AMERICAN UNIVERSITY | SCHOOL OF INTERNATIONAL SERVICE
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BUILDING BRIDGES OVER TROUBLED WATERS:

An Analysis of Palestinian-Israeli Cooperation within the Water-Food-Energy Nexus in the West Bank

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Bilial Aslam

Report of the 2018 SIS practicum team on Palestinian-Israeli Cooperation for Peacebuilding:
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The GEP program, which includes the Global Environmental Policy M.A. and the Dual Degree in Natural Resources and Sustainable Development (in partnership with the UN-mandated University for Peace, Costa Rica), welcomes students from a wide range of backgrounds. It provides students with the practical tools and academic framework to become participants and leaders in the international environmental field. The GEP program concentrates on sustainable development, environmental ethics, international political economy, international diplomacy, and environmental justice.

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Arava Institute for Environmental Studies (AIES)

The Arava Institute for Environmental Studies is the premier environmental education and research program in the Middle East, preparing future Arab and Jewish leaders to cooperatively solve the region's environmental challenges. Affiliated with Ben-Gurion University, the institute houses academic programs, research, and international cooperation initiatives on a range of environmental concerns and challenges.

http://www.arava.org

Palestinian Wastewater Engineers Group (PWEG)

Since its creation in 2004, the Palestinian Wastewater Engineers Group has remained highly dedicated to upgrading the personnel skills in the water and solid waste sector by focusing on capacity building activities. It aims to qualify professional and experienced members. Its utmost goal is to contribute to environmental pollution abatement and to protect water resources from pollution. PWEG assists the local authorities in planning, design, and implementation of water and sanitation programs and projects. Its assistance to the local authorities includes raising needed funds for water and implementing environmental projects.

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http://www.american.edu/sis/practica/

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LIST OF ACRONYMS

AIES	Arava Institute for Environmental Studies
AU	American University
CMM	Conflict Management and Mitigation
CTWM	Center for Transboundary Water Management
EU	European Union
FAO	Food and Agricultural Organization of the United Nations
GEP	Global Environmental Policy
ICA	Israeli Civil Administration
IDF	Israeli Defense Forces
IPCDPM	Israeli-Palestinian Cooperative Date Production and Management project
IWA	Israeli Water Authority
JAV	The Jordan-Arava Valley
JWC	Joint Water Commission
MCM	Million Cubic Meters
MECTA	Motivations, Expectations, Concerns, Threats, and Aspirations
MTWC	Mitigating Transboundary Wastewater Conflicts
NGO	Non-Governmental Organization
PTP	People-to-People
PA	Palestinian Authority
PICP	Palestinian-Israeli Cooperation for Peacebuilding
PV	Photovoltaic
PWA	Palestinian Water Authority
PWEG	Palestinian Wastewater Engineers Group
SDG	Sustainable Development Goal
TOC	Theory of Change
USAID	United States Agency for International Development
USD	U.S. Dollars
WFE	Water-Food-Energy Nexus
WWTP	Wastewater Treatment Plant

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EXECUTIVE SUMMARY

Now in the 10th year of their partnership, the Arava Institute for Environmental Studies (AIES) and the Palestinian Wastewater Engineers Group (PWEG) have worked together on environmental remediation and improvement projects which promote cooperation and coexistence between Israelis from the Arava Valley and Palestinians from the Jordan Valley. Their initial work addressed issues related to wastewater management. However, in recent years, AIES and PWEG have 'scaled out' their cooperation, developing a series of initiatives that are together, herein referred to as the Israeli-Palestinian Cooperative Date Production and Management (IPCDPM) project, incorporating water, energy, and food security dimensions.

The partners are in the process of designing and installing integrated small-scale greywater recycling, renewable energy, and farming systems providing a source of water for reuse in agriculture. In 2017, the IPCDPM project expanded from its initial project site in Al-Auja to Marj Al-Ghazal, another small West Bank village in the Jordan Valley. The partners are in the process of designing and installing integrated small-scale greywater recycling, renewable energy, and farming systems, to provide a source of water for reuse in agriculture.

The 2018 American University (AU), Palestinian-Israeli Cooperation for Peacebuilding (PICP) practicum team examined the development- and peacebuilding-related perspectives of stakeholders in the context of the IPCDPM project's extension into Marj Al-Ghazal. The current assessment is framed by four themes: identity, equity, trust, and shared environmental sustainability. The following report details the context of the IPCDPM project and the 2018 PICP practicum team's conceptual framework, findings, analysis, challenges, and recommendations based on a rapid appraisal of key project stakeholders.

Methodology

To gauge the attitudes and perceptions of IPCDPM project stakeholders, the practicum team's central research question asked:

What are the development and peacebuilding-related motivations, expectations, concerns, threats, and aspirations (MECTA) of Israelis and Palestinians who choose to cooperate on a water-food-energy nexus project?

To begin, our team completed a month-long desk study comprising secondary research on environmental peacebuilding and the Israeli-Palestinian conflict and a weekend training workshop. Based upon the literature review, our team developed a framework to address our research question while collecting data in the field. A rapid-appraisal assessment was conducted over a two-week period from June 23, 2018 to July 5, 2018 in Israel and the West Bank. Our research encompassed 22 interview sessions with a total of 31 participants, as well as observation of a JAV committee meeting involving 14 participants and 5 project staff. The interviews included a range of stakeholders, including Israeli and Palestinian farmers, non-governmental organizations (NGOs), and government officials. This qualitative methodology was used to analyze the perceptions and attitudes of project stakeholders, referred to throughout this report as stakeholders' MECTA. A data collection matrix was used to organize the MECTA according to our conceptual framework. We examined the different environmental peacebuilding indicators related to identity, equity, trust, and sustainability in order to assess the convergence and divergence of expressions of the stakeholders. This is premised on a belief that doing so would further contribute to building greater understanding between project partners in moving forward together on water-food-energy nexus cooperation.

Findings

Identity

- The shared farming identity of Israelis and Palestinians has been key to the success of this cooperation.
- The expectations and aspirations of Palestinian and Israeli date farmers reveal differences in orientation in regard to cultural and business contexts.
- Israeli farmers interpreted the Palestinian farmers' concern regarding scarcity of resources as a possible barrier to overcome, but did not feel threatened by the concerns. Palestinian farmers, on the other hand, experience such scarcity in farming resources that meeting their immediate needs is a major motivation for participating in the project.

Equity

- There was consensus among most stakeholders that the project's PTP connections countered the prior expectations resulting from personally mediated biases.
- The primary motivation for Palestinians to participate was inequities, whereas it was personal ideology for Israelis.
- Palestinian farmers emphasized the lack of rights and political power as key concerns and threats, whereas only a few Israeli farmers and practitioners mentioned political instability as a secondary concern. Moreover, there were different interpretations of what political instability means and its implications.
- Various stakeholder groups acknowledged the project's limited traction in addressing structural and institutional inequities.
- For project-implementing organizations, there were multiple visions for how the IPCDPM project could scale up its influence.

Trust

- There is a desire for continued cooperation on water-food-energy nexus issues.
- The lack of a fluent shared language between Israeli and Palestinian farmers on the JAV committee is a barrier to trust enhancement.
- When answering questions about individual motivations, expectations, and aspirations for cooperation in the project, both Palestinian and Israeli farmers expressed statements that indicate opportunities for trust enhancement.

Sustainability

- There was a clear belief from both Israeli and Palestinian stakeholder groups that the threat of pests, in particular the red palm weevil, presents an opportunity for cooperative management.
- A reliable, affordable, and renewable energy source is needed to improve the livelihoods of Palestinian date farmers.
- The soils on Palestinian farms demonstrate a high level of salinity, which presents challenges to agricultural pursuits.
- Date farmers require uninterrupted access to clean water for their livelihoods; this includes, just prior to the harvest, having access to water that is cleaner than treated wastewater.

Challenges

- Observations taken during the July 2018 joint JAV Committee meeting demonstrated that the meeting's objectives and challenges were not clear to all participants.
- Palestinian stakeholders have a clear desire for more knowledge on marketing, packing, and other forms of date production, but Israeli and Palestinian farmers' perceived fear of intergroup competition remains an obstacle.
- Due to insufficient data, this report was not able to include a larger section on women in peacebuilding, despite the fact that gender is a challenge within the cooperation.

Recommendations

Increasing and Improving Communication and Understanding

- Create presentations and handouts in both Hebrew and Arabic for JAV Committee meetings.
- Increase and support a variety of communication channels to continue building relations.
- Increase recruitment of Israeli participants by appealing to Israelis who are motivated by cooperation with Palestinians and charitable contributions.
- Facilitate dialogue and activities that promote a deeper understanding of regional inequities facing Palestinians and other identities.
- Increase vocational activities centered around the different experiences and expertise related to date farming for Palestinian and Israeli participants.
- Develop structures and rules, agreed upon by all parties, that maximize the efficiency of JAV Committee meetings.
- Hire a bilingual (Arabic and Hebrew) agricultural consultant for Israeli and Palestinian farmers and beneficiaries.

Developing Future Strategies and Projects

- Gain consensus on a strategic plan for the project's next steps, with emphasis on how it enables equitable and inclusive participation.
- Develop a mutually beneficial pest management strategy to monitor and reduce the spread of red weevil on date farms.
- Develop a strategy to implement a larger-scale community outreach plan to improve gender equality within the JAV Committee.
- Conduct an economic cost-benefit analysis of the benefits of forming Palestinian farming cooperatives.

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Top Left: Bilal Aslam | Bottom Left: Michael Band | Right: Brenna Rivett

CHAPTER 1
INTRODUCTION

1.1 AIES and PWEG: A Partnership Ten Years in the Building

Since 2008, AIES and PWEG have built a partnership through wastewater-focused initiatives in Israel and Palestine. The focus of this cooperation includes community resilience and empowerment and promoting dialogue through shared water management and environmental stewardship. In 2015, AIES and PWEG scaled out their wastewater cooperation to include an energy and food security dimension. In the following years, AIES and PWEG used a cooperative approach linking Palestinian date farmers from the village of Al-Auja in the Jordan Valley and Israeli date farmers from the southern Arava Valley. They aim to provide agricultural capacity-building and training, experience-sharing, and people-to-people (PTP) relationship-building opportunities. In 2017, the project expanded from Al-Auja to Marj Al-Ghazal, another Palestinian village in the Governorate of Jericho in the Jordan Valley.

The partnership has invited five AU PICP teams over the years to evaluate the development of the partnership and its project initiatives. Previous teams focused on the IPCDPM project's initial activity in Al-Auja and its expansion into solar energy. The 2018 team aimed to examine the development and peacebuilding-related perspectives and attitudes of the partners and other stakeholders toward the IPCDPM project and its new extension into Marj Al-Ghazal. The main objective is as follows:

> *To analyze the development- and peacebuilding-related motivations, expectations, concerns, perceived threats, and aspirations (MECTA) of Israelis and Palestinians who cooperate on a water-food-energy nexus project in the Middle East.*

The findings from this report should contribute to AIES and PWEG's understanding of the project within the scope of environmental peacebuilding. The analysis and recommendations will help identify opportunities and constraints for the project, providing an overall sense of the project's key values and implications for cooperation within the water-food-energy (WFE) nexus.

1.2 People-to-People and Environmental Cooperation as an Entry Point

The AIES/PWEG partnership and the IPCDPM project examined in this report take place within the context of one of the world's most longstanding conflicts. The region's historical context has affected rights, including water rights, through asymmetric power balances and subsequent political agreements, which are critical to farming and livelihoods in Israel and Palestine. Though the region has historically faced water challenges in terms of supply, quality, and governance, these challenges will continue to increase with the threat of climate change and rise of urbanization. In Palestine, political and economic challenges have also prevented adequate development and management of water and energy infrastructures. Cooperative management of resources provides an opportunity to facilitate dialogue and conflict reduction between the two groups. Therefore, the IPCDPM project orients itself around shared environmental concerns to build cooperation among regional communities.

1.3 About the Project

The IPCDPM project aims to address the WFE nexus by working with Palestinian and Israeli date farmers in the Jordan Valley through water and energy projects and PTP interactions. This project has several components. For its water and energy components, the project installed a series of household-level and neighborhood-level wastewater treatment plants (WWTP) that produce 500 to 4500 liters per day and an off-grid solar power generator with a peak capacity of 30kWh. For its PTP component, the project developed experience- and knowledge-sharing structures and processes among Israeli and Palestinian farmers.

Launched in Al-Auja, the project extended to the Palestinian village of Marj Al-Ghazal in 2017. Marj Al-Ghazal currently has the poorest water access of the governorates within the West Bank as well as high power intermittency. The recycled greywater from household-level treatment plants is intended for use at the household level (e.g. in gardens) as well as for small-scale agricultural irrigation. Groundwater pumping is the main water source for the project communities. There are plans to install photovoltaic (PV) systems for solar energy to mitigate energy costs for groundwater pumping and treatment needs, as was created in Al-Auja in previous years. The projects are expected to have an integrated, sustainable, and positive impact on water use, energy consumption, and small-scale date farming thereby improving local livelihoods.

In addition to the installation of PV systems for groundwater pumping and wastewater reuse systems, AIES and PWEG aim to develop Israeli-Palestinian partnerships around off-grid WFE nexus systems, which build on-site resource resiliency. The two partner organizations facilitate PTP activities and exchanges. In 2016, AIES and PWEG made strides toward achieving this objective through the creation of the Jordan Arava Valleys (JAV) Committee. The JAV Committee brings Palestinian and Israeli farmers, packers, technicians, decision-makers, and community leaders together to focus on regional water and energy needs for date production.[1] Comprised of 27 total committee members -- 16 Palestinians (13 male, 3 female) and 11 Israelis (6 Male, 5 Female) - the Committee currently falls short of their goal of 35% female participation. The committee holds 12 annual meetings aimed at formalizing relations between the two communities and developing joint projects for renewable energy, water needs, and farming knowledge in the Jordan and Arava Valleys. Four of the yearly meetings are intended to bring Palestinian and Israeli JAV Committee members together, while the eight remaining meetings are intended to be local (i.e., Palestinian members meet in the Jordan Valley and Israeli members meet in the Arava Valley).

Due to the time stringency and in order to get a better overview for the entire project, we believe that creating the theory of change (TOC) and the result chain for the relevant project components would be beneficial to our understanding of the project. TOC helps to lay out the map of the change process and its expected outcomes.[2] Considering TOC is always used at the project design phase and the IPCDPM is at the implementation phase already, we are aiming to use this TOC to summarize (1) what interventions are Arava and PWEG providing for the region, (2) what stakeholders are expecting to get from the project, (3) what these interventions are contributing to the broad impact, and (4) why the expected outcomes will occur. Result Chain is used to articulate how activities trigger the changes from the previous level to the next, and eventually lead to the broad impact.[3] Based on our interviews, observations, and evaluation of project documents, we agree that "the individual change theory" for peacebuilding is applicable for IPCDPM TOC,

1 Israeli-Palestinian Cooperative Date Production and Management Grant Proposal" (Palestinian Wastewater Engineers Group, n.d.).

2 Stein, Danielle and Craig Valters. 2012. "Understanding Theory of Change in International Development". The Asia Foundation.

3 Kessler Adam. Nabanita Sen, Donna Loveridge. 2017. "Guidelines to the DCED Standard for Results Measurement: Articulating the Results Chain". The Donor Committee for Enterprise Development.

which means that the changes in individuals' consciousness, behaviors, attitudes and skills could contribute to peace.[4] Therefore, we characterize the IPCDPM project's implicit TOC as the following:[5]

If AIES and PWEG

1. install PV systems for groundwater pumping and WWTPs in the targeted locations,
2. create the JAV Committee, and
3. arrange workshops for Palestinians delivered by Israeli farmers,

then

4. the cooperation and coexistence between Israelis and Palestinians will be strengthened, and
5. water quantity and quality for irrigation will improve, which will increase date productivity and improve the livelihoods of participating farmers

because the knowledge, workshops, training, and tools that communities receive in this project will

6. enhance agricultural cooperation, and
7. shared livelihoods between the groups will lead to confidence building and conflict mitigation.

