

Course Outline

EST 470 (#37493); EST 670 (#37505); 3 cr

WATER IN THE MIDDLE EAST: ISSUES & OPPORTUNITIES

David A. Sonnenfeld*Dept. of Environmental Studies*

SUNY College of Environmental Science and Forestry

Spring 2021, W 9:30 am – 12:20 pm, Online

DESCRIPTION

Overview

Seminar on water issues and initiatives in Israel, Jordan, and the Palestinian Territories. Participants explore a variety of perspectives on the biophysical, historical, and sociocultural roots of transboundary and other water-related issues in the region, as well as an array of top-down (technological, managerial) and bottom-up (community-based, participatory) approaches to developing solutions. Designed for students interested in environmental and natural resource policy, water resources, international relations, conflict resolution, Middle Eastern studies, and related fields. Each week, students write short commentaries on required readings; the essays serve as starting point for class discussion. Over the course of the semester, students develop and submit a research paper on a related topic. *Maximum 20 students.*

Procedures

The course is organized as a reading seminar with weekly readings and related short, formal essays. Commentaries/ reading notes are due to the instructor and all course participants *via* the course Blackboard site, by no later than **9:30 am, Tuesday**, the day before the class. (Guidelines for these commentaries are available separately.) Students are expected to read all commentaries/ reading notes, as well as the required texts, prior to class. Each **Wednesday** morning, we will begin our discussion of the assigned text(s) with the commentaries.

Platform(s)

- Class meetings, via Zoom
- Readings, assignments, & submissions, via course Blackboard site

Texts

REQUIRED

Tal, Alon, and Alfred Abed Rabbo, eds. 2010. *Water Wisdom: Preparing the Groundwork for Cooperative and Sustainable Water Management in the Middle East*. New Brunswick, NJ: Rutgers University Press. ISBN 978-0-8135-4771-8

Additional selections (virtual *Course Reader*), via Blackboard

RECOMMENDED

Dowty, Alan. 2017. *Israel/ Palestine*, 4th ed. Cambridge, UK & Malden, MA: Polity. ISBN 9-781509-520787

Siegel, Seth M. 2015. *Let There Be Water: Israel's Solution for a Water-Starved World*. New York: St. Martin's Press. ISBN 978-1-250-07395-2

Zeitoun, Mark. 2012. *Power and Water in the Middle East: The Hidden Politics of the Palestinian-Israeli Water Conflict*. London & New York: I.B. Tauris. ISBN 978-1-84885-997-5

Requirements

GRADUATE

- Attend all class sessions;
- Read required 'all' and 'graduate' texts, and everyone's weekly commentaries;
- Write a series of short (max. 500 words, double-spaced) *commentaries* on each week's required readings;
- Submit a seminar paper (15-20 pp.) related to the course topic.

UNDERGRADUATE

- Attend all class sessions;
- Read required 'all' texts and everyone's weekly commentaries;
- Write a series of short (max. 250 words, double-spaced) *reading notes* summarizing and responding to key points in each week's required readings;
- Submit a research paper (10-12 pp.) related to the course topic.

Grading

GRADUATE

- Weekly commentaries (10), 45%
- Seminar paper, 45%
- Attendance and participation, 10%

UNDERGRADUATE

- Weekly reading notes (10), 45%
- Research paper, 45%
- Attendance and participation, 10%

Communication

Office: Baker Lab 214

Hrs.: M 1:30 – 3:30 pm, Th 3:30 – 5:00 pm, & by appointment; via Google Meet

Tel. 315.464.0084 (voice/ text)

E-mail: <dsonn@esf.edu>, <DASonnenfeld@gmail.com>

Web: <http://www.esf.edu/es/sonnenfeld>

Bookstore

ESF Virtual Bookstore, available via *myESF*. For further information see:

<http://www.esf.edu/students/books.htm>

SEMINAR/ RESEARCH PAPER*

GRADUATE

- At the end of the course graduate students will submit a seminar paper *closely related to course topic*. This may take a variety of forms including: research paper, draft journal article, review of the literature/ review essay, thesis/ dissertation chapter, research proposal, etc.
- *Proposal*. By **Week 3**, submit an abstract describing your proposed seminar paper; typed, double-spaced, 1-2 pp.
- *Abstract, Outline & Bibliography*. By **Week 7**, submit a revised abstract, outline, and preliminary bibliography for your paper
- *Final Paper*. Due by the beginning of the regularly scheduled **Final Exam** period for this course. 15-20 pp. typed, double-spaced, *plus* cover page and references.

