

# Introduction to Human Dimension Observations in Polar Regions

- As Robert Correll said at the closing ceremonies of the Second International Conference on Arctic Research Planning in Copenhagen in November 2005, we have entered a new paradigm: global change forces us to see humans and environments as inextricably interconnected.
- How to see in such a way  
? ???? What kind of  
glasses should be put on ?  
???
- Two main points in such a new vision:
  - **1. Local and Indigenous People –Arctic Residents are unique observers** of changes happening in the nature ( in addition to such scientific devices as meteorostations, satellites , etc. ) It has been well demonstrated in the process of ACIA implementation.
  - **2. People's quality of life** is the major area from the point of view of mentioned human-nature interconnections to be observed- not only with the help of scientific methods (such as statistics, images, etc.) but with the strong participation of local and indigenous peoples in the Quality of Life issues identification and observations\monitoring.
  - I would like to stress that Quality of Life is the major driving force effecting the natural environment in the Arctic (especially in the more populated Northern regions of Russian Federation).



## Socially-oriented observations within IPY PPS Arctic N 151 and long-term period

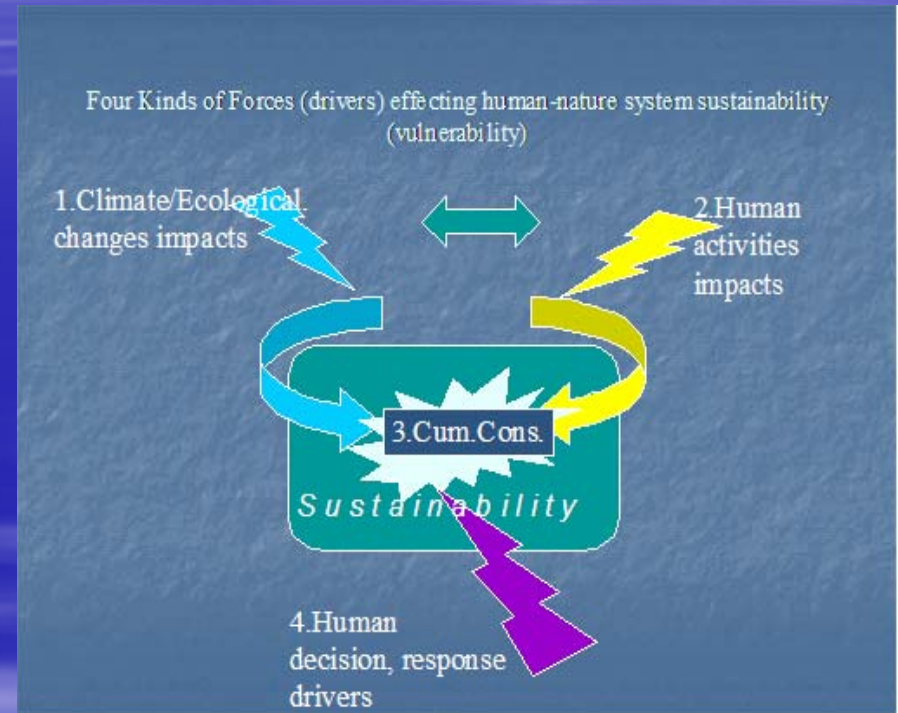
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SAON workshop 7 July 2008



# Main areas of socially-oriented observations/monitoring ('what')

- The aim of socially-oriented observations is to monitor changes on the way to better (or worse) quality of life and sustainability, increase knowledge of trends in socio-economic, political and living conditions of northern residents under the impacts of happening changes in climate, biodiversity, character of human impacts, globalization, socio-economic and political changes and human responses.



