

## **CURRICULUM VITAE AND LIST OF PUBLICATIONS**

---

### **Personal details**

Name: Pua Bar (Kutiel)

Address and telephone number at work: Department of Geography and Environmental Development, Ben Gurion University of the Negev, Beer Sheva; 08-6472012

### **Education**

B.Sc. 1974 Hebrew University of Jerusalem, Biology

M.Sc. 1977 Hebrew University of Jerusalem, Environmental Biology

Name of advisor: Prof. A. Danin

Title of thesis: "The interrelations between soil and vegetation at the coastal sand dunes near Caesarea, Israel"

Ph.D. 1984 Hebrew University of Jerusalem, Environmental Biology

Name of advisor: Prof. E. Noy-Meir

Title of thesis: "Competition between annual plants along a soil depth gradient"

### **Employment history**

- |            |   |
|------------|---|
| 2015-      | Full Professor with tenure. Department of Geography and Environmental Development, Ben Gurion University of the Negev, Beer Sheva   |
| 2004- 2015 | Associate Professor with tenure. Department of Geography and Environmental Development, Ben Gurion University of the Negev, Beer Sheva  |
| 2001-2004  | Senior Lecturer with tenure, Department of Geography and Environmental Development, Ben-Gurion University of the Negev, Beer Sheva. Chairwoman of the Environmental Studies Track |
| 1998-2001  | Senior Lecturer, Jordan Valley College, Tsemach   |
| 1995-2001  | Senior Lecturer, Judea and Samaria College, Ariel<br>Senior Lecturer, Department of Geography, Bar Ilan University, Ramat-Gan   |
| 1994-1995  | Senior Lecturer, University of Waterloo, Faculty of Environmental Studies, Canada (Sabbatical)  |
| 1991-1994  | Lecturer, University of Haifa, Department of Geography, Haifa   |
| 1991-1993  | Lecturer, the Center of Geographical Studies, Haifa   |
| 1989-1994  | Lecturer, Bar Ilan University, Department of Life Sciences and Department of Geography, Ramat Gan   |
| 1984-1989  | Teaching and Research Fellow, Technion - Institute of Technology, Faculty of Architecture and Faculty of Agricultural Engineering, Haifa  |
| 1983-1984  | Biology Instructor, David Yellin Teachers' College, Jerusalem   |
| 1979-1984  | Instructor, The Hebrew University of Jerusalem, Department of Botany, Jerusalem   |

1975-1979 Botanical guide, The Hebrew University of Jerusalem, Botanical Garden  
 Instructor, the Everyman's University of Israel, Life Sciences, Jerusalem and Tel-Aviv  
 Teaching Assistant, The Hebrew University of Jerusalem, Department of Botany, Jerusalem

### **Professional activities**

#### **(a) Positions in academic administration (department, faculty and university)**

2010-2014 Chairwoman, Department of Geography and Environmental Development, Ben-Gurion University of the Negev, Beer Sheva, Israel  
 2009-Present BGU coordinator of the Arava – BGU Environmental Studies Program  
 2007-2012 Representative of the Faculty of Humanities and Social Sciences in the Faculty of Life Sciences, and in the Jacob Bluestein Institutes for Desert Research (BIDR) Committee meetings  
 Member of the "Green Campus Committee" of Ben-Gurion University of the Negev  
 2001-2009 Chairwoman of the Environmental Studies Track in the Department of Geography and Environmental Development, Ben-Gurion University of the Negev  
 2001-2006 Chairwoman of the Teaching Committee in the Department of Geography and Environmental Development, Ben-Gurion University of the Negev  
 1998-2001 Member of the Academic Discipline Committee – Jordan Valley College  
 1989-2001 Chairwoman of the Environmental Studies Track in the Department of Geography, Bar Ilan University

#### **(b) Professional functions outside universities/institutions (inter-university, national, international)**

2012-2014 Chairwoman of the Israel Society of Ecology and Environmental Sciences  
 2010-2012 Vice-chairwoman of the Israel Society of Ecology and Environmental Sciences  
 Member, the national steering committee for designing the national plan for monitoring the biodiversity in Israel (appointed by the Israel LTER and the Israel Ministry of Environmental Protection)  
 2007-Present Principal scientist of Nizzanim ILTER (International Long Term Ecosystem Research) site  
 2007-Present Academic representative in the steering committee for Nature and Parks Conservation and Planning (appointed by the Israel Ministry of Environmental Protection)

- 2007-2009 Vice-President of the Israeli Geographical Association  
 2006-Present Member of the steering committee for planning, managing and conserving the LTER Nizzanim Nature Reserve (appointed by the Israel Ministry for the Environment)  
 1995-1998 Member of the Israeli Ecological Fund Committee  
 1989-1993 Member of the Carmel Fund Committee

### **Reviewer of research proposals**

GIF: German – Israeli Foundation  
 IALC: International Arid Lands Consortium  
 IME: Israel Ministry of Environment  
 ISF: Israel Science Foundation  
 NSF: US National Science Foundation

### **(c) Significant professional consulting**

- 2014 Ecological consultant for sand dune stabilization, forest management and forest fires - Qinghai Forestry Department, China  
 2000-2007 Ecological consultant for prescribed fires and management, and invasive plants management - Keren Kayemet LeIsrael / Jewish National Fund; Nature and Parks Authority  
 1997-1998 Ecological consultants - National Parks Authority  
 1995-Present Ecological consultant for dune ecosystems management and restoration, and invasive plant management - Nature and Parks Authority  
 1992 Scientific consultant for “Vegetation and Plants,” units 2-3, 91 pp. The Everyman's University of Israel

### **(d) Editor or member of editorial board of scientific or professional journal**

- 2009-Present "Ecology and Environment" (Hebrew), membership on editorial board  
 2009- 2012 "Nature of Things – Man and his Environment" (Hebrew), membership on editorial board

### **(e) Ad-hock reviewer of journals**

*Biological Conservation*  
*BioRisk*  
*Catena*  
*Ecology and Environment*  
*Ecoscience*  
*Environmental Management*  
*Forest Ecology and Management*  
*Geografiska Annaler*  
*Horizons in Geography*  
*Israel Journal of Plant Sciences*  
*Journal of Herpetology*

*Journal of Vegetation Sciences*  
*Landscape and Urban Planning*  
*MAN. The Journal of the Royal Anthropological Institute*  
*Plant Ecology*  
*Plant and Soil*  
*Coastal Conservation*

**(f) Membership in professional/scientific societies**

2014 ISAR – International Society for Aeolian Research  
 2000-2008 IALE – International Association of Landscape Ecology.  
 1999-2002 CLEAR – Center for Landscape, Environment and Agricultural Research  
 1994-2002 Israel Association for Canadian Studies.  
 1991- 1992 ESSC, European Society for Soil Conservation.  
 1988- Present Israel Society of Ecology & Environment Sciences.  
 1987- 1989 Israel Society of Soil Sciences.  
 1985-Present Israeli Geographical Association

**Educational activities**

**(a) Courses taught**

Selected by the Dean of Students as the Department of Geography's best instructor (Category A) for the academic year 1997-1998. Bar Ilan University.

Selected by the Dean of Students as Faculty of Social and Humanities best instructor (Category A) for the academic year 2002-2003. Ben-Gurion University of the Negev.

Introduction to Environmental Quality	BGU	lecture	B.A.
Ecology for Geographers	BGU	lecture	B.A.
Biogeography	BGU	lecture	B.A.
Ecological Applications in Geography	BGU	seminar	B.A.
Urban Ecology & Environment	BGU	campus	M.A. & Ph.D.
Geo-Ecology of coastal sand dunes	BGU	campus	M.A. & Ph.D.
Sand Dune Ecosystems	BGU	lecture	M.A. & Ph.D.
Urban Ecosystems	BGU	campus	M.A. & Ph.D.
Conservation & Management of Open Spaces	BGU	lecture	M.A. & Ph.D.
Computer Environmental Modeling	Bar-Ilan	lecture	M.A. & Ph.D.
Sustainable Eco-tourism	Bar-Ilan	lecture	M.A. & Ph.D.

**(b) Research students**

**Post-doctoral fellows**

Dr. Shunli Yu 1998-1999

Dr. Katz Ofir 2014

**Ph.D.** (completed)

1998	Goldshlanger Naphtaly	Department of Geography, Bar Ilan University, (Shoshany M., co-advisor)
2005	Shachanovit-Pirtel Yonit	Department of Geography and Environmental Development, Ben-Gurion University of the Negev, (Berliner P., Principal advisor)
2007	Cohen Oded	Department of Geography and Environmental Development, Ben-Gurion University of the Negev, (Riov Y., co-advisor)
2010	Segev Mehira	Department of Geography and Environmental Development, Ben-Gurion University of the Negev. (Becker N., co-advisor)
2014	Katz Ofir	Department of Geography and Environmental Development, Ben-Gurion University of the Negev. (Lev-Yadun S., co-advisor)
2014	Perry Meirav	Department of Geography and Environmental Development, Ben-Gurion University of the Negev. (Avriel-Avni, N. & Shachak M., co-advisor)
2019	Bird Tania	Department of Geography and Environmental Development, Ben-Gurion University of the Negev (Bouskila, A. and Gruner, E., co-advisor)
2020	Lehrer David	Department of Geography and Environmental Development, Ben-Gurion University of the Negev (Becker N., co-advisor)

**MA / M.Sc.** (completed)

1989	Gertner Yaron	M.A. Department of Geography, University of Haifa
1989	Keren Margalit	M.Sc. Faculty of Agricultural Engineering, Technion
1991	Carmon Ester	M.Sc. Faculty of Agricultural Engineering, Technion
1994	Hamadi Zeorit	M.Sc. Department of Life Sciences, Bar Ilan University (Steinberger Y., co-advisor)
1995	Akerman Oren	M.A. Department of Geography, Bar Ilan University (Lavee H., co-advisor)
1999	Sharon Haya	M.A. Department of Geography, Bar Ilan University
1999	Ashbel Julia	M.Sc. Department of Life Sciences, Bar Ilan University
1999	Eden Zohar	M.A. Department of Geography, Bar Ilan University

2000	Harrison Rachel	M.A.	Department of Geography, Bar Ilan University
2001	Kaufman Anat	M.A.	Department of Geography, Bar Ilan University
2001	Hadar Hedva	M.A.	Department of Geography, Bar Ilan University
2002	Maor Mor	M.A.	Department of Geography, Bar Ilan University
2002	Cohen Oded	M.A.	Department of Geography, Bar Ilan University
2002	Bismuth Mazal	M.A.	Department of Geography, Bar Ilan University
2002	Lichtman-Ido Orna	M.A.	Department of Geography, Bar Ilan University
2004	Doron Eran	M.A.	Department of Geography and Environmental Development, Ben-Gurion University of the Negev
2004	Bannet Tsafra	M.A.	Department of Geography and Environmental Development, Ben-Gurion University of the Negev (Svoray T., co-advisor)
2006	Paz Adi	M.A.	Department of Geography, Bar Ilan University
2006	Giler Zohar	M.A.	Department of Geography, Bar Ilan University
2006	Mazor Shira	M.A.	Department of Geography and Environmental Development, Ben-Gurion University of the Negev (Svoray T., co-advisor)
2006	Bernstein Iris	M.A.	Department of Geography and Environmental Development, Ben-Gurion University of the Negev (Stern E., co-advisor)
2006	Glazer Hano	M.A.	Department of Geography and Environmental Development, Ben-Gurion University of the Negev
2007	Ramot Adi	M.A.	Department of Geography and Environmental Development, Ben-Gurion University of the Negev (Groner E., co-advisor)
2007	Katz Ofir	M.A.	Department of Geography and Environmental Development, Ben-Gurion University of the Negev (Gilad Y., co-advisor)
2007	Rotem Guy	M.A.	Department of Geography and Environmental Development, Ben-Gurion University of the Negev (Saltz D., co-advisor)