1.4 Cooperation: Perceptions and Attitudes as a Focal Point

In order for AIES and PWEG to gain insight into the implications of the IPCDPM project's implementations around the installation of PV stations and WWTPs, the creation of the JAV Committee, and student environmental exchange programs on regional environmental peacebuilding, this report examines the perceptions and attitudes of project stakeholders cooperating in the project. The team uses the project's stakeholder perceptions and attitudes of the environmental and PTP initiatives as a focal point to elicit insights on the project's areas of convergence and divergence as they relate to peacebuilding. Participant perceptions and attitudes help identify opportunities and constraints for the project as it continues to move forward.

The report organizes stakeholder perceptions and attitudes using the following core categories: motivations, expectations, concerns, perceived threats, and aspirations (MECTA). The team's analysis is guided by a conceptual framework on environmental peacebuilding focused on four themes: identity, equity, trust, and shared environmental sustainability (see Chapter 3). Our research also conceptually frames livelihoods as a cross-cutting theme among the aforementioned components. Based on the MECTA findings, the team illustrates key thematic insights related to environmental peacebuilding (Chapter 5) and follows with recommendations based on the analysis (Chapter 7).

The team began preparing for fieldwork in May 2018, with secondary research, then traveled to Israel and Palestine to perform a rapid appraisal over a two-week period in June and July. In July and August, the team evaluated the research data and compiled this report for AIES and PWEG. The primary data for this analysis comes from semi-structured interviews, group interviews, and participant observations with various project stakeholders. Stakeholders include project participants and management, government officials, representatives from civil society organizations, and private-sector actors. Therefore, the report draws from the experience and knowledge of Palestinians and Israelis involved in cooperation efforts as well as secondary research on peacebuilding, development, and the WFE nexus.

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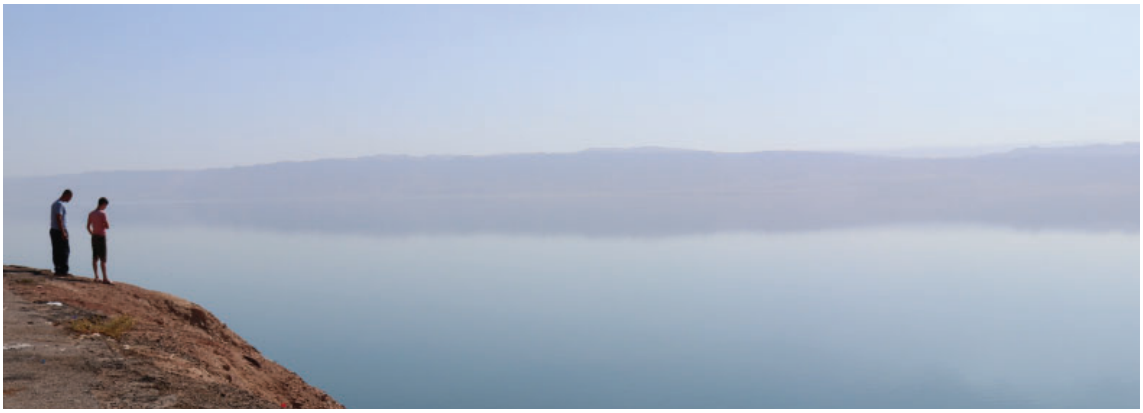
4 Church, Cheyanne, and Mark Rogers. 2011. Chapter 2: Understanding Change. Designing for Results: Integrating Monitoring and Evaluation in Conflict Transformation Activities. 10-42. Search for Common Ground.

5 The Result Chain and theory of change are based on the Israeli-Palestinian Cooperative Date Production and Management Grant Proposal. They only list the components that are relevant to this research. The Result Chain is shown in Appendix A.

1.5 Organization of the Report

Following this introduction, this report is organized as follows:

- Chapter 2 presents regional and project-related context;
- Chapter 3 introduces our team's conceptual framework;
- Chapter 4 explains our methodology and methods influenced by the conceptual framework and presents our findings on stakeholder perception and attitude through MECTA;
- Chapter 5 analyzes our team's findings through the four theoretical themes and other challenges; and
- Chapter 6 concludes with our team's list of recommendations.



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Top: Gloria Schultz | Bottom Left: Brenna Rivett |Bottom Right: Bilal Aslam

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CHAPTER 2

CONTEXT

This chapter will discuss the regional significance of the WFE nexus to the partnership between AIES and PWEG. The chapter will begin with an overview of the political conflict and the region's scarcities and agreements with respect to water and the role of cooperation in environmental peacebuilding. An overview of the WFE nexus concept will follow; each component of the nexus will then be described as it relates to the region's water scarcity, date farming, and renewable energy.

2.1 Political Context: Regional Scarcities & Peace Agreements

In 1947, the United Nations approved a plan for the partition of Palestine into a Jewish and Arab state with an international coalition responsible for Jerusalem. Israel declared independence on May 14, 1948 and within 24 hours was attacked by the surrounding Arab states. Egypt annexed the Gaza Strip (1948 - October 1956, March 1957 - June 1967) and Jordan gained control of the West Bank in 1950. At the conclusion of the 1967 Six Days War, Israel captured Jerusalem and the West Bank from Jordan, the Gaza Strip and the Sinai Peninsula from Egypt, and the Golan Heights from Syria.

Over the course of the First Intifada (1987-1993), the diplomatic peace process between Israel and the Palestinian Liberation Organization (PLO) began with the Madrid Conference in 1991 and continued into the mid-1990s with the Oslo Accords (1993 & 1995). The Oslo Accords created a Palestinian interim proto-government to be led by the newly formed Palestinian Authority (PA) in the West Bank and Gaza. While the Oslo Accords began the process of building a Palestinian state, the agreement was only intended to last for five years until a comprehensive final status agreement could be negotiated. Major issues such as borders, the status of Jerusalem, refugees, national security, and water rights would be further negotiated after the interim agreement.[6]


Photo Credit
Brenna Rivett

For the purpose of this report, the primary focus is Annex III Article 40 in the second Oslo agreement (hereafter, Oslo II), which details water cooperation between the Israelis and Palestinians. The Agreement, and thus Israel, recognized Palestinian water rights in the West Bank. Both parties agreed to coordinate the management and development of water and sewage resources and systems in the West Bank. Preventing the deterioration of water quality in water resources, sustainably using water resources, and treating/reusing domestic, urban, industrial, and agricultural sewage were also principles set out in this agreement. While the agreement established a critical framework or water cooperation, it specifically left out the issue of ownership of water- and sewage-related infrastructure in the West Bank and stated that it would be addressed in the permanent status negotiations.[7] Also problematic are the outdated parameters that were set to address the water needs of Palestinians in the West Bank. Both sides agreed that the total future need of the Palestinians in the West Bank would be between 70 and 80 MCM per year for both domestic

6 "The Israeli-Palestinian Interim Agreement on the West Bank and Gaza Strip," signed September 28, 1995.

7 Ibid.

and agricultural use, to be supplied by the Eastern Aquifer and other West Bank sources. Finally, Oslo II established a joint body to facilitate water cooperation. The Joint Water Committee (JWC) was created to implement the water agreement.

Formal cooperation occurs between the Israeli government and Palestinian Authority on issues such as water and security as well as smaller-scale cooperation between Israeli and Palestinian NGOs and nonprofits. However, in recent years, some Palestinians question cooperation on the ethical grounds that Palestinian engagement with Israelis ultimately ignores their plight and political situation. There is a movement among Palestinians to resist working with Israelis, thus threatening the peace process, out of concern that it normalizes relations and legitimizes the Israeli occupation of the West Bank. The anti-normalization movement has called for an end to all interactions between Israelis and Palestinians that do not subscribe to three key tenets: ending the occupation, equal rights for Israelis and Palestinians, and a full right of return for Palestinian refugees.[8] Studies show that the anti-normalization discourse sometimes overlaps with, and sometimes contradicts the peacebuilding process, especially since an anti-normalization stance is not always interpreted to mean a rejection of all relations.[9]

2.2 Water-Food-Energy (WFE) Nexus

Food, water, and energy all play an important role in human well-being, poverty reduction, and sustainable development.[10] Thus, it is imperative that there is an approach that addresses the complex interrelatedness of these three components. The UN Food and Agriculture Organization (FAO) defines the WFE nexus as the belief that "water, food, and energy security are inextricably linked and that actions in one area more often than not have impacts in one or both of the others."[11] Placing the nexus within a regional context, the Middle East is experiencing an increasing demand of scarce water resources from a growing population and a lack of access to reliable, renewable energy.[12] The West Bank is a prime example of the interconnectedness within the water, food, and energy sectors. For instance, Palestinian date farmers throughout the region require access to energy to produce treated wastewater used to grow their crops. When one resource is unavailable or unreliable, farmers may face a negative impact to their livelihoods. These WFE interactions are complex and dynamic, requiring a holistic analysis of each component when addressing sectoral issues in order to maintain a balance between resource user interests and the integrity of ecosystems.[13] As pressures continue to rise on natural resources within the West Bank, the WFE nexus provides an opportunity to systematically analyze the interaction between the natural environment and human activities and work toward increased coordinated management and the sustainable use of shared natural resources across sectors. In addition to improved environmental and resource-efficiency outcomes, cooperative management of resources provides an opportunity to facilitate dialogue between both groups, which in turn may create space for further conflict reduction and deepened cooperation. Assessing the distribution and management of shared natural resources is a fundamental principle within environmental peacebuilding (see Chapter 3.1).

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8 Braunold, Joel, 2015. "A Bigger Threat Than BDS: Anti-normalization" Haaretz.
9 Salem, Walid. "The Anti-Normalization Discourse in the Context of Israeli-Palestinian Peacebuilding".
10 Food and Agriculture Organization. 2014. "The Water-Energy-Food Nexus: A New Approach in Support of Food Security and Sustainable Agriculture." Rome, Italy: Food and Agriculture Organization of the United Nations.
11 Ibid.
12 Katz, David, and Arkadiy Shafran. 2017. "Water Energy Nexus: A Pre-Feasibility Study for Mid-East Water-Renewable Energy Exchanges." EcoPeace Middle East, EcoPeace Middle East/Konrad Adenauer Stiftung
13 "The Water-Energy-Food Nexus: A New Approach in Support of Food Security and Sustainable Agriculture."

Figure 1 describes the nexus interactions through the interdependencies, constraints, and synergies in how humans use and manage resource systems. By addressing each component of the WFE nexus, it is believed that environmental degradation and resource scarcity can be mitigated through sustainable development measures focused on improving livelihoods. In the following subsections, each component of the WFE nexus will be addressed in detail as they relate to the project.

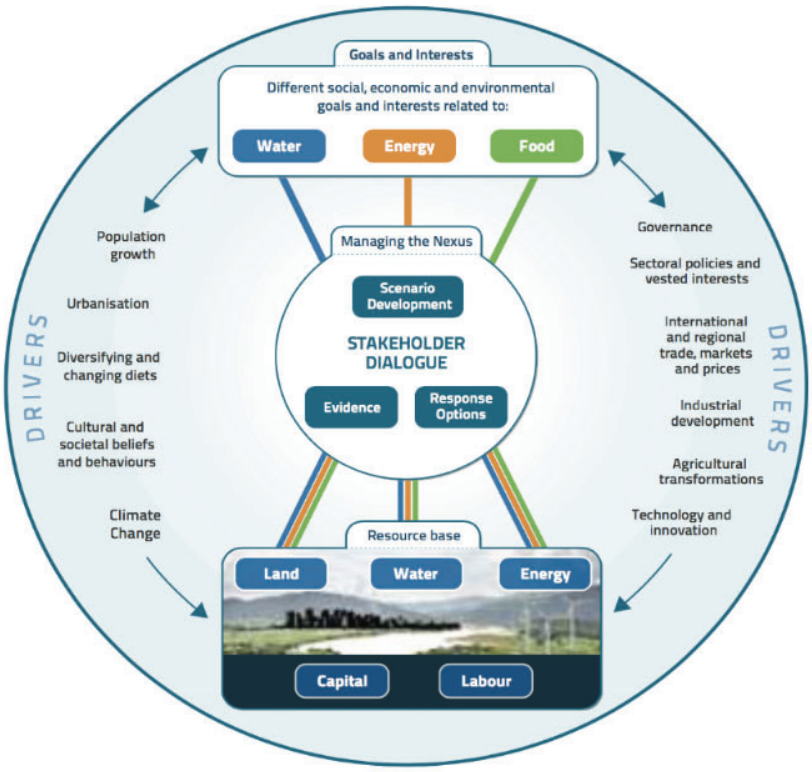

Figure 1 The FAO Approach to the WFE Nexus.[14]

2.2.1 Water: Scarcity and Conflict

Globally, water scarcity is a serious and growing challenge. According to the 2017 Geneva Water Hub report, approximately four billion people will live in "water-stressed" basins by 2050.[15] Due to limited water availability, inter-sectoral and interstate conflicts over the use of scarce water and energy resources will aggravate arid regions across the world.[16] Water scarcity as a source of conflict has been debated for decades with research on this link greatly increasing in the 1990s.[17] Several scholars have pointed out that water scarcity itself may not necessarily lead to conflict, but the competing governance and management of

14 "The Water-Energy-Food Nexus: A New Approach in Support of Food Security and Sustainable Agriculture."
15 Geneva Water Hub, 2017. "A Matter of Survival: Report on the Global High-Level Panel on Water and Peace." Geneva, Switzerland: https://www.genevawaterhub.org/resource/matter- survival.
16 Bekchanov, M, A Bhaduri, and C Ringler. 2013. "Is Rogun a Silver Bullet for Water Scarcity in Central Asia?" Giessen, Germany: Center for Development Research, Bonn University.
17 Homer-Dixon, Thomas F. 1994. "Environmental Scarcities and Violent Conflict: Evidence from Cases." International Security 19, no. 1: 5–40.

water may contribute to conflict.[18,19,20] It is widely believed that water scarcity will be "among the most dangerous developments in the future."[21]

In spite of this, there are instances of water management being used as a mechanism of cooperation, and it is crucial to point out that interactions over water resources can be cooperative among riparian states.[22,23,24] The 1994 water agreement between Jordan and Israel is a prime example. This cooperation is underlined by the belief that water diplomacy and the willingness to cooperate to resolve water challenges can strengthen relationships and build bridges between parties.[25] Therefore, it is imperative to recognize the important role water is playing in conflict and use it as an entry point to further cooperation and develop the pathway to peace. Regionally, the primary freshwater sources for Israel and the West Bank are the Jordan River and the Mountain Aquifer (though Israel and the Gaza Strip also rely on the Coastal Aquifer). Historically, the Jordan River has provided freshwater for the Jordan Valley region, but 96% of the water in the Jordan River Valley has since been diverted.[26] The Mountain Aquifer is considered "the most important groundwater resource" for Israel and the West Bank because it supplies approximately one-third of Israel's water and the majority of the West Bank's.[27] This is particularly important for the West Bank, as Palestinians do not have access to the Jordan River.[28] Despite growing dependence, the Mountain Aquifer is now threatened by leachate from solid waste.[29]

Additionally, Israel's investment in wastewater recycling and desalination has provided an abundance of water for Israelis. In Israel, water technology plays a crucial role in the sustainable use of water.[30] Israel is reusing about 86% of its water and desalinating 65 million cubic meters of water each year.[31] The expansion of wastewater treatment would mean that less investment in desalination will be needed in the region.[32]

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18 Conca, Ken. 2013. "Decoupling Water and Violent Conflict." Issues in Science and Technology 29: 39–48.
19 Troell, Jessica, and Erika Weinthal. "Harnessing Water Management for More Effective Peacebuilding: Lessons Learned." In Water and Post-Conflict Peacebuilding, 405–70. New York, New York: Earthscan.
20 Gerlak, Andrea K., and Susanne Schmeier. 2016. "River Basin Organizations and the Governance of Transboundary Watercourses." In The Oxford Handbook of Water Politics and Policy. Oxford University Press.
21 "A Matter of Survival: Report on the Global High-Level Panel on Water and Peace."
22 Pohl, Benjamin. 2014. "The Rise of Hydro-Diplomacy: Strengthening Foreign Policy for Transboundary Waters." Berlin, Germany: Adelphi Research and Federal Foreign Office.
23 Ojendal, Joakim, and Gustav Alden Rudd. 2017. "'Something Has to Yield': Climate Change Transforming Transboundary Water Governance (as We Know It)." In The Oxford Handbook of Water Politics and Policy, 1–30. Oxford University Press.
24 Petersen-Perlman, Jacob D., Jennifer C. Veilleux, and Aaron T. Wolf. 2017. "International Water Conflict and Cooperation: Challenges and Opportunities." Water International 42 (2):105–20.
25 Eran, Oded, and Gidon Bromberg. 2018. "Israeli Water Diplomacy and National Security Concerns." EcoPeace Middle East.
26 Kool, Jeroen. 2015. "Regional NGO Master Plan for Sustainable Development in the Jordan Valley." EcoPeace Middle East.
27 Harpaz, Yoav, Marwan Haddad, and Saul Arlosoroff. 2001. "Overview of the Mountain Aquifer a Shared Israeli-Palestinian Resource." Management of Shared Groundwater Resource, 43–56.
28 Meyhar, Munqeth, Gidon Bromberg, Nader Al Khateeb, Jessye Waxman, and Michal Milner. 2014. "A Water and Energy Nexus as a Catalyst for Middle East Peace," International journal of Water Governence 3(1), 71-92.
29 Ibid.
30 Selby, J. 2003. "Dressing up domination as 'cooperation': The Case of Israeli-Palestinian Water Relations". Review of International Studies 29(1): 21-38.
31 Interviewee 18, In discussion with the authors.
32 Keulertz, Martin, and Woertz Eckart. 2011. "The Water-Energy-Food Nexus in the Middle East and North Africa." Energy Policy, 39(8).

