*"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".*

Group #1: Agency

* Don: think of additional derived data before these tables are all generated;
* Q: Where does the data come from? A: Most of it is modeled
* Q: Can you change the polygons? A: Need to learn “R” in order to generate datasets for custom polygons, but this is possible using the existing algorithm
* Anne: are the derived variables useful? Are there any that are missed?
* Q: Is the list of derived variables available somewhere? A: it will be emailed to CARMA participants
* Comment: the derived variables are simply indices, rather than predictors in and of themselves
* Ann: some variables are included because they are relevant to non-biologists (e.g. climatologists)
* Jing is a graduate stats student at SFU and funded through CARMA – Q: is she available to support users? How do users access her? For how long?
* Q: Is it possible to show catastrophic events? Currently only means are shown; A: should be possible to identify extreme events
* Data is available in CSV format and can be imported into most software environments
* Don: would like to build an Excel front end on the datasets to make it easier to access data; this might make the data more accessible to the average user; Jan: a user interface would be wonderful
* Jan: it might be good to have a data manager
* Would be good to have the interface to the data on the web
* Mike Gill: could it be managed through his data portal; Q: How long is funding in place? A: one data manager is available “forever”; Q: is there someone who can build a front-end? A: cautious yes, until more is understood about what is required; CARMA should build the system and he can manage it
* good for community meetings to explain trends
* good for developing hypotheses
* how close to the Iceland herds do the grids occur? The grids are generally 40km on a side
* For small herds, the approach is to average neighboring grids
* Validation data is useful
* Real value will be determined by the accessibility of the data
* Is there any way to connect these variables to some of the “oscillation type” data? Needs to be done by a meteorologist

Group #2: University

* What kind of assessment has been done to see how good the data is? A: most data is modeled, so it’s the best data available; biggest advantage is that data has been corrected for sensor differences;
* Only suitable for modelling? GPS coordinate is the link between an individual animal location and the data; you can also use the seasonal range to tie to the location of the herd to the appropriate climate records
* Brad: data is associated with a polygon at present; to follow an individual animal it would be much more complicated
* Jillian: what do we mean by “temperature?” A: 10m, 2m, surface. How accurate is the data for predicting a freeze-thaw cycle? A: the variable right now is a snow indicator, not ice
* Monte: data is useful for graduate students; for the public it is important to provide some explanation for why the data is important, and to explain the relevance with respect to the herd
* Jillian: current variables do not seem relevant for her work on parasites; grids are large relative to the herds she is studying
* Ryan: tremendous opportunity, however need to use the data with caution; interested to see what kind of error there are in the modeled data.
* Julie: great database; not clear how to use the system; unfamiliar with GIS concepts
* Fellow from Scandinavia: useful; make it available in a simple format (e.g. snow depth over 30 years); good to have it easily available; great to avoid wading through huge datasets
* Archana: extremely useful; she spent several months working up climate data herself
* Grad student from Alaska: nice to explain why some years are different from others
* Genetics Phd student: seem like the usefulness depends on what corresponding data you have for your animals;
* Don: most variables have variation data (e.g. SD)
* Carol: what time span? 1979-2009
* Ann: spatial portal makes lots of sense (web GIS)
* Russians: very interesting data for Russia, as number of weather stations quite limited; interesting to compare this data to actual weather station data; data needs to be validated so Taimyr data could be used to validate with weather stations; also would be good to have web GIS
* Steeve Cote: 1. Validation is important, especially with snow measurements; satellite data doesn’t seem to work well for snow data; 2. Risk of stat fishing expedition; 3. We can look at common drivers across herds; 4. What about modelling data out into future (e.g. GCM data)
* Peter: 1. If used for publication, the methods are documented and credited; 2. 40km grid size large – would a smaller grid size be possible
* Monte: great interest by a non-scientific audience, but open to abuse. Need to explain why it is important and how certain you are about conclusions.
* Archana: challenge in validating is finding data that was not used in generating the original dataset;
* NASA website has a blog about validation
* Colin: how can we create a climate dataset for an individual animal as it moves across the landscape (for modelling purposes)?

Group #3: Community

* People would like to know for people in communities to know snow conditions
* Data is delayed by 2 months
* Could communities be told in advance of conditions for the upcoming hunt?
* Probably not realistic to expect less than a 6 month delay in data
* Is it possible to identify areas prone to flash floods? A: tough with only this data
* Brad: data might be useful to indicate fire risk in an area
* Could comanagement boards could use the data to predict fire risk and lobby for protection of caribou habitat
* Brad: questions like: which herds are most vulnerable to fire? And use this to direct efforts to protection
* Leslie: interested in predicting risks for herd; communities are interested in what happened to animals on the winter range
* Simple interface would be important
* Dave: are these derived variables generated from models? How are derived variables going to be validated? A: indices are more of a potential
* Gary: information would allow co-managements to be less reactive, and be more proactive.
* Karen: do these data lend themselves to doing correlation between climate and biology of caribou
* Karen: any way to look at connection between climate and forage quantity and quality? A: greenness index didn’t work out; Brad has been working with NDVI, which would be made available eventually
* Karen: advice on the kinds of relationships we could be looking for in the data
* Dave: extreme events (e.g. icing events) would be useful to know – helps corroborate hunter experience; also helps tell communities how extensive the event was (ie did it occur beyond the community)
* Layer this spatial information on past records of changes in herd, we might be able to understand how and why herds declined – this would be beneficial to boards; important to tie this information to biology of herd
* Don: boards could reconstruct
* Technical Committee for the PCH brings together all relevant information – this kind of data would be included.