2008	Negoitza Daniel	M.A.	Department of Geography and Environmental Development, Ben-Gurion University of the Negev
2008	Kashi Nati	M.A.	Department of Geography and Environmental Development, Ben-Gurion University of the Negev (Bouskila A., co-advisor)
2008	Perry Meirav	M.Sc.	.School of Desert Studies, Sde-Boker, Ben-Gurion University of the Negev (Shachak M., co-advisor)
2008	Mushelion Kfir	M.A.	Department of Geography and Environmental Development, Ben-Gurion University of the Negev (Potchter O., co-advisor)
2009	Rozenbaum Dafna	M.A.	Department of Geography and Environmental Development, Ben-Gurion University of the Negev
2009	Shpirt Simon	M.A.	Department of Geography and Environmental Development, Ben-Gurion University of the Negev (Potchter O., co-advisor)
2009	Lehrer David	M.A.	School of Management, Ben-Gurion University of the Negev (Becker, N., co-advisor)
2009	Renan Ittai	M.A.	Department of Geography and Environmental Development, Ben-Gurion University of the Negev) (Freidberg A., co-advisor)
2010	Levy Shiri	M.A.	Department of Geography and Environmental Development, Ben-Gurion University of the Negev (Guterman Y., co-advisor)
2010	Paz Tarin	M.A.	Department of Geography and Environmental Development, Ben-Gurion University of the Negev (Meir A. and Garb Y., co-advisors)
2010	Rubinstein Yonatan	M.A.	Department of Geography and Environmental Development, Ben-Gurion University of the Negev (Svoray T., co-advisor)
2011	Averbouch Achikam	M.A.	Department of Geography and Environmental Development, Ben-Gurion University of the Negev (Groner E., co-advisor)
2011	Yaakov Ella	M.A.	Department of Geography and Environmental Development, Ben-Gurion University of the Negev (Asraf Ben-Zvi O., principal advisor)
2011	Arnon Ofer	M.Sc.	School of Desert Studies, Sde-Boker, Ben-Gurion University of the Negev (Orenstein D., co-advisor)

2012	Ziso Vered	M.A. Department of Geography and Environmental Development, Ben-Gurion University of the Negev (Katra I., co-advisor)
2013	Carmi Anat	M.A. Department of Geography and Environmental Development, Ben-Gurion University of the Negev
2013	Boneh Daniel	M.A. Department of Geography and Environmental Development, Ben-Gurion University of the Negev (Erell E., principal advisor)
2014	Manor Irit	M.A. Department of Geography and Environmental Development, Ben-Gurion University of the Negev (Baker N., co-advisor)
2016	Itai Devinsky	M.A. Department of Geography and Environmental Development, Ben-Gurion University of the Negev (Baker N., co-advisor)
2019	Herooty Yair	M.A. Department of Geography and Environmental Development, Ben-Gurion University of the Negev (Hezi Y., co-advisor)
2019	Itay Keren	Department of Geography and Environmental Development, Ben-Gurion University of the Negev (Malkinson D., co-advisor)

### **Awards, honors & research fellowships**

1978	Pinhas Sapir Scholarships and Research Grants
1983	Scholarship, the Israeli Academic Women Union
1984	The Miriam and Aaron Gutwirth Scholarship Award and the Henry Gutwirth Research Grant
1985	The Lady Davis Fellowship Grant for post-doctorate in the Faculty of Agricultural Engineering, Technion - Institute of Technology, Haifa
1985-1986	The Henry Gutwirth Fund for the Promotion of Research
1997	Henry Ford European Conservation National Award

### **Scientific publications**

#### **(a) Editorship of collective volumes**

1. **Kutiel P.** 1998. Park-Hasharon. Special issue of *Ecology and Environment*. 51 p. (Hebrew).
2. **Kutiel P.** 2000. Park-Hasharon – Preservation of Natural Resources, Landscape and Heritage. 2000. Eretz – Geographic Research & Publications, Tel Aviv University. 108 p. (Hebrew).

Guest Editor



1. 1992 *Horizons in Geography* journal. Special issue on: Forest Fires, 35-36, 120 p (Hebrew, with English abstracts), Department of Geography, University of Haifa
2. 2012 *Ecology and Environment* journal. Special issue on: The Negev, 3 (1), 122 p (Hebrew). The Israeli Society for Ecology and Environmental Sciences
3. 2012 *GRF* (Geographic Research Forum) Journal. Special issue on: Man - Environment Interface, 32, 2012 (December 2012)
4. 2017 Israel Journal of Plant Sciences Vol 64 (1-2). Special issue in memory of Prof. Avinoam Danin (Published online: 30 March 2017)  
<http://booksandjournals.brillonline.com/content/journals/22238980>

**(b) Refereed chapters in collective volumes and Conference proceedings**

1. **Kutiel, P.** 1979. Vegetation of the sandy soils near Caesarea. Israel Guide - Sharon, Southern Coastal Plain and Northern Negev: Keter Publishing House and Ministry of Defense Publication, pp. 42-44 (Hebrew).
2. **Kutiel, P.** and Naveh, Z. 1988. Fire impact on soil and vegetation of Aleppo pine (*Pinus halepensis* Mill.) forests on Mt. Carmel. In: Proceedings of the Carmel Research Conference. June 1988. Haifa, Israel. The Institute of Haifa and Galilee Research, pp. 26-30 (Hebrew).
3. Naveh, Z. and **Kutiel, P.** 1990. Changes in vegetation of the Mediterranean Basin in response to human habitation. In: The Earth in Transition. Patterns and Processes of Biotic Impoverishment. Ed. G. Woodwell. Cambridge Press, pp. 259-300.
4. **Kutiel, P.**, Naveh Z. and Kutiel, H., 1990. The effect of a wildfire on soil nutrients and vegetation in an Aleppo pine forest, on Mount Carmel, Israel. In: Fire in Ecosystem Dynamics. Mediterranean and Northern Perspectives. Ed. J.G. Goldammer and M.J. Jenkins. SPB Academic Publishing, pp. 85-94.
5. **Kutiel, P.** and Shaviv, A. 1990. Effects of soil types, plant composition and leaching on soil nutrients following a simulated forest fire. Proceedings of the International Conference on Forest Fire Research, November 1990. Coimbra, Portugal. Section C.03, pp. 1-12.
6. Inbar, M. and **Kutiel, P.** 1991. Forest fires and their impact on erosion, soil and vegetation. In: Proceedings of the annual meeting of the Israel Geological Society. April 1991. Akko, Israel, pp. 7-16 (Hebrew).

7. Zohar, Y., Midani, E., **Kutiel, P.** and Israeli, A. 1992. Prescribed burning as a tool in forest management in Israel. In: Proceedings of the 5th International Conference of the Israel Society for Ecology & Environmental Quality Sciences, Israel, on Environmental Quality and Ecosystem Stability. June 1992 Jerusalem, Israel, pp. 779-787.
8. Grossman, D., Shoshany, M. and **Kutiel, P.** 1993. Landscape changes in the Carmel ridge in the modern era processes and methodology. In: Neils D. (ed.), Proceedings of the Commission on Changing Rural Systems. International Geographical Congress. Printed by Kansas State University, pp. 170-180.
9. Shoshany, M., **Kutiel, P.**, Lavee, H., 1994. Vegetation cover study in Judean Mountains and Judean Desert in the years 1991 and 1992 using satellites data. In: Y. Eshel and Z. Erlich. (eds.), Judean and Samaria Research Institute, Kedumim Ariel. Eretz publication, pp. 572-572 (Hebrew with English abstract).
10. **Kutiel, P.** 1994. Temporal and spatial heterogeneity of species diversity in a Mediterranean ecosystem as affected by fire. In: Proceedings of the 2nd International Conference on Forest Fire Research. November 1994. Coimbra Portugal. Vol. 2, section D-12, pp. 911-921.
11. **Kutiel, P.** and Lavee, H., 1995. Vegetation dynamics along a Mediterranean-Arid transect. In: Lavee, H. (ed.), and a Guide to Judean Desert Climatologically Gradient Excursion. International conference on Geomorphic Response of Mediterranean and Arid Areas to Climate Change. Israel, May 13-22, 1995. IGU Commission on Geomorphic Response to Environmental Change, pp. 38-41.
12. Shoshany, M., Lavee, H., **Kutiel, P.**, Rozenshtok, A. and Gollan, N., 1996. A study of cloud cover patterns along the climatic gradient of the Judean desert. In: Eshel, Y. and Erlich, Z. (eds.), Judean and Samaria Research Institute, Kedumim Ariel. Eretz publication, pp. 311-316 (Hebrew with English abstract).
13. **Kutiel, P.**, Kutiel, H., Lavee, H. and Shoshany, M., 1996. Vegetation response to possible climatic changes in the Judean region. In: Y. Eshel and Z. Erlich. (eds.), Judean and Samaria Research Institute, Kedumim Ariel. Eretz publication, pp. 299-308 (Hebrew with English abstract).
14. **Kutiel, P.**, 1996. Vegetation response in Mediterranean and arid regions to possible climate changes. In: Grdus Y. & Lipshitz G. (eds.), "The Mosaic of Israeli Geography". Ben-Gurion University of Negev Press, pp. 427-434.
15. **Kutiel, P.**, Lavee, H. and Akermann, O. 1997. Soil surface coverage on north and south facing hillslopes in Judean. In: Eshel Y. and Erlich Z. (eds.), Judean

- and Samaria Research Institute, Kedumim Ariel. Eretz publication, pp. 365-378 (Hebrew with English abstract).
16. Akermann, O., Lavee, H. and **Kutiel, P.** 1997. Spatial distribution of biogenic crusts and its effect on infiltration and overland flow along a climatological gradient of Judean desert. In: Eshel Y. and Erlich Z. (eds.), Judean and Samaria Research Institute, Kedumim Ariel. Eretz publication, pp. 353-364 (Hebrew with English abstract).
  17. **Kutiel, P.** 1999. To preserve the remainder- recommendations for ecological coastal system preservation along the Israeli Mediterranean coast. In: Sivan, D. and Kutiel, H. (eds.), Proceedings on Mare Nostrum – Physical, Social and Cultural aspects in the Mediterranean region. June 1999, Haifa University, pp. 154-157.
  18. **Kutiel, P.** 2000. Annual plants distribution and properties in a terrace site in Judean Mountains. In: Eshel, Y. (ed.), Judean and Samaria Research Institute, Kedumim Ariel. Eretz publication, pp. 371-381 (Hebrew with English abstract).
  19. Kauffman, A., **Kutiel, P.** and Lavee, H. 2000. Soil and vegetation on north and south facing hillslopes along a Mediterranean – extreme arid climatic transect. In: Eshel, Y. (ed.), Judean and Samaria Research Institute, Kedumim Ariel. Eretz publication, pp. 309-327 (Hebrew with English abstract).
  20. **Kutiel, P.** 2000. Plant composition and plant species diversity in *Pinus halepensis* Mill. forests. In: Ne'eman, G. & Trabaud, L. (eds.), Ecology, Biogeography and Management of *Pinus halepensis* and *P. brutia* forests in the Mediterranean basin. Backhuys Publishers, Leiden, pp. 143-152 (appears at ISI; 8 citations)
  21. Lichtman-Ido, O., **Kutiel, P.** and Zhevelev, H. 2002. Spatial distribution of heavy metal pollution in soil and vegetation in Jerusalem. In: Eshel, Y. (ed.), Judean and Samaria Research Institute, Kedumim Ariel. Eretz Publ., pp. 359-374 (Hebrew with English abstract).
  22. Lichtman-Ido, O., **Kutiel, P.**, Zhevelev, H. and Halamsky, S. 2003. Spatial distribution of heavy metals (Pb, Zn, Cu, Ni and Cd) in private and public gardens in Jerusalem. In: Eshel, Y. (ed.), Judean and Samaria Research Institute, Kedumim Ariel. Eretz Publ., pp. 391-404 (Hebrew with English abstract).
  23. Negoitza, D. and **Bar (Kutiel), P.** 2004. "Islands in the sea of wheat" – the impact of fragmentation on vegetation in arable land in Southern Shefela, Israel. In: Eshel, Y. (ed.), Judean and Samaria Research Institute, Kedumim Ariel. Eretz Publ., 13: 429-440 (Hebrew with English abstract).

