plans and Temporal Water Allocation. *Dirasat-Agricultural Sciences*. Volume 31, No. (2). Pages. 195-212.
 8. ***Emad Al-Karablieh*** (2004). An Analysis of Total Factor Productivity in Jordanian Agriculture (1983-1997). *Dirasat, Agricultural Sciences*, Volume 31, No. 1, 2004. pp 99-113
 9. ***Emad Al-Karablieh*** and I. K. Nazer (2003) "A Pilot Study on Manufacturing, Handling and Using of Pesticides in Jordan." *Dirasat-Agricultural Science*. Volume 30 (1) pp. 47-55
 10. Qtaishat, T. H., Al-Rimawi A. and ***Emad Karablieh*** (2002) "Consumer Awareness of Food Safety and Willingness to Pay for Integrated Pest Management Products in Jordan". *Dirasat-Agricultural Science*. Volume 29 (3) pp. 315-322.
 11. ***Emad Al-Karablieh*** and Mutasem Abdelrahman (May, 2002). "The Effect of Partial Early Weaning of Lambs on Milk Production, Growth Rate and Net Revenue". *Dirasat-Agricultural Sciences*. Volume 29 (2) pp. 145-152.
 12. Mutasem Abdelrahman and ***Emad Al-Karablieh*** (2002). "Effect of Vitamins AD3E Injection on Reproductive Performance and Net Cash Revenue of Awassi Sheep Raised under Semi-intensive System". *Journal of King Saud Univ.*, Volume 14, Agric. Sci. (1), pp.15-22.
 13. ***Emad Al-Karablieh*** and Mutasem Abdelrahman (2000) "Evaluation of Hormonal Treatment of PMSG on Reproductive Performance and Profitability of Awassi Sheep Reared under Semi-Intensive Production System in Jordan". *Oman Journal of Agricultural Sciences*, 5(2): 53-57.
 14. Salman, A. Z., M. A. El- Karaki and ***E. K. Al-Karablieh*** (2000) "Economics of Inputs Used in Olive Production in Al Badia Area of Jordan" *Dirasat-Agricultural Sciences*. Vol. (27). No. (3). p. 327-333.
 15. ***Al-Karablieh Emad*** and A. Z. Salman (1999) "Forecasting Models for Barley Production in Jordan". *Emirates Journal of Agricultural Science*". Vol. 11. p. 59-81.
 16. ***Al-Karablieh Emad*** and M. Salem (1999). "Measuring the Bias of New Production Technologies of Barley in Jordan". *Dirasat, Agricultural Sciences*, Volume 26, No. (1). p. 106-113.
 17. ***Al-Karablieh Emad*** and M. Salem (1996). "Sequential Adoption of divisible Technologies in Barley Production in Jordan". *Dirasat, Agricultural Sciences*, Volume 23, No. 1. p. 55-67.

Manuscripts Submit for Publication

1. ***Emad K. Al-Karablieh***, ;Amer Z. Salman, Abbas S. Al-Omari, (2012). The Residential Water Demand Function in Amman-Zarka Basin in Jordan. . Submitted to *Water Resource Managements*. Manuscript No. WARM2035
2. Al-Omari, ***E. Karablieh***, A. Salman,Z. Al-Houri (2012). Irrigation Water Management in the Jordan Valley under Climate Change Conditions.
3. Al-Omari, A. Salman, and ***E. Karablieh*** (2012). The Red Dead Canal Project: An Adaptation Option to Climate Change in Jordan
4. Nele Lienhoop, Jaime Cardona, Amer Salman, ***Emad Karablieh*** (2012). Cost Benefit Analysis of decentralised wastewater treatment and re-use in Jordan: An application in Maghareeb and Ma'addi.

Chapters in Books

1. **Chapter 5**: Ra'ed Daoud, Helena Naber,Mai Abu Tarbush,Razan Quossous, Amer Salman, and ***Emad Karablieh*** (2006) . *Environmental Issues of Water Resources in Water Resources in Jordan (Evolving polices for development, the environment and*

