

Equity & Social Science Integration at the 2018 Salish Sea Ecosystem Conference

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Introduction

Social science and equity are increasingly considered integral aspects of ecosystem restoration and reflect an expanding recognition that diverse approaches, tools, and voices matter in recovery efforts. For the past 30 years, the Salish Sea Ecosystem Conference (SSEC 2018) has been an interdisciplinary showcase for regional transboundary recovery efforts focused on the Salish Sea. As such, its proceedings provide an opportunity to reflect on and illustrate the current status of social science and equity integration.

Social Science

What is social science? By social science, I am referring to, “the academic body of theory, knowledge, and research methods aimed at understanding social systems,” that includes the various scholarly disciplines of anthropology, economics, geography, political science psychology, and sociology (Puget Sound Partnership 2017). Social science can reveal and/or address the social aspects or human dimensions of ecosystem restoration, including, but not limited to: Socio-ecological tradeoffs; management practices and governance; stakeholder engagement; diverse values, identities, and interests; local context and setting; and social equity (Bennett et. al. 2017; Charnley et. al. 2017). Through social science integration, coordinated ecosystem restoration efforts can better understand and integrate these human dimensions, among others, into decision-making, programs, projects, policies, and on-the-ground actions.

Social science integration within ecosystem recovery can take many forms. One apt regional example is the ongoing social science integration efforts at the Puget Sound Partnership (the Partnership), a Washington state agency tasked with coordinating ecosystem recovery efforts in the Puget Sound region. The Partnership currently monitors ecosystem health through a variety of designated biophysical and social measures, known as Vital Signs. The social measures are referred to as the Human Wellbeing Vital Signs and include measures such as economic vitality, sense of place, sound stewardship, and good governance. According to Kelly Biedenweg (2016), a social scientist involved in this effort, “metrics of human well-being related to natural resources is now seen as a component critical to holistically assessing environmental change,” (p. 1). These measures aim to provide a more multi-dimensional approach to ecosystem monitoring and restoration in the Puget Sound region and are currently being assessed (with the exception of economic vitality) through a region-wide survey (as of May 2018).

Interdisciplinary research illustrates the benefits of social science integration in such efforts (Bennett et. al. 2017; Charnley et. al. 2017). According to Wellman et. al. (2014), social science, “can explain how and why people affect the environment, how the environment affects human wellbeing and quality of life, what kinds of policies do and do not work to change human behavior, and which social systems are best

adapted to sustaining natural resources,” (p. 299). While social science expands in ecosystem recovery and natural resource management, barriers to effective and/or equitable integration of interdisciplinary social science remain a challenge (Robinson et. al. 2012). Social science integration in ecosystem restoration is reflected in an array of multi-sector restoration efforts, including research, planning actions, scholarly programs, and even conferences, like the SSEC.

Equity

What is equity? Equity is approached in innumerable ways and equity integration efforts take many forms. For the purpose of this article, equity is defined as an encompassing and multi-dimensional term that emphasizes social equity (i.e.: race, ethnicity, class, gender, sexuality) and includes four dimensions: (1) procedure: governance, process, involvement, and decision-making fairness, openness, transparency, and inclusiveness; (2) distribution: distribution or allocation of costs, benefits, rights, and burdens of ecosystem restoration and environmental management outcomes, policies, programs, or actions; (3) recognition: recognition and respect for the rights, values, cultures, social norms, and knowledge systems of all stakeholders involved in or impacted by ecosystem restoration

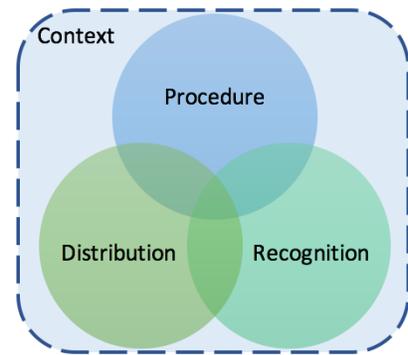


Figure 1. Equity Conceptual

efforts; and (4) context: social and geographic conditions that inform an individual’s or group’s ability to obtain recognition, participate, and gain fairness in ecosystem restoration (Pascual et. al. 2014; Petrescu-Mag et. al. 2016; Sarkki et. al. 2017; Schrock et. al. 2015) (Figure 1). While equity includes these four dimensions, they are interrelated and inform one another. For example, by increasing equity within ecosystem recovery procedures and decision-making processes, equity will likely increase within the distribution of costs, benefits, and burdens of restoration efforts. Equity is recognized as an integral aspect of ecosystem restoration and wider efforts to address fairness within public policy, planning, and governance; however, equity is often approached as a taken-for-granted afterthought or inadequately integrated into policy or planning efforts (Sarkki et. al. 2017; Schrock et. al. 2015).

