Lessons Learned:

Island Local Integrating Organization Pilot Process for Selecting Near Term Actions for the 2014 Action Agenda

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Executive Summary

The Puget Sound Partnership is developing decision support to more effectively integrate the priorities of Local Integrating Organizations (LIOs) into the Puget Sound Partnership Action Agenda (2016 and subsequent revisions). A pilot version of the process was implemented for Island LIO's selection of near-term actions (NTAs) for the 2014 Action Agenda. Through this process, Island LIO refined a list of 78 general strategy actions for ecosystem recovery to 12 new NTAs that contribute to implementing regional recovery strategies and substrategies. The Puget Sound Partnership Leadership Council approved the NTAs at its October 9, 2013 meeting (Resolution 2013-06).

This report presents and discusses lessons learned from the Island effort. One overarching lesson learned is that choosing NTAs well is hard work. While Island LIO participants expressed satisfaction with the final list of NTAs, improved quality of product required participation in a new NTA prioritization process as it was still being developed (while still at the pilot stage), leading to more time and effort spent exploring and developing the process than some members had anticipated. The intent is that the eight lessons learned discussed in this report, along with other local experiences, will together contribute to a more consistent standard of practice across all LIOs for connecting local actions to overall Puget Sound Recovery.

Background

From habitat restoration projects to acquisitions by local land trusts to land use planning, regulatory, and incentive programs administered by local jurisdictions, local actions are critical to the health of Puget Sound. With that in mind, the Puget Sound Partnership (PSP)'s Leadership Council has recognized collections of local jurisdictions, tribes, and other partners known as Local Integrating Organizations (LIOs) for the task of articulating and coordinating local priorities for Puget Sound recovery. PSP is developing decision support to more effectively integrate the priorities of LIOs into the Action Agenda (2016 and subsequent revisions). Specifically, decision support is being designed to help LIOs be thoughtful, systematic, and clear in deciding which actions and programs to support as near term actions (NTAs), on the assumption that the rationale for supporting particular NTAs needs to be explained to parties outside the LIO, e.g., PSP, elected officials, the public, the EPA, or other potential funders. The goal is to build a credible process that can meet the needs of all LIOs. The process will build on principles of decision science and establish guidelines for recommended steps to follow, terminology to use, and desired information quality.

A pilot version of the process was implemented for Island LIO's selection of NTAs for the 2014 Action Agenda, and a next step is to expand this support to all LIOs in preparation for the 2016 Action Agenda update. This report presents and discusses lessons learned from the Island effort. The intent is that these lessons, along with other local experiences, will together contribute to a more consistent standard of practice across all LIOs for connecting local actions to overall Puget Sound Recovery.

Approach

The underlying assumption is that better decision making processes must undergird and drive our attempts to do more successful adaptive ecosystem management. To this end, the tools and approaches of decision analysis provide a consistent and flexible set of approaches (Hammond et al. 1999, Gregory et al. 2012) that began to emerge during the 1960s from its more theoretical ancestors of operations research and decision theory. They are now widely recognized as not only rigorous, but also as a practical and accessible set of principles for helping people make better decisions. Decision analytic approaches have already begun to guide prioritization of the 2012 Action Agenda (Puget Sound Partnership 2012), and can also play a helpful role in guiding action prioritization at the local scale of the LIO.

The essential steps of a decision making process have been defined many times:

1. Define the context for the decision: What sort of decision needs to be made, by whom, and by when? What do we know about the context, e.g., how much do we understand about the relationship between cause and effect? What range of objectives and alternatives can be considered? What level of decision support are we likely to require, e.g., what sort of analysis needs to be done?
2. Define the objectives or "ends" of the decision and the particular attributes or metrics that will be used to measure progress toward them.

3. Develop a range of alternatives to achieve those objectives.
4. Estimate the consequences of those alternatives, including any associated uncertainties.
5. Explore tradeoffs and make recommendations or choices that reflect the preferences and values of the stakeholders.

