

Adrian Boyd,  
Director, Policy,  
Nunavut Planning Commission  
August 10, 2010.

Dear Adrian,

What follows is WWF-Canada's third submission to NPC regarding your Land Use Planning exercise (see May 26 and June 9, 2010). This one is specifically in response to the publication of your map titled Working Draft Nunavut Land Use Plan (referred to henceforth as the Working Draft map) and associated materials. Thank you for also providing our organization with the shape files and background information that went into this map and the earlier Priority Areas Map (PAM).

I have organized WWF's comments under two general headings: **Anticipating Change**, and **Protected Areas Considerations**. I have also attached a few key maps, which I hope are helpful illustrations of our points, and useful to your work.

### **Anticipating Change**

We noted in our June 9th submission that, as the area occupied by permanent ice in the world's Arctic retreats as a result of global climate change, Canada and specifically Nunavut will harbour by far the majority of what is left. Map 1 indicates the extent of permanent ice in 2007, and projected for 2040-49, both as overlays on your Working Draft map.

These maps raise the question of Nunavut's international responsibility, as the lead jurisdictional steward of this globally important Arctic habitat. Will it be identified and recognized as such in your final Land Use Plan? Will there be at least some preliminary thoughts about how such a refuge could be protected or managed, for example through zoning? Will Nunavut simply react to proposals from others regarding special stewardship of this area on behalf of the world, or will you come out of your planning exercise with proposals of your own? Such proposals are absent at this point, and WWF strongly urges you to pro-actively seek and bring forward Inuit-driven ideas in this regard.

In addition to remaining permanent ice, climatologists, biologists, and people out on the land are all seeing and anticipating other important habitat changes as a result of climate change, especially in the Arctic. These include enlarged seasonal and year-round open water areas, and shifts in vegetation favouring or disbenefitting different wildlife species, resulting in changes in wildlife distribution and abundance, with all the associated cultural impacts for Inuit. Of course, it is one thing to agree that such changes are going to occur, quite another to actively plan for adapting to them. Nevertheless, this is the current challenge before Nunavut.

In this regard, and as referenced in our earlier submissions, WWF is pioneering relevant international work through our Rapid Assessment of Circumarctic Ecosystem Resilience (RACER) project. RACER is spatially identifying areas in the world's Arctic, including Nunavut, whose fundamental ecological functions are likely to persist under projected climate regimes to the end of this century. Obviously, the future dependence of wildlife and Inuit on such key areas should be a central consideration for your

planning exercise. Whether such areas should be “protected” in some way through land use planning is moot at this point, but we re-iterate our invitation to NPC to share this information with you on an ongoing basis and as it becomes available. More important, WWF would like to discuss with you how it might be used in some practical way for planning purposes. The data base and shape files for this exercise are extensive, and WWF is eager to make it available to others in the interest of putting it to work.

As an illustration, I have attached Map 2 which uses remote sensing data (from the MODIS satellite) as an indicator of high terrestrial net primary productivity.

Readily available remote sensing data provide reasonably complete coverage of terrestrial systems in Nunavut (and marine too actually, via the SeaWiFS satellite). This approach provides important sources and analytic tools for understanding spatial variability in the vast areas of Nunavut for which detailed information on the functioning of ecosystems is sparse or lacking. Such tools are especially important now, given the current and projected impacts arising from rapid climate change. The WWF RACER project is making use of these tools to assess the vulnerability of tundra and marine ecosystems, which will then show area-specific projections of future resilience.

Map 2 illustrates one of these data sets, showing the distribution of areas in Nunavut for which the NDVI index (a proven indicator of greenness/net primary productivity) falls 1,2 or 3 standard deviations above the mean for each bioclimatic subzone within each of the RACER ecoregion study units occurring in Nunavut.

This composite map of Nunavut clearly shows areas (aggregations of yellow, orange or red pixels) for which summer plant productivity is relatively high. Many of these areas are well known as breeding areas for birds or mammals, and some have been illustrated on the various draft input maps NPC has been using for your Working Draft. But for other areas of relatively high primary productivity, the Working Draft does not show anything special. It is widely recognized that under rapidly changing climatic conditions and system stresses, socio-ecological system resilience is enhanced by taking special account of areas of maximum diversity and productivity. How all this could be practically translated into a land use plan, is precisely the kind of issue WWF would be pleased to discuss with you and NPC staff.

### **Protected Areas Considerations**

In your Working Draft map so far, a number of special areas have been identified. WWF was pleased to see most of the Important Bird Areas suggested by CWS brought forward, as well as the Marine Areas with Higher Biological Diversity derived from the Freshwater Institute studies and meetings (although the information cited in your Working Draft is dated 1994, and as you know, this was revisited and updated earlier this year in Winnipeg).

However, for some reason a number of areas in the background maps, for example the Beverly and Qamanirjuaq caribou calving areas in the Goal 2:Protecting and Sustaining the Environment & Goal 3: Encouraging Conservation Planning map, did not make it through to the roll-up Working Draft map. These were two calving areas that initially popped out for me, because I happen to know them both

quite well. But upon closer inspection, there don't appear to be ANY caribou calving areas noted on your Working Draft, which means that all the information on this subject recorded as Wildlife Areas of Significant Interest in your PAM, and as Critical Wildlife Areas, and as additional information supplied by the GN in the background maps cited above has not survived. Why is that? On what basis were caribou calving areas apparently "dropped?"