The region's growing reliance on desalination, while originally intended to decrease pressure on dwindling drinking water supplies, is a major energy consumer.[33] Within the water-food-energy nexus, because of the implications of desalination, it would require policies that incorporate a combination of water efficient measures that mostly include decreasing dependencies on agriculture and transitioning economies to less water intensive industries currently and in the future. AIES and PWEG have stated that water scarcity is a major problem requiring attention, particularly in regards to Palestinian farmers. Both groups are committed to expanding upon household level wastewater treatment facilities, most of which are dedicated to agriculture.

2.2.2 Food: Date Farming

In spite of the region's water security challenges, the Palestinian agricultural sector provides food to roughly 3.8 million people.[34] However, food security remains an issue in Palestine, with nearly one-quarter of the population, 1.3 million people, unable to afford nutritious food.[35] The vast majority, 92.1%, of Palestine's cultivated land is situated within the West Bank.[36] Of the West Bank's five ecological zones, the Jordan Valley is considered the nation's "food basket" due to its ideal location and climate.

Although the production and cultivation of dates in the Jordan Valley has existed for thousands of years, it wasn't until the early 2000s when the Jordan Valley's date industry began to rapidly expand. Since 2004, the area of date palm plantations within this territory has doubled.[37] Currently, individuals farming within the Jordan Valley produce primarily Medjool dates, a variety that is grown on land situated below sea level.[38] The Jordan Valley's hot and dry climate combined with the Medjool variety's high market value, nutritional composition, cultural and religious significance, and ability to be grown in saline soils have all contributed to farmers' decisions to begin or expand date production.[39] Concurrently, farmers in southeastern Israel's Arava Valley expanded their Medjool date orchards in search of alternatives to the decreasing global demand for Israeli peppers. This successful transition from peppers to date palms turned the country into one of the major exporters of this highly profitable date. In fact, three out of four Medjool dates consumed globally are harvested from date palms in either the Jordan or Arava Valleys.[40] After 10 years, each Medjool tree generates approximately $140 USD per year, or $19,600 USD per Ha.[41] Forecasts predict that by 2020 the worldwide consumption of dates will increase by 190% compared to 1994, creating significant economic opportunities for farmers in the Jordan and Arava valleys.[42]

Marj Al-Ghazal, a Palestinian village in the Jordan Valley and the project site, is heavily dependent on the production of dates. The agricultural sector encompasses 100% of the village's workforce, of which, 90% is dedicated to the cultivation of dates.[43] However, despite the tree's resilience in arid conditions, a number of obstacles prevent Palestinian farmers in Marj Al-Ghazal from maximizing their potential yields

33 Siddiqi, Afreen and Laura Diaz Anadon. 2011. "The Water–energy Nexus in Middle East and North Africa", Energy Policy 39 (8). 4529-4540.
34 David, Katherine. 2015. "Palestinian Date Farming in the Jordan Valley". Arava Institute for Environmental Studies.
35 United Nations World Food Program Programme. 2018. " WFP Palestine Country Brief."
36 Abu-Qaoud H. 2015. "Date Palm Status and Perspective in Palestine". In: Al-Khayri J., Jain S., Johnson D. (eds) *Date Palm Genetic Resources and Utilization*. Springer, Dordrecht.
37 David, Katherine. "Palestinian Date Farming in the Jordan Valley".
38 Ibid.
39 Abu-Qaoud H. 2016. "Date Palm Status and Perspective in Palestine".
40 Coren, Ora. 2016. "Hot Date: Jordan Valley Growers Conquer World's Medjool Market." Haaretz.
41 David, Katherine. "Palestinian Date Farming in the Jordan Valley".
42 Ibid.
43 Palestinian Wastewater Engineers Group. n.d. "Israeli-Palestinian Cooperative Date Production and Management Grant Proposal".

and profits. The terms of the Oslo Accord, including restrictions on movement, the presence of Israeli settlements, low water accessibility, and the village's decreasing water quantity and quality, pose significant challenges for farmers in the village.

Today, delays and the non-arrival of raw material and goods caused by Israeli-imposed restriction on movement between borders has impeded the economic stability of Palestine. Further, the 1995 Oslo Interim Agreement II designated approximately 96% of Marj Al-Ghazal as Area C -- territory that falls exclusively under Israeli security and administrative control.[44] Restrictions of movement for Palestinian farmers within Area C and the large amounts of freshwater extracted by Israeli settlements in the Jordan Valley prevent the village's farmers from extracting sufficient amounts of water for their date palms. It should be noted that Israeli settlements are illegal under international law as they are Israeli-occupied territory in the West Bank.[45] However, Israel argues these territories remain 'disputed' until a final status agreement is struck.

Mature date palms require between 300-700 liters (L) of water per day.[46] Due to the high soil salinity and temperature in Marj Al-Ghazal, date farmers must use closer to 700L per day in hopes of maximizing their harvests -- a figure much higher than the estimated daily amount of 167L of water available for each community member living there.[47] These challenges, combined with the terms of water usage agreed upon in the 1995 Oslo Accords, make it increasingly difficult for farmers in Marj Al-Ghazal to obtain the appropriate amounts of water to meet their needs.

The Jericho governorate, where Marj Al-Ghazal is located, currently has the lowest water accessibility of all governorates in the West Bank. This is due to numerous Israeli-enforced restrictions on their rich historical abundance of spring water. Although this governorate holds one-third of all groundwater reserves in the West Bank, only 40% of this supply can be used by Palestinians, or 58 MCM per year, out of a total capacity of 178 MCM/year.[48] The Jordan Valley's decreasing water discharge, poor water quality, and limited number of functioning wells further prevent many of the village's farmers from securing adequate water for irrigation.

Despite the numerous obstacles facing farmers in Marj Al-Ghazal, the cultivated area of dates in the region continues to expand. Some experts believe government and NGO-driven initiatives aimed at supporting the cultivation of date palms and the dissemination of information concerning the Medjool date will result in improved productivity of the crop throughout the region.[49] AIES and PWEG's experience in the region uniquely places both organizations in a position to address the concerns of local farmers and improve their yields and profits.

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44 The Applied Research Institute. 2012. "Marj Al Ghazal Village Profile." Jerusalem: The Applied Research Institute.

45 International Committee of the Red Cross. 1949. "Geneva Convention Relative to the Protection of Civilian Persons in Time of War, of August 12, 1949 (Convention No. IV)". Geneva: International Committee of the Red Cross.

46 David, Katherine. "Palestinian Date Farming in the Jordan Valley".

47 "Marj Al Ghazal Village Profile."

48 Dobricic, Kristina. 2013. "Water Scarcity in the Jordan Valley: Impacts on Agriculture and Rural Livelihoods. Uppsala University, Department of Earth Sciences.

49 Abu-Qaoud H. "Date Palm Status and Perspective in Palestine".

2.2.3 Energy: Solar Power and Renewable Energy

Renewable energy has been linked with effective approaches to sustainable development. In a region faced with natural resource scarcity, sustainable development practices are necessary for long-term success.[50,51] Renewable energy has the potential to be cost-effective, less damaging to the environment, and suitable for local conditions.[52,53]

Israel's control over the West Bank's access to electricity has greatly hindered Palestine's potential for community and economic development.[54] Israel controls more than 87% of the energy imported into Palestine, preventing open trade in electricity and driving up the cost. Additionally, the majority of the West Bank is located in Area C, where full civilian and security control is administered by Israel, preventing Palestinians from developing energy infrastructure.[55] A reliable, affordable, and sufficient energy source is imperative for the livelihoods of Palestinians; however, their lack of control over their own energy has prevented potential prosperity. Specifically, for Palestinian farmers, energy is required to pump water from wells and the high cost of intermittent energy can dramatically impact the cost of production.[56] Due to these restrictions, Palestinians cannot develop their own energy infrastructure and Israel struggles to meet the increasing domestic energy demands within the West Bank.[57]

The West Bank is ideally suited for solar energy, with a high solar energy potential of about 3,000 sunshine hours per year and high annual average of solar radiation amounting to 5.4 kWh/m^2/day on horizontal surfaces.[58] PV systems for electrification of rural and remote areas in Palestine have proven to be economically profitable and more feasible than using other methods. When off-grid communities in the West Bank establish a local capacity to generate energy, they strengthen their local and national public infrastructure, technical capacity, and knowledge base.[59] Generating their own electricity has the potential to mitigate Palestine's vulnerability to political and economic shocks while providing the building blocks for a sustainable future. It also has the potential to increase the adaptive capacity of local water management, as reliable energy is critical for water treatment, pumping, and desalination. Farmers will then presumably be able to invest in productivity enhancements or expansion of production with more confidence.

Given the region's potential for solar energy and potential benefits of a secure energy source for date farmers, the AIES and PWEG partnership has incorporated a renewable energy component. Through the installation of PV systems in the West Bank, solar power is utilized to pump groundwater for the irrigation of Palestinian farmers' dates as well as provide reliable electricity to their households and business establishments. Although there are currently only a few established PV systems through this partnership, they have proven to be an effective mechanism for increasing Palestinian farmers' livelihoods. Plans to continue developing household-level renewable energy projects in conjunction with wastewater treatment facilities showcase the potential benefits of the AIES and PWEG involvement in addressing the needs of Palestinian date farmers faced with continued barriers to capacity building.

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50 Hepbasli, Arif. 2008. "A Key Review on Exergetic Analysis and Assessment of Renewable Energy Resources for a Sustainable Future." Renewable & Sustainable Energy Reviews 12: 593–661.
51 Tareq Abu Hamed, Hannah Flamm, and Mohammad Azraq. 2012. "Renewable Energy in the Palestinian Territories: Opportunities and Challenges," Renewable and Sustainable Energy Reviews 16: 1082–88
52 Juaidi, Adel, Francisco G. Montoya, Imad H. Ibrik, and Francisco Manzano-Agugliaro. 2016. "An Overview of Renewable Energy Potential in Palestine," Renewable and Sustainable Energy Reviews 65: 943–60
53 Hepbasli, Arif, "A Key Review on Exergetic Analysis and Assessment of Renewable Energy Resources for a Sustainable Future".
54 Tareq Abu Hamed et al., "Renewable Energy in the Palestinian Territories: Opportunities and Challenges".
55 Adel Juaidi et al., "An Overview of Renewable Energy Potential in Palestine".
56 Ibid.
57 Tareq Abu Hamed et al., "Renewable Energy in the Palestinian Territories: Opportunities and Challenges".
58 Adel Juaidi et al., "An Overview of Renewable Energy Potential in Palestine".
59 Ibid.

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Left: Michael Band | Right Top and Bottom: Bilal Aslam

CHAPTER 3

CONCEPTUAL FRAMEWORK

3.1 Environmental Peacebuilding and Cooperation

The term "sustaining peace" was initiated by the UN Security Council and the General Assembly in 2016.[60] It aims at taking positive steps to build peace by strengthening the structures, attitudes, and institutions that consolidate it.[61] As pointed out by the International Peace Institute, sustaining peace is the "counterpoint" to peacebuilding. Since peacebuilding is narrowly considered as an "extension" of conflict resolution and conflict transformation in areas that have actual conflict, sustaining peace would be able to broaden this concept and reinforce the idea of conflict prevention.[62] Peacebuilding, following Galtung (1976), is a self-generating structure that "removes causes of wars and offers alternatives to war in situations where wars might occur."[63] Efforts for peacebuilding and sustainable peace need to look beyond conflict resolution and deliver a sustainable process of conflict management. According to Conca and Dabelko's (2002) foundational piece on environmental peacemaking, instead of asking if environmental degradation could trigger conflict, we should ask whether environmental cooperation could provide opportunities to contribute to peace.[64] Moreover, recent research indicates that there is no durable peace if the natural resources that sustain livelihoods and ecosystems are destroyed or degraded.[65] Environmental peacebuilding is "the process of governing and managing natural resources and the environment to support durable peace."[66] Hence, "effective management, conservation, and allocation of benefits" are indispensable in this process.[67]

The following conceptual framework was compiled to guide our methodology and analysis. During our empirical research, we agreed that identity, equity, trust and shared sustainability are critically important to enhance the pathway to sustaining peace through environmental peacebuilding practice. These four focal points require attention, as they are the areas where we can create specific mechanisms of environmental peacebuilding in this particular conflict.

3.2 Identity

The theoretical case for including identity politics in discussions around cooperation and peacebuilding can be traced to Edward Said's 1978 seminal work Orientalism, where he explores the concept of the "Other." Said describes the alienation of a group that is not one's own for the purpose of creating hegemonic societal and cultural structures that exclude the "Other."[68] This process of Othering is insightful when discussing how Palestinians and Israelis often frame their own identities and view each other. Israeli and Palestinian identities have continued to be shaped and influenced by history, events, and personal narratives of the conflict. Identity, a controversial theme of the conflict, is interconnected with historical claims and disputes over culture, borders, natural resources, security, resilience, and cooperation.

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60 UNDG. 2017. "Guidance on Sustaining Peace: What Does Sustaining Peace Mean?"
61 International Peace Institute. 2017."Sustaining Peace: What Does It Mean in Practice?" International Peace Institute, 1–5.
62 UNDG.2017. "Guidance on Sustaining Peace: What Does Sustaining Peace Mean?"
63 Galtung, Johan. 1976. "Three Approaches to Peace: Peacekeeping, Peacemaking, and Peacebuilding." Impact of Science and Society 1, no. 2: 282–304.
64 Conca, Ken, and Geoffrey D. Dabelko. 2002. "The Case for Environmental Peacemaking." In Environmental Peacemaking. Johns Hopkins University Press.
65 Brown, Oli. 2013. "Encouraging Peacebuilding through Better Environmental and Natural Resource Management." Chatham House.
66 Bruch, Carl, Carroll Muffett, and Sandra S. Nichols. 2016. "Natural Resources and Post-Conflict Governance: Building a Sustainable Peace." In Post-Conflict Peacebuilding and Natural Resource Management. Routledge.
67 Ibid.
68 Said, Edward. 1978. *Orientalism*. New York, New York: Pantheon Books.

Both Palestinian and Israeli peoples claim a cultural tie to the land they currently inhabit; both groups have, at different times, been exiled from that land. By utilizing the exile lens to explore identity in Palestine and Israel and examining the linkages between national identity and cooperation, Said (1978) provides both an argument for considering identity and a framework for approaching it.[69] Foucault's (1984) idea that identity is not fixed or predetermined but, rather, shaped by culture, interaction, and experience, and thus able to change and evolve, also contextualizes the Palestinian-Israeli conflict.[70] The idea of exile, something external that shapes the way one views the "Other" now occupying that space, is important for peacebuilding and sustainability because of the complex history of exile of both groups from the land. Similarly, the flexible, evolving characteristics of identity are important because they underline the potential of peacebuilding to overcome some of these identity barriers. At the core of both of these ideas around identity is the importance of communication in understanding the "Other."