- conflict resolution), Editor: Munther J. Haddadin, Resources for The Future, Washington DC
2. **Chapter 6:** Amer Salman, *Emad Karablieh*, Heinz-Peter Wolff, and Franklin M. Fisher (2006) . The Economics of Water in Jordan in Water Resources in Jordan (Evolving polices for development, the environment and conflict resolution), Editor: Munther J. Haddadin, Resources for The Future, Washington DC
 3. **Chapter 7 :** Munther J. Haddadin, Amer Salman and *Emad Karablieh* (2006) . The Role of Trade in Alleviating Water Shortage, in Water Resources in Jordan (Evolving polices for development, the environment and conflict resolution), Editor: Munther J. Haddadin, Resources for The Future, Washington DC
 4. Fisher, Franklin M. Huber-Lee, Annette Amir, Ilan Arlosoroff, Shaul Eckstein, Zvi Haddadin, Munther J. Hamati, Salem Ghazi Jarrar, Ammar M. Jayyousi, Anan . Shamir, Uri Wesseling, Hans Salman, Amer Z. (Contributor) *Al-Karablieh, Emad (Contributor)* (2005). **Liquid Assets: An Economic Approach for Water Management And Conflict Resolution In The Middle East And Beyond.** Publisher Johns Hopkins University Press.
 5. F. Ziadat, T. Oweis, S. Mazahreh, A. Bruggeman, N. Haddad, *E. Karablieh*, Bogachan Benli, M. Abu Zanat, J. Al-Bakri, A. Ali and K. Alzubaidi (2011). Chapter 1: Selection and Characterization of the Badia Benchmark research site. In Karrou, M., Oweis, T. and Ziadat (ed.), F. 2011.Rehabilitation and integrated management of dry rangelands environments with water harvesting. Community-based optimization of the management of scarce water resources in agriculture in Central and West Asia and North Africa Report no. 9. ICARDA, Alepo, Syria viii + 208 pp. ISBN: 92-9127-258-2

New Finished Research Project

Water Valuation in Jordan (December, 2010). Water demand management in Mediterranean countries: Thinking outside the water box! Jordan case study. Jordan Water Demand Management Study. Prepared for French Agency of Development (AFD)

Marco- level Assessment of potential direct and indirect impacts of climate change on socio-economic factors. For Assessment of Direct and Indirect Impacts of Climate Change scenarios on water availability and quality in the Zarqa River Basin. Submitted to: UNDP-Jordan

Assessing the Socioeconomic Benefits of Ecological System Services. GLOWA Jordan River. An integrated approach to sustainable management of water resources under global change

Pre-Ph.D. Publications

1. *Al-Karablieh, Emad* (1995). "An Assessment of the Impact of Agricultural Technology on Output in the Rainfed Farming Areas in Jordan." Arbeiten zur Agrarwirtschaft in Entwicklungslaender. Wissenschaftsverlag Vauk Kiel. Germany.
2. *Al-Karablieh, Emad* and M. Salem (1990). "The Impact of Technology on Employment in the Rainfed Farming Areas of Irbid District, Jordan." in : D. Tully (Editor) "*Labor, Employment and Agricultural Development in West Asia and North Africa.*" Kluwer Academic Publishers. Dordrecht, Holland. p. 7-30.

Reports in Workshops and Symposiums Proceedings

Wolff, H.-P.; Salman, A.Z., Doppler, W.; Nabulsi, A.; *Al-Karablieh, E.K.* (2004). "Socio-Economic Consequences from Replacing Freshwater By Treated Wastewater in Rural