UNDERGRADUATE

- At the end of the course students will submit a final research paper *closely related to course topic*. This may take a variety of forms including: research paper; formal, evidence-based essay, commentary, or editorial; integrated review of the literature/ review essay; etc.
- *Proposal*. By **Week 3**, submit an abstract describing your proposed final research paper; typed, double-spaced, ~1 p.
- *Abstract, Outline & Bibliography*. By **Week 7**, submit a revised abstract, outline, and preliminary bibliography for your paper
- *Final Paper*. Due by the beginning of the regularly scheduled **Final Exam** period for this course. 10-12 pp., typed, double-spaced, *plus* cover page and references.

* For extra credit, in addition to the seminar/ research paper assignment described here, I am open to receiving also a supplemental digital media product based on or complementing that paper.

TOPICAL OUTLINE

I. Introduction

Week 1 (2/10) – Overview and introduction

II. Roots of Water-related Issues in the Region

Week 2 (2/17) – Biophysical

Week 3 (2/24) – Historical

Week 4 (3/3) – Sociocultural

III. Top-down Solutions (Managerial, Technological)

Week 5 (3/10) – Israel/ Palestine

Week 6 (3/17) – Jordan

Week 7 (3/24) – Regional/ international

IV. Community-based, Participatory, and NGO Approaches

Week 8 (3/31) – Regional/ transboundary

Week 9 (4/7) – Israel/ Palestine

Week 10 (4/14) – Jordan

Week 11 (4/21) – WELLNESS DAY – no class

V. Conclusion

Week 12 (4/28) – Future prospects

Week 13 (5/5) – Student presentations

Finals Week – Seminar/ Research Papers Due

EST 470/ 670, Course Outline – Part B

DETAILED SCHEDULE

I. Introduction

Week 1 (2/10) – Overview and introduction

The Jordan-Yarmuk River Basin

Course introduction

REQUIRED (ALL):

Soffer, “The Jordan-Yarmuk Basin,” pp. 119-203*

REQUIRED (GRADS):

Tal & Rabbo, “Preface” and “Introduction”. Pp. xiii-xvi & 1-12 in *Water Wisdom*.

RECOMMENDED:

FAO, 2009. “Transboundary River Basin Overview – Jordan.” AQUASTAT Report. Rome, 10 pp.

ADDITIONAL:

UN-ESCWA and BGR, 2013. “Jordan River Basin”. Ch.6 in *Inventory of Shared Water Resources in Western Asia*. Beirut, 52 pp.

II. Roots of Water-related Issues in the Region

Week 2 (2/17) – Biophysical

Biophysical aspects of water in Israel, the Palestinian Territories, and Jordan

REQUIRED (ALL):

Tal & Rabbo, Part 1, “Characterizing Water Resources.” Pp. 11-39 in *Water Wisdom*, including:

- Aliewi, “Water Resources: The Palestinian Perspective”
- Tal, “Water Resources: The Israeli Perspective”

Ministry of Water & Irrigation, 2017. “Jordan Water Sector: Facts and Figures 2017.” The Hashemite Kingdom of Jordan, 24 pp.

Al-Zyoud, et al., 2015. “Over Exploitation of Groundwater in the Centre of Amman Zarqa Basin – Jordan: Evaluation of Well Data and GRACE Satellite Observations,” *Resources* 4: 819-830

REQUIRED (GRADS):

Hadadin, 2015. “Dams in Jordan: Current and Future Perspective,” *Canadian Journal of Pure & Applied Sciences* 9(1): 3279-3290.