Direct communication is vital to cooperation; discussions on identity through cross-cultural communication help on a personal level. Culture and identity can manifest themselves in the different ways in which Israelis and Palestinians communicate with members of their own communities. In turn, this directly impacts how Palestinians might interact with Israelis and vice versa. These communication differences can be a major impediment to cooperation if there is an incompatibility in understanding the expectations of either side. Professor Geert Hofstede conducted an in-depth study in the 1980s to categorize national values across 40 countries. He developed a dimension paradigm for defining national and organizational cultural values after interviewing 180 individuals in professional and academic backgrounds, and surveying 1,500 individuals in professional settings.[71] Over time, there has been data collected from nearly 80 countries, around 6 main dimensions:

- Power Distance Index -- The extent to which people accept hierarchical distributions of power or demand equal distribution of power.
- Individualism vs Collectivism -- Individualism - preference for loosely-knit social framework. Collectivism - preference for tightly-knit social framework (defining self image as "I" or "We").
- Masculinity vs Femininity -- "tough" vs "tender" cultures. Masculinity - preference for achievement, heroism, assertiveness, and competition. Femininity - preference for cooperation, modesty, caring for weak, and quality of life, more consensus-oriented society.
- Uncertainty Avoidance Index -- The degree that members of society feel comfortable with uncertainty and ambiguity; trying to control the unknown future vs just letting it happen. Countries with high uncertainty avoidance typically have rigid codes for behavior and belief and are unaccepting of new practices. Weak uncertainty avoidance countries value practice over principles.
- Short- vs Long-Term Orientation -- Short-Term (normative) cultures maintain traditional values and view change as suspicious. Long-Term (pragmatic) cultures encourage thrift and education as a way to prepare for the future
- Indulgence vs Restraint -- Cultures either allow relatively free gratification of desires relating to enjoyment and fun or suppress and regulate gratification through strict social norms.[72]

We have used scores from this study to compare cultural orientations of Israel and Middle East countries. While there is no available research done by Hofstede on the specific cultural dimensions of Palestine, available research on neighboring countries, Syria, Jordan, and Lebanon, due to their proximity

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69 Said, Edward. 2000. *Reflections on Exile and Other Essays*. Harvard University Press.

70 Foucault, Michael, and Paul Rabinow. 1984. *The Foucault Reader*. New York, New York: Pantheon Books.

71 Hofstede Insights. "Our Models." Accessed September 3, 2018. https://www.hofstede-insights.com/models/

72 Hofstede Insights. "National Culture" Accessed September 3, 2018. https://www.hofstede-insights.com/models/national-culture/

and cultural similarities, is used in its place.[73]

According to Hofstede insights, Israel has higher levels of uncertainty, avoidance, and individualism, and lower levels of power distance in comparison to its neighbors.[74] As a result, Israelis prefer to be consulted in decisions that affect them and have a strong sense of interdependence. While there are slight variations between the same cultural dimensions in Jordan, Syria, and Lebanon, these countries are generally more similar to each other than they are to Israel.[75] Jordan, Syria, and Lebanon prefer hierarchical structures where they are not consulted in decision-making. They are more collectivist in nature, having a stronger sense of loyalty to their families and communities and a responsibility for others in their group over themselves.[76] Jordan, Syria, and Lebanon share similarities with Israel as being countries that have a high uncertainty avoidance, which results in a preference for strict security. Israel's uncertainty avoidance score is far higher, so their preference is far greater for maintaining very strict security and regulatory environment.

Scarcity also plays a key role in influencing a nation's and an individual's ability to see beyond their current situation and take actions that build long-term resilience. Mullainathan and Shafir (2014) show that scarcity can cause individuals to focus on meeting immediate needs even if that means taking actions that are clearly harmful to them in the long-term.[77] The only way that someone experiencing scarcity may be able to break the cycle is to find a way to gain sufficient access to resources and thus be able to switch from focusing on basic needs and survival to long-term sustainability.[78]

As illustrated in Chapter 2, Palestinian farmers in the West Bank experience scarcity of resources, namely water, food, and energy, while Israeli farmers experience greater levels of abundance in those same resources. As a result, Palestinian farmers must focus on immediate needs and benefits, while Israelis have the resources to strategize for long-term gains and economic success. This suggests that the two groups may have entirely different motivations for participating in this project. Our findings on identity further elaborate on existing differences and the challenges they present for peacebuilding.

In the IPCDPM, the PTP aspect is a major component that aims to overcome contact barriers resulting from the conflict. This aim is clearly supported by Allport's (2005) "contact hypothesis."[79] Over the years, conflict has shaped the identities of several generations of Israelis and Palestinians in ways that physically divided the two people. Consequently, this made dialogue and interactions between both sides harder to occur which ultimately made peace difficult to achieve. It begins with the process of enculturation, through which language and values become part of a person's identity.[80] An example of this in a conflict zone would be parents that build their children's identities based on sufferings they share with their children as a way of preserving their own identity. After enculturation, the process of learning or adapting to a secondary culture within or outside one's own culture is referred to as acculturation.[81] At this stage, Israeli and Palestinian identities are influenced by personal experiences, interactions, and education -- all of which occur amid conflict. In the context of this project, cooperation is expected to be particularly sensitive since the individuals interacting are bound to their identity, culture, and sufferings that have developed throughout enculturation and acculturation in the context of the conflict.

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73 Javidan, Mansour, Peter W. Dorfman, Mary Sully de Luque, and Robert J. House. 2006. "In the Eye of the Beholder: Cross Cultural Lessons in Leadership from Project GLOBE." Academy of Management Perspectives 20, no. 1: 67–90.

74 "Country Comparison." Hofstede Insights. Accessed July 24, 2018. https://www.hofstede- insights.com/country-comparison/israel,jordan,lebanon,syria/.

75 Country Comparison." Hofstede Insights. Accessed July 24, 2018.

76 Ibid.

77 Mullainathan, Sendhil, and Eldar, Shafir. 2014. *Scarcity: The New Science of Having Less and How It Defines Our Lives.* 4th ed. New York, New York: Times Books.

78 Ibid.

79 Schiappa, Edward, Peter B. Gregg, and Dean E. Hewes. 2005. "The Parasocial Contact Hypothesis. Communication Monographs." 72 (1): 92-115.

80 Weaver, Gary R. 2013. "Intercultural Relations: Communication, Identity and Conflict." Boston: Pearson. 2-3.

81 Ibid.

In this study, we examined and compared the perceptions and attitudes of Palestinian and Israeli farmers toward cooperation and scarcity with regards to IPCDPM. Observing how these understandings relate to their shared sense of identity as date farmers and their different resource needs allows us to pinpoint barriers to stronger cooperation between the two groups and issue recommendations based on this shared identity and the opportunities it presents.

3.3 Equity

In addition to strong identity politics, inequity is a recurring theme in our analysis. At the root of the region's water tensions is a series of structural and institutional asymmetries perpetuated by high-level political mechanisms such as the Oslo Accords and the JWC.[82] While the Oslo Accords and the JWC have been lauded as cooperative measures in regards to water, they have also been criticized as "domination dressed up as cooperation" because of the power asymmetry within these mechanisms.[83]

There is an uneven distribution of power between Israelis and Palestinians, favoring Israelis. Rouhana and Fiske (1995) give a working definition of power within the conflict as "the perceived control over allocation of resources and the outcome for the other party."[84] According to Galtung (2013), the culmination of this asymmetric power balance results in structural violence or the actions built into societal structures which manifest as asymmetric power and opportunities. Institutionalized opportunities and resources are predominantly experienced by only one party, leading to inequalities for the other.[85] Within the context of the conflict, Palestinians experience inequities because they do not enjoy the same resources and services that contribute to stability and advancement experienced by Israelis. This asymmetry works as a driver in the continuation of the conflict.

Equity theory is fundamental to the practice of peacebuilding because peacebuilding stresses the need to "transform structures, institutions, and cultural practices."[86] In this transformation, peacebuilding should work to build new and fair "socio-political structures and institutions" with an "ecologically-informed commitment" to environmental sustainability.[87] To ignore the presence of inequality and inequity perpetuates systemically asymmetrical policies and actions toward one of the conflict parties.[88]

In this report, equity theory is used to analyze the opportunities and asymmetries of one group in relation to another, as opposed to race theory as Israel and Palestine are both multiracial societies. This is critical to the joint work done by AIES and PWEG as their partnership aims to address inequities in the WFE nexus in the Jordan Valley. Inequity manifests at different levels within overall societal structures. To operationalize equity as a framework, Grant-Thomas and Powell's Spheres of Systemic Racialization (Figure 2) provides a valuable tool. While the Israeli-Palestinian conflict is better characterized as ethnic than racial, the structural, societal, asymmetric outcomes are similar, and the Spheres of Systemic Racialization illustrate a nuanced view of the levels of systemic inequity.

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82 See Section 2.2 for more context on the Oslo Accords and the Joint Water Committee.
83 Selby, J. 2003. "Dressing up domination as 'cooperation': The Case of Israeli-Palestinian Water Relations." Review of International Studies 29(1): 21-38.
84 Rouhana, Nadim N., and Susan T. Fiske. 1995. "Perception of Power, Threat, and Conflict Intensity in Asymmetric Intergroup Conflict: Arab and Jewish Citizens of Israel." The Journal of Conflict Resolution 39, no. 1: 49-81.
85 Grant-Thomas, Andrew, and John A. Powell. 2006. "Toward a Structural Racism Framework." Poverty & Race Research Action Council 15 (6): 3–6.
86 Abitbol, Eric. 2012. "Hydropolitical Peacebuilding: Israel-Palestinian Water Relations and the Transformation of Asymmetric Conflict in the Middle East." England: University of Bradford.
87 Ibid.
88 Ibid.

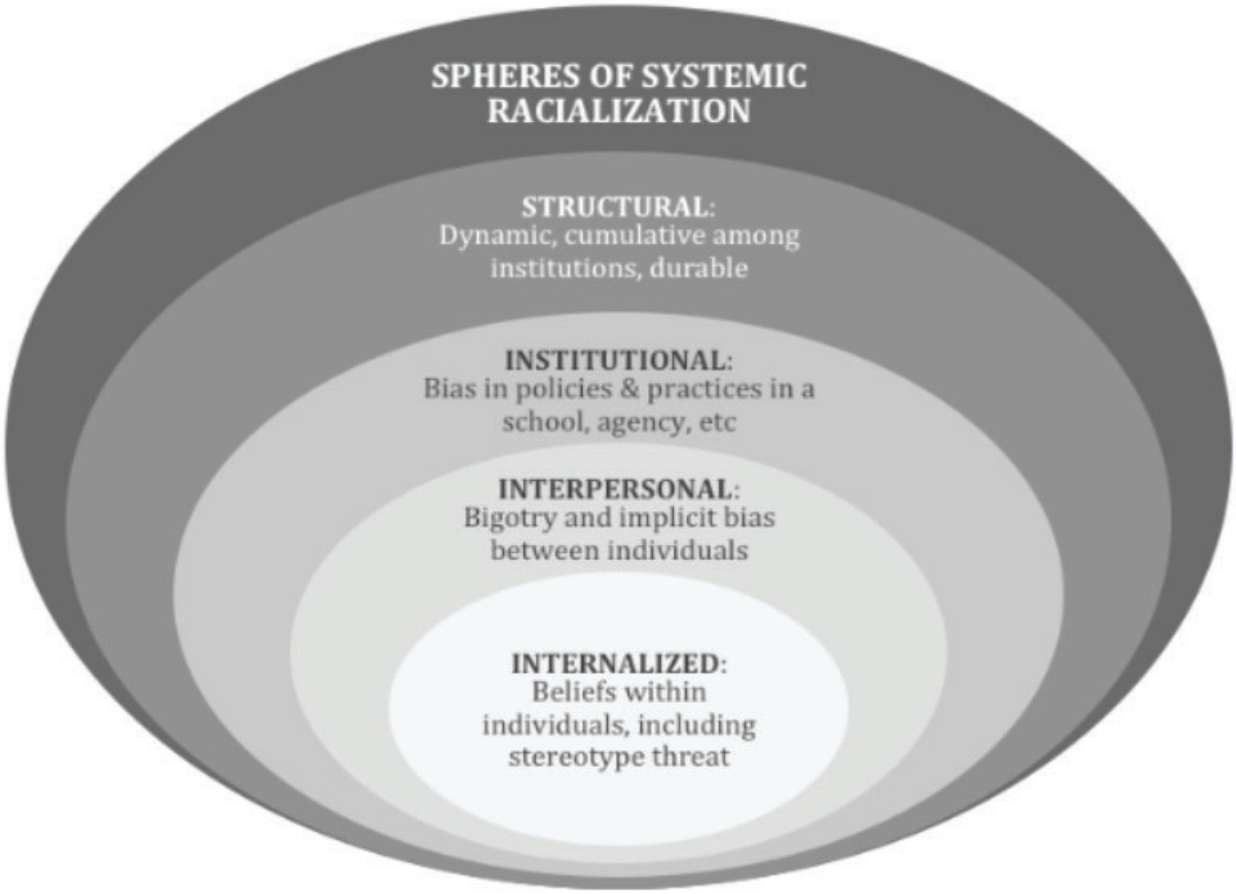

Figure 2 Spheres of Systemic Racialization[89]

The deepest form of asymmetry is at the structural level. Rather than focusing on one institution, such as the state as a whole, a structural lens examines the interplay of multiple institutions and their collective perpetuation of relational inequalities.[90] Within the Israeli-Palestinian context, structural inequities are embedded within high-level political relations and the rule of law.

Second, asymmetric power reinforced by institutionalized inequities in the conflict is well-documented. Rouhana and Fiske (1995), Maoz (2000), Suleiman (2004), and Thiessen and Darweish (2018) illustrate how Israelis hold more power than Palestinians in institutionalized processes, social structures, and planned encounters.[91,92,93,94] The uneven distribution of resource allocation results in effectively disempowering groups with disadvantaged access. This interaction is most commonly seen through the actions of government toward people.[95]

89 Grant-Thomas and Powell. "Toward a Structural Racism Framework."
90 Ibid.
91 Rouhana and Fiske. "Perception of Power, Threat, and Conflict Intensity in Asymmetric Intergroup Conflict: Arab and Jewish Citizens of Israel."
92 Maoz, I. 2000. "Power Relations in Intergroup Encounters: A Case Study of Jewish–Arab Encounters in Israel." International Journal of Intercultural Relations, 24, 259–277.
93 Suleiman, R. 2004. "Planned Encounters Between Jewish and Palestinian Israelis: A Social-Psychological Perspective." Journal of Social Issues, 60, 323–337.
94 Thiessen, C., & Darweish, M. 2018. Conflict resolution and asymmetric conflict: The contradictions of planned contact interventions in Israel and Palestine. International Journal of Intercultural Relations, 66, 73-84.
95 Jones, C P. 2000."Levels of Racism: A Theoretic Framework and a Gardener's Tale." American Journal of Public Health 90.8 : 1212–1215.

Third, on a more dynamic level, interpersonal asymmetries often manifest as personally mediated inequity in the Israeli-Palestinian conflict, rather than racism. This can result in discrimination and prejudice resulting in actions that may "Other" another group. Individually mediated inequities may be intentional or unintentional, and may take the form of suspicion, lack of respect, devaluation, scapegoating, or dehumanization.[96]

Lastly, inequity is perpetuated on the individual level through internalized discrimination and prejudice. For stigmatized groups, internalized inequity is characterized by feelings of disempowerment; it involves the stigmatized party accepting limitations to one's humanity, right to self-determination, and range of allowable self-expression.[97] It manifests as a self-devaluation, resignation, helplessness, and hopelessness.[98] For groups in power, internalized inequity is characterized by the perpetuation of stereotypes and the "enemy" discourse.