- Areas - An Example from the Jordan Valley". In: The 14th Stockholm Water Symposium, August 16-20, 2004 "Drainage Basin Management -Regional Approaches for Food and Urban Security", Abstract Volume, pp.129-130
- Roussan , L.; F. Awawdeh; ***Emad Al-Karablieh***; S. Akroush; K. Abusoui and N. Al-Jouhari (2001) "Community and Household-Level Impacts of Institutional Options for Managing and Improving Rangeland in the Low Rainfall Areas of Jordan". Paper presented at the International conference on Policy and Institutional Options for the Management of Rangeland in Dry Areas". in Hammamet, Tunisia for the period 6-11 May 2001.
- Emad Al-Karablieh*** (April, 2001) "Community-level Impacts of Policy, Property Right and Technology in the Low Rainfall Areas of Jordan". The Fourth Agricultural Conference: April 24-26, 2001. Jerash, Jordan.
- Nabil Chaherli & ***Emad Al-Karablieh*** (2001) "Micro-Level impacts of price policy reforms on income, equity and environmental sustainability in the low rainfall areas of West Asia and North Africa". Second Conference of FEMISE. EURO-MEDITERRANEAN FORUM OF ECONOMIC INSTITUTES, *Marseilles, 29 & 30 Mars 2001*
http://www.femise.org/conf_mrs_0301.html
- AL-Karablieh, Emad*** (2001). "Allocation of different water qualities- the case study of Jordan Valley", Atef Hamdy (edit) " Advanced short course on Water Saving and Increasing Water Productivity: Challenges and Options" Faculty of Agriculture University of Jordan. Amman- Jordan, March 10-23, 2001. pp. b19.1-b.19.13
- AL-Karablieh, Emad*** (January, 2001). "Community model to evaluate the impact of agricultural policy, technology and property rights in the low rainfall areas of Jordan" presented in the Workshop on "Technical, Policy and Institutional Options for the Development of Communities in the Dry Areas" Marrakech, Morocco. January 23-25, 2001.
- AL-Karablieh, Emad*** (1999). "Investigating the Manufacturing, Handling and Using Aspects of Pesticides in Jordan". The Third Agricultural Scientific Conference: The Scientific Research in Service of Agricultural Development. April 27-29, 1999.
- AL-Karablieh, Emad*** and M. Salem (1997). "Technological Change Bias of New Production Technologies of Barley in Jordan". Edited by Haddad, N., Tutwiler, R. and Euan Thomson (1997). Proceedings of the "*Regional Symposium on Integrated Crop-Livestock Systems in the Dry Areas of West Asia and North Africa*". 6-8 November, 1995, Amman, Jordan.
- AL-Karablieh, Emad*** and M. Salem (1997). "Sequential Adoption of divisible Technologies in Barley Production in Jordan". Edited by Haddad, N., Tutwiler, R. and Euan Thomson (1997). Proceedings of the "*Regional Symposium on Integrated Crop-Livestock Systems in the Dry Areas of West Asia and North Africa*". 6-8 November, 1995, Amman, Jordan.
- Harb, M. and ***Emad Al-Karablieh*** (1991). " Poultry Production in Jordan-Actual, Developmental and Marketing Review. Seminar on *Agricultural Policy Analysis in Jordan*. Food and Agriculture Organization of the United Nations (FAO), Ministry of Agriculture. Amman. (in Arabic)
- Harb, M. and ***Emad Al-Karablieh*** (1991). " Red Meat and Milk Production in Jordan- Actual, Developmental and Marketing Review. Seminar on *Agricultural Policy Analysis in Jordan*. Food and Agriculture Organization of the United Nations (FAO), Ministry of Agriculture. Amman. (in Arabic)
- Harb, M. and ***Emad Al-Karablieh*** (1991). " Feeds in Jordan-Actual, Developmental and Marketing Review. Seminar on *Agricultural Policy Analysis in Jordan*. Food and Agriculture Organization of the United Nations (FAO), Ministry of Agriculture. Amman. (in Arabic)
- Kaliefeh, A. ; Arabiat, S.; Qdaeh, H. and ***Emad Al-Karablieh*** (1989). " The Feasibility Study of Bee Production in Jordan" The First Jordanian Conference of Plant Protection." Oct. 3-5. 1989. The University of Jordan, Amman. (in Arabic)
- Salem, M. and ***Emad Al-Karablieh*** (1988). "The Impact of Technology on Employment in the Rainfed Farming in Irbid." Symposium of Rainfed Field Crops and Farming System in Jordan and Neighboring Countries. Sept., 10-14. 1988. The University of Jordan, Amman.

Professional Reports

- Al-Karablieh, Emad** and Amer Salman (2002). Agricultural Sector Assessment of Jordan. Commissioned by Food and Agricultural organization of the United Nation (FOA), submitted to the Ministry of Agriculture, Amman, Jordan. TCP/JOR/066.
- Nasri Haddad, **Emad Al-Karablieh** and Elizabeth Baily (1997). "Development and Transfer of Improved Technologies for Integrated Crop-Livestock Production in Low-Rainfall Zones". International Center for Agricultural Research in the Dry Areas (ICARDA) . Aleppo, Syria.
- Al-Karablieh, Emad** (1997). "Farmers' Selection of Barley Germplasm " Mashreq-Maghreb Project. Annual Report of Farm Resource Management Program, ICARDA.
- Al-Karablieh, Emad** and N. Haddad (1996). " Socio-Economics Network for West Asia Countries *An integrated problem-Solving Approach for the Development and Transfer of Agricultural Technologies to West Asia countries*". ICARDA.
- Al-Karablieh, Emad** (1989). " The Impact of Technology Application on Employment in the Rainfed Farming in Irbid Governorate." M. Sc. Thesis. Faculty of Agriculture. The University of Jordan. Amman.