These steps, as well as a number of best practices and guidelines for effective decision making, were used to inform and guide the Island NTA prioritization process.

Island NTA Prioritization Process

NTAs are track-able and measurable new activities and initiatives intended to reduce harmful pressures on the ecosystem and contribute to achieving the 2020 recovery targets for Puget Sound Vital Sign indicators. They are designed for implementation within a two-year window. They are essential components in the successful implementation of the Puget Sound Action Agenda (Puget Sound Partnership 2012). NTAs are related to (nested within) current Action Agenda substrategies, and supported/endorsed by an Owner, an entity that will champion their implementation and report on their progress. Implementation of Island LIO's NTAs is tracked via the Puget Sound Action Agenda Report Card (Puget Sound Partnership 2013). Federal, state, and local partners can utilize the Island LIO NTA list to clearly identify ecosystem recovery priorities in the Island watershed over the next two years.

In general, NTAs can be proposed to target various processes (e.g., coastal sediment dynamics) or habitats (e.g., pocket estuaries within a drift cell system) or species (e.g., Chinook salmon) within the LIO geography/ecosystem. Ultimately, the intent of a process to select NTAs is to identify and assess proposed NTAs based on their predicted effects on lessening prioritized pressures and improving ecosystem components that matter the most in a local geography. So the Island Policy Development Committee (PDC) met to consider whether ongoing programs were sufficient or falling short and if so, where were the gaps and how could they be addressed?

Our focus in this report will be on the steps taken by Island LIO, their relationship to decision analytic guidelines, and the lessons learned along the way. Island LIO took the following steps in selecting their 2014 NTAs:

1. Prioritize pressures.
2. Create a list of selection criteria to compare performance of proposed NTAs.
3. Identify and describe proposed NTAs.
4. Choose NTAs.
5. Engage in an external review and approval process.

1. *Prioritize Pressures*.

A pressure prioritization process can be used to focus NTA development on the pressures to which the ecosystem is most vulnerable. In pressure prioritization an assessment of vulnerability is based on the relationship of what is causing (we call this a pressure) harmful things (we call this a stress) to happen to the things we care about (we call these ecosystem components).

The Island LIO Policy Development Committee (PDC) used the Open Standards (OS) for conservation process (Conservation Measures Partnership 2007) through a series of workshops and surveys to evaluate pressures on applicable ecosystem components for the Island watershed. The applicable ecosystem components were specific habitats or species identified by Island LIO and valued as assessment endpoints. The PDC prioritized twenty-six (26) regionally classified pressures (Stiles et al. 2013) for their effect in the Island watershed based on the OS criteria of scope, severity, and irreversibility. Nine (9) high-priority local pressures were identified and grouped into two sets: "very high pressures" and "high pressures". The two (2) very high pressures (runoff from the built environment; marine shoreline infrastructure) were the primary drivers of current and potential future ecosystem degradation. The seven (7) high pressures (culverts; freshwater levees and tide gates; marine water levees and tide gates; livestock grazing; agriculture; invasive species and genes; and oil and hazardous spills) represent a mix of primary drivers and intermediate effects/secondary drivers on ecosystem degradation. Once these very high and high local pressures were established, NTAs were sought that would be effective in reducing them for the Island County geography.

