July 26, 2020

**Shiri Zemah Shamir**

**CURRICULUM VITAE**

**Personal Information**

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**Academic Education**

**1998** B.A., Dept. of Economics, University of Haifa.

**2002** M.Sc., Dept. of Economics, University of Haifa, and Industrial Engineering and Management Faculty, the Technion Israeli Institute of Technology. Thesis: “Economic Valuation of Habitats – the case of Mediterranean Grove”, 2002. Hebrew, Supervisors - Prof. Mordechai Shechter and Dr. Naomi Zeitouni.

**2009** PhD. Dept. of Economics, University of Haifa, and Industrial Engineering and Management Faculty, the Technion Israeli Institute of Technology. Thesis: "Setting Biodiversity Conservation Priorities: an Economic-Ecological Analysis", 2009. Hebrew, Supervisors - Prof. Mordechai Shechter and Prof. Benyamin Shitovitz.

**Academic Employment**

**Oct 2017-**

Lecturer at the School of Sustainability, the Interdisciplinary Center (IDC), Hezeliya, Israel.

**2016-2017**

Research fellow at the School of sustainability, the Interdisciplinary Center (IDC), Hezeliya, Israel **2011-2017**

Researcher at Natural Resource and Environmental Research Center, University of Haifa, Israel.

**2009-2011**

Post-doc researcher at the Eitan Berglas School of Economics. Tel Aviv University, Israel. Supervisor: Itzhak Zilcha Prof.   
**2003-2009**

Research assistant at Natural Resource and Environmental Research Center, University of Haifa, Israel.

**Research Grants**

2020-2022 Israel Science Foundation (ISF): 'Energy trilemma in future decarbonized-

decentralized electricity systems: a new evaluation framework and criteria'. Submitted to in collaboration with Dr. Parag and Dr. Teschner. (~$145K)

* 1. The Ministry of Energy (Israel-EU JRC collaboration): 'Mapping and modeling Israel's

Water-Energy-Food-Ecosystem nexus'. Together with Prof. Yair, Dr. Parag, Dr.

Fishman from the IDC and Dr. Iddo Kan from the Hebrew University (~$150K).

2020-2022 The Ministry of agriculture and rural development: 'Economic and Ecological

assessment of NbS in drainage basins in North of Israel'. Together with Prof.

Wittenberg, Prof. Malkinson from university of Haifa (~$17K).

2019-2021 JNF: 'Assessment of Regulation services in the Israeli JNF Forests'. Together with Prof. Wittenberg, Prof. Izhaki, Dr. Lotan from University of Haifa (~$25K).

2016-2018 Yad Hanadiv: 'Application of a unique framework for the development of sustainable management pathways of the Israeli EEZ- merging of economics and ecology.' Together with Prof. Shechter from University of Haifa, Dr. Israel, IOLR ($190K).

2016-2018 The Ministry of Energy: Analysis of the impact of fossil fuels utilization on marine ecosystem services flows'. Together with Prof. Shechter from University of Haifa, Dr. Israel, IOLR (~$70K).

2016-2019 The Ministry of Environmental Protection: 'Assessment of ecosystem services and human wellbeing in Mount Carmel Biosphere Reserve'. Together with Prof.

Wittenberg, Prof. Izhaki, Dr. Lotan, Dr. Negev from University of Haifa (~$195K).

2013-2015 Yad Hanadiv: 'The Israeli Mediterranean shores and their economic valuation '. Together with Prof. Shechter from University of Haifa, Dr. Israel, IOLR (~$150K).

2013-2016 The Ministry of Environmental Protection: 'Ecological and Economic aspects of grazing management in buffer zone'. Together with Dr. Dolev, NPA. ($40K).

**Other Academic Activities**

* Lead author of the chapter ‘provisioning services’ of the Israel’s National Ecosystem Assessment Program (the ‘Maarag’), funded by the Israel Academy of Sciences and Humanities.
* Member of task force ‘green economy and innovation’ part of ECCI workgroup.
* IDC representative in MERCI, Mediterranean Sea Research Center of Israel is a consortium of universities and research institution.
* Member of an expert committee to examine the light pollution damages.
* Member of an expert committee to examine Haifa after the fire.
* Member of the European Association of Environmental and Resource Economics (EAERE).
* Member of the European Commission on Energy Efficient Economy (ECEEE)
* Member of the **European Regional Science Association (ERSA).**
* Scientific partner of BIOdiversity and Economics for CONservation (BIOECON).
* Member of the Ecosystem services partnership (ESP).

