Modelling Breakout Group Notes

*"Following are notes from a CARMA 7 break-out session, and as such reflect the group ideas and participation and are meant to help CARMA set priorities".*

Community Group

* Is someone available to talk to the PCMB about the caribou calculator? A: it’s been used on the Porcupine and Bathurst
* Gary: history of model use in communities: there had never been a limit on harvest for the PCH, so we built a tool in 2002 to think about how to respond to problems before they occurred; also looked how good the information was for the herd
* Joe: PCH has gone through a lot and at the forefront; it’s an international herd so international cooperation is required; it’s important to adopt a model to develop a management plan, particularly in times of need; before the model there had to be a lot of buy in; in the early 80s people were against collars, but over time explaining it to the communities led to buy in; using models is more important now because of the decline of caribou; it’s important to get the communities to understand what we’re up against – gives a justification to the communities
* Went to all the communities – the caribou calculator allow different scenarios to be explored and to help communities understand how to avoid certain futures
* In the 80s we didn’t need to consider climate change – now it is more difficult
* How does the caribou calculator get setup for a herd? A: Needs data, but model can help identify which data is important
* Karen: sees the tool being useful for boards – would be good to have an easy to use interface; the value is as a teaching tool; even if the predictions aren’t real, they can still be instructive
* Joe: you need justification for harvest management plan – a model can help it a lot easier to go to communities for buy-in, as you can show them implications
* How do we make it accessible?
* A CARMA product would be to document it and make it available in a generic format
* In the Beaufort delta, problems with the Bluenose; a tag system was put in; some people didn’t believe in the satellite images and didn’t want to buy in to the project
* Yukon government is contracting Craig to better document it – short descriptions of using it and how to adapt it to different herds; explanation from the board on using it
* Joe: board stresses education, rather than regulation – e.g. no more calf harvest
* On the website there should be discussion of challenges: getting buy in was most difficult – need to trust scientists
* Need to go back to passenger pigeon as an argument for why we need to look at caribou

University Group:

* Caroline – challenge is to get the right inputs for modelling
* Monte – models need to be validated; have someone involved business community – consult with them to ensure the quality of information that goes into the models is good
* Peter – no error bars – is there a way to deal with uncertainty? Can we make the models simpler?
* How spatially explicit can these models be made? Can we look at shifting of caribou ranges?
* Taimyr has a long dataset – they are interested in spatial modelling; this herd would be a logical next herd for the energy/protein model
* Vladimir: Models are always uncertain and we need to deal with this
* Available resources constrain the quality of modelling we can realistically do – need to demand more of those doing the development
* Steeve – better models to estimate population size are being developed; using collar data to help estimate population size; CARMA could contribute to promoting this
* Steeve – NIRS infrared techniques to run samples for diet from caribou feces – can also get estimates of digestibility;

Agency Group:

* How do you use models like caribou calculator when no harvest data exists? A: you can use models to identify data requirements
* Jan: stochastic modelling is useful to show uncertainty – it’s been used successfully for population modelling on the Bathurst
* John: a tutorial to go with how to setup the model for different herds – it allows people to use the model and understand the assumptions with the model; models are only as good as how well people understand them
* Don: goal is to make models available on the website
* Christine: make a link to the TWS website
* Don: need to apply the model to show people how it can be used
* Jan: liked the herd comparison; it is tangible; will always need a modeller to run a model
* Don: if there are built in scenarios then model can be used as an education tool
* AUC and NA caribou workshop – could we have an educational session with models?
* Jan: develop a series of simple applications for different herds? Point out differences between herds, and the relevance of those differences.