Relationship to Decision Analysis Guidelines

Decision Analysis Step 1 calls for defining the context for the decision. For example, what sort of decision needs to be made, by whom, and by when? The desire was to decide on or choose a (potentially ranked) list of the top NTAs, which could in some cases be programmatic initiatives, in other cases, perhaps, projects involving dirt-turning activities. At the meetings as members of the PDC were staffers from Island County natural resources, planning, and water quality, as well as tribal and other citizen stakeholders. Final approval for any recommended NTAs would, however, be required from the elected officials of the Island County Executive Committee. Initial meetings to address pressure prioritization began in November 2012, with final, approved NTAs expected to be due by late 2013. After the initial meetings in late 2012, pressure prioritization, Island LIO step 1, was complete. Later, over the course of the summer 2013, several additional NTA development workshops were held to address steps 2 – 5 of the Island process. Another issue at Decision Analysis Step 1 is what sort of analysis is likely to be required. This remains an unresolved issue for Island PDC, and one that may be addressed at the Partnership level: it is likely that the PDC would welcome additional technical resources enabling them to do analysis specifically in support of choosing NTAs. However, the PDC ended up having to rely on what was readily available, largely the elicited expertise and understanding of the PDC members at the table.

To guide the second phase of NTA development workshops (Island steps 2 – 5) held over the summer 2013, the following overall goal and assumption were proposed:

> **Goal**: To identify and understand in *sufficient detail* a (short) list of candidate NTAs that will undergo *more detailed evaluation* to decide whether they will ultimately be chosen as Island LIO NTAs in the 2014 Action Agenda.
>
> **Assumption**: We (Island LIO) have limited resources (e.g., time and effort) to apply to implementing actions. Therefore, we wish to be *thoughtful, systematic, and clear* about which actions we choose

to support. We need to be able to *explain this rationale* to the Partnership, the Island Executive Committee, and other potential funders.

Pressure prioritization can be thought of as generally addressing an additional two elements of Decision Analysis Step 1: First, what do we understand about the relationship between cause and effect; and, second, what is the range of alternatives and objectives that is to be considered? With respect to cause and effect, pressures were prioritized, guided by the OS process, based on local elicited expertise/understanding and agreement about which pressures are causing the greatest amount of ecosystem degradation. With respect to alternatives and objectives, pressure prioritization led to screening out potential NTAs that did not focus on the top pressures. Subsequent discussion became focused on identifying and describing potential NTAs that would reduce the identified target pressures and, consequently, improve the key ecosystem components identified as assessment endpoints for the local ecosystem.

Lessons Learned

- **Going through the pressure prioritization process for a specific geography can help focus the discussion about prioritizing NTAs.** For example, for Island LIO, much discussion revolved around which NTAs would best lessen the effects of marine shoreline infrastructure, which is one of the two "very high" rated Island LIO pressures. Pressure prioritization did help the many local players to work together to frame the discussion of what recovery means for the local ecosystem, instead of only what it means from individual organizational perspectives.
- **Prioritizing pressures helps identify performance measures that can indirectly reflect how proposed NTAs are expected to perform in improving key ecosystem components.** Whether or not it is possible to identify key ecosystem components (e.g., Chinook salmon) that are likely to be measurably affected by a proposed NTA within its two-year window will depend on the particular NTA. For example, Island LIO found that some of their proposed NTAs were for programs that are new, and, thus, given the necessary "start-up" period, were unlikely to significantly affect the ecosystem within two years. One way forward was to instead identify proxies, i.e., measures of intermediate processes affected by prioritized pressures, which the NTA could affect within two years, with effects on ecosystem components expected to occur beyond the initial NTA window. The pressure prioritization helped do this by focusing attention on the network of cause and effect that characterized the Island geography/ecosystem. For example, for Island LIO an NTA might be assessed for its predicted effect on reducing shoreline stabilization as measured by linear length/area of hard structure (bulkheads, revetments, etc.). Ultimately, this would be expected to affect riparian and aquatic habitat and the key ecosystem components that benefit, such as salmon and shellfish.

2. *Create a list of selection criteria to compare performance of proposed NTAs.*

An important issue that was considered carefully was what criteria should be used to evaluate potential NTAs for membership in the final list, and why those criteria and not others. The Partnership was looking for the following criteria to describe and measure the performance of NTAs, implying, among

other things, that they should play a role in evaluating and comparing the potential performance of candidate NTAs:

- Milestone measures, which report on whether a particular milestone in an NTA's life has been reached (e.g., what percent will be completed by when).
- Output measures, which track that a certain number or percent of things has been finished (e.g., how many people will be trained).
- Outcome measures, which are the most ideal, and also the hardest and most expensive to track correctly. These will show some kind of measurable change in ecosystem or human behavior as a result of the NTA (e.g., amount of increase in abundance of salmon).