Professional Consultations

A. Environmental Economics

1. Mainstreaming marine biodiversity conservation into coastal management in the Aqaba Special Economic Zone, Socioeconomic Report (2009).. Via Nova Consultancy. UNEP
2. The impact of growth of fixed assets and adoption of technology on the agricultural output and the environmental consequences in Jordan. (2002) Commissioned by Food and Agricultural organization of the United Nation (FOA), submitted to the Department of Statistics, Amman, Jordan. TCP/JOR/065.
3. Monitoring, assessing and quantifying environmental damages to water, agricultural resources, terrestrial and marine ecosystems due to golf crisis in 1990. Section IV: Monitoring, Assessing and Quantifying Damage to Agricultural Resources. Claims for Environmental and Natural Resources Damages. Submitted to Government of Jordan, UNCC.
4. Participation in the Study "Cost of Influx of Palestinian Refugees into Jordan." (2004). Refugees' Studies Unit, Ministry of Foreign Affairs. Jordan.
5. Participation in the study "The Impact of Palestinian Refugees on Jordan's Environmental Resources; Agriculture and Soils" Studies Unit, Ministry of Foreign Affairs. Jordan
6. The Impact of Palestinian Refugees on Jordan's Environmental Resources; Natural Environment & Biodiversity Rangeland, Forest, Wetland and Wildlife study. Studies Unit, Ministry of Foreign Affairs. Jordan
7. The Impact of Palestinian Refugees on Jordan's Environmental Resources; Land Mines. Studies Unit, Ministry of Foreign Affairs. Jordan
8. The Impact of Palestinian Refugees on Jordan's Environmental Resources; Water Resources. Studies Unit, Ministry of Foreign Affairs. Jordan
9. The Impact of Palestinian Refugees on Jordan's Environmental Resources; Air Quality. Studies Unit, Ministry of Foreign Affairs. Jordan
10. The Impact of Palestinian Refugees on Jordan's Environmental Resources; Cultural Heritage. Studies Unit, Ministry of Foreign Affairs. Jordan
11. The Impact of Palestinian Refugees on Jordan's Environmental Resources; Marine and Risk Assessment. Studies Unit, Ministry of Foreign Affairs. Jordan
12. The Impact of Palestinian Refugees on Jordan's Environmental Resources; Solid and Hazardous Waste. Studies Unit, Ministry of Foreign Affairs. Jordan.

B. Agricultural Feasibility Studies

13. Participation as Financial analyst & agricultural Economist in the study "Development of Marketing Infrastructure for Horticultural Products in Jordan: (2006). "Economic indicators and Action Plan" Prepared for Ministry of Agriculture. By University of Jordan- Center for Consultations, Technical Services, & Studies, Arab Analysts for Consultations, Kelly Harrison Associates (Virginia, USA)
14. Participation as Financial analyst & agricultural Economist in the study Technical and Financial Feasibility Study of Horticultural Marketing Company in Jordan (2006). Prepared for Ministry of Agriculture. ECO Consult (Amman, Jordan). Kelly Harrison Associates (Virginia, USA)
15. Conducting the Feasibility Study of Dairy Cattle Farm. (1996). Commissioned by Nour Al-Hussein Foundation. Prepared in Collaboration with the International Center for Development (ICD), Amman, Jordan. (in Arabic)
16. Participation as Financial analyst in "Feasibility Study of Producing Olive Paste from Olive Cake in Jordan"-Market, Technical and Financial Studies (1997). Submitted to the Jordanian Investment Inc., in collaboration with Quality Consultancy Company (QCC), Amman, Jordan.(in Arabic)
17. Participation as Financial analyst in the study "Development and Modernization of Slaughterhouse of the Jordan Poultry Processing and Marketing Company Ltd. Oct. 1998. Submitted to the Jordan Poultry Processing and Marketing Company Ltd. Sponsored by the Industrial Development Bank (IDB). Prepared in collaboration with Quality Consultancy Company (QCC).
18. Conducting the Feasibility Study of Shami Goat Production in Jordan. (1996). Commissioned by Nour Al-Hussein Foundation. Prepared in Collaboration with the International Center for Development (ICD), Amman, Jordan. (in Arabic)
19. Conducting the Feasibility Study of Producing Medical Plants in Jordan. (1996). Commissioned by Nour Al-Hussein Foundation. Prepared in Collaboration with the International Center for Development (ICD), Amman, Jordan. (in Arabic)

C. Agro-Industrial and Industrial Feasibility Studies

20. Participation as financial analyst in the "Feasibility Study for creation and operation of bagging and handling unit (2000). Submitted to the Numira Mixed Salt and Mud company, in collaboration with Quality Consultancy Company (QCC), Amman, Jordan.
21. Participation as financial analyst in "Pre-Feasibility Study of Producing Aluminum Sulfate in Jordan"-Market, Technical and Financial Studies (1999). Submitted to the Jordanian Investment Inc., in collaboration with Quality Consultancy Company (QCC), Amman, Jordan.
22. Participation as financial analyst in " Feasibility Study for "Payphone Project" in the Republic of Yemen." (August 1999). Prepared for the International Telecommunication Center, in collaboration with Quality Consultancy Company (QCC), Amman, Jordan.
23. Participation as financial analyst in "The Pre-feasibility Study of Phosphorus-Based Flame-Retardant in Jordan-Market, Technical and Financial Studies" (1998). Prepared for the Industrial Development Bank (IDB) of Jordan and funded by the Arab Fund for Economic and Social Development (AFESD), in Collaboration with the International Center for Development (ICD) and Quality Consultancy Company (QCC), Amman, Jordan.
24. Participation as financial analyst in "The Pre-feasibility Study of Carpet Backing in Jordan"-Market, Technical and Financial Studies (1998). Prepared for the Industrial Development Bank (IDB) of Jordan and funded by the Arab Fund for Economic and Social Development (AFESD), in Collaboration with the International Center for Development (ICD) and Quality Consultancy Company (QCC), Amman, Jordan.

