**SAON RMTF Homework Assignment**

**David Arthurs**

The Arctic Observing Systems needs to be seen as more than physical measurements for science. It needs to encompass environmental, economic, and social systems and their interaction.

**Context**

What is the current state of the Arctic Observing System? What are the drivers for change in the system?

* Strengths
* Weaknesses
* Opportunities
* Threats

**Why**

Why should there be an improved Arctic Observing System? What is the objective? What are the costs and benefits?

* Environmental
* Economic
* Social
* Health
* Safety
* Sovereignty

**Who**

Who are the relevant interest groups? What are their (unmet) needs? What should be their roles in a future Arctic Observing System?

* Indigenous Peoples
* Northern Communities
* Scientists
* Operational Services
* Local, regional, national, multi-national governments
* World citizens

**What**

What is the vision for the Arctic Observing System? What are the components? How should they interact? How should they be managed and governed?

* Data collection (in-situ, aerial and space-based)
* Data management and analysis
* System management and governance
* Policies and laws

**Where**

Where should the Arctic Observing System operate? What should be observed? What indicators need to be measured?

* Ocean
* Land
* Atmosphere
* Space
* Social
* Economic

**How**

How can the Arctic Observing System be improved? What should be done? What is needed for it to be done?

* Activities
  + Political
  + Organizational
  + Technical
* Human resources
* Financial resources
* Infrastructure

**When**

When do things need to be done? What is the urgency? What are the priorities?