Zawahri, 2017. “Adapting to Climatic Variability along International River Basins in the Middle East.” Pp. 145-166 in *Water Security in the Middle East*

RECOMMENDED:

Soffer, “The Jordan-Yarmuk Basin” (review)

Beaumont, 2000. “Conflict, Coexistence, and Cooperation: A Study of Water Use in the Jordan Basin.” Pp. 19-44 in *Water in the Middle East: A Geography of Peace*, eds. Amery & Wolf. Austin, TX: University of Texas Press.

*** Weekly Reading Note #1 due ***

* All items in *Course Reader* unless otherwise noted.

Week 3 (2/24) – Historical

Historical dimensions of water issues in the Jordan-Yarmuk River Basin

REQUIRED (ALL):

Tal & Rabbo, Part 2, “Past Water Agreements and their Implementation.” Pp. 41-63 in *Water Wisdom*, including:

- Jayousi, “The Oslo II Accords in Retrospect: Implementation of the Water Provisions in the Israeli and Palestinian Interim Peace Agreements”
- Kerret, “Article 40: An Israeli Perspective”

Haddadin, 2014. “The Jordan River Basin: A Conflict Like No Other.” Pp. 243-263 in *Water and Post-Conflict Peacebuilding*, ed. E. Weinthal, et al.

Feitelson, 2013. “The Four Eras of Israeli Water Policies”. Pp. 15-32 in *Water Policy in Israel*

REQUIRED (GRADS):

Dolatyar & Gray, 2000. “Water Politics in the Jordan River Basin”. Pp. 85-115 in *Water Politics in the Middle East*

Hussein, 2017. “Whose ‘reality’? Discourses and Hydropolitics along the Yarmouk River,” *Contemporary Levant* 2(2): 103-115.

RECOMMENDED:

Wolf, 2000. “‘Hydrostrategic’ Territory in the Jordan Basin: Water, War, and Arab-Israeli Peace Negotiations.” Pp. 63-120 in *Water in the Middle East: A Geography of Peace*.

Zawahri, 2010. “Governing the Jordan River System,” *Journal of Transboundary Water Resources* 1: 127-147.

ADDITIONAL:

Dowty, 2015. *Israel/Palestine*

Selby, 2003. *Water, Power and Politics in the Middle East*

Wolf, 1995. *Hydropolitics along the Jordan River* [digital edition available via Moon Library]

Zeitoun, 2012. *Power and Water in the Middle East*

*** Weekly Reading Note #2 due ***

*** Seminar/ Research Paper Abstract/ Proposal Due ***

Week 4 (3/3) – Sociocultural

Sociocultural dimensions of water issues in the Jordan-Yarmuk River Basin

REQUIRED (ALL):

Tal & Rabbo, Part 3, “The Water Culture of Israelis and Palestinians.” Pp. 65-77 in *Water Wisdom*, including:

- Abdeen, “Water culture in Palestine”
- Lipchin, “Water culture in Israel”

Alatout, 2008. “‘States’ of scarcity: water, space, and identity politics in Israel, 1948-59,” *Environment and Planning D: Society and Space* 26: 959-982.

Naguib, 2013. “Aesthetics of a Relationship: Women and Water.” Pp. 82-97 in *The Social Life of Water*, ed. John Richard Wagner.

Al Rawashdeh, 2015. “Syrian Refugees in North Jordan.” Pp. 6-9 in *Women, Water and Peace: Crisis of Survival in the Middle East*. Strategic Foresight Group.

REQUIRED (GRADS):

Alatout, 2006. "Towards a bio-territorial conception of power: territory, population, and environmental narratives in Palestine and Israel," *Political Geography* 25: 601-621.

Wolf, 2000. "Indigenous Approaches to Water Conflict Negotiations and Implications for International Waters," *International Negotiation* 5: 357-373.

ADDITIONAL:

Naguib, 2009. *Women, Water and Memory: Recasting Lives in Palestine*. London and Boston: Brill. [available as an e-book via SU Libraries]

Orlove & Caton, 2010. "Water sustainability: anthropological approaches and prospects," *Annual Review of Anthropology* 39: 401-415.