Relationship to Decision Analysis Guidelines

Choosing selection criteria is related to Decision Analysis Step 2, defining the attributes or metrics that will be used to assess progress toward or improvement in your objectives. (Decision Analysis Step 2 also calls for defining the objectives themselves, as distinguished from attributes measuring progress or improvement in those objectives. In Island LIO, ecosystem objectives had been identified earlier as key ecosystem components to be improved, as part of pressure prioritization.) Once attributes that measure progress on each objective have been identified, in principle one could select NTAs by comparing them based on their relative expected performance on those attributes, and then choose the NTAs that are expected to perform best.

At this point, some definition and clarification about terminology might be helpful. In decision analysis terminology, objectives refer to the basic things that matter, the outcomes you really, ultimately care about, no matter how they are achieved. In OS and/or Partnership terminology many of these objectives refer to key ecosystem components—that is, the objectives are ultimately to protect or restore or improve these key ecosystem components, which are certain habitats and/or species and/or other components of the ecosystem that people care about. In decision analysis the terms attributes, metrics, or criteria are typically used interchangeably to describe measures of progress on the different objectives. Island PDC chose specifically to use the term criteria to refer to the assessment measures they used.

A couple of decision analysis best practices were highlighted at this stage. First, to decide whether a criterion should be included ask yourself, "Does it help you choose?" "Does it help you decide which proposed NTA(s) you would (most) prefer to support? This is a practical litmus test. For a technical expert, a criterion helps you choose if you can come up with an accurate, defensible, honest estimate of the consequences of an NTA in terms of that criterion. For a decision maker, a criterion helps you choose if it is the information that you need to make an informed choice of/among NTAs. Additional relevant questions to ask oneself are, "What really matters?" "What do you want to change?"

A second decision analysis best practice that was highlighted at this point is the distinction between "means" and "ends". Ends objectives are the things you ultimately care about (e.g., key ecosystem components), while means are the intermediate objectives that are not important in and of themselves; rather, you want to change them only because they help achieve the ultimately important ends. In this

context, means objectives are reducing the pressures. Reducing pressures is important because it ultimately improves key ecosystem components. Note that there may be multiple ways to improve key ecosystem components. While a focus on reducing pressures does make sense, an alternative, broader, conversation could focus on seeking the best action or suite of actions to improve the most important key ecosystem components. This question of which proposed NTAs are more likely to improve the most important key ecosystem components (as opposed to "Are the NTAs reducing the highest pressure(s)?") is at least as important (arguably, more) to ecosystem health and to many stakeholders.

Lessons Learned

- **Establishing clear selection criteria up front helps the process go more smoothly**. The process moves more smoothly when everyone knows the end game up front. The LIO coordinator has backing to facilitate tough decisions, e.g., saying "no" when needed, and participants can be assured that everyone will be evaluated against the same criteria. For Island LIO, a list of criteria was established early, prompting participants to propose improvements to candidate NTAs so that they could be expected to perform better in terms of the agreed upon criteria. The criteria also provided a basis to screen out a number of late NTA proposals that fell short.
- **Local criteria may be important too**. Besides the regional criteria that the Partnership was looking for (see above), there may also be local criteria that also affect the willingness of an LIO to support a proposed NTA. "Political feasibility" and "implementability" are two local criteria that Island LIO considered in assessing their proposed NTAs. Political feasibility is impacted, for example, by whether a proposed NTA must be endorsed by an executive committee of elected officials. An executive committee might consider public acceptability, economic benefit to the subregion, and/or geographic distribution of NTA activities in their decision on whether or not to endorse proposed NTAs. Even if funded and approved by the executive committee, a proposed NTA might still be difficult to implement. Implementability is affected, for example, by whether or not the NTA can be executed by the LIO on its own, how much it costs, or by the strength and enthusiasm of its owner. Additional local criteria that were considered were the following: "Boldness (willingness to take risks, challenge obstacles) and innovation" (relates to novelty, creativity)[1]; "Number of pressures addressed and how well they are addressed"[2]; and "Ecosystem Outcomes", where the particular outcomes that are most relevant will depend on the particular NTAs under consideration.