**Supervision of research students and researchers (past and present)**

PhD Students (Fully funded by my grants):

* Yoav Peled, University of Haifa (with Prof. Shechter),
* Orna Raviv, University of Haifa (with Prof. Izhaki),
* Geula Bitton, university of Haifa.

PhD students:

* Yael Mandelberg, Bar Ilan University (with Prof. Brener).
* Eti Asraf, university of Haifa (with Prof. Gerhmandi).

MA students:

* Yoav Peled, University of Haifa;
* Itai Tzion, University of Haifa;
* Eti Ofir, University of Haifa;
* Niva Tadmor Shalev, University of Haifa.

**Examiner of Dissertations and research proposal**

* PhD & MA dissertations: Tel Aviv University, University of Haifa.
* PhD & MA proposals: Tel Aviv University, University of Haifa.

**Evaluator for competitive grants**

* The Ring Center for multidisciplinary Environmental Research at The Hebrew University of Jerusalem

**Reviewer for Academic Journals**

* Ecosystem services (IF 5.57);
* Waste Management (IF 5.43);
* Journal of environmental Management (IF 4.86);
* Biological conservation (IF 4.45);
* Land Use Policy (IF 3.57);
* Environmental Science and Pollution Research (IF 2.91);
* Journal for Nature Conservation (IF 2.28);
* Regional Studies in Marine Science (IF 1.46);

**Teaching**

* Introduction to Micro-Economics (1st year)
* Environmental and natural resources Economics (2nd year)
* Cost-Benefit analysis (3rd year)
* Practicum-Capstone project (3rd year)

In addition, I am the head of the sustainability-economics track, I am responsible for around 40 students in the track academically, and academic advisor.

**List of Peer-Reviewed Publications**

[Citation from Google Scholar & Impact Factor]

[\* Corresponding author or leading author]

[\*\* Senior authorship is not assigned. Authors are listed alphabetically]

**Articles in Refereed Journals**

1. Raviv O., **Zemah Shamir S.**, Izhaki I., Sagie H., Negev M., Mazor-Tregerman M., Collins-Kreiner N., Mansfeld Y., & Lotan A. (2020). The socioeconomic value of multiple ecosystem types at a biosphere reserve as a baseline for one holistic conservation plan. Ecosystem Services 40 101043.‏[IF=5.57]
2. **Zemah Shamir S.** (2020). The economic values of climate change - A review. Ecology and environment, (4)10. (Hebrew).
3. Negev, M., Sagie, H., Orenstein, D. E., **Zemah Shamir, S**., Hassan, Y., Amasha, H., ... & Wittenberg, L. (2019). Using the ecosystem services framework for defining diverse human-nature relationships in a multi-ethnic biosphere reserve. Ecosystem Services, 39, 100989.‏[1, IF=5.57]
4. Zemah Shamir, Z., **Zemah Shamir, S**.\*, Becker, N., Scheinin, A., & Tchernov, D. (2019). Evidence of the impacts of emerging shark tourism in the Mediterranean. Ocean & Coastal Management, 178, 104847. [2, IF=2.59]
5. Zemah Samir, Z., **Zemah Shamir, S**., Tchernov, D., Scheinin, A., & Becker, N. (2019). Shark aggregation and tourism: Opportunities and challenges of an emerging phenomenon. Int. J. Sustain. Dev. World Ecol., 1-9.‏ [1, IF=2.81]
6. Lotan A., Kost R., Mandelik Y., Peled Y., Chakuki D., **Zemah Shamir S.,** Ram Y. (2018). National scale mapping of ecosystem services in Israel – genetic resources, pollination and cultural services. One Ecosystem 3: e25494. [2, No IF]
7. Becker N., Greenfeld A., **Zemah shamir S.\*\***, (2018). Cost Benefit Analysis of Full and Partly River Restoration: The Kishon River in Israel. International Journal of Water Resources Development. [1, IF=2.08]
8. Dudai N., Tsion I., **Zemah Shamir S.\*,** Nitzan N., Chaimovitsh D., Shachter A., and Haim A. (2018). Agronomic and economic evaluation of Vetiver Grass (Vetiveria zizanioides L.) as means for Phytoremediation of Diesel Polluted Soils in Israel. Journal of environmental management 211, 247-255. [5, IF=4.86]
9. Peled Y., **Zemah Shamir S.\***, Shechter M., Rahav E. and Israel A. (2018). A new perspective on valuating marine climate regulation: The Israeli Mediterranean as a case study. Ecosystem services 29(A), 83-90. [3, IF=5.57]
10. Korzen L., Peled Y., **Zemah Shamir S**., Shechter M., Gedanken A., Abelson A., and Israel A (2015). An economic analysis of bioethanol production from the marine macroalga Ulva (Chlorophyta). Technology 03:02n03, 114-118. [13, no IF].
11. Israel A., Gedanken A., Shechter M., Abelson A., **Zemah Shamir S**., Korzen L., Kropnik N., Kerry E. and Peled Y. (2015). Different aspects of bioethanol production from the marine macroalga Ulva (Chlorophyta). Ecology and environment (3), 211-216. (In Hebrew). [No IF]
12. Zemah Shamir S., (2010). An Interior Optimal Species Preservation Policy for the Symbiotic Noah's Ark Problem. Bioecon 2010 proceedings. [No IF]
13. Zemah Shamir S., Shechter M., Zeutouni N. (2005). Economic Valuation of Habitats – the case of Mediterranean Grove. Bioecon 2005 proceedings. [2, No IF]
14. Shechter M., N. Zeitouni, **Zemah Shamir S.**, N. Kadishi (2003). Economic Aspects of the Impact of Climate Change on Agriculture in Israel. Studies in Natural Resources and Environmental Management. Vol. 2 No. 1, 2003.(In Hebrew) [No IF]
15. **Zemah Shamir S**., N. Zeitouni, M.Shechter (2002). Economic Valuation of Irreversible Damage to Biodiversity. Studies in Natural Resources and Environmental Management Vol. 1 No. 1. (In Hebrew) [No IF]