We have the same question for Heritage Rivers (for example the Thelon and Kazan), for polar bear denning sites (for example on north South Hampton Island and the eastern Cumberland Peninsula), and for caribou sea ice crossings (for example for the Dolphin Union herd and Peary caribou—both now federally listed as being at risk).

Most of the special areas that are identified in the Working Draft and background maps appear to simply be an inventory of areas that either already exist, or have been brought forward by various agencies. That's fine as far as it goes, but there is no overall or systematic goal stated by NPC for the different values you wish to capture in such areas, or how much of that job has been done so far, or what remains to be done. For example, do you want to protect areas that are culturally significant to Inuit? And will this job be done based on whatever you have received during development of your plan (including perhaps some of the original Areas of Community Interest)? Or will there be some mechanism to add to these, based on criteria spelled out in your plan? The same question applies to Important Wildlife Areas, Conservation Areas, and Parks. For example, if Nunavut aspires to a system of ecologically-representative protected areas, there is definitely a "gap" between what exists and what would be needed. It seems to us that a Land Use Plan should not just identify what's out there on the land and water now, plus what agencies such as Parks Canada and CWS may have planned, but it should also propose goals not yet accomplished by Inuit, and a process for Inuit to achieve them.

Further, between the Working Draft map legend and sparse accompanying narrative ("Implementation Strategy"), it is still not clear what activities would or would not be permitted in some areas. For example, "management direction is pending" for Important Bird Areas, and you appear to be waiting for direction from "appropriate departments" on measures to manage land in critical caribou habitat. What exactly does "restricted access" mean? We note that areas so-classified occupy a very small portion of all of Nunavut, and that within them "leave no trace prospecting" could be permitted as a minor variance. What happens if a promising mineral deposit is found in a "restricted access" area?

In this regard, WWF re-iterates our view that no industrial development, including mineral exploration, should be permitted within the traditional caribou calving areas, which ARE "areas of proven recurring use in specific geographic areas" in Nunavut. I have attached an Appendix documenting the many Aboriginal and scientific sources who have expressed concern about the status of caribou calving areas, particularly given the current synchronous decline in migratory tundra caribou numbers right across the Canadian Arctic. And WWF again urges you to integrate up-to-date information from the Government of Nunavut Department of the Environment on the number and location of such areas, as there still appear to be many gaps in both your background and Working Draft maps in this regard, as noted above. Further, we strongly suggest that the GN's DoE be the leading "appropriate department" in determining what activities will be permitted in such critical caribou habitat.

Finally, in establishing goals for protected areas, it is often possible to efficiently capture different values in the same or overlapping areas. In WWF's experience, people of the Yukon, NWT and Nunavut particularly relate to cultural values/uses that they would like to see protected or maintained, for example areas for hunting, fishing and trapping, traditional travel routes, camping areas, crossing points, burial grounds, caches, spiritual sites, etc.

As an example, I have attached two socio-cultural maps pulled together by WWF from various Nunavut-based sources --the Nunavut Atlas (1992), and the three-volume Inuit Land Occupancy Project report (1976). We note that most portions of Nunavut were covered by these two publications, and also that a considerable portion of the High Arctic Archipelago had no recorded comments from those interviewed, presumably due to the long distance from the nearest communities. Nevertheless, WWF strongly recommends both documents as still-relevant, community-based sources of information that should be integrated into your plan.

These sources summarize a huge number of detailed interviews with active hunters, trappers and fishers, as well as elders and other community members. WWF has been digitizing these information sources as part of the RACER project, and also has sought upgrades and any edits from all key regional and national indigenous peoples' organizations relating to Arctic tundra and marine ecosystems.

Map 3 shows all Inuit harvesting areas (hunting trapping and fishing). Nice testimony to the extensive nature of such activity in Nunavut!

Map 4 shows all areas described as being of SPECIAL significance to Inuit communities according to the Nunavut Atlas. WWF extracted all quotes from the atlas which contained descriptions referring to "heavy or intensive use; important; excellent; significant portion of annual harvest; prime hunting/fishing area; favoured/major/best hunting-fishing area; or especially productive areas."

In any case, once such culturally-significant areas have been identified and mapped, based on IQ, they can then be compared with and modified to capture other values or protected areas goals, such as ecological representation. The point is that areas identified for one purpose (e.g.cultural) often make a significant contribution to areas needed for another purpose (e.g.scientific), rather than assuming that such areas must always be additive and distinct from each other. Expressed differently, a network of protected areas that meets certain scientific criteria, can often be anchored by areas that are culturally significant. It is then up to the people who have identified such areas to determine what level of protection, or what kind of management regime, is consistent with the why they were identified as important in the first place.

I hope these comments and attachments are helpful to you and other NPC staff and board members in your important work, and I invite discussion with NPC regarding anything WWF has submitted , now or earlier, in the course of your land use planning exercise.

Sincerely,

Monte Hummel  
President Emeritus  
WWF-Canada  
416-489-4567 Ext 7223, [mhummel@wwfcanada.org](mailto:mhummel@wwfcanada.org)

List of Attachments:

Map 1: Observed minimum sea ice extent (September, 2007), and Predicted sea ice extent 2040-2049.

Map 2: Areas of comparatively high terrestrial net productivity in Northern Canada.

Map 3: Areas of cultural importance to Inuit communities.

Map 4: Areas of special significance to Inuit communities.

Appendix: Protecting Caribou Calving Grounds