This report examines how inequity across these four levels manifests itself in the project stakeholders' attitudes and perceptions. We focus on interviewee expressions and response statements as manifestations of internalized, interpersonal, institutional, and structural inequities, and their relation to the project's impact. This could be through expressions and responses that indicate feelings of disempowerment or empowerment, statements that indicate unrealized or acknowledged privilege, or narratives that describe what should be a priority in order to reach a more equitable future and livelihood. The areas of convergence or divergence between Palestinian or Israeli stakeholders will illuminate key implications for the project's contribution to environmental peacebuilding and the potential for building trust between the two communities moving forward.

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96 Jones, C P. 2000."Levels of Racism: A Theoretic Framework and a Gardener's Tale." American Journal of Public Health 90.8 : 1212–1215.
97 Ibid.
98 Ibid.

Photo Credit
Gloria Schultz

3.4 Trust

The definition of trust has been discussed for decades without reaching a consensus. As Rousseau et al.'s (1998) influential piece on reviewing multi-disciplinary definitions of trust pointed out, even though there is no universally accepted definition, scholars still agreed on the importance of trust in several ways, such as the ability to trigger cooperation and respond to crisis effectively.[99] Hence, their own definition was abstracted from various meanings and emphasized its psychological status and underlying positive expectations.[100] However, as this report specifically focuses on Israeli and Palestinian cooperation, the definition of trust needs to consider the relationship and interdependence between adversarial groups.[101] Ross and Lacroix (1996) defined trust within the negotiation and mediation process as "one party's willingness to show its vulnerability to the other one when the behavior of the other party is unpredictable."[102] This willingness displays confidence that the other party will not take advantage of one's vulnerabilities.[103] Combining these insights, our definition of trust is:

> The intention and willingness to expose vulnerabilities, accept uncertainties, and create interdependencies based on positive expectations of the intentions or behavior of others.

The relationship between trust and cooperation is also complex and contested. The discourse around this relationship varies from trust being a determinant of cooperation, to 'working trust,'[104] to cooperation with no trust and only confidence.[105] 'Working trust' can be defined as parties engaging in cooperative behaviors mostly out of self-interest but also in the interest of peace,[106] while confidence is a judgement that another actor will act predictably and honestly within an agreement or reciprocate actions when sharing goals.[107] While a lack of trust does not necessarily connote mistrust, it can affect the willingness of protagonists to engage in cooperative agreements and projects. Conversely, the lack of cooperation decreases opportunities for interdependencies that can help build trust over time.[108] In relationships traditionally marked by conflict, environmental cooperation offers one way to create interdependencies between adversarial parties.

In environmental peacebuilding theory and practice, trust is a fundamental factor. Cooperation may not necessarily result from trust,[109] however, trust can trigger the positive interactions among the actors in

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99 Rousseau, Denise M., Sim B. Sitkin, Ronald S. Burt, and Colin Camerer. 1998. "Not so Different after All: A Cross-Discipline View of Trust." Academy of Management Review 23 (3): 393–404.
100 Ibid.
101 Kappmeier, Mariska. 2016. "Trusting the Enemy — Towards a Comprehensive Understanding of Trust in Intergroup Conflict." Journal of Peace Psychology 1 (2):1–11.
102 Ross, W., and J. LaCroix. 1996. "Multiple Meanings of Trust in Negotiation Theory and Research : A Literature Review and Integrative Model" The International Journal of Conflict and Management 7 (4):314–60.
103 Ibid.
104 Kelman, Herbert C. 2005. "Building Trust among Enemies: The Central Challenge for International Conflict Resolution." International Journal of Intercultural Relations 29 (6 SPEC. ISS.):639–50.
105 Keating, Vincent Charles, and Jan Ruzicka. 2013. "Trusting Relationships in International Politics: No Need to Hedge." Review of International Studies 40 (4):753–70.
106 Kelman, Herbert C. 2005. "Building Trust among Enemies: The Central Challenge for International Conflict Resolution."
107 Keating, Vincent Charles, and Jan Ruzicka. 2013. "Trusting Relationships in International Politics: No Need to Hedge."
108 Rousseau, Denise M., Sim B. Sitkin, Ronald S. Burt, and Colin Camerer. 1998. "Not so Different after All: A Cross-Discipline View of Trust."
109 Ibid.

moving toward sustainable peace as "the concern of being exploited" is reduced.[110,111,112] As a core requirement to manage all relations effectively and peacefully,[113] the lack of trust is usually the most fundamental obstacle to negotiating and building a natural resource management plan.[114] Recent research by Young et al. (2016) highlighted the importance of trust in mitigating conservation conflict. Conflict resolution may be more likely to happen if there is increased trust through fair processes and shared "high level of ecological knowledge."[115] More specific to the context of the Israeli-Palestinian conflict, some scholars like Yuchtman-yaar and Alkalay, indicated that in the past neither of the two groups played a positive role in trust-enhancing processes.[116] In order to achieve a better result for conflict mitigation, incorporating the concept of trust in both theory and practice is essential.

Historically in the Israeli-Palestinian conflict, trust-enhancing projects have utilized reconciliation-focused intergroup encounters to increase understanding of the other group.[117] Moaz identifies the Joint Projects Model as a method used to build trust through cooperation on shared issues, providing opportunities for dialogue on issues outside the conflict, and demonstrating peacebuilding in practice. In the context of the IPCDPM project, environmental cooperation in small-scale, low-tech decentralized water and energy projects with Israeli and Palestinian date farmers and community members have created relationships that have yielded partnerships that can build trust over time within the asymmetrical conflict. The facilitation of joint workshops and committees also creates opportunities for knowledge sharing and collaboration on the IPCDPM project as well as creates space for sharing narratives and dispelling myths of the other.

To operationalize trust, we emphasize the concept's multidimensionality as proposed by Kappmeier.[118] Table 1 identifies indicators used in the analysis of statements from the data collection period. Using this framework, we created a table (Appendix B) and divided the views expressed by stakeholders in the IPCDPM project into trust-enhancing and trust-undermining perceptions that can either contribute to or hinder peacebuilding through the practices/actions of people/participants in the environmental peacebuilding projects. Statements aligned with the descriptions in Table 1 are defined as trust-enhancing, and opposing views are defined as trust-undermining. Appendix B displays the categorization of each statement by each interviewee that is meant to analyze whether the statements expressed by individual project participants are aligned with the project implementation partners' statements and project goals. Furthermore, the opinions provided by state officials were separated out because they are not directly tied to the project, yet they provide context on the long-term sustainability of environmental cooperative peacebuilding projects.

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110 Ross, W., and J. LaCroix. 1996. "Multiple Meanings of Trust in Negotiation Theory and Research : A Literature Review and Integrative Model" The International Journal of Conflict and Management 7 (4): 314–60.

111 "Sustaining Peace: What Does It Mean in Practice?" International Peace Institute, 2017, 1–5.

112 Tam, Tania, Miles Hewstone, Jared Kenworthy, and Ed Cairns. 2009. "Intergroup Trust in Northern Ireland." Personality and Social Psychology Bulletin 35 (1): 45–59.

113 Kelman, Herbert C. 2005. "Building Trust among Enemies: The Central Challenge for International Conflict Resolution."

114 Lachapelle, Paul R., and Stephen F. McCool. 2012. "The Role of Trust in Community Wildland Fire Protection Planning." Society and Natural Resources 25 (4): 321–35.

115 Young, Juliette C., Kate Searle, Adam Butler, Peter Simmons, Allan D. Watt, and Andrew Jordan. 2016. "The Role of Trust in the Resolution of Conservation Conflicts." Biological Conservation 195: 196–202.

116 Yuchtman-yaar, Ephraim, and Yasmin Alkalay. 2016. "The Role of Trust in the Resolution of the Israeli–Palestinian Conflict." In The Role of Trust in Conflict Resolution The Israeli-Palestinian Case and Beyond, edited by Daniel Alon, Ilai, Bar-Tal, 149–67. Springer International Publishing Switzerland.

117 Maoz, Ifat. 2011. "Does Contact Work in Protracted Asymmetrical Conflict? Appraising 20 Years of Reconciliation-Aimed Encounters Between Israeli Jews and Palestinians." Journal of Peace Research 48, no. 1: 115-125.

118 Kappmeier, Mariska. 2016. "Trusting the Enemy — Towards a Comprehensive Understanding of Trust in Intergroup Conflict."

Table 1 Project Level Trust Indicators in the Evaluation of the Israeli-Palestinian Cooperative Date Production and Management[119]

Indicators	Conceptual Description
Willingness	Others display a desire to participate in cooperative behaviors.
Knowledge Accuracy	Others have sufficient education regarding wastewater, farming techniques, and marketing between groups.
Integrity	Others will act with good intention and will not intentionally seek an advantage at outgroup's expense.
Predictability	Others display predictable and stable behavior.
Fairness	Others perceive fairness in treatment and benefits from project managers and intergroup.
Perceived Communality	Others perceive the sharing of background, values, beliefs, or interests between groups.
Collaboration	Others have communicative accessibility, transparency, and knowledge sharing from project partners and outgroup.

119 Kappmeier, Mariska. 2016. "Trusting the Enemy — Towards a Comprehensive Understanding of Trust in Intergroup Conflict."

3.5 Sustainability

Peacebuilding initiatives that incorporate sustainability provide an opportunity to foster dialogue between conflicting parties. When opposing sides overcome barriers to cooperation, such as distrust, they can develop a shared knowledge base and common goals on transboundary natural resources that can transform the nature of their relationship. An understanding of the connection between resource scarcity, environmental degradation, and economic security is vital when livelihoods are dependent upon the available natural resources. Studies have supported the link between poverty and conflict, placing the role of the environment as a critical aspect of supporting sustainable livelihoods and building the foundations for lasting cooperation.[120,121]

For the purposes of exploring the role of sustainability in environmental peacebuilding, sustainability is defined as "the ability to maintain environmental quality, human rights, and equity among populations."[122] As human rights and equity are covered in other parts of our framework, we approach sustainability with an emphasis on environmental quality and its implications for cooperation. If sustainability is prioritized in cooperative projects, it can serve a preventative role in conflict mitigation, contribute to a shared knowledge base, and facilitate ongoing dialogue.

The WFE nexus plays a vital role in sustainable development. Water is necessary for food and energy production; energy is needed for food production and water supply; and food production is a consumer of land, energy, and water. Faced with water scarcity, Israel and the West Bank's dependence on the same water resource creates a community of diverse stakeholders that must cooperate amid conflict for the sustainable management of shared natural resources. Water is not just an ecological input; it is a security issue on which human health and economic development are dependent.[123] The issue surrounding the Mountain Aquifer upon which both Israel and the West Bank are situated is an example. According to Carius,

> One of the most important water sources for Israelis and Palestinians, the Mountain Aquifer, is under threat due to contamination by untreated wastewater. The continuing conflict has hindered donor initiatives for building treatment plants in Palestine and is setting the stage for a vicious circle in which groundwater pollution will aggravate the water scarcity in the region, which in turn will further esculate the Israeli-Palestine conflict.[124]

Finding a way to manage water resources can provide an opportunity for cooperation between Israelis and Palestinians if both sides are willing to enter lengthy and complex negotiations to benefit from the mutual development of water resources. Sustainable solutions to address transboundary environmental issues require a long-term perspective, cooperation, and adaptation. In this context, Israeli and Palestinian leaders must enact actions that strengthen adaptive capacities of the poor including managing the natural resources on which livelihoods depend, managing risks, and using resources in an efficient and sustainable manner to meet the needs of present and future generations. Sustainable adaptation is, "a set of actions that contribute to socially and environmentally sustainable development pathways, including social justice and environmental integrity."[125] The goal of adaptation is to reduce vulnerability to both climatic and non-climatic changes, so it is closely linked to achieving the sustainable use and management of water, food, and energy, which are vital

120 Ohlsson, "Livelihood Conflicts: Linking Poverty and Environment as Causes of Conflict".
121 Carius, "Environmental Cooperation as an Instrument of Crisis Prevention and Peacebuilding: Conditions for Success and Constraints."
122 McIntosh and Pontius, "Looking Ahead to a More Sustainable Future."
123 Carius, "Environmental Cooperation as an Instrument of Crisis Prevention and Peacebuilding: Conditions for Success and Constraints."
124 Ibid.
125 Rasul and Sharma, "The Nexus Approach to Water-Energy-Food Security: An Option for Adaptation to Climate Change."

for sustainable development. This incorporation into a cooperative dialogue between Israelis and Palestinians provides an opportunity to address water scarcity, face challenges related to the changing climate, and secure the future of their livelihoods.[126] In order to reach sustainable adaptation, poverty reduction and vulnerability reduction must be combined.

In a conflict environment with scarce resources, it is essential to develop a set of indicators to assess the role of sustainability in peacebuilding initiatives. Israeli and Palestinian date farmers' livelihoods are dependent upon water quality, water security, and energy security; therefore, we use these as indicators for the evaluation of the IPCDPM. Statements concerning water quality may be expressed in terms such as the impact of salinity issues in irrigation on livelihoods. Statements concerning water security are expressed through the need or wastewater treatment, desalination, and increasing the availability of water for agriculture. Statements concerning renewable energy include expressed energy needs of the community and the extent to which they are being addressed. How sustainability manifests in the stakeholders' MECTA will shed light on opportunities for long-term and future cooperation and disconnects that exist as barriers to economic development.

126 Rasul and Sharma, "The Nexus Approach to Water-Energy-Food Security: An Option for Adaptation to Climate Change."

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Left: Michael Band | Top Right: Jiameizi Jia | Bottom Right: Bilal Aslam

CHAPTER 4
METHODOLOGY

This chapter discusses our team's research process, MECTA methodology, data methods, and research limitations. The goal of our research is to analyze the development- and peacebuilding-related perceptions and attitudes of the project's stakeholders. To do this, we designed a data collection process focused on five concepts: motivations, expectations, concerns, perceived threats, and aspirations (MECTA). We use our team's conceptual framework to guide our interview design to ensure its relevance to environmental concerns and peacebuilding. Framed by theories on identity, equity, trust, and shared environmental sustainability, our research design aims to identify areas where stakeholders converge and diverge on their respective MECTAs.

In order to maintain consistency, we define our core concepts of MECTA using the same definitions of previous AU practicum research with the partner organizations. We follow the definitions outlined in the 2016 report, Finding Common Ground Amid Conflict,[127] with the addition of threats in 2018 to gain a perspective of the negative possibilities in the long term:

Motivations are the stakeholders' initial reasons for involvement in the project,
Expectations are what stakeholders anticipate receiving from their involvement in the project,
Concerns are perceived deficiency in the project or a challenge to its success,
Threats are the long-term challenges within the project or barriers to success,
Aspirations are what stakeholders hope to gain from the project in the future.

Using the themes of our conceptual framework, Chapter 6 analyzes our MECTA findings to examine trends and insights on the IPCDPM project's contribution to environmental peacebuilding.

4.1 Methods

To begin the research, our team completed a month-long desk study comprising secondary research on environmental peacebuilding and the Israeli-Palestinian conflict and a weekend training workshop. Based upon the literature review, our team developed a framework to address our research question while collecting data in the field. The team conducted a rapid appraisal from June 23, 2018 to July 5, 2018 in Israel and the West Bank. During this time, our team completed 22 interviews with a range of stakeholders, including Israeli and Palestinian farmers, practitioners, and government officials.

For data collection in the field, a rapid appraisal approach was determined to be the most effective method. Rapid appraisal is an approach that utilizes a variety of evaluation methods and techniques to efficiently collect data where tight time and budget constraints exist.[128] Rapid appraisal also fits our goals for a formative evaluation, as mid-course corrections can be made before projection completion.[129] Our team employed common rapid appraisal techniques including interviews, direct observation, and secondary data collection to gather, analyze, and report relevant information for our PWEG and AIES clients.

Our research design included the development of indicators, for each theme in our conceptual framework, to measure stakeholder MECTAs. The indicators establish the focus for interview questions with slight variations for each stakeholder group. Sample questions include:

127 American University. 2016. "Finding Common Ground Amid Conflict."
128 USAID. "Performance Monitoring & Evaluation Tips Using Rapid Appraisal Methods."
129 Freudenberger, "Rapid Rural Appraisal (RRA) and Participatory Rural Appraisal (PRA): A Manual for CRS Field Workers and Partners."

What do you need, in the future, to be successful?
What (if any) were your initial hesitations about joining the project?
What motivates you to participate in this cooperative project?