[1] Note the distinction between the objective of being bold/innovative as an end in itself vs. the objective of being bold/innovative if necessary or in order to successfully achieve or implement an NTA. Including boldness and innovation as criteria would appear to mean that they are desired as ends in themselves, not just as means to greater success. Decision analysis best practice suggests that the ideal criterion represent the ultimate ends the NTA is intended to achieve.

[2] This might be accomplished by (a) linking the proposed NTA to its Partnership sub-strategy and to the pressure(s) that substrategy addresses; and/or (b) developing a more detailed model enabling us to understand how the proposed NTA might impact some measure of (a stressor) caused by the pressure. Note, however, the potential for redundancy with the ecosystem outcome criterion, which also capture expected impacts of NTAs on the ecosystem.

3. *Identify and describe proposed NTAs.*

The process of identifying and writing a clear NTA description is intended to help LIOs examine why they are supporting (or shouldn't support) a particular NTA. In addition, an NTA that makes it through the local process should have a clear and succinct description that makes it obvious to outside interests (e.g., the Partnership, potential funders, and members of the public) why it is a local priority.

At a minimum the Partnership looks for the following:

- A title and narrative summary.
- Other suggested Partnership criteria (see above Step 2, "Create a list of selection criteria to compare performance of proposed NTAs"). These can be put into a table and included in the NTA section of the Action Agenda for each LIO.
- Additional supporting description can be included in each LIO's *Profile* section. This could include additional details that influenced the choice of NTAs, such as any local criteria that were considered or any scoring/rating that was done to compare and rank proposed NTAs.

Relationship to Decision Analysis Guidelines

This step in the Island LIO NTA selection process corresponds to decision analysis Steps 3, "Develop a range of alternatives to achieve the objectives", and 4, "Estimate the consequences of those alternatives, including any associated uncertainties". This is where technical analysis often plays an important role, as the best available information is needed to produce the best estimates or predictions of how the proposed NTAs will perform in terms of each of the criteria. A basic framework that is often used to compare the consequences of different proposed actions (NTAs in this case) is a *consequence table* (see Fig. 1 below for an example) in which the columns designate the different proposed NTAs and the rows the expected consequences of each NTA in terms of each of the criteria. The simplest notion of uncertainty in expected outcomes could be indicated by using ranges in the cells of this matrix. Performance could be indicated quantitatively by using data, models, or expert judgment in order to make predictions. Less costly in terms of time and resources, performance could be indicated semi-quantitatively, using, for example, a system of 0 – 5 stars or something similar. The question for analysis by designated experts is, given a baseline, for example, where things are today, what is the likely effect of a given NTA in terms of these different criteria. Depending on the nature of the task, experts may include natural scientists, engineers, economists, other social scientists, etc. In some settings, it will also include local or traditional knowledge holders (e.g., Failing et al. 2007).