Equity integration, whether within payments for ecosystem services schemes (Pascual et. al. 2014), municipal climate or sustainability plans (Schrock et. al. 2015), and/or minority community-specific projects or programs (Petrescu-Mag et. al. 2016), can have innumerable benefits. Benefits include, but are not limited to: Increased legitimacy, effectiveness, and credibility; reduced conflicts, community-based barriers, distrust, and inefficiencies; enhanced participation and accountability; and increased perceptions of fairness (Pascual et. al. 2014). While equity integration entails numerous benefits; equity is often overshadowed by the economic efficiency and/or environmental restoration aspects of ecosystem recovery (Pascual et. al. 2014; Schrock et. al. 2015). According to Pascual et. al. (2014), while “experience shows that seemingly inequitable approaches to conservation can sometimes meet environmental objectives, the contexts for conservation are changing, and we increasingly appreciate the complexities of socio-ecological systems,” (p. 1027). Thus, highlighting or integrating equity in ecosystem restoration, whether as a human dimension of restoration or an intentional program or policy, is increasingly important. The SSEC provides an example to reflect on equity, as both a topic of interest (presentations) and element of Conference’s composition (participants and presenters themselves) within regional ecosystem restoration in the Salish Sea area, particularly among public agencies, non-governmental organizations, and academics.

Social Science and Equity at the SSEC 2018

Just how prevalent were social science and equity at the SSEC 2018?

In order to assess regional integration of social science and equity in regional ecosystem recovery as reflected in the SSEC 2018 proceedings, a rough non-exhaustive Qualitative Content Assessment (QCA) was conducted with conference data provided by SSEC organizers. QCAs entail the systematic and qualitative extraction and evaluation of the occurrences within and content of textual or audiovisual material (Artiles et. al. 2017; Lashari et. al. 2015; Rochester 2016). QCA is a common tool within social sciences and the humanities and allows for the highlighting of content themes, patterns, and variations within a particular set of materials and from a specific content producer or outlet, such as a government agency (Trimbach 2014), academic discipline (Lashari et. al. 2015; Rochester 2016), or even scholarly conference (Artiles et. al. 2017) like the SSEC. Due to project limitations, tailored keywords were used to assess social science and equity integration at the SSEC; thus, the findings described are open to interpretation and should be used as a foundation to further discuss social science and equity integration at the SSEC and within regional research efforts.

Social Science at the SSEC 2018

What is the current status of social science in ecosystem restoration in the region as reflected in the SSEC 2018 proceedings?

Keyword	Social science	Human wellbeing	Human dimensions	Socio-ecological
Occurrence	17	12	0	6

Table 1. Occurrence of Specific Social Science Keywords in SSEC 2018 Presentations (n=573)

Keyword	Human	Social	Societal	Society
Occurrence	146	106	12	7

Table 2. Occurrence of Broader Social Science Keywords in SSEC Presentations (n=573)

Keyword	Human	Social	Societal	Society
Occurrence	10	5	0	1

Table 3. Occurrence of Broader Social Science Keywords in SSEC Posters (n=135)

Social science and other keywords are highlighted in Tables 1-3. Out of 573 presentations (total SSEC 2018 presentations), social science was referenced 17 times (may include multiple references within the same presentation description or duplicate session/presentation descriptions, depending on description submitted to the SSEC 2018), more than the other keywords that were assessed within the presentation proceeding data. Within the poster sessions, there were 0 occurrences of the primary keywords listed in Table 1; however, broadened, vaguer social science keywords were illustrated (Table 3). Broadening the scope of keywords for presentations to include keywords that may be slightly vaguer (Table 2), increases at least references to social science-relevant keywords, although without a more thorough analysis, it is

difficult to infer whether or not these keywords had any direct connection to social science or the human dimensions of ecosystem restoration. Likely, these keywords are only indirectly referring to the social or human aspects of restoration. In some cases, they are not related to the social or human aspects of restoration. For example, the occurrence of society within the SSEC posters refers to the Porpoise Conservation Society. A more rigorous and robust QCA could reveal more details related to the noted occurrences of specific and broad usage of social science keywords within these proceedings. It should also be noted that when compared to other Salish Sea keywords, social science notions and terms are underrepresented. For example, major keywords or terms represented in the Conference presentations included but are not limited to: Ecosystem (391), restoration (388), management (370), species (341), efforts (341), marine (328), monitoring (327), recovery (305), impacts (261), salmon (255), habitat (includes habitats) (357), shellfish (168), seagrass (128), fish (135), ecological (166), environmental (176), and biological (128).