In the field, our research encompassed 22 interview sessions with a total of 31 participants, as well as observation of a JAV committee meeting involving 14 participants and 5 project staff. Our strategy to elicit information from stakeholders involved icebreaker questions to make the interviewee comfortable. For example: "How long has your family been date farming?" and/or "What is your role in this project?" Two alternating team members led each interview with a designated team member for detailed note-taking on responses. Our team administered interviews in English with all Israeli and American participants and English-speaking Palestinian participants. Interviews with non-English speaking Palestinians relied upon translation by either a team member fluent in Arabic or bilingual PWEG staff. Our team conducted interviews in stakeholders' homes, date plantations, business establishments, and offices. Interviews averaged about one hour in length. Our team also spent one day observing a JAV Committee meeting that had both Israelis and Palestinians in attendance. This meeting consisted of an informal morning gathering followed by the official meeting. Fourteen JAV members and 5 project staff from PWEG and AIES were in attendance.

4.2 Research Limitations

Findings from rapid appraisals can have limited reliability and validity because of the short time frame and small sample size, and may not be generalizable to the larger population. Limitations surrounding interviews include susceptibility to interviewer selection bias and the possibility that individual interviewees may lack the broader understanding and insight of a key informant. Group interviews are additionally at risk of the discussion becoming dominated by a few individuals.[130]

Interviews with government officials posed their own set of challenges. Responses often appeared scripted to project a specific message, and difficult questions were avoided. During some interviews, participants came prepared with a predetermined set of talking points and questions were answered according to those topics, making it difficult to gather relevant and accurate data.[131]

The language barrier between the team and non-English speaking participants was a consistent limitation throughout data collection. Responses were often translated into summaries instead of word-by-word and included the perceptions and analysis of the translator. Additionally, when English was used with interviewees who were not native speakers, unintentional miscommunications may have occurred. This may have introduced misinterpretations or oversimplifications. In order to mitigate some of these issues, multiple translators were utilized in one interview and statements were asked to be clarified when necessary.

130 "Performance Monitoring & Evaluation Tips Using Rapid Appraisal Methods."
131 For example, some participants avoided discussion of the West Bank and focused on issues surrounding Gaza and/or back-tracked if a controversial statement was made.

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Jiameizi Jia

4.3 Data

The following tables show our stakeholder findings on Palestinian and Israeli interviewee attitudes and perceptions, categorized by interviewees' motivations, expectations, concerns, perceived threats, and aspirations (MECTA) for the project. Table 2 shows Palestinian farmers' responses and Table 3 shows Israeli farmers' responses.[132]

These tables show *tendencies* and *singular responses* among interviewee responses. For the purposes of this report, we define tendencies as responses that were offered by multiple interviewees. The number of times a response was given is indicated after the response.

132 Israeli and Palestinian practitioner response tables are included in Appendix C. For the purposes of this report, interviews conducted with Israeli and Palestinian government officials served the primary purpose of providing a broader, government-level context in the which the project takes place; government official responses informed our project context and their responses are not included in this report.

Table 2 Palestinian Farmers

Motivations	Expectations	Concerns	Threats	Aspirations
Improve livelihoods and the livelihoods of those in Marj Al-Ghazal (5)	Cost-savings (4)	Creation of barriers (i.e. production, geographic, etc.) due to Israeli permit regime (6)	Restrictions causing water shortages (3)	Increased access to reliable energy (solar power) (4)
Obtain tangible benefits (4)	Install a functioning, small-scale WWTP (2)	Religious views of WW reuse (2)	Political instability (3)	Increased access to clean water (4)
General community improvement (3)	Involvement in future AIES & PWEG projects (i.e. desalination) (2)	Lack of support from local government authorities (2)	Climate change (2)	Increased community engagement/benefits (3)
Improve future for children and the next generation (2)	Disseminate Palestinian narrative to the outside world (2)	Limited access to water and electricity (2)	Decrease in water quality (2)	Peace (2)
Water and electricity savings (1)	Receive project support from JAV members (1)	No autonomy (2)	Farmers' limited adaptive capacity (1)	Free state for Palestinians (2)
Saw the success of other project participants (1)	Increase crop harvest (1)	Long distance between Jordan and Arava Valleys (2)	Israeli permit regime creating further barriers (i.e. denial of well construction) (1)	Increased involvement in cooperative work (2)
Increase access to knowledge and/or technology exchanges (1)	Protect groundwater (1)	Decrease in economic opportunities within the community (2)	Power of the IDF (1)	Construction of additional greenhouses & wells (2)
View of participation as a leadership opportunity (1)	Utilize increased water access to diversify crops (1)	Climate change (2)	Desertification (1)	Diversification in date production (i.e. selan) (1)
Want of more water access (1)	Obtain tangible benefits (1)	Political instability (1)	Israeli occupation of the West Bank (1)	Access to low interest loans (1)
Ability to farm more of own land (1)	Exposure to knowledge/opportunity sharing (1)	Settler encroachment into West Bank (1)	Increased tensions around water (1)	Ability to cultivate 100% of own land (1)
Share Palestinian narrative with the outside world (1)	Improvement of public and environmental health (1)	Water pollution (1)	Food and energy insecurity (1)	Market access (1)
Peaceful coexistence (1)	Learn better farming techniques from Israelis (1)	Food security (1)	Social problems (1)	Higher quality water (1)
Want of household biogas system (1)	Reduce the use of chemicals in farming (1)	Increased desertification (1)	Presence of "enemy discourse" (1)	Return to farming more water intensive crops (i.e. bananas) (1)
		Belief that other countries will fail to "stand up to Israel" (1)	Pests (1)	Self-empowerment (1)
		Asymmetric costs of water for Israelis & Palestinians (1)	Low soil quality (1)	Plan for comprehensive sewage disposal system (1)
		Education gap (1)		Improve marketing of dates (1)
		Focus of project not broad enough to affect the masses (1)		Start a biogas project (1)
		Parents lacking interpersonal skills and emotional support (1)		
		NGO history of failed projects (1)		
		Language barriers (1)		

Table 3 Israeli Farmers

Motivations	Expectations	Concerns	Threats	Aspirations
Share knowledge and/or gain knowledge (4)	Meet/communicate more frequently with stakeholders from both sides (4)	Lack of organization and structure in JAV meetings (2)	Pests (4)	Share marketing and production knowledge with Palestinians (2)
Belief that working together is the best way forward (3)	Learn about other farming practices (2)	Vastly different realities for Israeli and Palestinian farmers make it difficult to find common ground (2)	High price of water (desalinated and recycled) (3)	Increase interactions among stakeholders from both sides (2)
Empower women in farming (2)	Increase joint work in 'the field' (2)	Social, cultural, and language barriers (2)	Uncertain future of water access (2)	"Peace and love" (1)
Personal Values/ideology (willingness to cooperate with Palestinians) (2)	Educate/empower women (2)	Asymmetry in cooperation and benefit sharing (1)	Increased competition by working with Palestinians (2)	Community empowerment (both men and women) (1)
Self-interest (i.e. improve personal business) (2)	Improve organization of PTP activities (1)	Unstable political climate (1)	Unstable political climate (1)	Israel, Palestine, and Jordan work together to solve regional water issues (1)
Establish early warning system for pests (2)	Will not gain anything from this cooperative work (1)	Peace must be agreed upon in order to see progress, but such an agreement currently doesn't appear likely (1)	Perception that small-scale projects are not sustainable (1)	Involve more Palestinian youth (1)
To meet people (1)	Establish an early warning system for pests (1)	Pests (1)	Both sides are becoming more extreme in their views (1)	Create a product/good that can be jointly marketed (1)
Build bridges between the communities (1)	Increase profit of personal farming business (1)	Price difference in water and electricity for Palestinian and Israeli farmers (1)		Build safe work spaces for women (1)
Show Palestinians that Israeli farmers are open to helping Palestinian farmers (1)				Political stability (1)
Aid Israeli farmers (1)				Increase date yields (1)
View participation as a leadership opportunity (1)				Create a happy work environment (1)

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Top: Brenna Rivett | Bottom: Bilal Aslam

CHAPTER 5
FINDINGS AND ANALYSIS

Using our stakeholder MECTA findings, this chapter identifies and analyzes patterns and tendencies related to the four themes in our conceptual framework and describes the implications for environmental peacebuilding. Each section illustrates areas of consensus and describes areas of divergence. The chapter concludes with a discussion of additional challenges for the project that do not fit neatly under a single theme.

5.1 Identity

The shared identity of farming between Israelis and Palestinians remains a key to the success of this cooperation. The team identified the shared identity of farming in IPCDPM prior to fieldwork, yet the nuance of this shared identity and its meaning in depth was discovered through dialogue and responses in interviews. The conversations with stakeholders and beneficiaries provided a stronger understanding of farming as a means of cooperation beyond the historical conflict, but also in the present and into the future. In a group interview, Palestinian farmers reminisced about growing bananas and other crops in the past; presently, these crops are not sustainable due to the large quantity of clean, desalinated water they would require.[133] The Israeli farmers in Arava overwhelmingly referred to farming as a business where the end goal is to make money and not just grow quality products.[134,135] However, Palestinian farmers' connection to their land goes beyond date farming.[136,137] A date farmer and village leader reflected on the symbolism of the olive tree as a sign of peace and an indigenous tree of Palestine. The farmer expressed, with frustration, that the Israeli settler farmers' uprooting of centuries-old olive trees when they develop land in the West Bank is a threat to Palestinian identity and symbolism.[138] However, while conscious of the past, Palestinian farmers look forward to having conditions and relationships that allow for continued cooperation with their neighbors, for the sake of improving their livelihood. On the other side, some Israeli farmers continue to cooperate and lend a hand to Palestinian farmers, with the aim of knowing their neighbors better to live with them in harmony. On an inter-personal level, different farmers in the West Bank, Israeli and Palestinian, interact informally through resource sharing after developing a relationship over time.[139]

The expectations and aspirations of Palestinian and Israeli date farmers reveal differences in orientation in regard to cultural and business contexts. Palestinian farmers are largely collectivist in culture, meaning they put great value on community-focused efforts and values, yet individualistic in farming and business practices, which largely means the farms are run at the family-level rather than the community level. However, the orientation of Israeli farmers from the Arava Valley is the opposite, with great emphasis on community-based farming in the form of Kibbutzim. These differing orientations impact peacebuilding efforts because they inform the motivations for the different groups to participate. While Israeli farmers of the Arava Valley have a more individualistic orientation when it comes to participating in peacebuilding activities, their business practices are largely collective (see Figure 3). This is evidenced in the large number of kibbutzim where farmers work together in a cooperative way to share the cost burden of farming on a commercial scale. The Israeli date farmers grow, market, and sell their dates collectively, as it lessens the economic strain and

133 Interview 4, In discussion with the authors.
134 Interviewee 14, In discussion with the authors.
135 Interviewee 15, In discussion with the authors.
136 Interview 4, In discussion with the authors.
137 Interviewee 7, In discussion with the authors.
138 Interviewee 7, In discussion with the authors.
139 Interview 4, In discussion with the authors.

allows resources to be used efficiently. We believe this is because the Israelis ultimately benefit more individually through this model and working together in a collective reinforces their individualistic cultural motivations. Israeli date farmers explained to us that this was a key strategy for scaling up their economic gains.[140,141]

The Palestinians farm as individual family units and do not share the same economic organization as the Israelis. Scarcity causes individuals to focus only on their own immediate needs and makes it almost impossible to consider long-term strategies for resilience.[142] The inability to organize collectively greatly limits the ability of Palestinians to achieve greater economies of scale in their operations. Greater cooperation among Palestinians could potentially improve their economic output as was recommended many times by Israeli members of the JAV Committee.[143,144] Palestinian farmers that were interviewed use a strategy to address the cost barriers to commercial-level farming: to focus only on their individual needs to farm their own land. As several Israeli farmers noted, "If they simply got together and shared the cost of heavy equipment and the infrastructure for date processing and marketing, they would all enjoy greater profits."[145]

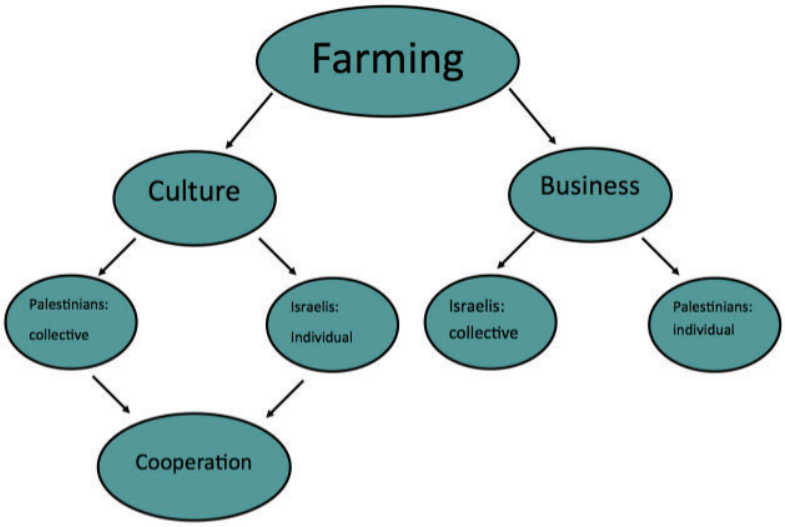


Figure 3 Farming a Shared Identity

Israeli farmers interpreted the Palestinian farmers' concern regarding scarcity of resources as a possible barrier to overcome, but did not feel threatened by the concerns. Palestinian farmers, on the other hand, experience such scarcity in farming resources that they do not express any other motivation for participating in the project other than to meet their immediate needs.[146,147] Palestinian farmers see the abundant resources, technology, government support, and rights enjoyed by Israeli farmers as major advantages and reasons for their success.[148] Israelis, in contrast, see their collective organizing and culture as a key to their success.[149] Some Israelis attribute their success to Jewish cultural values around collective

140 Interviewee 15, In discussion with the authors.
141 Interviewee 17, In discussion with the authors.
142 Mullainathan, S., and E. Shafir. 2014. *Scarcity: The New Science of Having Less and How It Defines Our Lives*. New York: Picador Books.
143 Interviewee 15, In discussion with the authors.
144 Interviewee 17, In discussion with the authors.
145 Interviewee 15, In discussion with the authors.
146 Interview 4, In discussion with the authors.
147 Interviewee 7, In discussion with the authors.
148 Interview 4, In discussion with the authors.
149 Interviewee 15, In discussion with the authors.

farming and resources sharing, while others attribute it to their business model. It was clear that there was a misalignment in how each group explained why Israeli farmers are successful. Similarly, Israelis struggle to grasp the severity of the obstacles faced by the Palestinian farmers. The Palestinians' experience is not simply a present challenge, but, rather, an ongoing barrier to accessing resources that is hard to overcome and largely out of their control.

Scarcity of resources that Palestinians require to successfully farm their land is an effect of the conflict on Palestinian farmers. The Israelis experience such abundance of these same resources that they are able to organize in a way that benefits them in the long term, allowing them to overlook even their individualist orientation for greater eventual gains. The asymmetry in access to resources that exists, born out of scarcity of resources and further complicated by politics, has continued to shape identity and inform willingness to cooperate. Until this is addressed, both sides will struggle to completely understand each other's identity with respect to scarcity and their collective/individualistic differences.

5.2 Equity

There was consensus among most stakeholders that the project's people-to-people connections countered the prior expectations resulting from personally mediated biases. Both Israeli and Palestinian participants noted that people frequently resort to the mainstream discourse of "Othering" and depictions of the other identity as an enemy. On the other hand, the expectations of PTP connections for Palestinian farmers were more pessimistic than Israeli farmers. One Palestinian farmer stated that, although he appreciated attending the JAV Committee workshop at AIES in the Arava Valley, witnessing the large solar farms and constant, reliable water service that the Israelis experience reminded him that the project still lacks long-term influence over institutional and structural inequities. In our interviews, JAV Committee members expressed the significance of "peacemaking on a personal level" and a strong commitment to the project's cooperation efforts. This highlights the significance of the project as a space for PTP interactions and demonstrates its ability to counter internalized and interpersonal inequities among Israeli and Palestinian participants.