25. Participation as financial analyst in "The Pre-feasibility Study of Powder Coating in Jordan"-Market, Technical and Financial Studies (1998). Submitted to the Industrial Development Bank (IDB) of Jordan and funded by the Arab Fund for Economic and Social Development (AFESD), in Collaboration with the International Center for Development (ICD) and Quality Consultancy Company (QCC), Amman, Jordan.
26. Participation as financial analyst in " The Techno-Economic Feasibility Study of Biogas Production in Jordan (1998). Submitted to PlanEnergi, Denmark, Jor-Dan Energy Group and Industrial Development Bank (IDB), in collaboration with Quality Consultancy Company (QCC) and United Group Consulting & Management Co.
27. Participation as financial analyst in the study "Investment and Development Opportunities of the Pesticides Industry in Jordan" Sept. 1998. Submitted to the Industrial Development Bank (IDB), funded by the Arab Fund for Economic and Social Development (AFESD), prepared in collaboration with Quality Consultancy Company (QCC).
28. Participation as financial analyst in the feasibility study of "Production of Kaolin as Pesticide Fillers". Dec. 1998. Submitted to the Industrial Development Bank (IDB), funded by the Arab Fund for Economic and Social Development (AFESD). Prepared in collaboration with Quality Consultancy Company (QCC).
29. Participation as financial analyst in the feasibility study of "Plastic Packaging of Pesticides". Dec. 1998. Submitted to the Industrial Development Bank (IDB), funded by the Arab Fund for Economic and Social Development (AFESD). Prepared in collaboration with Quality Consultancy Company (QCC).
30. Participation as financial analyst in the feasibility study of "Production of Macroemulsion and Microencapsulation Pesticides ". Dec. 1998. Submitted to the Industrial Development Bank (IDB), funded by the Arab Fund for Economic and Social Development (AFESD). Prepared in collaboration with Quality Consultancy Company (QCC).
31. Participation as financial analyst in "Feasibility Study of the Investment of Arab Revolt Plaza in Aqaba, Floating Hotel and Amusement Park (1997). Submitted to the Industrial Development Bank (IDB) of Jordan, in collaboration with Quality Consultancy Company (QCC), Amman, Jordan. (in Arabic)

D. Water Economics & Feasibility Studies

32. Participation as financial analyst in "The Economic and Financial Feasibility of the Water Supply and Sanitation for Seven Urban Centers in Yemen (2005-2007)". For Ministry of Water and Environment, Republic of Yemen. By Consulting Engineering Center, Sajdi & Partners.
33. Participation as financial analyst in "Consulting services for technical and economic feasibility study and final design of the wastewater collection, treatment and effluent reuse for Jerash area". (February, 2004). Jordanian Consulting Engineer Co. Ministry of Water and Irrigation. Amman. Jordan.
34. Participation as financial analyst in "Consulting services for technical and economic feasibility study and final design of the wastewater collection, treatment and effluent reuse for Sukhna area". (January, 2004). Jordanian Consulting Engineer Co. Ministry of Water and Irrigation. Amman. Jordan.
35. Participation as financial analyst in the Final Updating of "The Economic Feasibility Study of Al-Wehdah Dam Project" (April 2002). This study was conducted in collaboration with the Ministry of Water and Irrigation. The Arab Fund for Economic and Social Development (AFESD) agreed to finance this project with 150 million US Dollars in May, 2002. This project is now under construction.
36. Participation as financial analyst in the updating of "The Technical, Financial and Economic Feasibility Study for Mujib and Southern Ghors Irrigation Project – Stage II" (1997). This study was conducted in collaboration with the Ministry of Water and

Irrigation. The Arab Fund for Economic and Social Development (AFESD) agreed to finance this project with 135 million US Dollars in December, 1997.