24. Svoray, T., **Bar (Kutiel), P.**, Banet, T. 2004. Sustainable planning of Ma'ale-Adumim based on ecological and environmental aspects: a synergy of multi-criteria analysis and GIS. In: Eshel, Y. (ed.), Judean and Samaria Research Institute, Kedumim Ariel. Eretz Publ., 13: 403-416 (Hebrew with English abstract).
25. **Bar (Kutiel), P.** 2004. Landscape changes along the coastal sand dunes in Israel – Dilemmas and challenges for conservation and management objectives. In: Arianoutsou, M. and Papanastasis V.P. (eds.), Ecology, Conservation and Management of Mediterranean Climate Ecosystems. Proceeding of the 10<sup>th</sup> international conference on Mediterranean Climate Ecosystems, April, 25-May 1, 2004, Rhodes Greece, 9 pp.
26. **Bar (Kutiel), P.**, Negoitza, D., Mazor, S. and Svoray, T. 2004. Plant composition and diversity in fragmented natural patches within arable land, Israel. In: Arianoutsou, M. and Papanastasis V.P. (eds.), Ecology, Conservation and Management of Mediterranean Climate Ecosystems. Proceeding of the 10<sup>th</sup> international conference on Mediterranean Climate Ecosystems, April, 25-May 1, 2004, Rhodes Greece, 7 pp.
27. Cohen, O. and **Bar (Kutiel), P.** 2004. The invasion rate of *Acacia saligna* and its impact on protected Mediterranean coastal habitat. In: Arianoutsou, M. and Papanastasis V.P. (eds.), Ecology, Conservation and Management of Mediterranean Climate Ecosystems. Proceeding of the 10<sup>th</sup> international conference on Mediterranean Climate Ecosystems, April, 25-May 1, 2004, Rhodes Greece, 10 pp.
28. Cohen, O., **Bar (Kutiel), P.**, Katan, J., Riov, J. and Gamliel, A. 2004. Soil solarization as a method for reducing viability of invasive seed bank – the case of *Acacia saligna*. In: Arianoutsou, M. and Papanastasis V.P. (eds.), Ecology, Conservation and Management of Mediterranean Climate Ecosystems. Proceeding of the 10<sup>th</sup> international conference on Mediterranean Climate Ecosystems, April, 25-May 1, 2004, Rhodes Greece, 6 pp.
29. Negoitza, D. and **Bar (Kutiel), P.** 2004. “The edge impact” – causes and processes in arable land, Israel. In: Arianoutsou, M. and Papanastasis V.P. (eds.), Ecology, Conservation and Management of Mediterranean Climate Ecosystems. Proceeding of the 10<sup>th</sup> international conference on Mediterranean Climate Ecosystems, April, 25-May 1, 2004, Rhodes Greece, 8 pp.
30. Mazor, S., Svoray, T. and **Bar (Kutiel), P.** 2004. Modeling variations in patch plant composition and habitat heterogeneity using aerial photography and GIS. In: Arianoutsou, M. and Papanastasis V.P. (eds.), Ecology, Conservation and Management of Mediterranean Climate Ecosystems. Proceeding of the 10<sup>th</sup>

international conference on Mediterranean Climate Ecosystems, April, 25-May 1, 2004, Rhodes Greece, 8 pp.

31. **Bar (Kutiel), P.** 2004. Landscape changes in the Israeli Mediterranean region: ecological implications and management tools. In: Maoz, J.O., Inbar, M. and Shmueli D.F. (eds.), *Contemporary Israeli Geography, special Issue of Horizon in Geography*, Vol. 60-61. Department of Geography and Environmental Studies, University of Haifa, Israel, pp. 203-214.
32. Shoshany, M., Goldshlager, N., **Bar (Kutiel), P.**, and Grossman, D., 2004, Man–Landscape Relationships in Mediterranean Areas: A Study of Landscape Changes in the Mount Carmel. In: *Recent Dynamics of Mediterranean Vegetation and Landscape*. In: Mazzoleni, S., di Pasquale, G., de Martiono, P., Mulligan, M., and Rego, F. (eds.), John Wiley & Sons, Ltd, London. Chapter 9, pp. 95-104 (2<sup>nd</sup> Edition 2005).
33. Negoitza, D. and **Bar (Kutiel), P.** 2005. "Edge effect" – causes and processes in arable lands in the Southern Judea plain. In: Eshel, Y. (ed.), *Judean and Samaria Research Institute, Kedumim Ariel. Eretz Publ.*, 14: 417-430 (Hebrew with English abstract).
34. Gleizer, H., **Bar (Kutiel), P.**, Bahat, O., Groner, E. and Ovadia, O. 2005. The Effect of habitat productivity and structure on bird spatial distribution in an airfield located in a semi-arid region. *International Bird Strike Committee, IBSC27/WP III-2, Athens, 23-27 May, 2005*, pp. 1-4.
35. Negoitza, D., Ramot, A. and **Bar (Kutiel), P.** 2006. Wadis as ecological corridors in the Southern Judea plain. In: Eshel, Y. (ed.), *Judean and Samaria Research Institute, Kedumim Ariel. Eretz Publication*, 15: 373-385 (Hebrew with English abstract).
36. Potchter, O., Holst, J., Shashua-Bar, L., Cohen, S., Yaakov, Y., Tanny, J., **Bar (Kutiel), P.** and Mayer, P.H. 2010. Comparative study of trees impact on human thermal comfort in urban streets under hot-arid and temperate climates. In: Matzarakis, A., Mayer, H. and Chmielewski F.M. (eds.), *Proceeding of 7<sup>th</sup> Conference on Biometeorology, the Meteorological Institute, Albert-Ludwigs-University of Freiburg, Freiburg, Germany, 12-14 of April, 2010*, pp. 467-472.
37. Shashua-Bar, L., Cohen, S., Potchter, O., Yaakov, Tanny, Y.J. and **Bar (Kutiel), P.** 2010. The use of street trees for heat mitigation in hot and arid regions. Case study: Beer Sheva, Israel. In: Matzarakis, A., Mayer, H. and Chmielewski F.M. (eds.), *Proceeding of 7<sup>th</sup> Conference on Biometeorology, the Meteorological Institute, Albert-Ludwigs-University of Freiburg, Freiburg, Germany, 12-14 of April, 2010*, pp. 461-466.

38. Potchter, O., Shashua-Bar, L., Cohen, S., Yaakov, Y., Tanny, J., **Bar-(Kutiel), P.**, 2011. The use of urban vegetation as a tool for heat stress mitigation in hot and arid zone, the case of Beer Sheva, Israel. In: Hebbert, M., Jankovic, V. and Webb, B. (eds.), *City weather: Meteorology and urban design 1950-2010*, Manchester Architecture Research Centre, University of Manchester, UK, pp. 85-90
39. **Bar (Kutiel), P.** 2013. Restoration of coastal sand dunes for conservation of biodiversity – the Israeli experience. In: Martínez, M.L., Gallego-Fernández J.B. and Hesp, P.A. (eds.), *Restoration of Coastal Dunes*, Springer Series on Environmental Management, pp. 173-186.
40. Lehrer, D., Becker, N. and **Bar (Kutiel), P.** 2013. The value of coastal sand dunes as a measure to plan an optimal policy for invasive plant species: the case of the *Acacia saligna* in the Nizzanim LTER coastal sand dune nature reserve, Israel. In: Martínez, M.L., Gallego-Fernández J.B. and Hesp, P.A. (eds.), *Restoration of Coastal Dunes*, Springer Series on Environmental Management, pp. 273-288.
41. Shpirt, S., Potchter, O., **Bar (Kutiel), P.** and Yaakov, Y. 2006. Micro-climate behavior in various urban parks located in a hot, arid climate zone- The case of Beer Sheva, Israel, In: *Proceedings of the 6<sup>th</sup> International Conference on Urban Climate*, Goteborg, Sweden, 12-16th of June, 2006, pp. 250-253.
42. Becker, N., Segev, M. and **Bar (Kutiel), P.** 2015. Stabilization of sand dunes: Do ecology and public perception go hand in hand? In: Chabay, I., Frick, M. and Helgeson, J. (eds.), *Land Restoration: Reclaiming Landscapes for a Sustainable Future*, Elsevier Academic Publishers. Pp 97-106.
43. Katz, O. and **Bar (Kutiel), P.** 2020. The ecology of *Artemisia monosperma* Delile: a desert keystone species in sandy ecosystems in the Middle East. In: Roe, J.M. (ed.), *Artemisia: Classification, Cultivation and Uses*, Nova Science Research, New York, pp. 1-29.

### (c) Refereed articles in scientific journals

Publications (Google Scholar)

1. **Kutiel<sup>\</sup>, P.**, Danin<sup>\</sup>, A. and Orshan<sup>\</sup>, G., 1979. Vegetation of the sandy soils near Caesarea, Israel. I. Plant communities' environment, and succession. *Israel Journal of Botany*, **28**: 20-35.
2. **Kutiel<sup>\</sup>, P.** and Noy-Meir<sup>\</sup>, I., 1986. The effect of soil depth on annual grasses in the Judean Hills. I. The effect of soil depth on pure plant species populations. *Israel Journal of Botany*, **35**: 233-239.

3. **Kutiel, P.** and Naveh, Z., 1987. The effect of fire on nutrients in a pine forest soil. *Plant and Soil*, **104**: 269-274.
4. **Kutiel, P.** and Danin, A., 1987. Annual species diversity and above-ground phytomass in relation to some soil properties in a sandy area in the northern Sharon plains. *Plant Ecology*, **70**: 45-49.
5. **Kutiel, P.** and Naveh, Z., 1987. Soil properties beneath *Pinus halepensis* and *Quercus calliprinos* trees on burned and unburned mixed forest on Mt. Carmel, Israel. *Forest Ecology and Management*, **20**: 11-24.
6. **Kutiel, P.** and Kutiel, H., 1989. The effect of wildfire on soil nutrients and vegetation in an Aleppo pine forest, on Mount Carmel, Israel. *Pirineos*, **134**: 59-74.
7. **Kutiel, P.** and Shaviv, A., 1989. Effect of simulated forest fire on the availability of N and P in Mediterranean soils. *Plant and Soil*, **120**: 57-63.
8. Kutiel, H. and **Kutiel, P.** 1991. The distribution of autumnal easterly wind spells favoring rapid spread of forest wildfires on Mount Carmel, Israel. *GeoJournal*, **23**: 147-152.
9. **Kutiel, P.** and Shaviv, A. 1992. Effects of soil types, plant composition and leaching on soil nutrients following a simulated forest fire. *Forest Ecology and Management*, **53**: 329-343.
10. **Kutiel, P.** 1992. Slope aspect effect on soil and vegetation in a Mediterranean ecosystem. *Israel Journal of Botany*, **41**: 243-250.
11. Bolca, M., Holdgate, M.W., Charlier, R.H., de Mayer, C.P., Charlier, R.H., Charlier, C.P., **Kutiel, P.**, Cohen, O., Shoshan, M., Shub, M., Turk, T., Analyst, I., Erinc, S., Van der Meulen, F., Salman, A.H.P.M., Nordstrom, K.F., Lotstein, E.L., Hackney, C.T., Cleary, W.J., Boumans, R.M.J., Day Jr, J.W., Reed, D.J., Foote, A.L., Nyman, J.A., Delaune, R.D., Roberts, H.H. and Patrick Jr, W.H. Relationship 1993. Relationship between vegetation and soil formation in a rapidly submerging coastal salt marsh. *Journal of Applied Sciences*, **5**: 481-482.
12. **Kutiel, P.** and Inbar, M. 1993. Fire impacts on soil nutrients and soil erosion in a Mediterranean pine forest plantation. *Catena*, **20**: 129-139.
13. **Kutiel, P.** 1994. Fire and ecosystem heterogeneity: A Mediterranean case study. *Earth Surface Processes and Landforms*, **19**: 187-194.

14. Shoshany, M., **Kutiel, P.**, Lavee, H. and Eichler, M. 1994. Remote sensing of vegetation cover along a climatological gradient. *Journal of Photogrammetry and Remote Sensing*, **49**: 2-10.
15. **Kutiel, P.**, Lavee, H., Segev, M. and Benyamini, Y. 1995. The effect of fire-induced surface heterogeneity on rainfall-runoff-erosion relationships in eastern Mediterranean ecosystem, Israel. *Catena*, **25**: 77-87.
16. **Kutiel, P.**, Lavee, H. and Shoshany, M. 1995. Influence of climatic gradient upon vegetation dynamics along a Mediterranean - arid transect. *Journal of Biogeography*, **22**: 1065-1071.
17. Lavee, H., **Kutiel, P.**, Benyamini, Y. and Segev, M. 1995. Effect of surface roughness on runoff and erosion in a Mediterranean ecosystem. The role of fire. *Geomorphology*, **11**: 227-234.
18. Shoshany, M., Lavee, H. and **Kutiel, P.** 1995. Seasonal vegetation cover changes as indicators of soil types along a climatological gradient: a mutual study of environmental patterns and controls using remote sensing. *International Journal of Remote Sensing*, **16**: 2137-2151.
19. **Kutiel, P.** 1996. Spatial and temporal heterogeneity of species richness and species diversity in a Mediterranean ecosystem following fire. *Ecology and Environment*, **3**: 61-68 (Hebrew with English abstract).
20. **Kutiel, P.** and Sharon, H. 1996. Landscape changes in the last 50 years in the area of HaSharon Park, Israel. *Ecology and Environment*, **3**: 167-176 (Hebrew with English abstract).
21. **Kutiel, P.**, Dangor, H., Mozes, H. and Levi, S. 1996. The role of biogenic crusts in vegetation succession processes of the Sharon sand dunes. *Ecology and Environment*, **3**: 177-183 (Hebrew with English abstract).
22. Lavee, H., **Kutiel, P.**, Segev, M. and Benyamini, Y. 1996. Effects of fire on the spatial pattern of surface runoff and erosion. *Ecology and Environment*, **3**: 35-42 (Hebrew with English abstract).
23. Shoshany, M., **Kutiel, P.** and Lavee, H. 1996. Monitoring temporal vegetation cover changes in Mediterranean and arid ecosystems using remote sensing techniques: Case study of the Judean Mountain and Judean Desert. *Journal of Arid Environments*, **33**: 9-21.
24. **Kutiel, P.** 1997. The annual vegetation of sand dunes in the northern Sharon. *Ecology and Environment*, **4**: 25-34 (Hebrew with English abstract).