Keyword	Armoring	Armor
Occurrence in Presentations (n=573)	12	28
Occurrence in Posters (n=135)	6	14

Table 4. Occurrence of Armoring and Armor at the SSEC 2018

Shoreline armoring is one area of interest that directly illustrates the human dimensions of restoration and the role that various social science approaches and perspectives can play in addressing a particular recovery challenge or targeted metric (i.e.: reduction of hard shoreline armoring, such as seawalls along public or private shoreline property). Shoreline armoring is a Puget Sound Partnership designated Vital Sign (metric) and Implementation Strategy (a plan for accelerating ecosystem recovery progress). Given shoreline armoring’s recognized importance within regional and local recovery efforts, numerous collaborative planning, programming (i.e.: outreach, education, incentive, regulatory), monitoring, and research efforts are ongoing throughout the Salish Sea, specifically within the Puget Sound region. Based on the QCA conducted on SSEC 2018 data, the occurrence of shoreline armoring in presentations (individual presentations within sessions and panel discussions) based on the keywords of armoring and armor was also limited (Table 4). While limited, armoring and armor presentations were quite diverse in foci or approach. For example, one collaborative presentation session entitled, “Forage fish status, spawning beach restoration and monitoring, and community engagement in the Salish Sea,” sought to illustrate current science and lessons learned on forage fish beach site restoration from the perspective of practitioners and scientists from various fields throughout the Salish Sea. An additional poster example entitled, “Understanding community perceptions on sea level rise adaptation,” highlighted the relationship between shoreline armoring and social science. This particular project implemented by Friends of the San Juans (nonprofit) integrated social science through the use of surveys to illustrate community perceptions of armoring, among other sea level rise management topics.

Equity at the SSEC 2018

What is the current status of equity in ecosystem restoration in the region as reflected in the SSEC 2018 proceedings and presentations?

When it comes to equity — meaning who is included and recognized as participants at the SSEC 2018 — the two types of presentations seem to be predominantly represented primarily by individuals primarily affiliated with government (public employees) and education (academics, researchers, and students). These group categories (nonprofit, government, education, business, tribe, and unknown) were defined through a grounded process that illustrated a specific pattern or theme among self-identifying information associated to an individual’s primary institutional affiliation (Figures 2-4). While this may not necessarily reflect other aspects of equity, specifically social equity, it does illustrate what groups or affiliations are participating in this particular conference and within ecosystem restoration activities and those that are not. Session presenters were largely comprised of individuals affiliated with a government agency (all levels and in the US and Canada) (235). Poster sessions included a large number of government affiliations; however, those affiliated with education, particularly universities, slightly outnumbered (51) those in government (47). Additionally, it should be noted that other types of groups were not represented, including non-tribal community members at large. These participant group findings are quite similar to the 2014 SSEC Conference Evaluation. According to the 2014 Evaluation, participants included individuals affiliated with nonprofits (82), tribes/first nations (34), governments (167), businesses (46), and academia (99). While the 2014 SSEC Conference Evaluation only illustrates self-reported and self-selected demographics, the findings do reflect a pattern in conference participation, particularly the high representation of government-affiliated participants (2014, 42%; 2018, 40%), moderate representation of academics (2014, 24%; 2018, 27%), and low representation of tribe/First Nation-affiliated participants (2014, 8%; 2018, 7%).

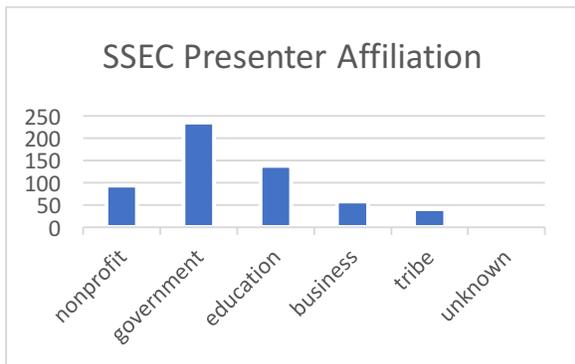


Figure 2. Presenter Primary Affiliation (n=573)