Island PDC conducted an informal exercise in scoring a subset of the proposed NTAs using a 0 – 5 star-based scoring system (Fig. 1), where, as stated above, the question for analysis is to estimate the effect of each NTA (column labels) in terms of each criterion (row labels) relative to the current conditions. This was done for a subset of the full list of proposed NTAs and for two ecological criteria. To carry out the exercise, the scores were first assigned individually, and then shared with the group, accompanied by discussions of why the particular scores had been assigned. The intent was not to achieve a high level of precision (which, if sought subsequently, would require significant resources and involve, in

some cases, complex analysis), but rather have a dialogue to improve clarity and mutual understanding about how the NTAs were being defined, and what was the basis for believing that they would achieve a particular benefit and were thus desirable. Another reason for conducting the exercise was to get an initial sense of what might be required to provide enough clarity of definition for the assessments to be done by experts that were not members of and/or were not present at the PDC meetings.

Objective	Performance Measure (Outcome)	Project 6: Education and Behavior change on Shoreline Armoring	Project 3: Improve feasibility and design of culverts	Project 5: Incorporating water quality technology priorities into water quantity projects	Project 2: GIS monitoring
Improve likelihood of implementation if funding is received	Constructed Index on Implementability				
Improve shoreline ecological functions (habitat to support abundance, diversity of biota, e.g., salmon, shellfish, etc.)	Shoreline stabilization (linear length/area of hard structures)	1-3 stars	2-3 stars	0-1 stars	0-2 stars
Improve ecosystem health (resilience) as represented by salmon, shellfish condition	Water quality (linear measurement of mature Marine/Freshwater riparian vegetation)	0-2 stars	0-1 stars	1-2 stars	1-2 stars

Fig. 1. Consequences table with semi-quantitative scores (scale of 0 – 5 stars, with 0 being no improvement and 5 representing the biggest improvement) representing the expected outcomes of each NTA (column labels) in terms of two ecological criteria (row labels) relative to the current conditions.

A couple of decision analysis best practices were relevant to this stage. First was the issue of "Peer Review", or, put another way, the challenge of obtaining a rigorous, auditable, and adequate level of technical rigor in the "best available information" used to inform understanding of what would be the likely consequences (or performance) of each proposed NTA. Ideally, resources would exist, if not within the PDC or its supporting agencies, then from the Partnership or others, to provide the technical resources needed. However, the need for sufficient technical resources at the LIO level is a known issue that remains unresolved. And even if these resources were available, still, in many cases, there are likely to be significant uncertainties in the predicted consequences, stemming from incomplete understanding of the relevant science or, perhaps, variability due to the natural environment or other unknowns—in still other cases, due to the difficulty of defining with sufficient precision NTAs that are proposed programs with many unknowns and contingencies about how they might unfold if implemented.

A further goal of discussions concerning technical impacts would be for participants to all be learning about why the estimated impacts are what they are. Thus, the mechanisms, supporting or dissenting

studies, provenance, and expertise underlying predicted impacts should all be presented, explained, discussed, and even questioned and defended in the context of PDC deliberations. With these issues in mind, the PDC was presented several elements of a practical "peer review", where guided deliberations within the PDC can create an environment that leads to the discovery and use of defensible analysis that provides best available information about the likely consequences of the proposed NTAs. Gregory et al. (2012) discuss details of what this guidance should involve.

A second decision analysis practice that was emphasized at this stage was the value of iteration. Simply, the idea is that even if initial NTA descriptions lacked important details, PDC participants, instead of getting bogged down say due to some critical missing information, were strongly encouraged to get started, keep moving, and come back to previous work when needed.

Lessons Learned

- **Keep improving your first draft.** Don't be afraid to start with what you have and keep coming back to improve it as needed. The first draft of NTAs for Island LIO lacked important details. However, comparing it to a list of Partnership and local criteria (see above) started a cycle of updates that progressively added clarity. Later drafts improved further through individual meetings with proposed owners of the NTAs who provided corrections and improved descriptions. The NTA rating exercise conducted by Island PDC (see above, e.g., Fig. 1) also helped lead to clearer descriptions.
- **Seek outside feedback.** It is easy for participants to become so wrapped up in the process that they fail to recognize when the assumptions they have made might not be clear to others or when some logical step is missing. Outside expertise can be effective in asking clarifying questions that expose these missing steps. For Island LIO, this role was played in part by Richard Anderson, an environmental decision analyst with the Puget Sound Institute/University of Washington, who was facilitating the second phase of the Island LIO process, Steps 2 – 5. In his unique position of being neither local constituent nor Partnership staff, he was able to ask probing questions with less risk of offending anyone. Without the prior background knowledge of many of the PDC members with whom he was working and consequently free of many of their assumptions, he was often better able to see what was missing in descriptions, which could subsequently be better explained or highlighted.