# What to observe/monitor ?

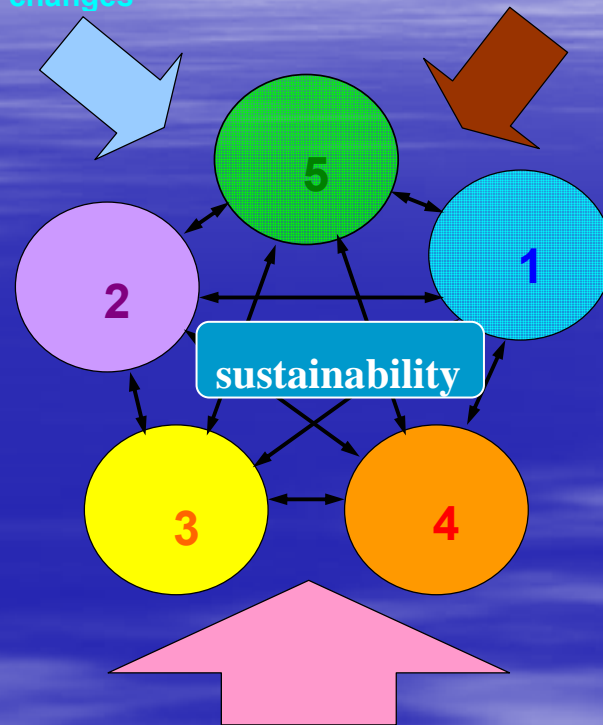
- Socio-oriented monitoring is observation of specially identified **key issues** (challenges or limits to quality of life) and human-defined **targets** set to achieve better quality of life and sustainability.
- For this purpose **socially-oriented key indicators** (**key variables**) should be identified in order to observe changes on the way to better (or worse) quality of life and sustainability.



# Developing the procedure for Key Indicators Identification within 5 spheres of human-nature system

Climate and biodiversity changes

Human Impacts



Human Response: management

Domains → Issues → Indicators

	Spheres	Topics	Challenges	Indicators
1	Spiritual-Cultural			
2	Governance, Law			
3	Social			
4	Financial-Economic			
5	Natural Environmental			

# Decision tree, showing scoring from domains to indicators

Targets, opportunities

Domains

Forces

Issues

Consequences  
to QL

Indicators

Spiritual-cultural

Criminality, less  
awareness of the  
state of the  
environment,  
poaching

N of criminals,  
N poachers  
caught, etc.

Governance,  
legislation

Social

Unemployment  
(hidden)

Ef tourism  
dev-t  
eco,  
scientific

Percent  
unemployed

Economic-  
financial

Stop econ. activities

Water polluted,  
fires in settlements  
and  
forests increase,  
valuable animals  
disappear, etc.

N new jobs  
(tourism)

Water  
quality,  
N fires,  
N animals,  
biodiversity

Nature-ecological

Q  
L

# Main issues in socially-oriented indicators development

## Key social indicators may vary:

from one country to another. There is great national and regional diversity in the Circumpolar area. Those socio-economic indicators important for one country or region is not so important for others. For example the taiga-tundra zone in Canada is not so settled and economically impacted as the same one in Russia and that is why a set of demographic indicators are not so important, as well as a set of indicators showing the environment degradation under human impacts.

**Key social indicators such as social relations, security, freedom of choice and action can't be quantitatively measured.** These indicators which are becoming now of greater importance need qualitative indicators and special data gathering and management techniques to be applied for their storage. Statistical indicators reflecting quality of life and level of human potential development (reflecting non-material well-being) such as life expectancy, educational level, crime rate etc. are used much less often, especially for decision and policy making.



IPY PPS Arctic Cluster N 151  
Active and Proposed sites

Geographical coverage  
for long term:

- active/proposed
- ★ links/proposed
- non arctic

Canada: 21

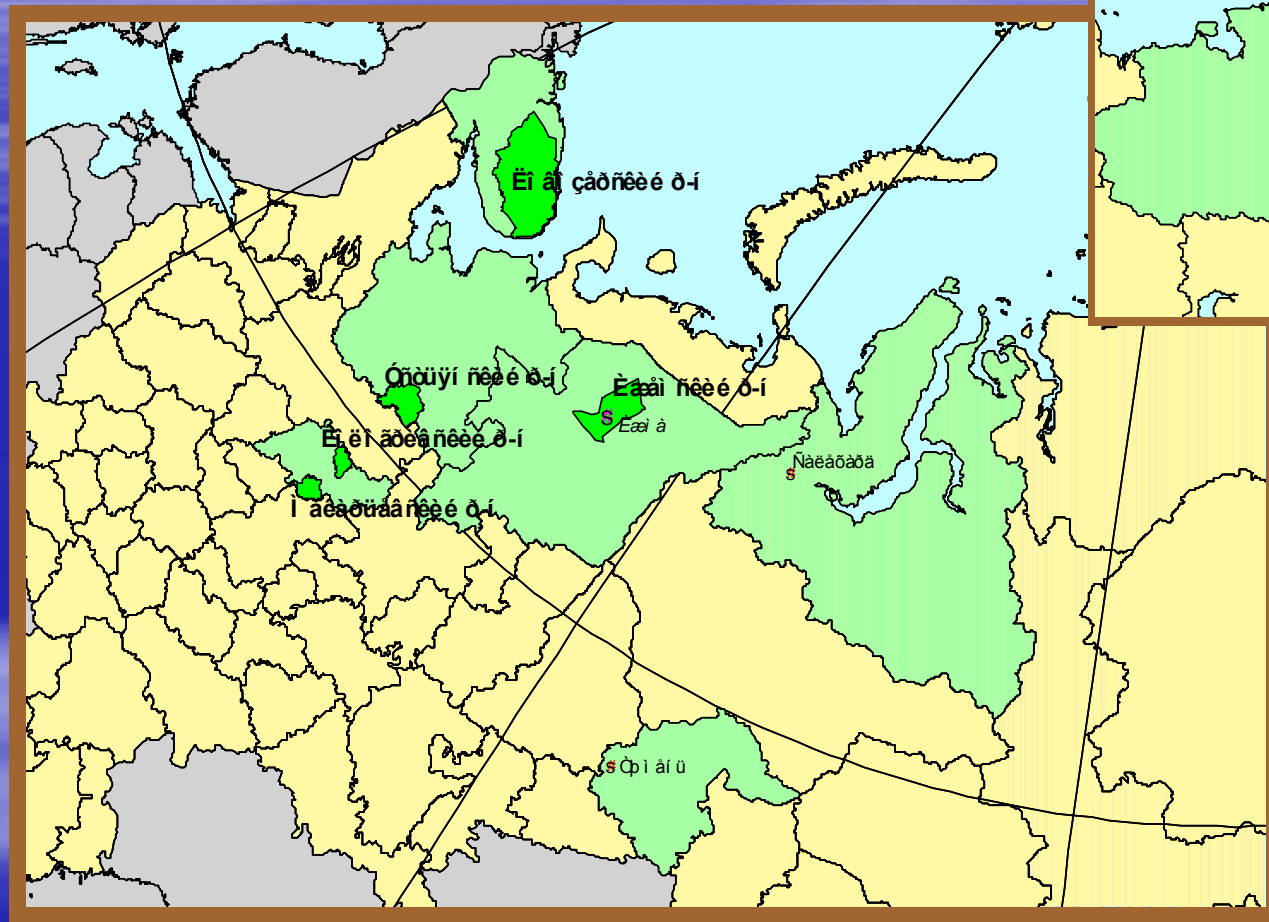
Barents region: 9

Alaska: 2

Russia: 4 + ?



# Geographical coverage of socially-oriented observations in Russia



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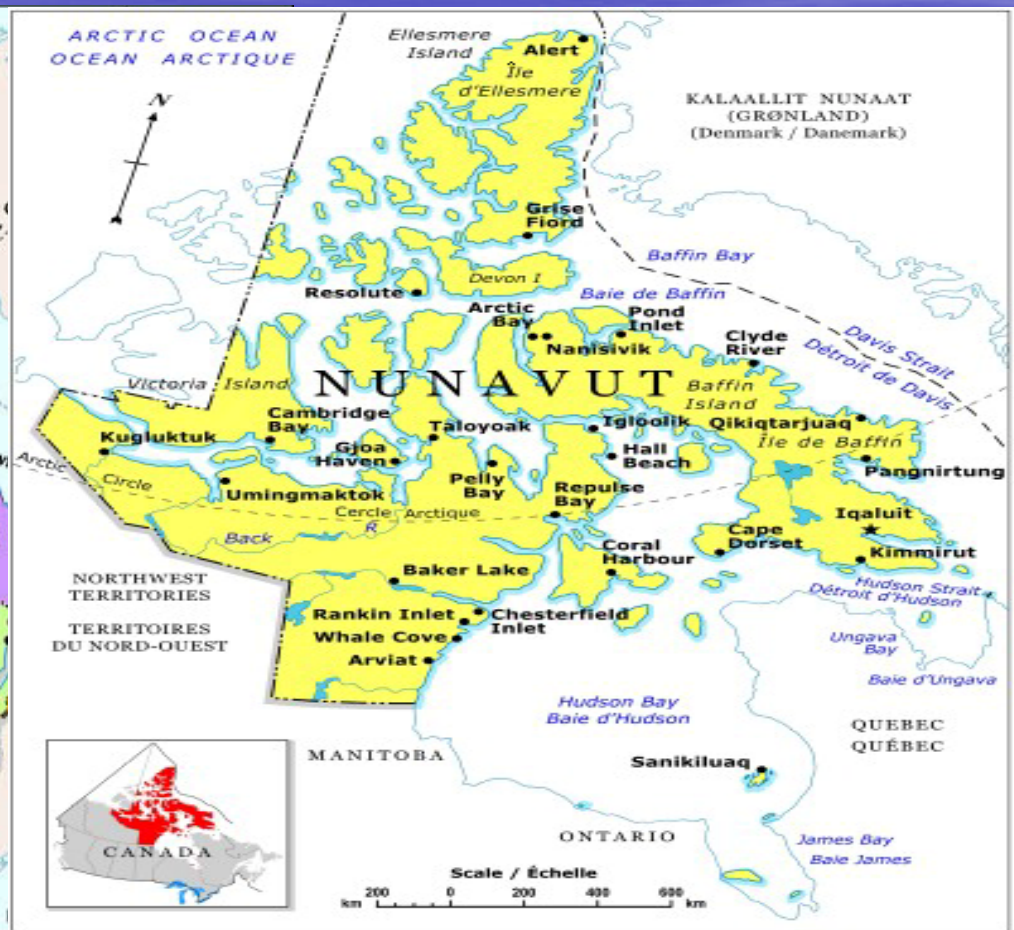
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# Nunavut, Canada Field Trip, 2007