25. **Kutiel, P.**, Shahar<sup>S</sup>, Z., Paryente<sup>S</sup>, R. and Jaimes<sup>S</sup>, E. 1997. Management in a sandy nature reserve - an experiment for conservation of *Gerbillus andersoni allenbyi*. *Ecology and Environment*, **4**: 35-40 (Hebrew with English abstract).
26. Dan, Y. and **Kutiel, P.** 1997. Landscapes and soils in the area of HaSharon Park. *Ecology and Environment*, **4**: 87-94 (Hebrew with English abstract).
27. **Kutiel, P.** 1997. Spatial and temporal heterogeneity of species diversity in a Mediterranean ecosystem following fire. *International Journal of Wildland Fire*, **7**: 307-315.
28. **Kutiel, P.** and Lavee, H. 1998. Effects of slope aspect on soil and vegetation along an extremely arid-Mediterranean climatic transect *Ecology and Environment*, **5**: 25-33 (Hebrew with English abstract).
29. **Kutiel, P.**, Galili, U., Katz, E. and Epshtein, S. 1998. Visitor impact on trail vegetation cover. *Ecology and Environment*, **4**: 227-233 (Hebrew with English abstract).
30. **Kutiel, P.** 1998. Possible role of biogenic crusts in plant succession on the Sharon sand dunes, Israel. *Israel Journal of Plant Sciences*, **46**: 279-286.
31. **Kutiel, P.** 1998. Annual vegetation of the coastal sand dunes, Israel. *Israel Journal of Plant Sciences*, **46**: 287-298.
32. **Kutiel, P.**, Lavee, H. and Akermann, O. 1998. Spatial distribution of soil surface coverage on north and south facing hillslopes along a Mediterranean to extreme arid climatic gradient. *Geomorphology*, **23**: 245-256.
33. Hadar, H. and **Kutiel, P.** 1999. Local and spatial impacts of pedestrian and off-road vehicles on ecosystems – a review. *Ecology and Environment*, **5**: 238-243 (Hebrew with English abstract).
34. **Kutiel, P.**, Guler, A., Gur, V. and Kaufman, A. 1999. Tendencies in the development of tracks in open areas. *Horizons in Geography*, **50**: 19-26 (Hebrew with English abstract).
35. **Kutiel, P.** 1999. Tendencies in the development of tracks in open areas. *Environmental Management*, **23**: 401-408.
36. **Kutiel, P.** and H. 1999. Effect of slope aspect effects on soil and vegetation along a Mediterranean-extreme arid climatic transect. *Israel Journal of Plant Sciences*, **47**: 169-178.

37. **Kutiel, P.**, Zhevelev, H. and Harrison, R. 1999. The effect of recreational impacts on soil and vegetation of stabilized coastal dunes in the Sharon Park, Israel. *Ocean & Coastal Management*, **42**: 1041-1060.
38. **Kutiel, P.** and Geffen, E. 1999. Coastal dune ecosystems: management for conservation objective: I. The impact of woody vegetation removal on annual plants. *Journal of Mediterranean Ecology*, **1**: 101-108.
39. **Kutiel, P.**, 2000. The impact of pedestrian and vehicle traffic on soil and vegetation of sandy habitat. *Horizons in Geography*, **52**: 71-88 (Hebrew with English abstract).
40. **Kutiel, P.** 2000. Conservation and management of open spaces along the Mediterranean coastal sand dunes in Israel. *Ecology and Environment*, **6**: 91-96 (Hebrew with English abstract).
41. **Kutiel, P.**, Kutiel, H., and Lavee, H. 2000. Vegetation response to possible scenarios of rainfall variations along a Mediterranean - extreme arid climatic transect. *Journal of Arid Environments*, **44**: 277-290.
42. **Kutiel, P.**, Peled, Y. and Geffen, E. 2000. The effect of removing shrub cover on annual plants and small mammals in a coastal sand dune ecosystem. *Biological Conservation*, **94**: 235-242.
43. **Kutiel, P.**, Zhevelev, Y. and Eden, Z. 2000. Effect of experimental trampling and off-road motorcycle traffic on soil and vegetation of stabilized coastal dunes, Israel *Environmental Conservation*, **27**: 14-23.
44. **Kutiel, P.**, Zhevelev, Y. and Harrison, R. 2000. Coastal dune ecosystems: management for conservation objective: II. The effect of recreational use on annual plants. *Journal of Mediterranean Ecology*, **1**: 155-163.
45. **Kutiel, P.**, Zhevelev, Y. and Harrison, R. 2000. Coastal dune ecosystems: management for conservation objective: III. Soil response to three vegetation types to recreational use. *Journal of Mediterranean Ecology*, **1**: 171-179.
46. Hamadi, Z., Steinberger, Y., **Kutiel, P.**, Lavee, H., and Baraness, G. 2000. Decomposition of *Avena sterilis* litter under arid conditions. *Journal of Arid Environments*, **46**: 281-293.
47. Tzvikel, S., **Kutiel, P.** and Zhevelev, Y. 2001. Recreational impact on soil properties in Ramat Hanadiv. *Ecology and Environment*, **6**: 273-284 (Hebrew with English abstract).

48. **Kutiel, P.** and Zhevelev, Y. 2001. Recreational use impact on soil and vegetation in picnic sites in Aleppo pine forests on Mt. Carmel, Israel. *Israel Journal of Plant Sciences*, **49**: 49-56.
49. **Kutiel, P.**, Eden, Z. and Zhevelev, Y. 2001. The impact of motorcycle traffic on soil and vegetation of stabilized coastal dunes, Israel. *Journal of Coastal Conservation*, **7**: 81-90.
50. **Kutiel, P.** 2001. Conservation and management of the Mediterranean coastal sand dunes in Israel. *Journal of Coastal Conservation*, **7**: 183-192.
51. Cohen, O., **Kutiel, P.**, Shoshany, M. and Shuv, M. 2002. The invasion rate of the alien species *Acacia saligna* within Nitzanim coastal sand dune, Israel. *Horizons in Geography*, **55**: 79-96 (Hebrew with English abstract).
52. Cohen, O., **Kutiel, P.**, Shoshany, M. and Shuv, M. 2003. Landscape changes in the southern coastal dunes of Israel between the years 1965-1999. *Horizons in Geography*, **56**: 46-61 (Hebrew with English abstract).
53. Yu, S.L., Sternberg M., Jiang, G.M. and **Kutiel, P.** 2003. Heterogeneity in soil seed banks in a Mediterranean coastal sand dune. *Acta Botanica Sinica*, **45**: 536-543.
54. **Kutiel, P.**, Cohen, O., Shoshany, M. and Shub, M. 2004. Vegetation establishment on the southern Israeli coastal sand dunes between the years 1965-1999. *Landscape and Urban Planning*, **67**: 141-156.
55. **Bar (Kutiel) P.**, Cohen, O. and Shoshany, M. 2004 Invasion rate of the alien species *Acacia saligna* within the coastal sand dune habitats in Israel. *Israel Journal of Plant Sciences*, **52**: 115-124.
56. Sternberg, M., Yu, S.L. and **Bar (Kutiel), P.** 2004. Soil seed bank, habitat heterogeneity and regeneration strategies in a Mediterranean coastal sand dune. *Israel Journal of Plant Sciences*, **52**: 213-221.
57. **Bar (Kutiel), P.** 2005. Invasive plants in Israel. *Agamit*, **172**: 18-21 (Hebrew).
58. **Bar (Kutiel), P.** 2005. Invasive plants and animals in Israel. *National Geographic (the Hebrew version)*, **90**: 62-63.
59. Cohen, O. and **Bar (Kutiel), P.** 2005. Effect of invasive alien plant – *Acacia saligna* – on natural vegetation of coastal sand ecosystems. *Forests*, **7**: 11-17 (Hebrew with English abstract).

60. S., Svoray, T. and **Bar (Kutiel), P.** 2005. Modeling dwarf-shrub cover in fragmented natural patches in the Northern Negev using aerial photography and GIS. *Forests*, **7**: 25-34 (Hebrew with English abstract).
61. Svoray, T., **Bar (Kutiel), P.** and Bannet, T. 2005. Urban land-use allocation in a Mediterranean ecosystem: habitat heterogeneity model incorporated in a GIS using multi-criteria mechanism. *Landscape and Urban Planning*, **72**: 337-351.
62. Svoray, T., Mazor, S. and **Bar (Kutiel), P.** 2007. How is shrub cover related to soil moisture and patch geometry in fragmented landscapes of the northern Negev desert? *Landscape Ecology*, **22**: 105-116.
63. Yu<sup>PD</sup>, S.L., Sternberg, M., **Kutiel, P.** and Chen, H. 2007. Seed mass, shape and persistence in the soil seed bank of Israeli coastal sand dune flora. *Evolutionary Ecology Research*, **9**: 325-340.
64. Katz, O., Gilead, I., **Bar (Kutiel), P.** and Shahack-Gross, R. 2007. Chalcolithic agricultural life at Grar, northern Negev, Israel: Dry farmed cereals and dung fueled hearths. *Paléorient*, **33**: 101-116.
65. **Bar (Kutiel), P.** 2008. Expected climate changes and their impact on Mediterranean ecosystems. *Agamit*, **183**: 13-17 (Hebrew).
66. **Bar (Kutiel), P.** and Negoitza, D. 2008. The relationships between patch size and *Sarcopoterium spinosum* association properties in the Mediterranean fringe – Israel. *Israel Journal of Plant Sciences*, **55**: 93-102.
67. Shachnovich, Y., Berliner, P.R. and **Bar (Kutiel), P.** 2008. Rainfall interception and spatial distribution of throughfall in a pine forest planted in an arid zone. *Journal of Hydrology*, **349**: 168-177.
68. Yu, S.L., Bell, D., Sternberg, M. and **Kutiel, P.** 2008. The effect of microhabitat on vegetation and its relationships with seedlings and soil seed bank in a Mediterranean coastal sand dune community. *Journal of Arid Environments*, **72**: 2040-2053.
69. Cohen, O., Riov, Y., Katan, Y., Gamliel, A. and **Bar (Kutiel), P.** 2008. Reducing persistent seedbanks of invasive plants by soil solarization - the case of *Acacia saligna*. *Weed Science*, **56**: 860-865.
70. Yu, S.L., Bell, D. and **Bar (Kutiel), P.** 2009. Impact of microhabitat on heterogeneity of seedling emergence in a Mediterranean coastal dune community. *Ecoscience*, **16**: 369-378.

71. Cohen, O., Riov, Y. and **Bar (Kutiel), P.** 2010. Restoration of a wetland after invasion of *Acacia saligna*. *Ecology and Environment*, **1**: 8-9 (Hebrew).
72. Cohen, O., Riov, Y., Gamliel, A., Katan, J. and **Bar (Kutiel), P.** 2010. The impact of temperature under dry and wet conditions on the resistance of the seed bank of *Acacia saligna* in the soil. *Ecology and Environment*, **2**: 28-37 (Hebrew).
73. Renan, I., Friderberg, A. and **Bar (Kutiel), P.** 2011. The impact of sand stabilization on arthropod assemblages in the Western Negev. *Ecology and Environment*, **2**: 134-139 (Hebrew).
74. Shelly, S., Zhevelev, H., Ziso, V. and **Bar (Kutiel), P.** 2011. Spatial changes in soil properties at sand dunes – the case of Nizzanim dunes. *Ecology and Environment*, **2**: 274-286 (Hebrew).
75. Lehrer, D., Becker, N. and **Bar (Kutiel), P.** 2011. The economic impact of the invasion of *Acacia saligna* in Israel. *International Journal of Sustainable Development & World Ecology*, **18**: 118-127.
76. Rotem, G., Berger, H., King, R., **Bar (Kutiel), P.** and Zalts, D. 2011. The effect of antropogenic resources on the space-use patterns of Golden Jackals. *Journal of Wildlife Management*, **75**: 132-136.
77. Renan, I., Freidberg, A. and **Bar (Kutiel), P.** 2011. The sandy islands of West Negev. *Israel Journal of Ecology & Evolution*, **56**: 98.
78. Drori, B. and **Bar (Kutiel), P.** 2012. Recovery of the Machtesh Ramon abundant quarries – an eco-geomorphic application for restoration of arid ecosystems. *Ecology and Environment*, **3**: 8-10 (Hebrew).
79. Potchter, O., Yaakov, Y., Shashua-Bar, L., Cohen, S., Tanny, J. and **Bar (Kutiel) P.** 2012. The use of vegetation for urban heat mitigation in arid cities, the case of Beer-Sheva, Israel. *Ecology and Environment*, **3**: 33-43 (Hebrew).
80. Zhevelev, H. and **Bar (Kutiel), P.** 2012. Urban soil properties as affected by land use units and socio-economic levels – the case of the city of Tel-Aviv, Israel. *GRF*, **32**: 28-45.
81. Rubinstein, Y., Groner, E., Yizhaq, H., Svoray, T. and **Bar (Kutiel), P.** 2012. An eco-spatial index for evaluating stabilization state of sand dunes. *Aeolian Research*, **9**: 75-87.