*** Weekly Reading Note #3 due ***

III. Top-down Approaches (Managerial, Technological)

Week 5 (3/10) – Israel/ Palestine

Water management in Israel and the Palestinian Territories

REQUIRED (ALL):

Feinerman, et al., 2013. "The Water Authority: The Impetus for Its Establishment, Its Objectives, Accomplishments, and the Challenges Facing It". Pp. 267-286 in *Water Policy in Israel*

Selby, 2003. "Administering Water under Oslo." Pp. 148-170 in *Water, Power and Politics in the Middle East*

Tal & Rabbo, Part 12, "Gaza's Water Situation." Pp. 265-279 in *Water Wisdom*, including:

- Abu-Mayla & Adar, "The Gaza Water Crisis"

Tal, 2017. "The Evolution of Israeli Water Management: The Elusive Search for Environmental Security," pp. 125-143 in *Water Security in the Middle East*

REQUIRED (GRADS):

Assaf, 2007. "Managing Palestine's Water Budget: Providing for Present and Future Needs". Pp. 89-110 in *The Jordan River and Dead Sea Basin*

Gilmont, 2014. "Decoupling dependence on natural water: reflexivity in the regulation and allocation of water in Israel," *Water Policy* 16(1): 79-101

Spiritos & Lipchin, 2013. "Desalination in Israel". Pp. 101-123 in *Water Policy in Israel*

Abualtayef, et al. 2017. "Evaluation of the effect of water management interventions on water level of Gaza coastal aquifer," *Arabian Journal of Geosciences* 10: 1-19

RECOMMENDED:

Palestinian Water Authority, 2013. "National Water Policy for Palestine, 2013-2032." Palestinian National Authority. 13 pp.

Water Sector Regulatory Council [WSRC], 2017. "Bridge to Sustainability: Waste and Wastewater Service Providers in Palestine. Facts and Prospects – 2015 Report." 76 pp.

Peiris, et al., 2017. "Seawater desalination transforming the Gaza Strip." 7 pp.

Siegel, 2015. *Let There Be Water*

ADDITIONAL:

Becker, ed., 2013. *Water Policy in Israel*

Sulyman, 2013. "Review the Legal Side and Reform the Institutional Framework of Water Sector in Palestine." 120, xiii pp.

*** Weekly Reading Note #4 due ***

Week 6 (3/17) – Jordan

Water management in Jordan

REQUIRED (ALL):

Ministry of Water & Irrigation. 2015. "Jordan Water Sector Facts and Figures, 2013," 18 pp. (review)

Ministry of Water & Irrigation. 2014. "Establishing the Post-2015 Development Agenda: Sustainable Development Goals towards Water Security. The Jordanian Perspective," pp. 1-23

Ministry of Water & Irrigation. 2016. "Water Substitution and Reuse Policy," pp. 1-20

REQUIRED (GRADS):

McIlwaine, 2007. "Managing Jordan's Water Budget: Providing for Past, Present and Future Needs". Pp. 61-74 in *The Jordan River and Dead Sea Basin*, eds. Lipchin et al.

Mustafa & Tillotson, 2019. "The Topologies and Topographies of Hydro-Social Territorialisation in Jordan," *Political Geography* 70: 74-82.

Al Naber & Molle, 2017. "Water and sand: Is groundwater-based farming in Jordan's desert sustainable?" *Groundwater for Sustainable Development* 5: 28-37

RECOMMENDED:

Alqadi, Khaled A., and Lalit Kumar. 2014. "Water policy in Jordan," *International Journal of Water Resources Development* 30(2): 322-334.

Al-Mefleh, Naji K., Saad M. AlAyyash, and Fatima A. Bani Khaled. 2019. "Water Management Problems and Solutions in a Residential Community of Al-Mafraq City, Jordan," *Water Supply*. DOI 10.2166/ws.2019.003

World Bank. 2010. "Water Quality". Pp. 67-124 in *Achieving Sustainable Development in Jordan: Country Environmental Analysis*

ADDITIONAL:

Grover, et al. 2010. "Integrated Water Resources Management in Jordan." Working Paper No. 577. Cairo: Economic Research Forum, 23 pp., ff.