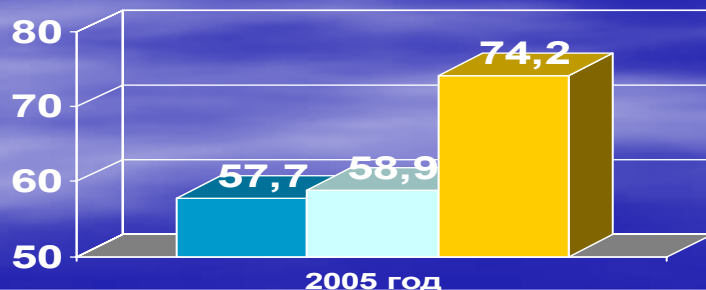


## Data:

Tools and Methods for key indicators of quality of life identification and acquisition by science with local and traditional knowledge integration



Life expectancy at birth, men, years



■ Murmansk Oblast  
■ Russian Federation  
■ Critical limits



Stakeholder sessions (Apatity 2008)

Statistics, literature, maps, images, Photos

Semi structured interviews

Analyses of samples of drinking water and food in polluted areas



# Combination of statistics method with people's perception of main issues and indicators for socially oriented observations is needed

- Estimations of an acuteness of the same quality of life issue on the basis of statistics and those based on the subjective opinions of local residents essentially differ. For example, IEP KSC researches on poverty in the Murmansk region have revealed essential divergences in estimations of poverty level based on statistical data (20,3 % of the poor population in 2005) and those based on the integrated index of poverty level that included opinion of the population (44 % of the poor in total number of population). (Based on Larisa Riabova presentation at Apatity workshop)
- The lack of vital for quality of life statistics at the local municipal level. Only we can get these important statistics at the level of region (oblast). As I understand, the same situation we have in many other Arctic states, for example, Canada. That is why we need very much local peoples (community- based observations)
- Statistical indicators reflecting quality of life and level of human potential development (reflecting non-material well-being) such as life expectancy, educational level, crime rate etc. are used much less often, especially for statement of strategic goals, and are analyzed mainly in scientific papers” (Based on Larisa Riabova presentation at Apatity workshop).

# Common protocol on socially-oriented observations of the Quality of life (PPS Arctic Manual)

- Questionnaire:
- Record location, date and name of the researcher.
- 1.What are main issues affecting the quality of life in the region where you are? Please list issues of concern to your quality of life (e.g., nature, economic, social, culture, governance...etc.).
- 2.What are the main driving forces contributing to the issues you listed in your answer to question 1 above?
- 3.What are the main consequences for quality of life of the issues that you listed in your answer to question 1 above ?
- 4.What can be done to achieve a better quality of life and sustainability ?
- 5. What are main indicators, or variables that we should observe to understand the trends for better and worse in the quality of life?
- 6. Is your environment healthy? (Yes or no, with an invitation to add comments)
- 7. Is your life better than it was 5 years ago? (Yes or no, with an invitation to add comments)
- 8. Is your personal health good? (Yes or no, with an invitation to add comments)
- 9. Are you happier now than you were 5 years ago? (Yes or no, with an invitation to add comments)
- 10. Are environmental changes that are taking place influencing your well-being? If yes, please



