

Coast Information Team: Ecosystem-Based Management Handbook

- p. iii, 4, 66 The definition of EBM is not quite the same as that on p. 66 in the glossary. A definition should be the same in both places and across the various reports for that matter.

The definition includes sustaining ecological processes and species, as well as human well being. However, it does not indicate the priority of these values. This compromises the concept of sustainability and thus makes the definition internally inconsistent. Sustainability is central to ecosystem-based management. Whatever human activities are conducted they must not compromise sustainability. That is, the ecosystem is the context and there are limits to its species productivity and forest productivity. These limits then define the domain within which management activities can operate. Activities to support human well being must be such that they keep the system within these boundaries. If these limits are treated as boundaries that can be transgressed depending on the magnitude of human need then the central principle of sustainability may be compromised.

It is not clear from the definition nor throughout most of the report whether ecological integrity and human well being are equal values or whether one must exist within the domain of the other: i.e., options for human well being are within the domain of ecosystem integrity; past approaches have attempted to meet ecosystem integrity within the domain of human well being but that has not worked very well.

The goals of EBM are stated on p. 5 and included two primary values, ecological integrity and human well being. The priority relationships between the two goals are never explicitly stated. In Table 2.1, the two goals are stated but treated as equal. Without priority of these two values explicit, EBM could be unsustainable. These goals should be rewritten to include the order of priority or in other words the domain within which different states ecological integrity and human well being can both occur and be sustainable.

This domain and priority is not explicit throughout most of the document. However, on p. 5 “ecological integrity” is an “overarching context” but it does not state that “ecological integrity” is defining the domain within which human well being must fit. The two goals are hierarchical if sustainability is a tenant of the principles of EBM. This should be made clear throughout the Handbook, e.g., on p. 8. Section 2.5.3. Table 2.3 and also in the guidelines for developing management objectives on p. 9.

- p. 4, 23, 10, 19 The terms “precautionary principle” (p. 4) and “precautionary approach” seem to be used interchangeably. They are different concepts and have different approaches to applying precaution and to the burden of proof. Page 2 of the following pdf article describes the precautionary principle and precautionary approach: <http://spo.nwr.noaa.gov/fa1.pdf> . As well, other terms such as

“precautionary thresholds” (p. 9), “precautionary targets” (p. 10) and “precautionary management” (p. 23) appear in the document and it is not clear what these mean. The term “precautionary thresholds” arises again on p. 9 Section 2.5.4. It seems to be used to describe risk management. This section appears to deal with what managers should do when the states desired for human well being are close to the limits of ecological integrity, i.e., when the states are near the boundary of the domain. I think the concepts and principles on which the Handbook is based would be clearer and more readily accepted by the public if this issue of priority is resolved and dealt with early within the document.

- p. 5. The handbook states that to achieve the core goals of EBM, i.e., protect ecological integrity and achieve high levels of human well being then you need to engage in conservation planning to develop a system of protected areas and reserves. This statement of a “Key Concept” implies that such areas are all that is needed or at least they are the primary mechanism to deliver conservation values. However, what about the rest of than land base? On p. 6 (item 4), maintaining biological legacies in the matrix is mentioned but the contributions of the non-protected areas and non-reserves are not given adequate weight.

I think section 2.5.1 (p. 5) should be expanded to include management and contribution of the matrix along with the protected areas and reserves. The way it reads now is that protected areas and reserves are the primary (almost only) tool to meet conservation goals.

This tone of salvation through protected areas is evident in statements on p. 16 last words of the last bullet. In fact this statement implies that if you have big protected areas then its okay to go out and be ecologically reckless outside of protected areas and reserves. I note that the findings of the Scientific Panel for Sustainable Forest Practices in Clayoquot Sound are not cited in the references. One of the key concepts in the work of the Scientific Panel for Sustainable Forest Practices in Clayoquot Sound and also in the work of Bunnell et al. (2003) is that management activities in the matrix (i.e., the land between reserves) is critical to retain and support ecological and other values. Although Bunnell et al. (2003) is cited, the work of the Scientific Panel for Sustainable Forest Practices in Clayoquot Sound is not cited and I think the CIT EBM Planning Handbook is remise in not mentioning that seminal work. It is hard to believe that it was accidentally left out and did not form any part of the intellectual processes used to develop this Handbook.

- p. 11 Fig. 2.3 I do not understand why ecological risk must always increase (as I understand this figure) with increasing size of scale and why management flexibility increases with decreasing size of scale. Management flexibility is a product of ecological context and current state. It is not clear how this diagram was derived.
- p. 12. The past sentence of section 2.5.4 is a good example where the lack of prioritizing goals makes all the difference in the effects of this allocation. If ecological values are high and if human well being values are even higher then take greater risk with

ecological values. However this should only apply to the set of conditions where both ecological integrity is assured and activities are sustainable.

- p. 15 I think readers would benefit from an example of the different scales. Given a real life example of a “region” and a “territory/subregion” etc.
- p. 20 section 3.3.3 Integration. EMB as explained so far in the Handbook does not address priorities, i.e., the possible domain of ecological integrity then, within this domain, how are human well being and other values maximized.

I do not understand in Table 3.3 why “Environmental risk” is listed but not ecological integrity or ecological values. Surely ecological values should be listed as is cultural heritage. Environmental risk should be listed because it is not one of the planning values but it is one of the decision considerations.