USAID Jordan. 2016. "USAID Water and Development Country Plan for Jordan," 6 pp.

*** Weekly Reading Note #5 due ***

Week 7 (3/24) – Regional/ international

International water management in the Jordan-Yarmuk Basin

REQUIRED (ALL):

Comair, et al. 2013. "Water Resources management in the Jordan River Basin," *Water and Environment Journal* 27: 495-504

Haddadin, 2007. "A Jordanian Socio-legal Perspective on Water Management in the Jordan River – Dead Sea Basin". Pp. 41-60 in *The Jordan River and Dead Sea Basin*, eds. Lipchin et al.

Daibes-Murad, 2007. "A Palestinian Socio-legal Perspective on Water Management in the Jordan River-Dead Sea Basin". Pp. 75-88 in *The Jordan River and Dead Sea Basin*

Laster & Livney, 2015. "Basin Management in the Context of Israel and the Palestine Authority," Pp. 227-242 in *Water Policy in Israel*, ed. Nir Becker

REQUIRED (GRADS):

Shmueli & Aviram, 2015. "The International Hydro-Political Policies of Israel." Pp. 243-265 in *Water Policy in Israel*

Fischhendler & Nathan, 2016. "The Social Construction of Water Security Discourses: Preliminary Evidence and Policy Implications from the Middle East". Pp. 76-90 in *Handbook on Water Security*, eds. Pahl-Wostl, Claudia, et al.

Hussein, 2017. "Politics of the Dead Sea Canal: a historical review of the evolving discourses, interests, and plans," *Water International* 42(5): 527-542

RECOMMENDED:

Fischhendler, et al. 2016. "Identifying synergies and trade-offs in the sustainability-security nexus: the case of the Israeli-Palestinian wastewater treatment regime," *Hydrological Sciences Journal* 61 (7): 1358-1369

Lipchin & Albrecht. 2017. "A Watershed-based approach to Mitigating Transboundary Wastewater Conflicts between Israel and the Palestinian Authority: The Besor-Hebron-Be'er Sheva Watershed." Pp. 93-123 in *Water Security in the Middle East*, ed. Cahan

Susskind, 2017. "The Political and Cultural Dimensions of Water Diplomacy in the Middle East." Pp. 185-205 in *Water Security in the Middle East*

Willner, et al., 2015. "Salt storms, sinkholes and major economic losses: Can the deteriorating Dead Sea be saved from the looming eco crisis?" *Negev, Dead Sea and Arava Studies* 7(2): 27-37.

ADDITIONAL:

Tal & Rabbo, Part 11, "The Jordan River Basin." Pp. 249-264 in *Water Wisdom*, including:

- Rumman, 2013. "Managing the Jordan River Basin: A Palestinian Perspective." Pp. 251-257 in *Water Wisdom*, eds. Tal & Abed Rabbo
- Laster & Livney, 2013. "Managing the Jordan River Basin: An Israeli Perspective." Pp. 258-263 in *Water Wisdom*, eds. Tal & Abed Rabbo

*** Weekly Reading Note #6 due ***

*** Seminar Paper (rev.) Abstract, Outline & Bibliography Due ***

IV. Community-based, Participatory, and NGO Approaches

Week 8 (3/31) – Regional/ transboundary

Transboundary community, participatory, and NGO based approaches

Topic discussion leader #1: _____

Topic discussion leader #2: _____

Topic discussion leader #3: _____

REQUIRED (ALL):

Twite, 2005. "The Role of NGOs in Promoting Regional Cooperation over Environmental and Water Issues in Israel and Palestine – Successes and Limitations." Pp. 247-256 in *Palestinian and Israeli Environmental Narratives*, ed. Schoenfeld.

Bromberg & Qumsieh, 2005. "Advancing Human Security through the Sharing of Water Perspectives in the Middle East." Pp. 257-262 in *Palestinian and Israeli Environmental Narratives*, ed. Schoenfeld.