## CONSTITUENTS OF WELL-BEING

### SECURITY

Personal safety  
Secure resource access  
Security from disaster

### BASIC MATERIAL FOR GOOD LIFE

Adequate livelihoods  
Sufficient Nutritious food  
Shelter  
Access to goods

### HEALTH

Strength  
Feeling well  
Access to clean air and water

### GOOD SOCIAL RELATIONS

Social cohesion  
Mutual respect  
Ability to help others

### FREEDOM OF CHOICE AND ACTION

Opportunity to be able to achieve what an individual values doing and being

# Cooperative partners in socially-oriented observation

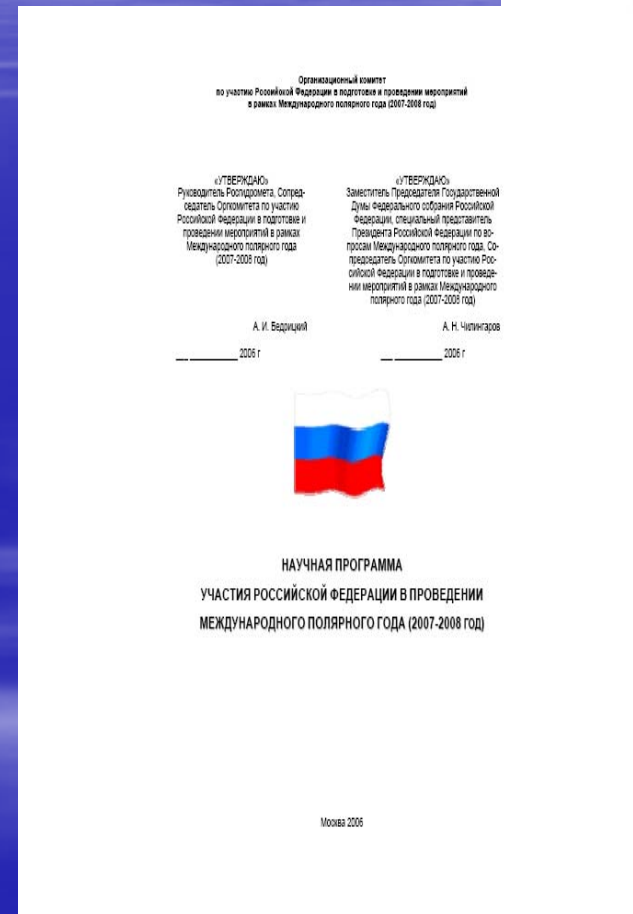
- UN and EU programmers
- IPY JC Sub-committee on Observations (IGRAS membership, cooperation with other IPY Projects)
- Arctic Council (AMAP, CAFF, SDWG, etc.)
- Ministries of RF ( Rosgidromet, MNR, Ministry of Regional Development)
- RAIPON (looking forward)
- NINA (Norway), Carleton University (Canada), Abisko Station (Sweden)
- IPY National Committee
- Cooperation with other integrated observation system (networks) is envisioned
- ALL OTHER INTERESTED ORGANIZATIONS, INSTITUTIONS, PERSONS



# IASOS-CASEAS 899 expected results



- Within the list of RESULTS of the Russian scientific program “the development of tools and methods of socially-oriented monitoring” is put on one of the first places in this Scientific Program.
- As it is written in SPRP “The development of the IASOS which is connected with CASEAS IPY EoI 899 should be specially emphasized. IASOS is one of the socially oriented direction of the monitoring system, envisioned to be constructed during the IPY” (p.77)



Scientific Program of Russia Participation in the IPY (SPRP)

THANK YOU !

Issues of Quality of Life	Total Summ of Values	Indicators based on people's perception (subjective)	Indicators based on statistics ( objective)
Low material well-being (standards of life)	6	Poorness ( perception of yourself to be poor or not ). Percent of people who consider themselves to be poor.	Average salaries ? The relation of average salaries to living minimum of life
Low life expectancy	11	People (percent of )worried about low life expectancy	Mortality (men !!!), infant mortality
Low quality of health-care system	14	People (percent of ) considering health-care system to be accessible (1), and satisfied with its quality (2)	Mortality, infant mortality .....
Environmental pollution and degradation	15	issue of water quality air pollution, , the lack of well equipped recreational zones, the problem of biodiversity protection, the esthetic view of the territory ( garbage relocation, etc )	Number of days with exceeding maximum allowable concentration (in air). The alternative source of water supply existence.
Low level of peoples' activity (participation) in self-governance ( in decision making)	26	People (percent) considering themselves participating ( in NGO, etc.)	Number of NGO, number of people participating in public activities.