- p. 22. Is the caption for Figure 3.4 correct? Should this read “Adaptive co-management cycle”?
- P. 23 Why should passive adaptive management be implemented when ecological risk is high? (see second bullet under Passive Adaptive Management). Surely when the ecological risk is “unacceptably high” then you should either use “precautionary management” or “active adaptive management”? It seems that using best current knowledge may not be good enough. Hence, you should either use either precautionary management or invest the time and money to do active adaptive management.
- p. 24. Table 3.4 I think the word “Adaptive” is missing from the phrase “Engage in Active and/or Active Co-management”. This would make the terminology consistent with p. 23.
- p. 24. Perhaps I am misunderstanding key concept here but Table 3.4 seems to be inconsistent if not opposite to the guidance offered with the 3 options on page 23. On page 23, the authors state Precautionary Management is best when the “ecological, cultural or social risks are considered unacceptable” but then on page 24 Table 3.4 Precautionary Management is recommended to be used when there is a low risk management target. I think Passive Adaptive Co-management should be used for Low Risk situations. Active Adaptive Co-management or Precautionary Management should be used for Moderate Risk Situations and if Active co-management is used then it can be at a larger scale. Active Adaptive Co-management or Precautionary Management should be used for High Risk Situations but if Active co-management is used then it must be at a small scale until new knowledge generated by truly adaptive management is available to inform management decision processes.
- p. 25 See Territory/Subregions, the second bullet under Key Characteristics. Again, there is a focus on Protected Areas and Reserves as the means to protect endangered and

rare species and ecosystems and sustain populations of all native species. Protected Areas are important, but the management activities in the areas among these reserves are critical to the efficacy of the reserves and, for many species, sustain their populations even without reserves. This over reliance on Protected Areas and Reserves misses the substantive benefits of better management practices over the bulk of the land base. Perhaps this importance of the matrix is understood by the authors, but it is never stated absolutely and clearly. It should be dealt with as one of the underlying principles of resource/land management.

- p. 25. See third bullet. Why should “cautious targets be developed? Yes, knowledge of natural ecological patterns and processes should be used to develop targets for management but the cautious part of it must be dealt with a risk management mechanism. Perhaps there should be a sixth bullet where a formal risk management mechanism is used to set cautious targets when sufficient information is not available.
- p. 34. The last paragraph under section 5.1 states that in “general landscape and watershed plans should not be implemented before high level planning is complete” and then refers to Section 7.2. The issues and flexibility addressed in Section 7.2 are critical to local communities. These issues are important enough to state again here, at least give a summary statement.
- p. 38. Table 5.2 Where do the numbers in the table come from? Are they scientifically or ecologically based? Are they the result of negotiations among managers and stakeholders to integrate/balance ecological and social values? I think a short paragraph stating the origin of the numbers is needed and would add greatly to the credibility of the document.
- p. 48. The last bullet under Integrated Design states, “Identify uncertainties and develop site-specific monitoring/research projects”. This statement taken literally implies that each stand will have some monitoring or research project because there will be uncertainties associated with each stand. Surely most of these projects would be conducted in a sample of site/stands and the results extrapolated to all similar sites.

More importantly from the Planning Handbook perspective, this recommendation of research is only given here under Site/Stand Planning. I think some very important research would involve research that is planned, developed and conducted at the Watershed, Landscape and even the Territory spatial scales. This research bullet should be repeated in the sections of each of the other spatial scales.

- p. 53 Section 7.1 “cash in on” are the wrong words here. Such wording plays into the hands of distrust which is a key issue in obtaining support for management initiatives. Use “enable” or “access”.
- p. 53. Section 7.2. One very important issue not addressed in this section is “reasonable time line”. If the constraint is that “landscape and watershed plans should not be

implemented before high level planning is complete”, then higher level planning must be done in a timely fashion. It cannot be left open ended. Otherwise this puts local communities at high risk and thus violating one of the core objectives of EBM as stated on p. 5. Resources to do the work and commitment to firm deadlines is paramount and need to be articulated in this planning framework. This is a key issue for both governments and stakeholders to understand.

p. 56 This table should be numbered as Table 7.2 not 3.8.

p. 59. Table 7.3 deals with trade-offs. This vulnerability framework does not explicitly deal with issues of scale. It seems to me that a particular hectare may have high ecological value but also may high value to human well being. This hectare may be ecologically important as some small scale but how important is it at a larger scale? Some how scale should be incorporated into this framework.

In Table 7.3, the priority between the two goals of EBM (p. 5, Table 2.1) is finally revealed. However, I do not think the principle of sustainability is clearly expressed in this table. If there are going to be trade-offs that result in unsustainable activities then can you call it “Ecosystem-Based Management”? One can argue that the framework expressed in Table 7.3 is the best one to deal with the two value sets of ecological integrity and human well being, but then call it something else besides EBM. My comment may be unwarranted if it is clear that sustainability is a core principle and the options and trade-offs in Table 7.3 fall within the domain of sustainable combinations of ecosystem integrity and human-well being. However, the Planning Framework document does not clearly express this principle.

General Comment

My greatest concern could turn out to be my least concern depending on what the authors had in mind. I do not think the priority of ecological integrity is articulated clearly in the document. If Ecosystem-Based Management is supposed to be sustainable then human well being must fit within this premise. I can understand that risk management is used and trade-offs can be assessed when trying to decide management activities close to but still within the boundaries of sustainability. However, when I read the document it implied that exceeding sustainability was desirable or at least acceptable in some cases (e.g., Table 7.3). If this document is to be titled Ecosystem-Based Management then early in the document and then throughout the priority of ecological integrity (i.e., activities must be sustainable) must be clearly expressed and then human well being can be addressed within this single constraint. Perhaps my concern can be dealt with simply by adding clarification. However, if the notion of Ecosystem-Based Management as defined in this document does allow transgression beyond the boundaries of sustainability, no matter for what reasons, then there is a more fundamental problem that needs to be addressed and the framework should not be named EBM.