4. Choose NTAs.

As stated above (see description of Step 1 of the LIO process), the overall goal initially proposed that more detailed evaluation would be conducted of each proposed NTA. The assumption was that this additional detail would facilitate a systematic and explicit comparison of the performance of proposed NTAs in a way that would enhance the ability of the PDC as well as Partnership, Executive Committee, and other potential funders to understand the analysis and rationale that had been done to conclude that particular NTAs were most worthy of implementation. As discussed in LIO Step 3 under *Relationship to Decision Analysis Guidelines*, each proposed NTA would be analyzed and assessed by the appropriate technical experts to develop a prediction of its consequences in terms of each of the decision criteria. As shown in Fig. 1, this information could then be displayed, for example, in a

consequences table to facilitate understanding of the relative performance of each NTA and the degree to which there exists broad-based support for each NTA.

However, at this juncture, the PDC chose to reassess whether, based on the following factors, additional detailed evaluation really needed to be conducted:

- Progress they had made so far in improving NTA descriptions,
- The resources (time, effort to find and enlist the needed expertise) that would be required to conduct further assessment; and
- Likely ability to sufficiently explain the rationale for these NTAs to obtain their Executive Committee's approval.

As described in LIO Step 3 under *Lessons Learned*, NTA descriptions had significantly improved over a number of iterations involving input from multiple parties requiring significant effort. The PDC recognized that these descriptions would need to be even further improved to be ready for technical assessment, requiring significant additional time and effort. Securing technical expertise would require still additional time and effort. Finally, it seemed likely that, if not to other potential funders, at least to the Executive Committee the current level of description would sufficiently explain and support their rationale for choosing particular NTAs. It was proposed that outside feedback could be sought at a higher, more general level: From the Partnership and other outside experts on the sufficiency of NTA descriptions, rather than from individual technical experts to provide assessment of the performance of each NTA in terms of each decision criterion.

In light of this reassessment, the following 3 options were presented to the PDC on how they might proceed at this juncture:

1. Complete descriptions of NTAs based on high level expert/reviewer comments, but do not attempt to explicitly assess NTA performance in terms of the different decision criteria.
2. Assume that all NTAs will result in ecological benefits to the ecosystem of roughly equal importance and assess NTAs explicitly on the non-ecological criteria, i.e., political feasibility, implementability, boldness and innovation, and numbers of pressures addressed.
3. Determine availability of expertise and information to do a full assessment off each NTA. Have experts do the assessment. Present results of expected performance in terms of each of the criteria in a consequences table. Assess support for each NTA.

Support was unanimous to proceed with option 1.

Relationship to Decision Analysis Guidelines

This step in the Island LIO NTA selection process corresponds to decision analysis Step 5, "Explore tradeoffs and make recommendations or choices that reflect the preferences and values of the stakeholders." One reason that ecosystem management decisions are difficult is that they typically require difficult tradeoffs: greater shoreline protection may restrict property rights; water quality improvements may require limiting or redirecting economic development, etc. A good decision process

will present decision makers with fully-developed alternatives that present real value-based choices across the different dimensions of value. This facilitates a thoughtful, clear, and systematic approach to assessing the extent of broad-based support for the tradeoffs implied by the different alternatives, or, in this case, the different NTAs. In the end, the Island PDC process focused mainly on identifying and clearly describing NTAs that targeted top pressures rather than on differentiating between NTAs on the basis of their relative predicted ability to meet outcome criteria.