The primary motivation for Palestinians to participate was inequities, whereas for the Israelis it was personal ideology. Palestinians' motivations were centered around tangible benefits associated with the betterment of their personal, familial, and overall community livelihoods while Israeli motivations were centered around intangible benefits of personal satisfaction associated with working with the Palestinians and charitable contributions. Israeli farmers expressed aspirations that their personal efforts would lead to a livelihood improvement for their Palestinian counterparts.[150] Palestinian farmers often cited their struggle with scarcity and hope to obtain benefits to improve their livelihoods focusing on existing inequities as opposed to the project's peacebuilding potential. This illustrates the importance of aligning the project's outcomes with the different motivations of each stakeholder group; otherwise, the level of stakeholder engagement could be affected.

Palestinian farmers emphasized the lack of rights and political power as key concerns and threats, whereas only a few Israeli farmers and practitioners mentioned political instability as a secondary concern. Moreover, there were different interpretations of what political instability means and its implications. The JWC and Israeli Civil Administration permit regime and the region's political instability were primary concerns and threats for many Palestinian farmers. Further, Palestinian farmers noted the lack of institutional power, resource restrictions, and little economic access as concerns with a high degree of importance. Israeli farmers, practitioners, and government officials only expressed concern about political

150 Interviewee 9 & Interviewee 15, In discussion with the authors.

instability with less importance after more technical concerns such as competition, climate change, or pests. Four Israeli stakeholders characterized the anti-normalization movement as a threat because of its negative impact on cross-boundary cooperation and its negative impacts more so on Israelis than Palestinians. When Palestinians cited anti-normalization, they often focused on the legitimacy or reasoning behind it, emphasizing the movement's limitations and restrictions as an acceptable and necessary short-term consequence. The lack of a nuanced understanding of anti-normalization for project participants can have negative implications on the IPCDPM project. The misperception of the anti-normalization movement as an unnecessary burden can inadvertently and mistakenly delegitimize the project's cooperation efforts. Without this understanding or acknowledgement of the historical context surrounding anti-normalization, Israelis default to positions naive of political realities given the asymmetric power balance in their favor. This was evidenced in an interview with an Israeli who had declined an invitation to participate in the IPCDPM project. The interviewee suggested that Palestinian farmers in the Jordan Valley work with settler farmers as opposed to their current project partners, farmers from the Arava Valley, due to the geographic proximity of Palestinian Jordan Valley farmers to settler farmers neglecting the implications of the settlements in the Jordan Valley being seen as illegal under international law. This statement illustrates the lack of understanding of the Palestinian anti-normalization movement.[151]

Various stakeholder groups acknowledged the project's limited traction in addressing structural and institutional inequities. Palestinian farmers expressed expectations for the project to continue its small-scale, household, and community impact. Israeli farmers were also aware of its small-scale impact and expressed expectations for more knowledge sharing at the farming community level. PWEG and AIES practitioners both expressed motivations driven by the region's institutional and structural inequities, but they were also cognizant that the project mostly influenced interpersonal and internalized inequities and not the institutional and structural inequities related to access, identity, gender, and trust. Nevertheless, organizers still stressed the significance of efforts to align water, food, and energy projects in a manner that would improve internal and interpersonal equity through building resilience and the facilitation of PTP cooperation. This points to the significance of aligning project expectations with stakeholder expectations.

For project-implementing organizations, there were multiple visions for how the IPCDPM project could scale up its influence. The aspirations of Israeli and Palestinian practitioners indicated a notable shift in project strategy over the last two years. An AIES staff member stated that the project's framing is moving beyond the previous goal of "finding common ground," as this framing does not acknowledge the deep inequities and asymmetries that create vastly different circumstances for Israeli and Palestinian farmers.[152] In this vision, the next step of the project is to build empowerment and political agency. Whether through the implementation of informal or formal agreements, this staff member aspired for the project to expand its sphere of influence to political decision-makers. Another AIES staff member's vision focused on financial sustainability and economic empowerment rather than political empowerment. This vision stressed aspirations for a commercial business as a means for the project to be independent of donor funding. It would be a sustainable business model that includes Israeli/Palestinian collaboration; this model envisions a new production of power based on an equal partnership. Lastly, a PWEG manager expressed a vision with a technical perspective to expand solar power efforts and include desalination solutions for Palestinian farmers. Building resilience and adaptation strategies against an increasingly harsh political and climatic reality is still the priority; this framework assumes the continuation of institutional and structural inequities, focusing on

151 Interviewee 17, In discussion with the authors.
152 Interviewee 13, In discussion with the authors.

how best to overcome these obstacles on a community level. It was unclear if project organizers were all aware of these multiple visions; without a clear long-term strategy, scaling up the project's impact will be difficult.

It is not within the scope of this report to evaluate the validity and efficacy of these long-term approaches; however, in our data collection, it was unclear if there was consensus on priority action areas after the current funding finishes. Aligning future priority areas and how they affect inequities across the four levels, how they complement each other, and how they can enable more inclusive and equitable participation from stakeholders would ultimately build more trust; and, therefore, a more sustainable project.

5.3 Trust

There is a desire for continued cooperation for the environmental cooperation project. Palestinian and Israeli non-governmental organizations at the practitioner level expressed expectations of continued cooperation associated with the IPCDPM project. Regarding aspirations, practitioners from both sides stated interests in the continuation of creating interdependencies both at the PTP and organizational level. At the PTP level, Palestinian practitioners stated a desire to bridge the gap between Palestinian and Israeli date farmers through renewable energy and increased technology use as a means to improve Palestinian export capacity. There were similar concerns shared over donor trends (i.e. lack of and difficulty in securing funding) from the practitioners who implement the project. Practitioners have greater access to resources than individuals such that they may amplify individual concerns. For environmental cooperation projects to succeed for peacebuilding purposes, there is not only a need for the practitioners to continue being interdependent but also a need to show how these interdependencies have produced tangible results.

The lack of a shared language between Israeli and Palestinian farmers on the JAV committee is a barrier to trust-enhancement. During the JAV committee meeting, Palestinian farmers expressed concerns over the language barriers that prevent consistent communication with Israeli farmers both in and outside of meetings. As shown in indicators, a better way of communication fits into the "collaboration" indicator to increase the trust-enhancing process. Furthermore, the ongoing translations interrupted the meeting and took away time that could have been used for the farmers to share knowledge and come up with solutions in the date farming fields. One farmer stated, "In the field, we are all farmers," indicating a need to communicate easily to find shared solutions for a common problem or goal.[153]

Motivations, expectations, and aspirations expressed in statements by Palestinian and Israeli farmers are the trust-enhancing perceptions that could contribute to participation in IPCDPM. Interviewees stated that their motivation to join the project is the opportunity "to learn" (Israelis) and "to understand the other side" (Palestinians). This motivation shows both Israelis and Palestinians are willing to work with each other. Furthermore, Israelis mentioned they wanted to learn more about farming practices from Palestinians, especially how to farm under water scarce conditions.[154] Similar to the Palestinian farmers, they expressed their willingness to get some suggestions on farming with more advanced technological skills. These statements aligned with the "collaboration" indicator. These motivations and expectations demonstrate a perceived communality and indicate the willingness to participate and share knowledge.

153 Interviewee 15, in discussion with the authors.
154 Interview 9, in discussion with the authors.

5.4 Sustainability

There was a clear belief from both Israelis and Palestinians stakeholder groups that the threat of pests, in particular the red palm weevil, presents an opportunity for cooperative management. Seven individual stakeholders, including Palestinian farmers, Israeli farmers, Israeli practitioners, and JAV members mentioned either the red palm weevil or the rhinoceros beetle as concerns and threats. Additionally, both Israelis and Palestinians identified an aspiration of a localized pest management plan. Without a duel pest management plan in place, risks include further spread of pests from the Jordan Valley into the Arava Valley and continued damage to Palestinian and Israeli date trees. The presence of pests was one of the few issues identified by both sides, highlighting a unique opportunity for cooperation based on the shared environmental concern.

A reliable, affordable, and renewable energy source is needed to improve the livelihoods of Palestinian date farmers. Palestinian farmers, practitioners, and government officials consistently mentioned the aspiration for a secure energy source, favoring PV systems due to their low cost and previous success. Israeli practitioners showed motivations, expectations, and aspirations to assist Palestinian farmers in accessing affordable renewable energy and establishing healthy interdependence between Israel and the West Bank. Renewable energy was positively received as it is a reflection of participants' needs, most notably with gaining access to affordable, reliable energy. Palestinians and Israelis both favor the current PV systems and aspire to expand the technology to a greater number of households. Without localized, reliable sources of renewable energy, the dialogue between Israelis and Palestinians from mutual development and knowledge sharing could be lost and Palestinians may not be able to better their livelihoods.

The soils on Palestinian farms demonstrate a high level of salinity, which presents challenges to agricultural pursuits. Palestinian farmers, Palestinian practitioners, and USAID all expressed concerns with the quality of the water being used for agriculture and the amount of salt content within the soil from untreated water. Due to Israeli farmers' access to clean water, issues surrounding water quality were not expressed in their MECTA. This divergence between Israeli and Palestinian farmers' MECTA demonstrates how Palestinians can tangibly benefit from cooperation while Israelis' benefits are ideological. Cooperation could provide Palestinians with greater access to clean water from aquifers and Israeli desalination plants. If cooperation is not achieved, insufficient water quality could diminish the quality of dates produced, thereby negatively impacting livelihoods, food security, and economic gain for Palestinians.

Date farmers require uninterrupted access to clean water for their livelihoods; this includes, just prior to the harvest, having access to water that is cleaner than treated wastewater. Palestinian farmers and practitioners mentioned the access to clean water as being a significant concern, threat and aspiration; Israeli farmers and practitioners mentioned a moderate concern, threat and aspiration. The opportunity for expansion into desalination was consistently mentioned, and expectations and aspirations of Palestinian farmers included household level wastewater treatment plants. Inconsistent access to clean water could present challenges to livelihood protection with implications to identity, equity, and trust issues as previously illustrated.

5.5 Challenges

Beyond our conceptual framework, several concrete obstacles to cooperation were observed through and in addition to the MECTA analysis. Obstacles such as the overarching political situation are interwoven throughout our findings, necessitating a section that specifically states the barriers to cooperation present within the project. Each of these implications for peacebuilding were found within our MECTA analysis and represent important challenges that AIES and PWEG face in establishing cooperation between the two groups.

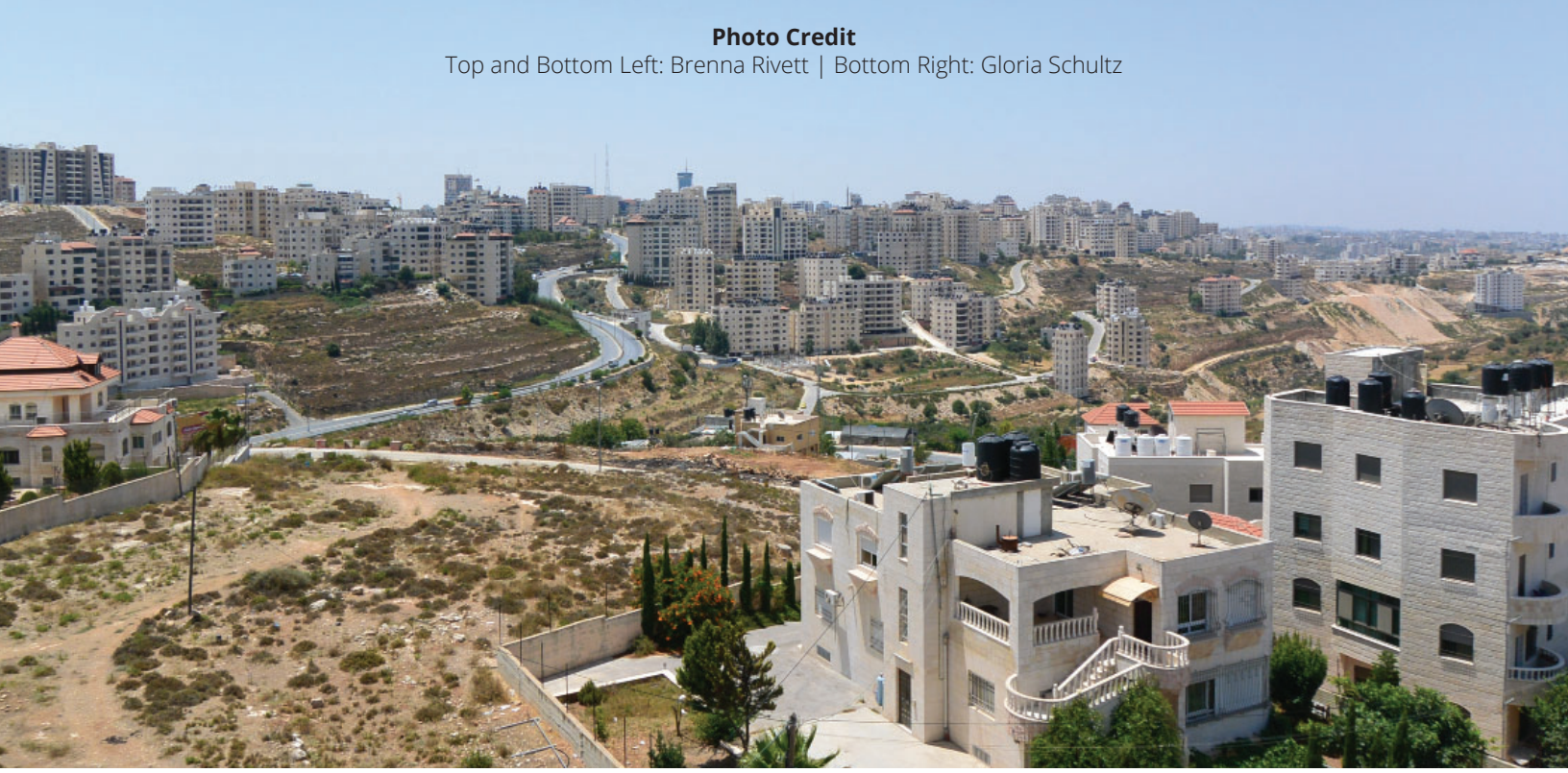
Observations taken during the July 2018 joint JAV Committee meeting demonstrated that the meeting's objectives and challenges were not clear to all participants. While the potential exists for the JAV Committee to facilitate meaningful dialogue and build relationships, several barriers currently prohibit this including limitations to funding, geographic distances, and communication. The current funding from USAID is only for three years, risking turning the committee into an initiative that lacks long-term strategy and impact due to the unpredictable nature of grants. Organizing meetings is challenging, not only due to the geographic distance between the participants, but also due to the lengthy permitting process the Palestinians must complete to visit the Arava valley. This limits the number of participants at each meeting.

Palestinian stakeholders have a clear desire for more knowledge on marketing, packing, and other forms of date production, but Israeli and Palestinian farmers' perceived fear of intergroup competition remains an obstacle. Palestinian farmers and AIES and PWEG project NGOs noted the clear lack of experience in other forms of date production and business strategies. Recruiting experienced Israeli date farmers, due to the fear of competition, was a challenge noted by Israeli practitioners. However, several Israeli farmers suggested that Palestinian farmers could still improve their business operations, expand production to incorporate options such as selan (date syrup), and optimize available resources more effectively.

Due to insufficient data, this report was not able to include a larger section on women in peacebuilding, despite the fact that gender is a challenge within the cooperation. The interview questions were not designed to reveal gender dynamics within the committee and there were far fewer women interviewed than men. However, three anecdotal findings were revealed that should be explored in future reports:

- **Despite positive strides towards gender equity, there are still barriers holding women back from fully participating in the project.** PWEG staff have encountered issues approaching women about participating in the JAV Committee because the women were discouraged from doing so by male family or community members who were uncomfortable with them participating in the initiative.
- **Female JAV members held different perspectives than male members, often more focused on the household level.** These different perspectives can offer valuable contributions to the committee's work and should be considered when recruiting female committee members.
- **There is potential to build a platform for woman-to-woman relationship-building activities within the JAV Committee that would strengthen the committee and cooperation.** One committee member with experience working with women in the West Bank and Jordan revealed that when women are given opportunities to work closely with other women, they are often able to push back on barriers and work toward greater gender equality. This highlights the significance and potential for women's roles in the project's cooperative, leadership, and organizing aspects and should be explored further.