82. Katz, O., Lev-Yadun, S., **Bar (Kutiel), P.** 2013. Plasticity and variability in the patterns of phytolith formation in *Asteraceae* species along a large rainfall gradient in Israel. *Flora*, **208**: 438-444.
83. Mor-Mussery, A., Leu, S., **Bar (Kutiel) P.** and Budovsky, A. 2014. The impact of *Messoe* sp. on soil and vegetation in northern Negev. *Ecology and Environment*, **4**: 336-349 (Hebrew).
84. Segev, M., **Bar (Kutiel), P.** and Becker, N. 2014. Eco-economic values of the coastal dunes in Israel. *Ecology and Environment*, **5**: 245-253 (Hebrew).
85. Erell, E., Pearlmutter D., Boneh, D. and **Bar (Kutiel), P.** 2014. Effect of high-albedo materials on pedestrian thermal stress in urban street canyons. *Urban Climate*, **10** (2): 367-386.
86. Katz, O., Lev-Yadun, S. and **Bar (Kutiel), P.** 2014. Do phytoliths play an antiherbivory role in southwest Asian *Asteraceae* species and to what extent? *Flora*, **209**: 349-358.
87. Becker, N., Tavor, T., Friedler, L. and **Bar (Kutiel), P.** 2015. Two stages decision process towards organic food: the case of organic tomatoes in Israel. *Agroecology and Sustainable Food Systems*, **39**: 342-361.
88. **Bar (Kutiel), P.**, Becker, N. and Segev, M. 2016. Sand dunes management: a comparative analysis of ecological versus economic valuations applied to coastal region in Israel. *Regional Environmental Change*, **16**: 941–950 <http://link.springer.com/article/10.1007/s10113-015-0808-z/fulltext.html>.
89. Katz, O., Lev-Yadun, S. and **Bar (Kutiel), P.** 2015. Plant silicon and phytolith contents as affected by water availability and herbivory: integrating laboratory experimentation and natural habitat studies. *Silicon* <http://link.springer.com/article/10.1007%2Fs12633-015-9310-y>.
90. Becker, N., Tavor, T., Friedler, L. and **Bar (Kutiel), P.** 2016. Consumers' preferences towards organic tomatoes: A combined two-stage revealed - stated approach. *Journal of International Food & Agribusiness Marketing*, DOI: 10.1080/08974438.2014.940123.
91. **Bar (Kutiel), P.**, Ziso-Cohen, V., Divinsky, I.; Katra, I. and Katz, O. 2016. Water availability potential in sand dunes and its implications for the distribution of *Artemisia monosperma*. *Catena*, **137**: 144-151.
92. Katz, O., Kam, M., Carmi, A., Degen A., Henkin, Z. **Bar (Kutiel), P.** 2016. Activity and short-term impacts of dromedary camels (*Camelus dromedarius*)

- foraging on perennial coastal sand dune vegetation. *Journal of Arid Environments*, **133**: 47-53.
93. Divinsky, I., Becker, N., **Bar (Kutiel), P.**, 2017. Ecosystem service tradeoff between grazing intensity and other services-A case study in Karei-Deshe experimental cattle range in northern Israel. *Ecosystem Services*, **24**: 16-27. <https://doi.org/10.1016/j.ecoser.2017.01.002>.
  94. **Bar (Kutiel), P.** 2017. Visitor trampling impacts on soil and vegetation: the case study of Ramat Hanadiv Park, Israel. *Israel Journal of Plant Sciences*, **64**: 145-161. <http://dx.doi.org/10.1080/07929978.2016.1267507>.
  95. Cohen , O. and **Bar (Kutiel), P.** 2017.The impact of *Acacia saligna* invasion on the indigenous vegetation in various coastal habitats in Israel and its implication for nature conservation. *Israel Journal of Plant Sciences*,**64**:111-121. <http://dx.doi.org/10.1080/07929978.2016.1275362>.
  96. Bird L.F., T., Dorman, M., Ramot, A., Bouskila, A., **Bar (Kutiel), P.**, Groner, E. 2017. Shrub encroachment effects on habitat heterogeneity and beetle diversity in a Mediterranean coastal dune system. *Land Degradation & Development* **28**: 2553–2562. doi: [10.1002/ldr.2807](https://doi.org/10.1002/ldr.2807).
  97. Divinsky, I., Becker, N., **Bar (Kutiel), P.**, 2018. Opportunity costs of alternative management options in an LTER: Application to Ramat Hanadiv, Israel. *Land Use Policy* **71**: 494-504.
  98. Katz, O., Lev-Yadun, S. and **Bar (Kutiel), P.** 2018. Plant silicon and phytolith contents as affected by water availability and herbivory: integrating laboratory experimentation and natural habitat studies. *Silicon* (DOI: [10.1007/s12633-015-9310-y](https://doi.org/10.1007/s12633-015-9310-y)).
  99. Cohen, O., Gamliel, A., Katan, J., Kurzbaum , E., Riov , J. and **Bar (Kutiel) , P.** 2018. Controlling the seed bank of the invasive plant *Acacia saligna*: comparison of the efficacy of prescribed burning, soil solarization, and their combination. *Biological Invasion*, **20**: 2875-2887. <https://doi.org/10.1007/s10530-018-1738-8>
  100. Cohen, O., **Bar (Kutiel), P.**, Gamliel, A., Katan, J. Kurzbaum, E., Weber, G., Schubert, I. and Riov, J. 2019. Rain-based soil solarization: An efficient method for reducing the persistent seed bank of invasive plants in natural ecosystems - *Acacia saligna* as a model. *Pest Management Science* <http://dx.doi.org/10.1002/ps.5306>
  101. Cohe' P., Shashua-Bar, L., Keller, R. Gil-Ad, R., Yaakov, Y., Lukyanov, V., **Bar (Kutiel), P.**, Tanny, J., Cohen, S. and Potchter, O. 2019. Urban outdoor

- thermal perception in hot arid Beer Sheva, Israel: Methodological and gender aspects. *Building and Environment*, Vol. 160  
<https://doi.org/10.1016/j.buildenv.2019.106169>
102. Lehrer, D. Becker, N. and **Bar (Kutiel), P.** 2019. The drivers behind nature conservation cost. *Land Use Policy*, 89.  
<https://doi.org/10.1016/j.landusepol.2019.104222>
103. Fairfax Bird, T.L., Bouskila, A., Groner, E. and **Bar (Kutiel), P.** 2020. Can vegetation removal successfully restore coastal dune biodiversity? *Applied Sciences*, 10, 2310. <https://doi:10.3390/app10072310>
104. Herooty' Y., **Bar (Kutiel), P.**, Yizhaq, H. and Katz, O. 2020. Impact of various soil hydraulic properties and water source-sink relations on plant rings' formation and sizes under arid conditions. *Flora*, 270.  
<https://doi.org/10.1016/j.flora.2020.151664>
105. Lehrer, D., Becker, N. and **Bar (Kutiel), P.** 2020. Managing nature conservation prioritization; a spatial conservation planning index approach. *Journal of Environmental Planning and Management*.  
<https://doi.org/10.1080/09640568.2020.1835617>
106. Renan, I., Freidberg, A., Groner, E., **Bar (Kutiel), P.** 2020. Impact of spatial patterns on arthropod assemblages following natural dune stabilization under extreme arid conditions. *Global journal of Ecology*, 5(1): 079-087. DOI:  
<https://dx.doi.org/10.17352/gje.000024>
107. Lehrer, D., Becker, N. and **Bar (Kutiel), P.** 2020. Combing benefits and coasts to prioritize the distribution of conservation resources: Evidence from Israel. *Journal of Nature Conservation* 58.  
<https://doi.org/10.1016/j.jnc.2020.125922>

#### (d) Review of books (in journals)

Danin, A. and Orshan, G. (eds.) 1999. *Vegetation of Israel: I. Desert and Coastal Vegetation*. Backhuys Publishers, Ledin, 346 p. *The Quarterly Review of Biology*, 75 (4): 460-461.

#### (e) Published scientific reports and technical papers

1. **Kutiel, P.** 1998. "Ramat Hanadiv visitor survey. 29 p. (Hebrew).
2. **Bar (Kutiel)<sup>PI</sup>, P.**, Irwin<sup>PI</sup>, M.E., Bouskila<sup>C</sup>, A., Andersen<sup>C</sup>, M. 2005. Sustainable management of coastal dune ecosystems for biodiversity conservation: Development of concepts and tools. Final scientific report, IALC proposal NO. 04R-18. 26 p. (English).



3. **Bar (Kutiel)<sup>PI</sup>, P.** 2007. Exotic *Prosopis* species in Israel – problems, impacts and management recommendations for preventing the spontaneous spread. Submitted to KKL (The Jewish National Fund). 48 p. (Hebrew).
4. **Bar (Kutiel)<sup>PI</sup>, P., Tany<sup>C</sup>, J., Cohen<sup>C</sup>, S., Mayer<sup>PI</sup>, H. and Potchter<sup>C</sup>, O.** 2013. The contribution of vegetation to urban heat island mitigation in the global climate change era. Final scientific report, GIF Grant NO. 955-36.8/2007. 25 p. (English).
5. **Bar (Kutiel)<sup>PI</sup>, P and Lev-Yadun<sup>C</sup>, S.** 2014. Phytolith formation factors in the Asteraceae: Inter- specific and spatial variations related to aridity and grazing. Final scientific report, Grant NO 103/11. 25p. (English).

### **Lectures & presentations at meetings & invited seminars**

#### **(a) Invited plenary lectures at conferences**

- 1989 The effect of wildfire on soil nutrients and vegetation in an Aleppo pine forest. Third International Symposium on Fire Ecology. May 1989. Freiburg, FRG.
- 1992 The role of fire in Mediterranean landscape ecosystems. U.I.M.P., Santander Seminar, July 1992. Santander, Spain.
- 1993 Eco-geomorphological systems response to climate change. Workshop of the GCTE (Global Change & Terrestrial Ecosystems) on Global Change and Landscape Dynamics in Mediterranean System. November 1993. Toledo, Spain.
- 1997 Spatial and temporal heterogeneity of species diversity in a Mediterranean ecosystem following fire. International workshop on Fire, Landscape and Dynamics in the Mediterranean Area. September 1997. Banyuls-Sur-Mer, France.
- 2000 Policies and management of open spaces for the next 20 years in Israel. A workshop on Social, Economic and Environmental Changes in the Rural Settlement System of Romania and Israel. The Romanian Academy, Institute of Geography. August, 2000. Bucharest, Romania.
- 2001 Dilemmas and possibilities of conservation and management of coastal dunes. Nature and Park Authority, workshop on Coastal Dune Management for Nature Conservation Objectives. December 2001. Shikmim Field School, Israel.

- 2001 Management of coastal sand dunes for conservation objectives. Workshop on Coastal Dune Dynamics. June 2001. Torino, Villa Gualino, Italy
- 2003 Ecology in Israel. A fall quarter course at UCSC University, Santa Cruz, California. Invited visiting Prof., September-November 2003.
- 2003 Landscape and environment in Israel. The annual meeting of the Israel Geographical Association. December 2003. Bar Ilan University, Ramat Gan, Israel.
- 2004 Biological invasion: problems, dilemmas and prevention. Workshop in: Coping with Invasive Species, Nature and National Parks Authority, Volcani Institute. September 2004. Beit Dagan, Israel.
- 2006 The constructed space in Israel on the next decade: the ecological-environmental challenge. The annual meeting of the Israeli Geographical Association. January 2006. The Hebrew University of Jerusalem, Israel.
- 2007 The Mediterranean ecosystem response to climate change. The annual meeting of the Israeli Geographical Association. December 2007. Ben-Gurion University in the Negev, Israel.
- 2008 Invasive species in the Mediterranean Basin – impacts, management and predictions for climate change era. The second International Symposium on "Intractable Weeds and Plant Invaders". September 2008. Osijek, Croatia.
- 2010 Biological diversity in Israel – the national plan for sustainable conservation. The annual meeting of the International Geographical Union (IGU). July 2010. Tel Aviv, Israel.
- 2010 Climate change and Mediterranean ecosystems – What we are expecting? GeoMed 2010, International Symposium on Geography, Environment and Culture in the Mediterranean Region. June 2010. Kemer, Antalya, Turkey.