**Accepted**

1. Peled Y., **Zemah Shamir S.\***, Shechter M., Israel A. and Gal G. (2020). Incorporating insurance value into ecosystem services assessments: mitigation of ecosystem users’ welfare uncertainty through biological control. Submitted to Ecosystem services.
2. Raviv O., Tchetchik A., Lotan A., Izhaki I., **Zemah Shamir S.**, (2020). Direct and indirect valuation of air-quality regulation services as reflected in the preferences towards distinct types of landscape in a biosphere reserve. Submitted to Ecological economics.

**Papers under Review**

1. Y. Peled, Tchetchik A., Shechter M., Israel A. **Zemah Shamir S.\*** (2020). Incorporation of Non-Use Values in Marine Spatial Planning: Valuation and Spatial Mapping. Submitted to Ecological economics.
2. **Zemah Shamir S**., Zemah Shamir Z., Israel A., and Haim A. Seasonal growth enhancements of *Ulva rigida* (Chlorophyta) and *Gracilaria conferta* (Rhodophyta) in CO2 -enriched seawater – an economic - biological model. Aquaculture.
3. Bitton-Michael G., Gal G. Corrales X., Ofir E., Shechter M. & Zemah Shamir S., (2020). Economic aspects of fish stock accounting as a renewable marine natural capital: The Eastern Mediterranean continental shelf ecosystem as a case study. Ecosystem services.

**Papers in preparation**

**Zemah Shamir S.**, Ofir E., Haim A., Gal G. Combining economic assessment and ecological models for ecosystem-based lake management.

**Zemah Shamir S.** An Optimal Preservation Policy in the Symbiotic Noah's Ark Model with Two Types of Species".

**Zemah Shamir S.** & Aiche A. An Explicit Formula for the Symbiotic Expected Diversity in the Libraries Model with a Central-National Library.

**Zemah Shamir S.**, Bar-Lev N. Eldan R., Malkinson D.From golden jackal and wolves to golden coins: social cost benefit and ecological analyses of sanitation treatment on wildlife.

Zemah Shamir Z., **Zemah Shamir S.**, Scheinin A., Gal G., Tchernov D. Do sharks behavior and abundance will negatively affects from increase CO2 concentration in the Mediterranean Sea?

**Book Chapters**

1. Shechter M. and **Zemah Shamir S.** (2009). Economic Aspects of Biodiversity Preservation. The Israeli Convention on Biodiversity. (Hebrew).
2. **Zemah Shamir S**., Shitovitz B and Shechter M. (2014). Optimal Species Preservation Policy in a Symbiotic Relationship between Species. Handbook on the Economics of Ecosystem Services and Biodiversity. Edward Edgar, 302-317.

**Recent and selected papers, posters and presentation in academic conferences**

Sep 11-13 2019 Shiri Zemah Shamir, Yoav Peled, Mordechai Shechter, Alvaro Israel, Economic valuation of the ecosystem services in the Israeli Mediterranean. XXI Annual BIOECON Conference, Wageningen, the Netherlands.