Lessons Learned

- **Flexibility in process creates a sense of ownership**. Given the diversity of decision contexts[3] within each LIO, flexibility of approach will be important so that any Partnership standard of practice can be adapted to the particular LIO situation. At Island both decision support and LIO coordination took the approach of offering guidance and options for moving forward within parameters set out by the Partnership, rather than inflexible requirements. Ultimately, Island PDC took an approach to choosing NTAs based on their own assessment of how to get the most essential improvement in their product given the resources and needs at hand.
- **Choosing NTAs well can be hard work**. Island PDC participants expressed satisfaction with the final list of NTAs, which represented Island LIO priorities for the 2014-2016 period. Previously, Island LIO's priorities were represented only by a list of 78 general strategy actions for ecosystem recovery, relegated to the Profile section of the Action Agenda. However, the improved quality of product required participation in a new NTA prioritization process as it was still being developed (while still at the pilot stage), which led to more time and effort spent exploring and developing the process than some members had anticipated.

5. *Engage in External Review and Approval Process*

As discussed above in LIO Step 4, Island PDC decided that outside feedback would be sought at a general level: From the Partnership and other outside experts on the sufficiency of NTA descriptions. To this end, a few draft NTAs that were very focused in a content area (e.g., oil spills, near shore processes and storm water) were given to content experts at the Washington Department of Ecology and Puget Sound Partnership for early feedback about their overall value and if the approach suggested in the NTA was based on best available science/technology. When the list was almost finalized, it was sent to a local expert and the Partnership for overall feedback.

The NTAs were also vetted through a series of public meetings and workshops, an external review process, and Partnership review and comment for final revisions. These 12 NTAs were submitted to the Island Executive Committee for review and approval. The Executive Committee approved the NTAs on

[3] In general, each LIO will have engaged in a different process for establishing local priorities and will be at a different stage relative to a Partnership-recommended standard of practice. LIOs will also be in different places with respect to the quantity and quality of technical information available, the types of ecosystem components that are relevant and most important to protect, the nature and complexities of the stakeholder constituency affected by the decisions, and the funding landscape potentially available to support implementing these priorities, and the status with respect to previous decisions, projects, and ongoing programs. To be more effective, future guidance could be customized to address these details.

September 25, 2013. The approved NTAs effectively serve a strategic plan for addressing high priority pressures in the Island geography/ecosystem in the next two years.

Conclusions and Next Steps

Through this process, the Island PDC refined a list of 78 general strategy actions for ecosystem recovery to 12 new near-term actions (NTAs) that contribute to implementing regional recovery strategies and substrategies. The Partnership Action Agenda Local Profile for Island LIO was updated to include a description of the NTA selection and development process and the list of priority NTAs. The Island Profile and 12 NTAs were submitted to the Partnership Leadership Council for inclusion in the 2012 Action Agenda (Puget Sound Partnership 2012). The Leadership Council approved the updated Island Profile and the NTAs at its October 9, 2013 meeting (Resolution 2013-06). This amendment adds specific priority actions for the Island LIO into the Action Agenda that integrate with the regional recovery framework.

Next steps are to engage with all the LIOs to translate these eight and other lessons learned into guidance and training that can equip all LIOs in moving toward an NTA selection process that meets the following objectives:

1. Reflects lessons learned from PSP's pilot work with Island LIO as well as work of other LIOs for the 2014 Action Agenda.
2. Anticipates availability of results from the Puget Sound Pressure Assessment scheduled to be completed by April 30, 2014.
3. Builds on and enhances the Open Standards expertise, products, and procedures.
4. Builds on work being done by the watersheds on the Chinook Monitoring and Adaptive Management project.
5. Results in a procedure that can be facilitated by LIO coordinators.
6. Improves coordination and alignment with regional decision-making and adaptive management processes, including integration of local information within the regional Action Agenda.

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