37. Participation as financial analyst in the updating of "The Economic Feasibility Study of Al-Wehdah Dam Project" (1998). This study was conducted in collaboration with the Ministry of Water and Irrigation. The Arab Fund for Economic and Social Development (AFESD) agreed to finance this project with 150 million US Dollars in December, 1999.
38. Participation as financial analyst in Economic and Financial Assessment of the Jordan Rift Valley, Jordan Rift Valley Improvement Project. (2000), World Bank with the cooperation of Ministry of Water and Irrigation (team member).
39. Participation as financial analyst in The Economic Feasibility of the Reuse of Treated Wastewater in Makrabah Area and in the Northern Jordan Valley (1998), upon the request of Jordan Valley Authority – Ministry of Water and Irrigation.

E. Production and Resources Economics

40. Water pricing and its implication in the irrigated agriculture in Jordan (2002) participated with Dr. Amer Salman. Commissioned by FAO-Cairo Office. Cairo Egypt.
41. Using Seemingly Unrelated Yield and Area Equations to Predict Cereal Grain Outputs in Jordan (2002) with a participation of Dr. Amer Salman. Commissioned by Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH. Amman, Jordan.
42. Participation in the development of the Agricultural Sub-Model "AGSM". (1997-1998) in collaboration with Harvard Middle East Water Project, Harvard University, John F. Kennedy School of Government, Institute of Social and Economic Policy in the Middle East/ and The Regional Office for International Development, Amman. Jordan. This project aims to predicting water demand and optimization of agricultural water use.
43. Forecasting Models for Wheat Production in Jordan (1999) by Emad Al-Karablieh and Amer Salman. Commissioned by Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH. Amman, Jordan.
44. Models for Forecasting Barley Production in Jordan (An Econometric Approach) (1997) by Amer Salman and Emad Al-Karablieh Commissioned by Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH. Amman, Jordan.
45. Agricultural Sector Assessment of Jordan. Commissioned by Food and Agricultural organization of the United Nation (FOA), submitted to the Ministry of Agriculture, Amman, Jordan. TCP/JOR/066.

F. Socio-Economic Studies

46. Participation in "Market Survey to Identify the Present and Future Job Opportunities for the Poor of the Rural Areas". The Regional Centre on Agrarian Reform and Rural Development for the Near East (CARDNE). Submitted to the Ministry of Social Development, Food Security Project. Commissioned by European Union.
47. Team Leader of "The Socio-economic Study of Agricultural Resource Development Project in Yarmouk Basin". (2002) The Regional Centre on Agrarian Reform and Rural Development for the Near East (CARDNE). Submitted to the Ministry of Agriculture
48. Team member of the Study "Developing the Private Sector Role in Agricultural Development". (2004) The Regional Centre on Agrarian Reform and Rural Development for the Near East (CARDNE). Submitted to the Ministry of Agriculture

Trainer in Local and Regional Training Programs

1. A training program "Macro-Economic Policies and Their Effects on Rural Finance". Near East-North Africa Regional Agricultural Credit Association (NENARACA) and Agricultural Credit Corporation. Amman- 27/08/2007-5/9/2007.

2. A training program in the field of Sustainable Finance Management and Policies for Small Producers and Cooperatives. Near East-North Africa Regional Agricultural Credit Association (NENARACA) and Syrain Rural Bank. Damascus. 1-10 Sept. 2006 .
3. Project Analysis Using Computer with Emphasis on Credit-Supported Projects. Near East North Africa Regional Agricultural Credit Association.(NENARACA). Regional Training Programme, Tunis . Monday 15-25/08/2005
4. Agricultural Project Analysis Using Computer. Agricultural Engineer Association. Amman-Jordan. 19/02/2005– Thursday 24/02/2005
5. Project Analysis Using Computer with Emphasis on Credit-Supported Projects. Near East North Africa Regional Agricultural Credit Association.(NENARACA). Regional Training Programme, Amman-Jordan. Monday 09/08/2004 – Thursday 19/08/2004
6. A training program in the field of sustainable finance management and policies for small producers and cooperatives. Near East-North Africa Regional Agricultural Credit Association (NENARACA) and Lebanon Ministry of Agriculture. Beirut- Lebanon 15-24/10/2002.
7. A training program in the field of sustainable finance management and policies for agricultural sector and Cooperatives. Near East-North Africa Regional Agricultural Credit Association (NENARACA) and the Libyan Agricultural Bank. Tripoli- Libya 13-23/10/2003.
8. A training workshop on Project Appraisal for Jordanian Refinery Company. In corporation with Dr. Fawwaz ElKarmi. 23-27/8/2003.
9. A training workshop on Project Appraisal for Jordanian Electricity Company. In corporation with Dr. Fawwaz ElKarmi. 24-27/9/2003.
10. A training program “Macro-Economic Policies and Their Effects on Rural Finance”. Near East-North Africa Regional Agricultural Credit Association (NENARACA) and Agricultural Credit Corporation. Amman- 18-23/9/2003.