**(b) Presentations of papers at conferences/meetings (oral or poster)**

- Kutiel P.** and Naveh Z. 1986. Changes in vegetation of the Mediterranean basin in response to human habitation. International Symposium on Impoverishment of the Biosphere. Woods Hole Research Center of the Hudson Foundation. October 1986. Massachusetts, USA.
- Kutiel P.** and Shaviv A. 1988. Changes in soil phosphorus and nitrogen levels as obtained in a simulated forest fire. The annual meeting of the Israel Association of Soil Sciences. April 1988. Rehovot, Israel.

- Kutiel P.** and Naveh Z. 1988. The impact of wildfires on soil and vegetation of Aleppo pine forests on Mt. Carmel. Carmel Research Conference No. 2. June 1988. Haifa, Israel.
- Kutiel P.** and Naveh Z. 1988. The impact of wildfires on soil nutrients in Aleppo pine forests on Mt. Carmel. The 19th annual conference of The Israel Society for Ecology & Environmental Quality Sciences. June 1988. Jerusalem, Israel.
- Kutiel P.** and Naveh Z. 1988. The impact of fire on vegetation and landscape development on Mt. Carmel. The 19th annual conference of The Israel Society for Ecology & Environmental Quality Sciences. June 1988. Jerusalem, Israel
- Kutiel P.** 1989. Impacts and lessons of forest fires. The annual meeting of the Israel Geographical Association. December 1989. Haifa, Israel.
- Kutiel P.**, Inbar M and Mandel S. 1989. The impact of forest fires on water flow, erosion and soil nutrient contents. The annual meeting of the Israel Geographical Association. December 1989. Haifa, Israel.
- Kutiel P.** and Naveh Z. 1989. The effect of wildfire on soil nutrients and vegetation in an Aleppo pine forest. Third International Symposium on Fire Ecology. May 1989. Freiburg, FRG.
- Kutiel P.** and Naveh Z. 1989. The role of fire in Mediterranean vegetation. Sixth Meeting of Optima. September 1989. Delphi, Greece.
- Kutiel P.** and Inbar M. 1989. Effect of a forest fire on water and sediment discharge and soil nutrients content. Heinrich Rohdenburg Memorial Symposium: Theory and simulation of infiltration, overland flow, erosion and deposition processes and their relevance to landscape evolution. September 1989. Braunschweig, FRG.
- Kutiel P.** 1990. Impacts of fire temperature, plant composition and soil properties on soil nutrients. The annual meeting of the Israel Geographical Association. December 1990. Haifa, Israel.
- Kutiel P.** 1990. Effects of soil types, plant composition and leaching on soil nutrients following a simulated forest fire. In: The International Conference on Forest Fire Research. November 1990. Coimbra, Portugal.
- Inbar M. and **Kutiel P.** 1991. Forest fires impacts on erosion processes, soil and vegetation. The annual meeting of the Israel Geological Society. April 1991. Akko, Israel.

- Kutiel P.** 1991. Fire effects on soil nutrients in the Mediterranean mountainous region of Israel. E.S.S.C. conference on Soil Erosion and Degradation as a Consequence of Forest Fires. September 1991. Barcelona and Valencia, Spain.
- Lavee, H., **Kutiel P.**, Benyamini, Y. and Segev M. 1991. Infiltration, Runoff and Erosion Processes as Influenced by Forest Fires in the Carmel Mountain, Israel. E.S.S.C. conference on Soil Erosion and Degradation as a Consequence of Forest Fires. September 1991. Barcelona and Valencia, Spain.
- Shoshany M., **Kutiel P.** and Grossman D.A 1991. A study of spatial and temporal changes of land use and vegetation on Mount Carmel, 1945-1984. International Geographical Union Commission on Changing Rural Systems: Harmony and Conflict in Rural and Ex-Urban Space. December 1991. Jerusalem, Israel.
- Kutiel P.** 1992. Fire Effects on Vegetation. The 5th international conference of The Israel Society for Ecology & Environmental Quality Sciences on Environmental Quality and Ecosystem Stability. June 1992. Jerusalem, Israel.
- Zohar Y., **Kutiel P.**, Midani E. and Israeli A. 1992. Prescribed burning as a tool in forest management in Israel. The 5th international conference of The Israel Society for Ecology & Environmental Quality Sciences on Environmental Quality and Ecosystem Stability. June 1992. Jerusalem, Israel.
- Lavee, H., **Kutiel P.**, Benyamini, Y. and Segev M. 1992. Slope aspect impacts on geo-ecological factors in the Mediterranean region. The annual meeting of the Israel Geographical Association. December 1992. Beer-Shiva, Israel.
- Kutiel P.** 1993. North and south hillslope aspects in the Mediterranean region. Geo-ecological impacts and significance. The 24th annual conference of The Israel Society for Ecology & Environmental Quality Sciences. June 1993. Tel Aviv, Israel.
- Kutiel P.** The impact of fire on infiltration processes, overland flow and erosion on Mt. Carmel. Ecosystem Dynamics along a Semi Arid - Arid Climatic Gradient. A workshop on Global Change and Landscape Dynamics in Mediterranean Systems. November 1993. Toledo, Spain.
- Kutiel P.** Lavee H. and Shoshany M. 1993. Vegetation response along climatological gradient. The annual meeting of the Israel Geographical Association. December 1993. Ramat Gan, Israel.
- Lavee H., Shoshany M. and **Kutiel P.** 1993. Integrative aspects in studies of eco-geomorphic systems along climatological gradient. The annual meeting of the Israel Geographical Association. December 1993. Ramat Gan, Israel.

- Shoshany M., **Kutiel P.** and Lavee H. 1993. Studies of vegetation cover in Judea between the years 1991 and 1992 by remote sensing methods. The annual meeting of the Israel Geographical Association. December 1993. Ramat Gan, Israel
- Kutiel P.** 1994. Spatial and temporal heterogeneity of species diversity in a Mediterranean ecosystem following fire. The 2nd International Conference on Forest Fire Research. November 1994. Coimbra, Portugal.
- Kutiel P.**, Lavee H., Benyamini, Y. and Segev M. The effect of fire - induced surface heterogeneity on rainfall-runoff-erosion relationship. The 2nd International Conference on Forest Fire Research. November 1994. Coimbra, Portugal.
- Kutiel P.**, 1994. Chairman of the session on: Fire Effects. The 2<sup>nd</sup> International Conference on Forest Fire Research. November 1994. Coimbra, Portugal.
- Kutiel P.** 1994. Vegetation dynamics along a Mediterranean-arid transect. International Conference on Geomorphic Response of Mediterranean and Arid Areas to Climate Change. May 1994. Ramat-Gan and Jerusalem, Israel.
- Kutiel P.** 1995. Video movies - an environmental education tool. The annual meeting of the Israel Geographical Association. December 1995. Jerusalem, Israel.
- Kutiel P.**, Kutiel H., Lavee H. and Shoshany M. 1996. Vegetation response to possible climate change in the Judea region. The 6<sup>th</sup> annual meeting of the Judea and Samaria Research Studies. March 1996. Ariel, Israel.
- Shoshany M., **Kutiel P.** and Goldshlager N. 1996. Landscape changes during the recent 50 years on Mt. Carmel. The annual meeting of the Israel Geographical Association. December 1996. Tel-Aviv, Israel.
- Sharon H. and **Kutiel P.** 1996. Landscape changes during the recent 50 years on northern Sharon. The annual meeting of the Israel Geographical Association. December 1996. Tel-Aviv, Israel.
- Akermann O., **Kutiel P.** and Lavee H. 1996. Biogenic crusts impact on infiltration-overland flow relationships along climatological gradient. The annual meeting of the Israel Geographical Association. December 1996. Tel-Aviv, Israel.
- Kutiel P.**, Akermann O. and Lavee H. 1996. Spatial distribution of soil surface coverage on north and south facing hillslopes in Judea. The 7<sup>th</sup> annual meeting of the Judea and Samaria Research Studies. March 1996. Ariel, Israel.

- Akermann O., **Kutiel P.** and Lavee H. 1996. Spatial distribution of biogenic crusts and its effect on infiltration and overland flow along a climatological gradient of Judean desert. The 7<sup>th</sup> annual meeting of the Judea and Samaria Research Studies. March 1996. Ariel, Israel.
- Kutiel P.** 1996. Open spaces – problems and ecological significance. The case of the Sharon Park. A study day organized by Bar Ilan University for the Ministry of Environmental Quality on Environmental Quality Research Studies in Bar Ilan University. December 1996. Ramat Gan, Israel.
- Kutiel P.** 1997. Chairman of the session on: Landscape changes and fluvial processes. The 28th annual conference of The Israel Society for Ecology & Environmental Quality Sciences. June 1997. Haifa, Israel.
- Kutiel P.**, Lavee H. and Kutiel H. 1997. Spatial and temporal changes in vegetation along Mediterranean – extreme arid climatological gradient. The 28th annual conference of The Israel Society for Ecology & Environmental Quality Sciences. June 1997. Haifa, Israel.
- Kutiel P.** 1997. Fire and Erosion Processes. International workshop on Fire, Landscape and Dynamics in the Mediterranean Area. September 1997. Banyuls-Sur-Mer, France.
- Goldshlager N., Grossman D., **Kutiel P.** and Shoshany M. 1997. Impact of settlement pressures on the Carmel landscapes. The 28th annual conference of The Israel Society for Ecology & Environmental Quality Sciences. June 1997. Haifa, Israel.
- Sharon H. and **Kutiel P.** 1997. Landscape changes in the northern coastal plain, Israel, during the recent 100 years. The 28th annual conference of The Israel Society for Ecology & Environmental Quality Sciences. June 1997. Haifa, Israel.
- Kutiel P.**, Zevelev H. and Lavee H. 1997. Recreational impacts on geocological units in Park Ha'Sharon. The 28th annual conference of The Israel Society for Ecology & Environmental Quality Sciences. June 1997. Haifa, Israel.
- Kutiel P.** 1997. Spatial and temporal heterogeneity of species diversity in a Mediterranean ecosystem following fire. International workshop on Fire, Landscape and Dynamics in the Mediterranean Area. September 1997. Banyuls-Sur-Mer, France.
- Kutiel P.** 1998. Recreationist use impacts on soil and vegetation. The 29th annual conference of The Israel Society for Ecology & Environmental Quality Sciences. June 1998. Beer Sheva, Israel.

- Eden Z. and **Kutiel P.** 1998. Pedestrian and vehicle impacts on soil and vegetation in sandy habitats. The 29th annual conference of The Israel Society for Ecology & Environmental Quality Sciences. June 1998. Beer Sheva, Israel.
- Zevelev H., **Kutiel P.** and Lavee H. 1998. Soil and vegetation characterization in urban ecosystems of Tel Aviv, Israel. The 29th annual conference of The Israel Society for Ecology & Environmental Quality Sciences. June 1998. Beer Sheva, Israel.
- Kutiel P.** 1998. Sharon National Park ecosystems. A study day on “The Future of the Sharon National Park” organized by the “Green Collage” and Bar Ilan University. February 1998. Michmoret, Israel.
- Kutiel P.** 1998. Development of coastal ecosystem management policies for the Israeli coastal plains. A study day on “The Sand Park” organized by the Society for the Protection of Nature and JNF (The forestry authority). May 1998. Ashdod, Israel.
- Kutiel P.** and Datner A. 1998. Spontaneous development of trails in open spaces with high natural and landscape values as demonstrated by the Sharon coast. The annual meeting of the Israel Geographical Association. December 1998. Ramat Gan, Israel.
- Sharon H. and **Kutiel P.** 1998. The northern Sharon landscapes – then and today. 50 years of changes. The annual meeting of the Israeli Geographical Association. December 1998. Ramat Gan, Israel.
- Harrison R. and **Kutiel P.** 1998. The impact of recreationists on soil and vegetation of long established trails in stabilized sand plains in the Sharon National Park. The annual meeting of the Israeli Geographical Association. December 1998. Ramat Gan, Israel.
- Kutiel P.** 1998. Vegetation response to possible climate change. The annual meeting of the Israel Geographical Association. December 1998. Ramat Gan, Israel.
- Zevelev H. and **Kutiel P.** 1998. Soil and vegetation in selected areas in the city of Tel Aviv. The annual meeting of the Israeli Geographical Association. December 1998. Ramat Gan, Israel.
- Kutiel P.** 1999. Spatial and temporal heterogeneity of species richness and species diversity in Mediterranean pine forests. MEDPINE – International Workshop on Mediterranean Pines. February 1999. Beit-Oren, Israel.