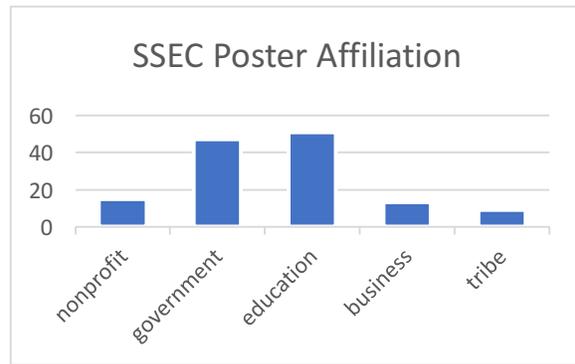


Figure 3. Poster Primary Affiliation (n=135)

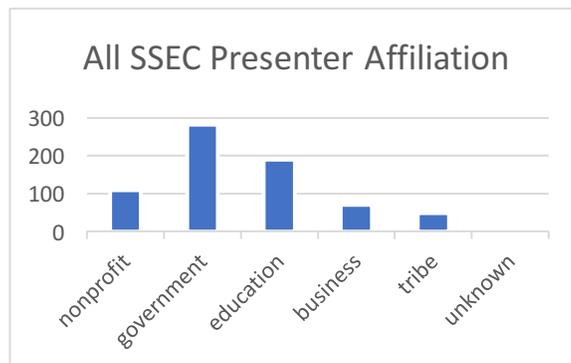


Figure 4. All Presenters Primary Affiliation (n=708)

Keyword	Equity	Justice	Diversity	Inclusion
Occurrence in Presentations (n=573)	6	0	53	6
Occurrence in Posters (n=135)	0	0	7	0

Table 5. Occurrence of Equity Keywords at the SSEC 2018

When it comes to equity, specifically as a topic of interest or content within presentations (both sessions and posters), based on the QCA conducted on data from the SSEC 2018, equity was largely absent. Out of 573 presentations (total SSEC 2018 presentations), equity was only referenced 6 times (may include multiple references within the same presentation description or duplicate session/presentation descriptions, depending on description submitted to the SSEC 2018). Within the poster sessions, there were 0 occurrences of equity. Keywords associated with equity included equity, justice, inclusion, and diversity. While diversity at first glance appears to be reflected in the presentations, this is predominantly related to biophysical or biological diversity and not social or human. Only one particular presentation session focused on equity, thus all occurrences associated with equity (6) are directly connected to this one specific session. The session was entitled, “Diversity, Equity and Inclusion for Environmental Progress,” and focused on, “three different paradigms of thinking regarding diversity and inclusion, though they are not mutually exclusive: diversity and inclusion through representation, content, and process,” (Session Description, SSEC 2018). The author also attended this well-attended session (standing room only) on the final day of the conference. The session highlighted regional approaches and engagement around equity and environmental justice more broadly. The session included speakers and leaders in this area who spoke about their own efforts to better understand, integrate, and engage other regional institutions on equity within the broader environmental field. The presenters also illustrated regional efforts that include Sustainable Seattle and the Avarna Group, both of which integrate and/or advocate around equity as an integral element of environmental management, planning, and recovery efforts.

Conclusions

What can be gleaned from these findings?

Based on the broad assessment of social science and equity integration at the 2018 Salish Sea Ecosystem Conference, social science and equity are represented and reflected in the conference proceedings. This representation and reflection, while minor does illustrate that ecosystem restoration efforts around the Salish Sea are integrating and/or recognizing the role, if not importance of social science and equity within these efforts. This illustrates that the region does highlight this overarching shift within ecosystem restoration. This includes work around shoreline armoring, human wellbeing, and equity.

While illustrated — when compared to other topics, areas of interest, and types of approaches or research — social science and equity are marginal or limited. These findings may reflect the tailored target audiences of the SSEC (e.g. government), the semi-siloed or prevailing natural science approaches within ecosystem restoration, and/or the recognized challenges associated with social science and equity integration more broadly within ecosystem restoration and environmental management, among other potential influencing factors (Robinson et. al. 2012; Schrock et. al. 2015). Although diversity in content

and participants or lack thereof is a challenge, diversity is considered one of the best aspects of the SSEC experience (Biedenweg 2014). If diversity in content and participation remains recognized and valued among SSEC participants, perhaps, more can be done to expand and reflect social science and equity integration within regional ecosystem restoration in future research, planning, programs, policy, and SSECs.

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