Workshops and Conferences

1. The 3rd Regional Coordination meeting of the Project: Community-based Optimization of the Management of Scarc Water Resources in Central & West Asia and North Africa'.8-10, January 2007, Cairo, Egypt.
2. EU-FP7 proposal preparation workshop 27-29 March, 2007. Workshop held from 27th to 29th March, 2007 at Newcastle University. KBBE-2007-1-4-12 Policy and institutional aspects of sustainable agriculture, forestry and rural development in the Mediterranean partner countries.
3. Regional Workshop on the Natural Resource Valuation and Assessing the Impact of Water Resource Management Research in Agriculture. Organized by ICARDA. January, 6-11, 2005. Rabat, Morocco
4. The Environmental Valuation methodologies in a workshop titled Efficient Management of wastewater, it's treatment and reuse in the Mediterranean Countries, held at Al_al-bayt University funded by the European Commission and German Federal Ministry for Economic cooperation and Development (BMZ). June, 27-October 12, 2004
5. Participation in the 10th IUPAC International Congress on the Chemistry of Crop Protection, Emad Al-Karablieh and I. K. Nazer (2002) “Poster participation: Manufacturing, Handling and Using of Pesticides in Jordan.”. Basel- Switzerland.
6. Participation in the “III^{ed} Regional Technical Coordination & Planning Meeting” The Development of Integrated Crop/Livestock Production in the Low Rainfall Areas of the Mashreq and Maghreb Regions. Phase II. 13-15 November 2001. Organized by ICARDA, Aleppo, Syria.
7. Participation in the Workshop “ Property Right and Rangeland Management Systems. In corporation between NCARTT, IFPRI and ICARDA. 29-30 April, 2001.
8. Organization and participation in the Fourth Agricultural Scientific Conference, "*Scientific Research for Safe Agricultural Production*". 24-26 April. 2001. Jerash Private University. Jerash, Jordan.

9. Participation in the Second Conference of Euro-Mediterranean Forum of Economic Institutes. 29 & 30 Mars 2001. Marseilles, France.
10. Participation as trainer in the Advanced short course on Water Saving and Increasing Water Productivity: Challenges and Options” Faculty of Agriculture University of Jordan. Amman-Jordan, March 10-23, 2001
11. Participation in the Workshop on “Technical, Policy and Institutional Options for the development of communities in the dry Areas”. 23-25 January 2001. Marrakech, Morocco, Organized by IFPRI, IDRC, ICARDA, and Institut National de la Recherche Agronomique de la Moroc.
12. Participation in the “II^{ed} Regional Technical Coordination & Planning Meeting” The Development of Integrated Crop/Livestock Production in the Low Rainfall Areas of the Mashreq and Maghreb Regions. Phase II. 9-11 November 2000. Algiers, Organized by ICARDA, and Institut Technique des Grandes Cultures.
13. Participation in the “Community Studies: Policy, Technology and Institutional Evaluation for Dryland Agriculture”. 3-7 July 2000. Tal Ammara, Lebanon. Organized by ICARDA, the Lebanese Agricultural Research Institute.
14. Participation in the “The International Conference on Water Resources Management, Use and Policy in Dry Areas”. 1-3 December 1999. Amman, Jordan. Organized by ICARDA, International Water Management Institute (IWMI), Ministry of Agriculture, Ministry of Water & irrigation, and the Islamic Development Bank.
15. Organization and participation in the third agricultural Jordanian scientific conference, “*Scientific Research in the Service of Agricultural Development*”. 27-29 April. 1999. Mut’ah University.
16. Participation in the " *The First National Agricultural Conference* " 16-17. June 1998. Agricultural Engineers Society, Amman.
17. Participation in the " *The Fourth Jordanian Scientific Week*" 20-27. August 1996. Organized by the Higher Council for Science and Technology. In Jordan University for Science and Technology. Amman.
18. Participation in the “ *Regional Symposium on Crop-Livestock Integration Systems in Dry Areas of WANA*” 6-8-November, 1995. Amman, Jordan. Organized by ICARDA.
19. Participation in the seminar “*Agricultural Policy Analysis in Jordan*. Dec. 1991. Organized by Food an Agriculture Organization of United Nation (FAO) and Ministry of Agriculture. Amman.
20. Organization and participation in the socio-economic group meetings for the Mashreq countries (1996-1997). The meetings discussed issues related to socio-economic studies that will be conducted in the Mashreq countries including a sheep fertility survey, adoption and impact of barley production technology, and adoption of livestock management and production technology and farmers’ selection of germplasm.
21. Participation on the symposium "*Labor, Employment and Agricultural Development in West Asia and North Africa*." 13-15, June, 1988 ICARDA. Aleppo.
22. Participation in the " *The First Jordanian Conference of Plant Protection*." 3-5. October 1989. The University of Jordan, Amman.
23. Participation in the symposium” Rainfed field crops and farming systems in Jordan and the neighboring countries.” 10-14 Sept. 1988. Organized by Faculty of Agriculture, and Ministry of Agriculture. Amman. Jordan.