Lipchin & Albrecht, 2017. "A Watershed-based Approach to Mitigating Transboundary Wastewater Conflicts between Israel and the Palestinian Authority: The Besor-Hegbron-Be'er Sheva Watershed." Pp. 93-124 in *Water Security in the Middle East*, ed. Cahan

Schoenfeld, 2010. "Environment and Human Security in the Eastern Mediterranean: Regional Environmentalism in the Reframing of Palestinian-Israeli-Jordanian Relations." Pp. 113-131 in *Achieving Environmental Security*, eds. P.H. Liotta, et al.

REQUIRED (GRADS):

Tal & Abed Rabbo, Part 13, "Citizen Involvement." Pp. 281-293 in *Water Wisdom*. Including...

- Aburdeineh, Bromberg, et al. "The Role of Civil Society in Addressing Transboundary Water issues in the Israeli-Palestinian Context"

Ide & Fröhlich, 2015. "Socio-environmental cooperation and conflict? A discursive understanding and its application to the case of Israel and Palestine," *Earth System Dynamics* 6: 659-671.

Ide, 2017. "Space, Discourse and Environmental Peacebuilding," *Third World Quarterly* 38 (3): 544-562.

RECOMMENDED:

Arava Institute. 2013. "Mitigating Transboundary Water Conflicts: Building Partnerships and Trust through Collaborative Networks." Workshop Report. Arava Institute for Environmental Studies, Israel. 60 pp.

EcoPeace/ME. 2016. "Community Based Problem Solving on Water Issues: Cross-border 'Priority Initiatives' of the Good Water Neighbors Project". Amman, Bethlehem & Tel Aviv: EcoPeace Middle East. 36pp.

Kranz & Mostert, 2010. "Governance in Transboundary Basins – the Roles of Stakeholders..." Ch.7 in Earle, et al., *Transboundary Water Management*, pp. 91-106

Salamé & van der Zaag, 2010. "Enhanced Knowledge and Education Systems for Strengthening the Capacity..." Ch.12 in Earle, et al., *Transboundary Water Management*, pp.171-186

ADDITIONAL:

Butterfly Effect, The. 2014. "External Evaluation – 'Good Water Neighbours Project' – Concluding Report of Years 2012-2014." EcoPeace/ Friends of the Earth Middle East, August. 67 pp.

FoE/ME. 2005. "Good Water Neighbors: A Model for Community Development Programs in Regions of Conflict." Amman, Bethlehem & Tel Aviv: EcoPeace/ Friends of the Earth Middle East. 44pp.

FoE/ME. 2007. "Good Water Neighbors: Identifying Common Environmental Problems and Shared Solutions." Amman, Bethlehem & Tel Aviv: EcoPeace/ Friends of the Earth Middle East. 58pp.

WEB RESOURCES:

Arava Institute of Environmental Studies (<http://arava.org/>)

Eco-Peace/ Friends of the Earth Middle East (<http://ecopeaceme.org/>)

Environment and Climate in the Middle East (<http://mideastenvironment.apps01.yorku.ca/>)

*** Weekly Reading Note #7 due ***

Week 9 (4/7) – Israel/ Palestine

Community, participatory, and NGO based approaches in Israel & the Palestinian Territories

Topic discussion leader #1: _____

Topic discussion leader #2: _____

Topic discussion leader #3: _____

REQUIRED (ALL):

Schoenfeld, 2005. "Types of environmental narratives and their utility for understanding Israeli and Palestinian environmentalism." Pp. 93-114 in *Palestinian and Israeli Environmental Narratives*.

Schein. 2004. "The role of NGOs in addressing water access in Israel and the Palestinian Authority," *Sustainable Development Law & Policy* 5 (1): 19-22.

Lipchin, et al. 2005. "Public perceptions and attitudes towards the declining water level of the Dead Sea Basin: A multi-cultural analysis." Pp. 263-280 in *Palestinian and Israeli Environmental Narratives*.

Zohar, et al., 2010. "Environmental Peacebuilding Strategies in the Middle East: The Case of the Arava Institute for Environmental Studies," *Peace & Conflict Review* 5(1): 1-14.

Abu Amr, et al., 2015. "Public participation and response towards water resources management options in Gaza Strip, Palestine," *Applied Mechanics and Materials* 802: 581-586.

von Medeazza, et al. 2019. "Assessing change in access to WASH in Palestinian schools," *Waterlines* 38(2): 123-134.