Photo Credit
Top and Bottom Left: Brenna Rivett | Bottom Right: Gloria Schultz



CHAPTER 6
RECOMMENDATIONS

6.1 Increasing and Improving Communication and Understanding

1. Create presentations and handouts in both Hebrew and Arabic for JAV Committee meetings.

In order to reduce the amount of translation needed for Israeli and Palestinian JAV Committee members and to ensure that all meeting participants are working from a common foundation, JAV meetings should incorporate, in both Hebrew and Arabic, (a) an easily readable presentation on a large screen and (b) handouts with relevant information and meeting objectives. Alleviating some of the issues surrounding language barriers will increase transparency, organization, and efficiency.

2. Increase and support a variety of communication channels to continue building relations.

Facilitating exchanges between Israeli and Palestinian farmers will aid in keeping all JAV Committee members informed and will strengthen bonds that can yield mutually beneficial gains beyond the life of the project. Examples include enabling Israeli and Palestinian farmers and/or youth to work on each other's farms, maintaining regular communication among committee members in the periods between meetings, and sharing meeting minutes with all members, including those unable to attend meetings. Useful suggestions made at the last JAV Committee meeting included increased time in the field and increased communication outside of meetings via a project newsletter, facilitated phone calls, and a Facebook group.[155]

3. Increase recruitment of Israeli participants by appealing to Israelis who are motivated by cooperation with Palestinians and charitable contributions.

Intangible benefits such as the realization of personal values and self-satisfaction are an important project benefit. The project could better highlight the experiences, ideas, and contributions of Israeli farmers in order to encourage more of them to participate. The implementation of Israeli JAV Committee member suggestions regarding project improvements, provided they are acceptable to the committee as a whole, could also result in continued or increased Israeli participation.

4. Facilitate dialogue and activities that promote a deeper understanding of regional inequities facing Palestinians and other identities.

The project's cooperative element will be most effective if activities are rooted in an understanding of the region's power asymmetry and inequities for different identities, including gender, age, income, and/or the NGO-participant relationship. More earnest efforts to understand one another's MECTA and the project via facilitated discussions at workshops, JAV meetings, and equity trainings, can produce a deeper level of trust and equity that will better inform and influence the project's future steps.

5. Increase vocational activities centered around the different experiences and expertise related to date farming for Palestinian and Israeli participants.

In addition to committee meetings, AIES and PWEG could organize more impactful interactions structured around the farming season, milestones in date farming, and production (e.g., harvest, selan production). Since there are differences in business orientation between Palestinian and Israeli farmers, AIES and PWEG could also host workshops on date production and marketing to allow for broader dialogue, beyond what occurs in the context of farming and harvesting. This also sets the foundation for better understanding each other's struggles and identities.

155 Facebook offers a translation function or users who speak different languages.

6. Develop structures and rules, agreed upon by all parties, that maximize the efficiency of JAV Committee meetings.

With limited time and resources, JAV Committee members should seek different strategies to maximize productivity and participation during meetings. The meeting structure could include large group discussion, breakout group discussion, more fieldwork, and/or facilitated trainings. Meeting standards could include the delegation of a moderator, speaking time limits considering ongoing translation, and discussion topic time limits.

7. Hire a bilingual (Arabic and Hebrew) agricultural consultant for Israeli and Palestinian farmers and beneficiaries.

JAV Committee meetings use technical agricultural terms that are often misinterpreted between Israeli and Palestinian members. For example, there was a misinterpretation of terms related to the use of compost and fertilizer as well as chemical usage terminology. PWEG and AIES leadership and staff share English as a common language, but relying on a third party to translate between Arabic and Hebrew adds complexity and hinders the meeting time. The time saved through proper interpretation and expert advice could ensure the entire agenda of a meeting is covered and more field time is available for joint work.

6.2 Developing Future Strategies and Projects

1. Gain consensus on a strategic plan for the project's next steps, with emphasis on how it enables equitable and inclusive participation.

There should be a consultative process to develop next steps that incorporates the needs and desires of project participants. Through participation in strategic planning and more structured JAV Committee meetings, the project could reach consensus on a shared vision. By allowing key stakeholders to share and exchange their opinions on future developments, new ideas can be conceptualized, expanded, and refined to fit the needs of Israeli and Palestinian participants and organizers.

2. Develop a mutually beneficial pest management strategy to monitor and reduce the spread of red weevil on date farms.

The development of a cooperative pest management strategy would facilitate knowledge sharing on the problem of the red weevil, which is spreading from northern Israel, through the West Bank, to the Arava Valley. The red weevil represents a critical example of how the knowledge-sharing and cooperation from Israelis will ultimately benefit both sides. The project could provide an opportunity to better engage Israeli and Palestinian farmers' technical expertise to facilitate cooperation.

3. Develop a strategy to implement a larger-scale community outreach plan to improve gender equality within the JAV Committee.

Through the JAV Committee, both male and female community members are able to craft solutions through discussions with experts, and all families benefit when more community members are engaged with these resources. PWEG and AIES should focus in ensuring that the gender breakdown in participation and engagement, on both the Israeli and Palestinian sides, is equally split between men and women. Since each community is unique and faces different barriers to participation, different strategies should be developed to encourage female participation in both groups.

4. Conduct an economic cost-benefit analysis of forming Palestinian farming cooperatives.

Many Palestinian date farmers that we interviewed mentioned the challenges of selling independently with less market access and desire for date marketing cooperatives. An economic cost-benefit analysis could provide a better sense of the outcomes and processes that may be necessary. The project could approach this by leveraging the business experiences of Israeli farmers involved in the project.

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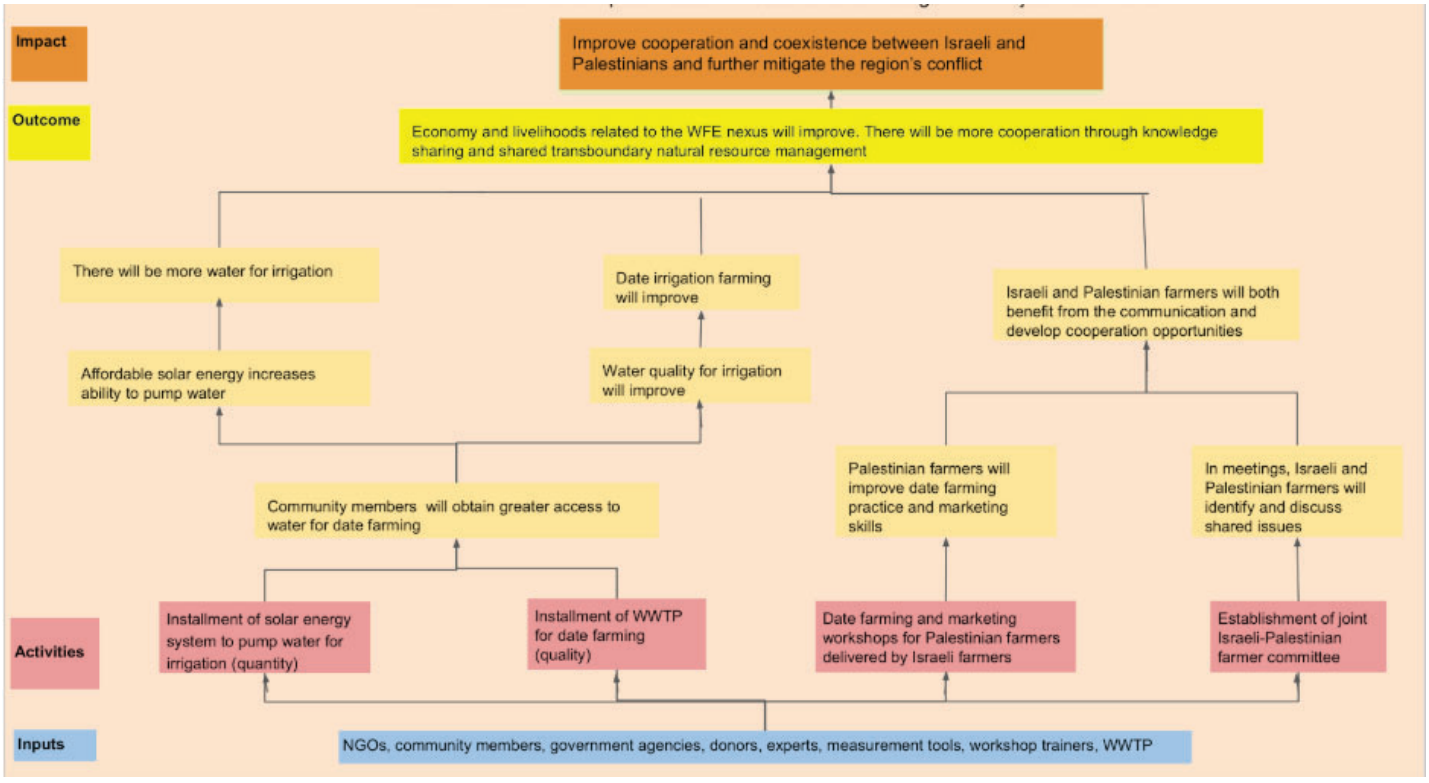
APPENDIX

Appendix A: Israeli-Palestinian Cooperative Date Production and Management Project Result Chain



Appendix B: Stakeholder Findings in Trust-enhancing and Trust-undermining Categories

Individual	Israeli Side	Palestinian Side
Trust-Enhancing	**Motivation:** See participation as an opportunity to learn; show the Palestinian side that Israeli farmers are open to help; strengthen the track II diplomacy; shared marketing and pest control skills; share similar interests on projects; better together than apart; personal values **Expectation:** Information sharing, recruiting Israelis with similar ideology, show the value of people working together, identify voids, increase the number of beneficiaries from both sides; empowering women through farming knowledge; work with Palestinian youth	**Motivation:** Want to understand the other; perceived communality; Palestinian community improvement; improve livelihood through water/energy savings; influence others to participate in cooperation project; economic gains and business opportunities; spread Palestinian narrative to those outside Israel/Palestine, build community resilience; partnership; balance inequities and asymmetry; one state solution; would become more involved if project grew larger
		Expectation: Learn better farming techniques; continued cost savings and positive impacts (i.e. less chemicals, increased crop harvest, community protection); Save money on electricity and water; continued PWEG involvement for maintenance and continued tangible benefits (100% PV coverage); increased public and environmental health, protection of groundwater, knowledge sharing **Aspiration:** More community engagement through the help of PWEG; capacity building and technical expertise, diversification in date production (jams, selan, etc.), market access; increased global understanding and courage leading to effective international action resulting in free state for Palestine

Trust-Undermining	**Concern:** Don't see a way for Palestinians to get resources until there is peace; Israelis don't see mutual benefits; lacking capacity to communicate with high-level diplomats; not able to recruit enough Israelis; struggle to see issues beyond pest control to bring people together; limited involvement; asymmetry within the cooperation; growing competition **Threat:** Uncertain future of water access for both sides; scared to share the trade secrets; both sides are becoming more extreme in their views	**Concern:** Language and geographic barriers; air pockets; lack of municipal support, "marginalized"; settler interactions; education and employment gap; loss of identity without a formal state; water pollution; production barriers (cherry picker), electricity; marketing, distribution, geographical distance between cooperating parties, uncovered septic tanks; lack of interpersonal skills and parental/emotional support in education, general lack of NGO project sustainability **Threat:** Political instability; loss of land to settlers; increased urbanization; growing water tensions; national security depends on food security and water access

Practitioner	Israeli Side	Palestinian Side
Trust-Enhancing	**Expectation:** Trust, cooperation between Palestine and Israel, interdependence on natural resources in the region, create easily identified benefits for both sides	**Expectation:** Continued implementation of projects for farmers
Trust-Undermining	**Concern:** Struggle to find other common issues to bring people together; donor trends; lack of organizational structure; language barrier in the institution; less field tours; cultural sensitivity; **Threat:** Be seen as traitors by the countries they serve	**Concern:** Need for more financial support from outside donors; competition affecting willingness of beneficiary participation; inaccurate knowledge on Palestinian side about greywater; Israeli hesitance to participate **Threat:** An unsustainable project after funding ends; cultural barriers for women to participate in cooperative efforts

State	Israeli Side	Palestinian Side
Trust-Enhancing		**Expectation:** JWC meeting regularly again and, more broadly, maintain existing infrastructure
Trust-Undermining	**Concern:** Lack of enthusiasm on both sides **Threat:** Misalignment of discussion topics on both sides	**Concern:** Uncertain funding from the US and EU; unreliable energy in Palestinian territories **Threat:** Israel treating Palestine as a water customer; limited infrastructure development through restrictive Israeli permit regime; lack of input and leverage due to lack of settlement illegality/acknowledgement; continued deterioration of the situation in Gaza

Appendix C: Stakeholder Perceptions and Attitudes (MECTA): Full Findings

Palestinian NGO

Motivations	Expectations	Concerns	Threats	Aspirations
Improve livelihoods of Palestinian farmers (2)	Increase understanding of Israelis (1)	Stakeholder hesitation to participate (2)	Competition for funding among other NGOs (1)	Increase Palestinian farmer capacity to export/sell dates at fair prices (2)
	Benefit Palestinians (1)	Perception of increased competition (1)	Project ending when funding ends (1)	Bridge the gap between Israeli and Palestinian farmers through renewable energy and technology (1)
	Community empowerment (1)	Need for financial support (1)	Cultural barriers (1)	Continued communication of JAV Committee members after funding ends (1)
	Achieve the objectives of the proposal (1)	Shift in foreign funding to other sectors (i.e. infrastructure and education) (1)		Female empowerment (1)
	Construct WWTPs for farmers (1)	Logistical challenges (distance/availability of participants) (1)		Secure future project funding and concept notes (1)
	Organize JAV meetings that focus on community needs/demands (1)	Cultural barriers (1)		Hope communications between Israelis and Palestinians promote feelings of safety (1)
	Recruit more women for the JAV Committee (1)			

Israeli NGO

Motivations	Expectations	Concerns	Threats	Aspirations
Community approach to technical projects (1)	Frame and scale the JAV Committee to reach higher-level decisionmakers (1)	Unstable political climate (2)	Anti-normalization (2)	Empower communities to practice Track II diplomacy (2)
Prospects of Track II diplomacy (1)	Identifying voids and strategizing ways to eliminate them (1)	Vastly differing realities make finding common ground impossible (beyond pest control) (2)	Political instability (1)	Shift from Track III to Track II diplomacy (2)
Obtain the funding to run a successful NGO (1)	Show the value in cooperative work between Israelis and Palestinians (1)	Israelis fail to show interest because they don't see mutual benefits of the project (2)	Rift between Hamas and the PA (1)	Transform the project into a commercial enterprise (1)
Increase Palestinian capacity/leadership (1)	Recruit Israelis with similar ideologies based in cooperation with Palestinians (1)	Lack of trust on the ground (2)	Israeli water/border decision-making interpreted as "green fascism" (1)	Increase Palestinian leadership on project proposals (1)
Facilitate a cooperative approach to tackle the WFE crisis in the region (1)	Obtain continued support/funding from donors (1)	Differentiating current project from prior projects (which were not sustainable) (1)	Ideology of the Israeli civil administration (1)	Increase technology access (i.e. desalination) (1)
Environmental protection (1)	Increase the number of beneficiaries from both sides (1)	Shift in foreign funding to other sectors (i.e. infrastructure and education) (1)	Over-reliance on donor funding (1)	Adapting a bilateral approach (1)
Regional security/stability (1)	Show success by meeting project objectives from USAID proposal (1)	Taking the project to scale (1)	Participation leads to fellow citizens viewing you as a traitor (1)	Recruit more youth (1)
Introduce environmental peacebuilding into policy agenda (1)	Use the success of this project to transition to Track II diplomacy work (1)	Lack of cultural sensitivity (1)		Convey the project as valuable to peacebuilding and reaching formal/informal agreements (1)
	Cooperation leading to trust between Israeli and Palestinian stakeholders (1)	Environmental health (1)		Desalination plant for Palestine (1)
	Interdependence among regional natural resources (1)			Solar power plant in Jordan (1)
	Create easily identified benefits for all stakeholders (1)			

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