- Kutiel P.** 1999. Coastal dune ecosystem: management for conservation objectives. The 7th International Conference of the Israel Society for Ecology and Environmental Quality Sciences, on Environmental Challenges for the Next Millennium. June 1999. Jerusalem, Israel.
- Kutiel P.** 1999. To preserve the remainder- recommendations for ecological coastal system preservation along the Israeli Mediterranean coast. A study on “Mare Nostrum – Physical, Social and Cultural aspects in the Mediterranean region” organized by University of Haifa. June 1999, Haifa University.
- Kutiel P.** 1999. Managing coastal dune ecosystem for biodiversity conservation. EURECO '99 - 8th European Ecological Congress. September 1999. Halkidiki, Greece.
- Kutiel P.** 1999. Recreational impacts on annual vegetation of stabilized coastal dunes, Israel. EURECO '99 - 8th European Ecological Congress. September 1999. Halkidiki, Greece.
- Kutiel P.** 1999. The effect of recreational impacts on soil and vegetation of stabilized Mediterranean coastal dunes. International Conference on Sustainable Management of Coastal Ecosystems. November 1999. Oporto, Portugal.
- Kutiel P.** 1999. The effect of removing shrub cover on annual plants and small mammals in a coastal sand dune ecosystem. International Conference on Sustainable Management of Coastal Ecosystems. November 1999. Oporto, Portugal.
- Kutiel P.** 1999. Open spaces along the coastal plain of Israel – development against conservation. The annual meeting of the Israeli Geographical Association. December 1999. University of Haifa, Haifa, Israel.
- Hadar H. and **Kutiel P.** 1999. Local and regional impacts of trampling and vehicles on the ecosystem. The annual meeting of the Israeli Geographical Association. December 1999. University of Haifa, Haifa, Israel.
- Zhevelev H. and **Kutiel P.** 1999. Ecosystem response to visitor use. The annual meeting of the Israeli Geographical Association. December 1999. University of Haifa, Haifa, Israel.
- Sadan M. and **Kutiel P.** 1999. The importance of public gardens for the urban decision makers – the case of the Tiberius town. The annual meeting of the Israeli Geographical Association. December 1999. University of Haifa, Haifa, Israel.



- Kaufman A. and **Kutiel P.** 1999. Soil and vegetation on southern and northern hill slopes along a climatic transect, Mediterranean – extreme arid. The 10th annual meeting of the Judea and Samaria Research Studies. May 2000. Ariel, Israel.
- Kutiel P.** 2000. Management of coastal dune ecosystems for conservation objectives. MEDECOS 2000, ninth International Conference on Mediterranean-Type Ecosystems. September 2000. Stellenbosch, South Africa.
- Kutiel P.** and Zhevelev H. 2000. Recreational use impact on soil and vegetation at picnic sites in Aleppo pine forests on Mt. Carmel, Israel. MEDECOS 2000, ninth International Conference on Mediterranean-Type Ecosystems. September 2000. Stellenbosch, South Africa.
- Kutiel P.** 2001. Management of coastal dunes in Israel for nature and landscape conservation – dilemmas and applicable possibilities. The annual meeting of the Israeli Geographical Association. December 2001. The Hebrew University of Jerusalem, Jerusalem, Israel.
- Ido-Lichtman O., **Kutiel P.** Zhevelev H. and Halamsky S. 2001. Soil and plant pollution by heavy metals in Jerusalem. The annual meeting of the Israeli Geographical Association. December 2001. The Hebrew University of Jerusalem, Jerusalem, Israel.
- Paz. A., **Kutiel P.** and Zhevelev H. 2001. Soil and vegetation properties in Tel Aviv. The annual meeting of the Israeli Geographical Association. December 2001. The Hebrew University of Jerusalem, Jerusalem, Israel.
- Kaufman A., **Kutiel P.** and Lavee H. 2001. The affinity between soil, vegetation and hillslope aspect (north and south) along climatic transect, Mediterranean-extreme arid. The annual meeting of the Israeli Geographical Association. December 2001. The Hebrew University of Jerusalem, Jerusalem, Israel.
- Cohen O., **Kutiel P.** and Shoshany M. 2001. Vegetation establishment in Nitzanim sand dunes between 1965-1999, and the management application of the process. Nature and Park Authority, workshop on Coastal Dune Management for Nature Conservation Objectives. December 2001. Shikmim Field School, Israel.
- Kutiel P.** 2001. Vegetation cover changes in the coastal dunes of Israel between the years 1965-1999. IALE European Conference on Development of European Landscapes. June 30 – July 2 2001. Stockholm, Sweden; July 2001. Tartu, Estonia:
- Kutiel P.** 2001. Should we create the desired landscape or leave it to be shaped by “nature”? IALE European Conference on Development of European

Landscapes. June 30 – July 2 2001. Stockholm, Sweden; July 2001. Tartu, Estonia:

**Kutiél P.** 2001. Landscape changes along the coastal sand dunes in Israel, and their eco-geomorphological management. IGRG – Israel Geomorphological Research Group (affiliated to: IAG – International Association of Geomorphologists). October 2001. Nizzanim Sand Dune Park, Israel.

Cohen O., **Kutiél P.**, Shoshany M. and Shub M. The invasion rate of the alien species *Acacia saligna* within coastal sand dune habitats in Israel. The annual meeting of the Israeli Geographical Association. December 2001. Tel Aviv University, Tel Aviv, Israel.

**Kutiél P.** and Bismut M. 2002. Soil and vegetation in the abandoned fields in the coastal dunes of the Sharon region, Israel. The annual meeting of the Israeli Geographical Association. December 2002. Ben-Gurion University of the Negev, Beer Sheva, Israel.

Cohen O. and **Kutiél P.** 2002. The impact of biological invasion of *Acacia saligna* on the indigenous vegetation of a Mediterranean coastal ecosystem, Nizzanim Sand Park, Israel. The annual meeting of the Israeli Geographical Association. December 2002. Ben-Gurion University of the Negev, Beer Sheva, Israel.

Doron E. and **Kutiél P.** 2002. Recreation / restoration of off-road vehicle tracks in an arid ecosystem for landscape and nature conservation objectives. The annual meeting of the Israeli Geographical Association. December 2002. Ben-Gurion University of the Negev, Beer Sheva, Israel.

Negoitza D. and **Kutiél P.** 2002. "Islands in the sea of wheat" – the impact of fragmentation on the indigenous vegetation in agricultural landscape of a semi-arid ecosystem, Northern Negev, Israel. The annual meeting of the Israeli Geographical Association. December 2002. Ben-Gurion University of the Negev, Beer Sheva, Israel.

Savoray T., **Kutiél P.** and Banet T. 2002. Integration of ecological and environmental criteria in sustainable urban spatial planning using GIS. The annual meeting of the Israel Geographical Association. December 2002. Ben-Gurion University of the Negev, Beer Sheva, Israel.

Lichtman-Ido and **Kutiél P.** 2002. Spatial distribution of heavy metals (Pb, Zn, Cu, Ni and Cd) in private and public gardens in Jerusalem. The annual meeting of the Israeli Geographical Association. December 2002. Ben-Gurion University of the Negev, Beer Sheva, Israel.

- Paz A. and **Kutiel P.** 2002. Spatial distribution of heavy metals (Pb, Cu and Zn) in various land uses in Tel Aviv, Israel. The annual meeting of the Israeli Geographical Association. December 2002. Ben-Gurion University of the Negev, Beer Sheva, Israel.
- Giller Z. and **Kutiel P.** 2002. The impact of prescribed burning and cutting of woody vegetation on re-establishment of annual psammophilic plants in the coastal dunes of the Nachal Alexander National Park. The annual meeting of the Israeli Geographical Association. December 2002. Ben-Gurion University of the Negev, Beer Sheva, Israel.
- Shoshany M., **Kutiel P.** and Cohen O. 2002. A remote sensing study of two-phase distribution of the alien species *Acacia saligna* in the coastal sand dune habitats in Israel. ISPRS Commission VII Symposium on Resource and Environmental Monitoring. September 2002. Hyderabad, India.
- Negoitza D. and **Kutiel P.** 2003. The processes that determine the plant composition in fragmented patches in the southern Judean Plain in Israel. The 13th annual meeting of the Judea and Samaria Research Studies. April 2003. Ariel, Israel.
- Kutiel P.** 2003. Chairwomen of the session Nation Land – Country Land: Applicable Aspects. The annual meeting of the Land Policy and Land Use Research Institute. June 2003. Jerusalem, Israel.
- Kutiel P.** and Cohen O. 2003. The invasion rate of the alien species *Acacia saligna* within the coastal sand dunes, Israel, and its ecological impacts. IALE – International Association of Landscape Ecology. July 2003. Darwin, Australia.
- Kutiel P.**, Negoitza D, Mazor S. and Savoray T. 2003. Fragmentation impact on vegetation structure, composition and diversity in a semi-arid region in Israel. IALE – International Association of Landscape Ecology. July 2003. Darwin, Australia.
- Kutiel P.** 2003. Landscape and environment in Israel. The annual meeting of the Israeli Geographical Association. December, 2003. Bar Ilan University, Ramat Gan, Israel:
- Bar (Kutiel) P.** 2004. Landscape changes along the coastal sand dunes in Israel – Dilemmas and challenges for conservation and management objectives. MEDECOS (Mediterranean Ecosystems), the 10<sup>th</sup> international conference on Mediterranean Climate Ecosystems, April, 25-May 1, 2004. Rhodes, Greece:
- Bar (Kutiel) P.**, Negoitza D., Mazor S. and Svoray T. 'Islands in the sea of wheat': The impact of fragmentation on vegetation. Proceeding of the 34th Annual

Conference of the Ecological Society in Giessen on: Eco-complexity and dynamics of the cultural landscape, September 2004. Giessen, Germany.

**Bar (Kutiel) P.** and Ramot A. 2004. Vegetation characterization in Wadis in southern Judean plain: Study for analyzing the potential of Wadis as ecological corridors in fragmented area. The annual meeting of the Israeli Geographical Association. December 2004. Haifa University, Haifa, Israel:

**Bar (Kutiel) P.** Seedbank – Two strategies, similar impact. Biological Invasions in Ecosystems in Israel. January 2005. Ben-Gurion University of the Negev, Beer Sheva, Israel:

European IALE congress" Landscape ecology in the Mediterranean: Inside and outside approaches". March 29-April 2 2005. Faro, Portugal:

- **Bar (Kutiel) P.**, Kashy, N. and Bouskila, A. The impact of vegetation cover on flora and fauna of coastal sand dunes in Israel – implications for biodiversity conservation.
- **Bar (Kutiel) P.**, Negoitza, D. and Svoray, T. The impact of fragmentation on vegetation in embedded natural habitats within arable land.

**Bar (Kutiel) P.** The uniqueness of the coastal dune ecosystem in Nizzanim and its future in the light of the construction plans in the area. The annual meeting of the Israeli Geographical Association. December, 2005. The Hebrew University of Jerusalem, Israel:

**Bar (Kutiel) P.** The impact of vegetation cover on ecosystem structure and composition at Nizzanim coastal sand dunes. The annual meeting of The Israel Society for Ecology and Environmental Quality Sciences. May 2006. Haifa, Israel:

ICCD 2007, International Conference on Management and Restoration of Coastal Dunes. October 2007. Santander, Spain:

- **Bar (Kutiel) P.**, Groner E., Rennan I. and Perry M. Do we know enough about sand dune ecosystems in order to conserve them successfully?
- **Bar (Kutiel) P.**, Groner E. and Bouskila A. Restoration of coastal sand dunes for conservation of landscape and psammophilic biodiversity.
- **Bar (Kutiel) P.**, Cohen O., Riov J., Gamliel A. and Katan Y.. Eradication of invasive plants as a part of coastal sand dune restoration.

**Bar (Kutiel) P.**, Cohen O., Riov J., Gamliel A. and Katan Y. 2008. Reducing the persistent seedbank of a plant invader - *Acacia saligna* , application and implication. The second International Symposium on "Intractable Weeds and Plant Invaders". September 2008. Osijek, Croatia (keynote speaker).

**Bar (Kutiel) P.** 2008. Coastal dune biodiversity in an era of intensive development and biological invasion – the case of Israel. International Symposium on Documenting, Analyzing and Managing Biodiversity in the Middle East. October 2008. Aqaba, Jordan

International conference on "Drylands, Deserts & Desertification". December 2008. Sede Boker Campus, Israel:

- **Bar (Kutiel) P.** Combating desertification – not at all coasts – a matter of temporal and spatial scales and policies.
- **Bar (Kutiel) P.** Climate change and its effect on Mediterranean Basin ecosystems.