REQUIRED (GRADS):

Menahem & Gilad, 2015. "Israel's Water Policy 1980s-2000s: Advocacy Coalitions, Policy Stalemate, and Policy Change". Pp. 33-50 in *Water Policy in Israel*.

Murthy, et al., 2013. "The Human Right to Water in Israel: A Case Study of the Unrecognised Bedouin Villages in the Negev," *Israel Law Review* 46(1): 25-59.

Beltran & Kallis, 2018. "How does virtual water flow in Palestine? A political ecology analysis," *Ecological Economics* 143: 17-26.

RECOMMENDED:

Yishae, 1998. "Civil Society in Transition: Interest Politics in Israel," *The Annals of the American Academy of Political and Social Science* 555: 147-162.

Laskier, 2000. "Israeli Activism American-Style: Civil Liberties, Environmental and Peace Organizations as Pressure Groups for Social Change, 1970s-1990s," *Israel Studies* 5(1): 128-152.

Benstein, 2005. "Between Earth Day and Land Day: Palestinian and Jewish environmentalism in Israel." Pp. 51-74 in *Palestinian and Israeli Environmental Narratives*.

Nazer, et al. 2010. "A financial, environmental and social evaluation of domestic water management options in the West Bank, Palestine," *Water Resource Management* 24: 4445-4467.

Tarabulus, 2014. "Thirsty for (the right to) water: the policy of not supplying water to the unrecognized Arab-Bedouin villages in the Negev." Negev Coexistence Forum for Civil Equality, Omer, Israel. 66 pp.

Al-Khatib, et al., 2017. "Governing the reuse of treated wastewater in irrigation: the case study of Jericho, Palestine," *International Journal of Global Environmental Issues* 16 (1/2/3): 135-148.

ADDITIONAL:

Tal, et al. 2011. "Israel's Environmental Movement: Trends, Needs and Potential." Ben Gurion University of the Negev, Israel. 48 pp.

Bieler, 2016, June. "A Case Study: Economic and Social Feasibility of Decentralized Greywater Treatment in the West Bank." 36 pp.

Taha & Al-Sa'ed. 2018. "Application potential of small-scale solar desalination for brackish water in the Jordan Valley, Palestine," *International Journal of Environmental Studies* 75 (1): 214-225.

Siegel, *Let There Be Water*

*** Weekly Reading Note #8 due ***

Week 10 (4/14) – Jordan

Community, participatory, and NGO based approaches in Jordan

Topic discussion leader #1: _____

Topic discussion leader #2: _____

Topic discussion leader #3: _____

REQUIRED (ALL):

Hadadin, 2010. "Water shortage in Jordan – sustainable solutions," *Desalination* 250 (1): 197-202.

Mustafa, et al., 2015. "Water User Associations and the Politics of Water in Jordan," *World Development* 79: 164-176.

Hussein, 2018a. "Tomatoes, Tribes, Bananas, and Businessmen: An Analysis of the Shadow State and of the Politics of Water in Jordan," *Environmental Science and Policy* 84: 170-176.

Oweis, 2017. "Rainwater harvesting for restoring degraded dry agro-pastoral ecosystems: a conceptual review of opportunities and constraints in a changing climate," *Environmental Reviews* 25: 135-149.

Al Rawashdeh, 2015. "Syrian Refugees in North Jordan." Pp. 6-9 in *Women, Water and Peace: Crisis of Survival in the Middle East*. Mumbai: Strategic Foresight Group

UNHCR, 2014. "Water Supply, Sanitation and Hygiene (WASH) Jordan Working Group Terms of Reference." United Nations High Command for Refugees. 3 pp.

REQUIRED (GRADS):

Mustafa & Talozzi, 2018. "Tankers, Wells, Pipes and Pumps: Agents and Mediators of Water Geographies in Amman, Jordan," *Water Alternatives* 11(3): 916-932.