Aug 27-30 2019 Special session organization and presentation:

(a) Ziv Zemah Shamir, Shiri Zemah Shamir, Israel Alvaro, Avrahan Haim, A bio-economic approach of marine macroalgae exposed to global increase of CO2 concentrations.

(b) Shiri Zemah Shamir, Yoav Peled, Mordechai Shechter, Eyal Rahav, Alvaro Israel, Economic Valuation of Climate Regulation in the Mediterranean.

(c) Ziv Zemah Shamir, Shiri Zemah Shamir, Nir Becker, Aviad Scheinin, Dan Tchernov, Shark aggregation and tourism: Human Wild-Life Conflict in the Mediterranean.

(d) Anat Tchechik, Yoav Peled, Shiri Zemah-Shamir, Mordechai Shechter, Alvaro Israel Estimation of non-use values by the general public in the Israeli Mediterranean.

59th congress of ERSA, Lyon, France.

Apr 4-7 2019 Elai Rettig, Shiri Zemah Shamir, Raiding the Vault: Predicting Mismanagement of Natural Resource Funds in Oil-Exporting Developing Democracies. Midwest Political Science Association 77th Annual Conference, Chicago, Illinois

Aug 27-30 2018 Shiri Zemah Shamir, Nir Becker, Asael Greenfeld, Cost–Benefit Analysis of full and partial river restoration: The Kishon River in Haifa, Israel. 58th congress of ERSA, Cork, Ireland.

Apr 21-22 2017 Mordechai Shechter, Shiri Zemah Shamir, Yoav Peled, Economic Evaluation of Marine Ecosystem Services. Ninth International Conference on Climate Change: Impacts & Responses, Cambridge, UK.

Jan 19-21 2017 Mordechai Shechter, Shiri Zemah Shamir, Seas: Natural Capital Assets. Thirteenth International Conference on Environmental, Cultural, Economic & Social Sustainability, Rio de Janeiro, Brazil.

Feb 8-9 2016 Shiri Zemah Shamir, Economic valuation of ecosystem services, Israel - Collaborative Workshop, Leibniz Association, Berlin, Germany

Jun 24-27 2015 Shiri Zemah Shamir, an Economic Analysis of Ecosystem Services under Different Fertilizing Regimes in Agroecosystems. 21st Annual Conference of the European Association of Environmental and Resource Economics, Helsinki, Finland.

Sep 19-20 2013 Shiri Zemah Shamir, Optimal Species Preservation Policy in Symbiotic Relationships between Species. 15th BIOECON Conference on Resource Economics, Biodiversity Conservation and Development, Cambridge, UK. (Also Member of scientific and steering committees.)

Jun 26-29 2013 Shiri Zemah Shamir, Optimal Species Preservation Policy in Symbiotic Relationships between Species. 20th Annual Conference of the European Association of Environmental and Resource Economics, Toulouse, France.

Sep 27-28 2010 Shiri Zemah Shamir, an Interior Optimal Species Preservation Policy for the Symbiotic Noah's Ark Problem. 12th International BIOECON Conference on "From the Wealth of Nations to the Wealth of Nature: Rethinking Economic Growth", Venice, Italy.

Sep 29-30 2006 Shiri Zemah Shamir, an Application of Weitzman's Libraries Model for Biodiversity Preservation with Parasites. 8th Annual BIOECON conference on "Economic Analysis of Ecology and Biodiversity”, Cambridge, UK.

Jan 26-27 2006 (a) Shiri Zemah Shamir, an Extension of Weitzman's Libraries Model.

(b) Shiri Zemah Shamir, Mordechai Shechter, Valuation of Habitats.

EURODIV 1st Conference "Understanding diversity: Mapping and measuring", Milan, Italy.

Jan 9-12 2006 Shiri Zemah Shamir, Mordechai Shechter, Economic Valuation of Habitats - the case of Mediterranean Grove. 2nd International Conference on Environmental, Cultural, Economic and Social Sustainability, Hanoi, Vietnam.

Jun 23-26 2005 Shiri Zemah Shamir, Mordechai Shechter, Economic Valuation of Habitats - Application to Mediterranean Grove in Carmel National-Park (poster presentation). 13th Annual conference of European association of environmental and resource economics (EAERE), Bremen, Germany.

Jan 30-Feb 1 2003 Shiri Zemah Shamir, Mordechai Shechter, Economic Valuation of Habitats - Application to Mediterranean Grove in Carmel National-Park. MedForEX annual meeting (Mediterranean Forest Externalities), Avignon, France.