Community Services

1. Team Member in the National Committee of Re-Negotiation of Jordan-EU partnership agreement. Re-Negotiation of agricultural protocols. Ministry of Agriculture (2004).
2. Team Member in the Development of Water Allocation Models in Jordan. A regional project in coordination between University of Jordan, Jordan University of Science and Technology

- &Hashemite University, USAID, MWI (2003-2004).
3. Team Member in the agricultural section of the Study “Monitoring, assessing and quantifying environmental damages to water, agricultural resources, terrestrial and marine ecosystems due to golf crisis in 1990”. Participate as agricultural economist in “Monitoring, Assessing and Quantifying Damage to Agricultural Resources.” (2002-2003).
 4. Team leader of the “Agricultural Policy and Community Modeling” research component of Mashreg/Maghreb Project in Phase II. The Development of Integrated Crop/Livestock Production in the Low Rainfall Area of West Asia and North Africa. National Center for Agricultural Research and Technology Transfer (NCARTT) and ICARDA. (1999- 2003)
 5. Team member of the “Property Right and Institutional Options in Rangeland Improvement” Research component Project of Mashreg/Maghreb Project in Phase II. The Development of Integrated Crop/Livestock Production in the Low Rainfall Area of West Asia and North Africa. National Center for Agricultural Research and Technology Transfer (NCARTT) and ICARDA. (2000-2003)
 6. Team Member of the “Monitoring and Evaluation Committee” of the National Center for Agricultural Research and Technology Transfer (NCARTT). For the period 2000-2002.

Participation in Training Courses

1. Participation in the “GAMS *Training Workshop*”. Organized by ICARDA and the National Center for Agricultural Research and Technology Transfer. May 24-June 04, 2000. Amman.
2. Participation in the “*Mashreq/Maghreb Modeling Workshop*”. Organized by ICARDA and International Food Policy Research Institut (IFPRI). 12-16, May, 1996. Amman.
3. Participation in the Workshop “SPSS-Anwendertagung”. Organized by SPSS Inc. 2-3 November, 1994, Mainz, Germany.

Examination Committees

Supervising more than 10 M.Sc. students in agricultural economics and IWRM master program
 Member of the examination committee for (45) M. Sc. Students in agricultural economics.
 Member of the examination committee for (6) Ph.D. student in agricultural economics.

Computer Skills

Word Processing:	Microsoft Office, WordPerfect, etc.
Spread Sheets:	Lotus, QuattroPro, Excel, etc.
Data Base:	Dbase, Foxpro for Win
Statistical Package:	SPSS 17. Statgraphics, SYSTAT
Econometrics package:	STATA 11, TSP 4.5, RATS.,
Operation Research:	Lindo, BLP88, XA, @Risk etc.
Mathematical Programming:	GAMS 2.5 IDE.
Jordan University	ICDL

Membership in Professional Societies

Membership in the following Non-Profitable Organizations:

- Agricultural Economic Society, England.
- Southern Agricultural Economics Association, USA.
- Jordan Society of Agricultural Engineers
- Arab Society for Agricultural Social & Economic Science

Bulletins

Writing three contribution in the Mashreq/Maghreb project Newsletter,

- (a) The importance of socio-economics study in technology transfer. No. 8, 1996.

- (b) The Proposed Socio-Economics Network for West Asia. No. 9, 1996.
 (c) Merits and Characteristics of Rapid Diffused Technologies. No. 10, 1997.

Awards & Scholarship

- M.Sc. scholarship from International Center for Agricultural Research in the Dry Areas (ICARDA) for two years (1987-1989) to complete the M.Sc. program at the Department of Agricultural Economics Extension at the University of Jordan.
- Ph.D. scholarship from Deutsche Akademische Austauschdienst (DAAD) for four years (1991-1995) to complete the Ph.D. program at the Department of Agricultural Economics and Agribusiness at the University of Christian-Albrechts zu Kiel Germany.
- Visiting Scholarship: A scientific scholarship from Deutsche Akademische Austauschdienst (DAAD) to conduct a research in corporation with the Department of Agricultural Economics and Agribusiness at the University of Christian-Albrechts zu Kiel (Germany) for two months starting from July 15- September 15, 2001.

References

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