# Issues of poor housing conditions, sewage and garbage storage in Kolguev Island, NAO



Bad quality of drinking  
water



# Information proposal for improvements Information

- PPS Arctic web-site
- Socially-Oriented Monitoring IG RAS web-site under construction. ( IASC, AMAP funding –needs translation
- Cooperation with other integrated observation system (networks)



# Canadian- Russian cooperation on socially- oriented observations within IPY and IGU CRE Comission

## Canadian-Russian cooperation in the North

### Snapshot of regional socioeconomic and cultural observations

One of the four principal objectives of PPS Arctic is "to develop conceptual models of the long term relationship of environmental change and human health and well-being in the Arctic and Sub-Arctic. ...". Research should therefore include the participation of Northern Peoples and address human-landscape interactions, documenting social-cultural-ecological patterns, and observations of political, economic and cultural factors related to health and well-being.

Snapshot level data collection should be completed wherever possible in consultation with local communities. Activities under Section IV are not intended to replace major social-cultural-ecological research at each site; rather these activities should enhance other more intensive research activities.

Common protocols for ethical human-landscape interaction research, for quantitative and qualitative social-cultural-ecological field observations, and for ethical handling of material collected with communities and individuals are described below. They reflect the 'respect model' mandated by the Canadian Government (see appendix A4.1)

### 1. Simple Oral Informed Consent:

Please read the following consent statement aloud to the person who is to be interviewed:

"If you agree, we would like to ask 10 questions concerning your experience and your well being so that we can understand the ways in which environmental changes and other changes may be affecting you. We will not record your name or any identifying information, and we will not disclose in anyway your identity, so that your anonymity is protected. We will include your answers in our research and in our reporting. We will not be giving a payment, but will provide a small gift to show our appreciation for your contribution. Do you agree to this arrangement, and that we may ask you these 10 questions?"

If the person says "yes", then continue to the questions below. If the person says "no", then the interview is ended at this time.

Source: [http://pps-arctic.sres.management.dal.ca/pps\\_Manual.pdf](http://pps-arctic.sres.management.dal.ca/pps_Manual.pdf)



### 2. Questionnaire:

Record location, date and name of the researcher.

1. What are main issues affecting the quality of life in the region where you are? Please list issues of concern to your quality of life (e.g., nature, economic, social, culture, governance...etc.).
2. What are the main driving forces contributing to the issues you listed in your answer to question 1 above?
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10. Are environmental changes that are taking place influencing your well-being? If yes, please add comments:





# Multiple-scale approaches, methods applied for social indicators identification and use

## Tools of observations:

- Statistics
- Literature, Internet, reports, images, maps, photos, etc.
- unstructured interviews
- Sessions of stakeholders

## Scales of observations:

- The global
- The Arctic
- National
- Regional/local
- Social, professional groups, individuals

At each scale observations require a different set of tools

- **PRINCIPLES OF INTEGRATED ARCTIC SOCIALLY-ORIENTED OBSERVATION SYSTEM (IASOS) CONSTRUCTION WITHIN IPY AND RUSSIAN- NORWEGIAN PROJECT “BENEFITS”**
- T.K. Vlasova, P.M. Glazov, A.A. Medvedev
- *Institute of Geography, RAS*
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- Within IPY a special Sub-committee on Observations (SCOBS) has been formed and construction of Socially-oriented Observations (SO) networks has been considered as an important component of monitoring system. One example of such an IPY activity is the construction of IASOS undertaken within PPS Arctic 151 cluster, national IPY Russian IASOS-CASEAS 899 project and Russian-Norwegian project “BENEFITS” where Norwegian Research Council, supports IASOS network at Kola peninsular sites, Russia. SO are observations of key variables characterizing quality of life in the Northern regions, experiencing changes under cultural, social, economic, political and environmental impacts. In order to observe, the set of key quantitative and qualitative variables are identified and a special protocol based on listed below 5 principles is developed: 1) Key variables should be closely tied to issues (limits to quality of life), driving forces (human and environmental stresses) and human-defined targets set up to achieve better quality of life and sustainability; 2) Participation of arctic residents, different stakeholders is of primary importance; 3) Integration of methodologies and tools used in humanitarian (semi-structured interviewing, statistics, etc.), natural disciplines (ecosystem approach, etc.) and remote sensing; 4) Multi-scale approach to key variables identification, from global to local; 5) Observation of time trends.