Oct 12-16 2000 Shiri Zemah Shamir, Valuing Biodiversity Loss under Development Stresses. Biodiversity in the Mediterranean region: evaluation, threats and strategies for its conservation and sustainable use in the face of global change, Toledo, Spain.

Nov 12-16 1999 Shiri Zemah Shamir, Valuing Irreversible Losses of Biodiversity under Development Stresses. 16th Course: FEEM Seminar on Biodiversity: an Economic and Naturalistic Integrated approach, Sicily, Italy.

**Organization of Conferences or Sessions**

Feb 12 2020 Principal Organizer, Member of scientific and steering committees in the Second Conference on Open Space and Ecosystem Services, IDC Herzliya.

Dec 29 2019 session organizer, The 59th Israel geographical association conference, Special session on human-wildlife conflicts, Bar Ilan University.

Aug 27-30 2019 Special session organizer and presenter, 59th congress of ERSA, Lyon, France

March 13 2019 Principal Organizer, Member of scientific and steering committees in the Second Conference on the Mediterranean, IDC Herzliya.

May 1 2018 Principal Organizer, Member of scientific and steering committees in the Mediterranean: Natural, Strategic and Economic Resource conference, IDC Herzliya.

Feb 26 2018 Principal Organizer, Member of scientific and steering committees, Paper presentation in the Ecosystem services in Israel: from theory to practice conference, IDC Herzliya.

Jul 10-11 2017 Two sessions organizer, ISEES’ annual conference, IDC Herzliya.

Nov 9-10 2015 Principal Organizer, Member of scientific and steering committees in the 1st Science Based Management of Marine and Coastal Resources convention, University of Haifa.

Oct 12-14 2015 Session organizer in the Annual Conference of The Israel Society of Ecology and Environmental Sciences, the Hebrew University.

Sep 13-15 2015 Member of scientific and steering committee in the 17th Annual BIOECON Conference, Cambridge, United Kingdom.

Sep 14 2014 Principal Organizer, Member of scientific and steering committees in the Israeli Mediterranean: The Management Aspect, University of Haifa.

June 2010 Presenter and principal organizer in the Environmental and social aspects of biodiversity preservation policy, university of Haifa.

Feb 2007 Presenter and principal organizer in Bi-National Workshop Netherlands-Israel, "Management of Conflicts between Conservation and Agriculture", Kibbutz Bet-Oren, Israel.

### Reports

1. **Shiri Zemah Shamir,** Yoav Peled and Israel Gev (2019), provision services. Chapter for the Israel’s National Ecosystem Assessment Program (the ‘Maarag’), funded by the *Israel Academy of Sciences and Humanities* (Hebrew).
2. **Shiri Zemah shamir**, Gideon Gal, Mordechai Shechter, Alvaro Israel, Yoav Peled, Eyal Ofir, Dafna Ben Yousef (2017), Economic Valuation of the Israeli Mediterranean Sea. (Final research report). Report submitted to Yad Hanadiv.
3. **Shiri Zemah Shamir**, Mordechai Shechter, Alvaro Israel, Yoav Peled (2018). Analysis of the impact of fossil fuels utilization on marine ecosystem services flows**.** Report submitted to the Israeli Ministry of Energy.
4. Amit Dolev, **Shiri Zemah Shamir**, Naama Tesler, Ben Rozenberg (2015). Ecological and Economic aspects of grazing management in buffer zone. Report submitted to Ministry of Environmental Protection (Hebrew).

**Popular Communication**

1. Interview in ‘Zavit for educators’, on environmental economics. <https://education.zavit.org.il/newsletter/%D7%93%D7%A8-%D7%A9%D7%99%D7%A8%D7%99-%D7%A6%D7%9E%D7%97-%D7%A9%D7%9E%D7%99%D7%A8/>
2. 5 minutes interview in 103FM, ‘think well’ about the winning of Nordhaus in the Nobel prize and an opinion paper on this subject in WALLA FINANCE. <https://103fm.maariv.co.il/programs/media.aspx?ZrqvnVq=HHEGHI&c41t4nzVQ=FGM>
3. Interview in the Marker, on the economic valuation of the Israeli Mediterranean Sea. <http://www.zavit.org.il/wp-content/uploads/2018/05/%D7%97%D7%95%D7%A3-%D7%A0%D7%A7%D7%99-%D7%93%D7%94-%D7%9E%D7%A8%D7%A7%D7%A8.gif>