**Bar (Kutiel) P.** 2014. *Artemisia monosperma* distribution in the Mediterranean coastal sand dune ecosystem the role of soil water availability. The 8 international conference of the International Society for Aeolian Research (ISAR) Lanzhou, China. July 21-25, 2014.

**Bar (Kutiel) P.** 2014. Herooty Y., Yizhak H, Katra I. Enhanced soil-water content, caused by a self-induced infiltration pattern in ring forming psammophilic, *Cyperus macrorrhizus* nees plant. The 8 international conference of the International Society for Aeolian Research (ISAR) Lanzhou, China. July 21-25, 2014.

### (c) Seminars at universities and institutions

- 1994 The response of ecosystems to possible climate change. Faculty Seminar. January 1994. University of Waterloo, Ontario, Canada.
- 2003 Biodiversity, Conservation and Management in Israel. Environmental Studies Division Seminar. October 2003. UCSC University, California, US.
- 2003 Environmental issues in Israel – a talk to the Jewish Studies Research Colloquium. October 2003. UCSC University, California, US.
- 2007 Why we protect open "natural" spaces, and do we know enough how to conserve them properly? April 2007. Ecology Department Seminar. The Ecology Department, University of Castilla-La Mancha, Toledo, Spain.
- 2008 Invasive plants – spread strategies, impacts and management. March, 19 2008. The Zoology Department, Tel-Aviv University.
- 2009 Climate change and the Mediterranean ecosystems: What we are expecting? Faculty of Agriculture, Food and Environment, The Hebrew University of

- Jerusalem, Faculty of Agriculture, food and Environment, November, 8 2009. Rehovot, Israel.
- 2014 Four lectures focusing on sand dunes management and conservation in semi-arid and arid environments. Project Management Office of Qinghai Forestry Department (PMO of QFD), SAFEA International Cooperation, Xining, China. July 13-20 2014.
- 2014 *Artemisia monosperma* distribution in the Mediterranean coastal sand dune ecosystem the role of soil water availability, Qinghai University, China. July 16, 2014.

### Research grants

#### (PI in all cases)

- 1988-1989 The Ecology Fund (\$5,000)
- 1989-1993 The Carmel Fund (\$10,000)
- 1990-1995 The Ministry of Science and Technology, Israel and the Forschungszentrum Fuer Umwelt und Gesundheit - GSF, Neuherberg, Germany (with Prof. H. Lavee<sup>PI</sup>, Prof. M. Shoshany<sup>PI</sup>, Bar Ilan University; Prof. A. Imeson<sup>PI</sup>, University of Amsterdam & Dr. H.R. Bork<sup>PI</sup>, Technische Universität, Berlin) (DM 300,000)
- 1991 Shnitzer Fund, Faculty of Social Sciences, Bar Ilan University (\$1,000)
- 1993 Moskovith Cathedra Fund, Department of Land of Israel Studies, Bar Ilan University (\$3,000)
- 1994 Bar Ilan University Interior Funds (\$3,000)
- 1994 The Canadian Funds for Promotion of Canadian Studies (\$3,000).
- 1997 Bar Ilan University Interior Funds (\$3,000)
- 1997 Rothschild Fund (\$8,000)
- 1998-1999 Bar Ilan University Interior Funds (\$3,000)
- 2000 Nature and Parks Authority (\$2,000)
- 2001 Ingeborg Rennert Center for Jerusalem Studies (\$3,000).
- 2001 Nature Reserves Authority (\$2,000)
- 2001 The Canadian Funds for Promotion of the Canadian Studies (\$3,000)
- 2001 The Jewish National Fund (KKL) (\$15,000)
- 2001 The Mifal Hapais Fund (\$6,000)
- 2002 "Nekudat Hen" (\$18,000)
- 2003 The Jewish National Fund (KKL) (\$25,000)
- 2004-2006 IALC (International Arid Land Consortium, with Prof. M.E. Irwin<sup>PI</sup>, Department of Natural Resources & Environmental Sciences, University of Illinois, Urbana, USA; Dr. A. Bouskila<sup>PI</sup>, Department of Life Science, Ben-Gurion University of the Negev,

	Beer Sheva, Israel and the Mitrani Dept. for Desert Ecology, The J. Bluestein Inst. for Desert Research, Ben-Gurion University of the Negev, Sde Boqer Campus, Israel; Dr. E. Groner <sup>PI</sup> , Department of Life Science, Ben-Gurion University of the Negev, Beer Sheva) (\$100,000)
2004	The Jewish National Fund (KKL) (\$105,500)
2005	The Jewish National Fund (KKL) (\$30,500)
2007	Israel Ministry of Science, Sport and Culture (with Dr. A. Bouskila <sup>PI</sup> , Department of Life Science, Ben-Gurion University of the Negev, Beer Sheva, Israel and the Mitrani Dept. for Desert Ecology, The J. Bluestein Inst. for Desert Research, Ben-Gurion University of the Negev, Sde Boqer Campus, Israel) (\$53,000).
2008	GIF (German-Israel Fund) (with Prof. H. Mayer <sup>PI</sup> , Department of Geography, Universitaet Freiburg Meteorolog. Inst., Germany) (EU 206,140)
2009	Israel Ministry of Science, Sport and Culture (\$80,000)
2011	ISF - Israel Science Foundation (\$45,200)
2011	Israel Ministry of Education (\$22,000)
2013	Israel Ministry for the Protection of the Environment (\$38,000)
2014	Nature and Park Authority (\$35,000)

**Synopsis of research, including reference to publications and grants in above lists**

The overarching theme of my research focuses on **disturbances** (wildfires, cutting, grazing, trampling and 4X4 vehicles, fragmentation and invasion of alien plant species) **in arid and in the Mediterranean ecosystems and their impacts on vegetation** (with special emphasis on annual plants), **soil and geomorphological processes** (runoff and erosion), and **the relationships among them**. I am trying to understand the **vegetation-soil-geomorphic and climate relationships** by working on **various geo-ecological spatial scales** (gradients, ecosystems, habitats and patches under the trees/shrubs and the open adjacent patches) using data gathered from **structured field observations or experimental manipulations**. Through this multi-scalar analysis and by working on annual plants, which temporally respond fast due to (a) seasonal changes and immediate after disturbances and (b) spatially distribute within short distances to form various patches as a result of micro soil properties, I am able to describe processes at the finer scales (habitat, aspect and patch), and explain how they shape patterns at the ecosystem scale. Moreover, by comparing various ecosystems along soil and climate gradients, I am able to evaluate the effects of different environmental settings (at the ecosystem scale) on patterns and processes in finer scales. In this way I search for general principles, or 'rules', that underlie complex patterns of vegetation (communities, coverage, life forms, and diversity) in arid and Mediterranean ecosystems.

My study on the **effects of wildfires on vegetation, on soil and on runoff / erosion** was pioneering research in Israel in particular and in the Mediterranean Basin in general. The relevant publications were the first to introduce the difference impact of fire on different forest types - pine and oak (paper #5); fire temperature impact on soil nutrients and physical structure as related to various soil types, north and south slope aspects and patches (papers #3, 9, 19); the relationships among various soil layers following a wildfire as it affects the seed bank and the re-establishment of plants and micro-organisms (paper #7); the significance of the effects of soil surface roughness after a wildfire on geomorphological processes at the patch and slope scales (papers #11, 14, 16), all of which designate trends following fire that indicate the temporal and the high spatial variability both in the micro- and macro- scales which contribute to the high biodiversity that characterize the Mediterranean ecosystems (papers # 12, 19).

My study on **climate impacts on soil and vegetation** focused on their spatial and temporal dynamic along a Mediterranean - arid gradient. This study added new insights to those that I already gained earlier, concerning the spatial and temporal heterogeneity of the Mediterranean ecosystems. I found that the temporal changes at the humid Mediterranean ecosystems are very small compared to the xeric Mediterranean and arid ecosystems (paper # 15). The ability of the vegetation (as well soil properties) at humid ecosystems to respond dramatically to internal fluctuations of rainfall, even between very extreme years, is very limited. Accordingly, such ecosystems may define as predictable ecosystems while the xeric Mediterranean and particularly the arid and the extreme arid are unpredictable. I also found that while gradual changes exist between the humid and the xeric



Mediterranean zones and between the arid and the extreme arid, a drastic decline in vegetation and soil properties exists between the xeric Mediterranean and the arid ecosystems. This sharp border shift eastwards in wetter years and vice versa, constructing the most dynamic zone defined as the ecoton. The study of the patterns of vegetation cover along the gradient (papers # 13, 15, 18, 22) may serve, from the remote sensing point of view, as indicators of soil types in semi-arid and arid ecosystems (paper #17). This work was the first time, to the best of my knowledge, where soil types were identified and mapped on the basis of the analysis of the pattern of temporal vegetation cover changes. Attempt was also done to predict the impact of climate change on vegetation along a Mediterranean – extreme arid climatic transect based on vegetation cover and diversity (paper # 27). In addition, I worked on vegetation impact on heat mitigation and human thermal comfort in urban streets under hot-arid and temperate climates (paper # 55).

The studies on **recreational and grazing/cutting** emphasized the similarities and the differences among them, and between them and wildfires in terms of tendencies and impacts. Changes in the physical structure of the upper soil layer under recreation is the major factor affecting soil nutrients, seed bank and plant regeneration (papers #25, 29); plant selection by herbivores as a trigger for development of anti-herbivory structures, mainly phytoliths, in herbaceous plants (paper #54, 56); and the intensive spread of invasive plants due to their abilities to easily regenerate vegetatively and through seeds at various habitats, causes a significant decrease in biodiversity within a short period of few decades.

All knowledge and experience I gained through the years led me to study, practically and theoretically, the **issue of ecosystem management, restoration, conservation, ecosystem services and urban planning** (papers # 28, 35, 37, 40).

In 2005 I established the LTER site at the Nizzanim coastal dune nature reserve where I serve as the principal scientist. I also lead several projects such as: vegetation encroachment impacts on flora and fauna (paper # 37), invasive plants spread and impacts (paper # 38), economic issues regarding evaluation of ecosystem services and goods and conflicts among land owners in the context of political ecology, all of which are fundamental for management and conservation tools and policies.

In addition to my present holistic approach concerning nature conservation and management of Mediterranean ecosystems, my recent work also focusses on the relationships among climate, vegetation and soil at the scale of the individual species and the single family in order to understand mechanistic processes and functional traits in plants. Currently, I am leading 3 main projects, which are funded for the next 4 years:

- a. Silicon in vegetation and soils – functions and adaptations in grass and non-grass families and herbaceous communities as a whole. This study highlights the principal differences between grass and non-grass taxa in terms of phytolith contents, roles and ecological significance. Thus, it sheds more light on the roles silicon plays in the plant evolution (especially in grasses) and on the valuable data

that can be retrieved from studying silicon in non-grass taxa under field conditions (papers #54, 56); in addition, the study of phytoliths can further demonstrate the importance of incorporating mineralogical and phytolith analysis in archaeological research, especially when macro-archaeological remains are scarce.

- b. Mechanisms leading to the central die-back of two perennial herbaceous plants (*Asphodelus ramosus* L and *Cyperus macrorrhizus* N.) under arid condition and two soil types (loose and sand). This study is also conducted under field conditions, which are very scarce in the issue of ring-plant pattern. The study, which advances this issue by suggesting a new mechanism to ring-forming species, is under preparation for submission for publication.
- c. Physiological and morphological adaptations of the desert shrub *Artemisia monosperma* to Mediterranean coastal sand dune habitat, where the soil water content during summer time is almost zero.

Up until the current time, 50 students under my direction completed advanced degrees (and there are still 6 ongoing students). These students, coming from the faculties of Biology and Geography, at the outset of their work, adopted my ideas and my methodologies I have used and continue to use in my work; however, in continuing their own work, they advanced by using new technologies (GIS and remote sensing) and integrate geo-ecology discipline with other disciplines, such as education and economics. Currently, I am directing one post-doctoral student studying "Silicon in vegetation and soils: Its functional contribution in a Mediterranean herbaceous plant community". I am directing two doctoral students working on "Changes in system stability in response to vegetation removal for remobilization of coastal dunes" and "Development of coast efficient model for nature conservation in Israel". I am further directing two students, working towards their master's degrees, who are working on "Biodiversity services analysis and their economic worthy in diverse ecosystems along climatic gradient in Israel" and "Enhanced soil-water content, caused by a self-induced infiltration pattern in ring forming species".

A large proportion of students under my direction who completed their graduate studies continue to be engaged in the Geo-ecological field, whether in academe, the Nature and Parks Authority, the Office of Environmental Protection, or education and pedagogy.