RECOMMENDED:

GIZ, 2015. "Promotion of training to improve efficiency in the water and energy sector in Jordan." Project evaluation: summary report. Deutsche Gesellschaft für Internationale Zusammenarbeit (German Society for International Cooperation. 5 pp.

GIZ, 2016. "Support to Jordanian communities in response to the Syrian refugee crisis through Water wise Plumbers." Project evaluation: summary report. Deutsche Gesellschaft für Internationale Zusammenarbeit (German Society for International Cooperation. 6 pp.

*** Weekly Reading Note #9 due ***

Week 11 (4/21) – WELLNESS DAY – no class

V. Conclusion

Week 12 (4/28) – Future prospects

Cooperative water management strategies; new challenges

REQUIRED (ALL):

Tal & Abed Rabbo. Part 14, “The Role of Third Parties in Conflict Resolution.” Pp. 295-309 in *Water Wisdom*. Including...

- Twite, "The Role of Third Parties in Helping to Resolve the Conflicts over Water Issues in Israel and Palestine"

Tal & Abed Rabbo. Part 15, “Cooperative Water Management Strategies.” Pp. 311-321 in *Water Wisdom*. Including...

- Haddad & Feitelson, "Joint Aquifer Management Institutional Options"

Seigel. 2015. “Israel, Jordan, and the Palestinians: Finding a Regional Water Solution.” Pp. 171-195 in *Let There Be Water*

Tal, 2017. “Will demography defeat river rehabilitation efforts? The case of the River Jordan,” *Water Research* 111: 404-419.

REQUIRED (GRADS):

Selby. 2013. “Cooperation, Domination and Colonisation: The Israeli-Palestinian Joint Water Committee,” *Water Alternatives* 6 (1): 1-24

Susskind, 2017. “The Political and Cultural Dimensions of Water Diplomacy in the Middle East.” Pp. 185-205 in *Water Security in the Middle East*, ed. Cahan

Haddadin. 2014. “The Jordan River Basin: A Conflict Like No Other.” Pp. 243-263 in *Water and Post-Conflict Peacebuilding* (review)

Fischhendler, et al. 2016. “Identifying synergies and trade-offs in the sustainability-security nexus: the case of the Israeli-Palestinian wastewater treatment regime,” *Hydrological Sciences Journal* 61 (7): 1358-1369 (review)

RECOMMENDED:

Abitol & Schoenfeld. 2007. “Constructing an Adaptive Regional Vision of Water Development in the Jordan River Basin. Pp. 297-316 in *The Jordan River and Dead Sea Basin*, eds. Lipchin et al.

Kool, 2016. *Sustainable Development in the Jordan Valley: Final Report of the Regional NGO Master Plan*. Hexagon Series on Human and Environmental Security and Peace, Vol. 13.

Yasuda, et al. 2017. “Transboundary Water Cooperation over the Lower Part of the Jordan River Basin...” Hague Institute for Social Justice, Netherlands. 153 pp. (skim)

ADDITIONAL:

Öjendal, et al., 2010. "Towards a Conceptual Framework for Transboundary Water Management". Ch.14 in Earle, et al. *Transboundary Water Management*, pp. 237-248

Nincic & Weiss, 2016. “The Future of Transboundary Water Conflicts,” *Political Science Quarterly* 131 (4): 717-748

*** Weekly Reading Note #10 due ***

Week 13 (4/22) – Student presentations

Finals Week – Seminar/ Research Papers Due

NOTICE

Accommodations

ESF works closely with Syracuse University's Center for Disability Resources (CDR) in assisting students with learning and physical disabilities. If you think you may need accommodations in this course related to a disability, you may contact the ESF Division of Student Affairs, 110 Bray Hall, tel. 315.470.6660, or email studenthelp@esf.edu, for assistance with the process. You may also contact CDR directly via their website at <https://disabilityresources.syr.edu>; or call (315) 443-4498 or email disabilityresources@syr.edu for more detailed information. CDR is responsible for coordinating disability-related academic accommodations and will work with the student to develop an access plan. Since academic accommodations may require early planning and generally are not provided retroactively, please contact ESF's Division of Student Affairs or CDR as soon as possible to begin this process.