

**Integrated Group Systems Analysis &
ICAM (Integrated Coastal Area Management)**

Evaluation of the questionnaire:

“The first Summer School of Limnoecology at Lake Baikal in 2007”



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1 Introduction

The first International summer school "Limnoecology of Lake Baikal" took place at the Biological research station in Bolshie Koty from the 20th of August to the 4th of September 2007.

The Summer school program had been drawn up jointly by the professors of the two universities (Research and Educational Centre "Baikal" (Irkutsk State University) and the Ecological Centre of the Christian Albrecht University in Kiel). One of the basic subject of the school was to give an "Introduction to limnology" that was read by professors of both Irkutsk and Kiel Universities. It is one of the basic courses for nature management students, hydrologists, ecologists and biologists.

20 participants (6 teachers/ 14 students) took place in the evaluation process and answered at the end of the Summer School a short questionnaire, which consists of 13 questions.

The questionnaire plays a critical role in data gathering for purposes of making evaluations of social and educational programs and at the very beginning of a new project like the International Summer School of Limnoecology it is a useful tool to improve and adapt the programme to the needs and requirements of teachers and students.

The questionnaire was split into two parts. The first part should cover the „**Virtual Phase**“ (The preparations via Internet before meeting in the summer school destination) and the second part should cover the “**Face to Face Phase**” (when the participants have already arrived at the summer school).

We evaluated the answers separately depending on the professional background (**teacher/student**) to get a better impression of the prevailing situation for the different approaches of both parties.

2 Evaluation process

All the questions which included a ranking were evaluated in the following way:

- All the figures given by the participants were summarized and divided by the amount of the participants.

As an example we take question two for the “Virtual Phase”:

- Which type of media should be provided by the “Virtual Phase”?
(Please rank the answers from 1(the best) to 6 (the worst))
- The answer a: Articles got the following values by the teachers (4, 2, 1, and 2)
- We summed the values up: $4+2+1+2$. The result is 9.
- We divide 9 into 4 values. The result is 2.25. To round it up with one decimal place we get 2.3.

3 Evaluation of the first part of the questionnaire “Virtual Phase”:

3.1 *How many hours (overall hours) would you like to use “Virtual Phase” of activity?*

- The majority of the teachers like to attend the “Virtual Phase” for 50 hours.
- The opinion of the students is divided. On average the students would like to spend 25 hours in advance in front of their computer.

3.2 *Which type of media should be provided by the “Virtual Phase”?*

(Please rank the answers from 1(the best) to 6 (the worst))

a. Articles	d. Animations (3D)
b. Presentations (written)	e. Interactive tests
c. Lecturers (audio and video-based)	f. Skype

- Teachers prefer best written presentation (average value 1.8) and articles (2.3). Animations (5.0) and skype (3.8) is not the favourite media chosen by the teachers.
- For students written presentations (2.9) and audio and video-based lecturers (3.2) play the key role. Animations (3.9) and skype (4.4) is in agreement with the teachers also not the favourite media.

3.3 *What type of involvement you think will be appropriate for the communication between students and professors?*

(Please rank the answers from 1(the best) to 5 (the worst))

a. Special area in the forum	d. White Board (chat combined with the possibility to work together on documents)
b. E-Mail communication	e. Video conferences
c. Chatting	

- Teachers like the special area in the forum (1.4) and E-Mail communication (2.0) best. Chatting (3.6), the White Board (3.8) and Video conferences (3.8) didn't gain high values from the teachers.
- Students like to use for the communication process the Forum (2.4) and the Chatting possibility (2.4)

3.4 *Which information about the summer school in Bolshy Koty should be provided by the "virtual phase"?*

(Please rank the answers from 1(the best) to 5 (the worst))

a. Facilities	d. Scientific papers
b. Accommodations	e. Personal information of the participants
c. Scientific equipment	

- For teachers are information about facilities (2.0), scientific papers (2.2) and scientific equipment (2.3) very important
- For students are information about scientific equipment (2.5) most important

3.5 *Which information you missed urgently?*

- Answers given by teachers:
 - Details on scientific equipment and facilities, this would allow a better planning and preparations of the students
 - A detailed structure of the days, including scientific plans
- Answers given by students:
 - Information about the facilities, environmental "thinking" of people and about participants, to have a schedule for the day
 - Economic, Toxic, Geologic aspects
 - History of the village Bolshie Koty, Information about pollution, biodiversity
And urgent hydro biological methods

3.6 *Which additional disciplines you would like to have in limnological summer school?*

- Answers given by teachers:
 - Geology, Botany, Geobotany, Social science
 - Environmental economy, Hydrochemistry, Nutrient science

- Answers given by students:
 - 5 people have interest in Geology, 4 in Environmental Science and 3 in Botany and Ichtiology
 - Also there exists interest in Geobotany, Terrestrial Zoology, Economic aspects and Toxic Ecology

4 Evaluation of the second part of the questionnaire “Face to Face Phase”

4.1 *What can attract students of foreign countries go to Lake Baikal Region*

- Answers given by teachers:
 - Most teachers answered that the reason going to the Lake Baikal Region could be the unique region (unique flora, landscape, history and facts of lake) (3 people)
 - and the prevailing good conditions for scientific learning (2 people)

- Answers given by students:
 - Most students also answered that the reason going to the Lake Baikal Region could be the unique region (unique flora, landscape, history and facts of lake) (13 people)
 - and the prevailing good conditions for scientific learning (6 people)
 - Other reasons are visiting a foreign country (2 people), Adventure (2 people), that the population density is low and to improve English skills (1 person)

4.2 What teaching form do you think should be prevailing? (more than one answer is possible)

a. Lectures	d. seminars
b. excursions	e. field work
c. practises	f. laboratory work

- Teachers decided that field work (6 people), seminars (4 people) and laboratory work (4 people) should be prevailing
- For students excursions (10 people), field work (9 people) and practises (6 people) are most important

4.3 Does the school comply with the objective: learning through research? (when your answer is “no”, please explain why)

- 4 teachers said yes, 1 said no and 1 said partly true
- 8 students said yes, 2 said no and 4 said partly true

4.4 What should be the appropriate number of persons in the summer school?

a. < 30	b. < 20	c. < 12
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- The majority of the teachers (66 percent) find that the appropriate number of participants should be fewer than 20.
- The students have the same opinion, a majority of almost 80 percent decided that the appropriate number of participants should be fewer than 20.

4.5 Which ratio between Russians and foreign people you think will be appropriate?

a. 50:50	b. more foreign people	c. more Russian people
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- Every teacher and student think that the appropriate ratio between Russians and foreign people should be 50:50

4.6 How many people should be in every working group?

a. > 10	b. 10 -5	c. < 5
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- 66 percent of the teachers would like to have 5 to 10 people and 33 percent less than 5 people in every working group
- Almost 80 percent of the students would like to have 5 to 10 people and 20 percent less than 5 people in every working group

4.7 Were your expectations met by the expeditions?

- 3 teachers answered with yes and 2 said partly (for the scientific part no, for the tourist part yes)
- 10 students answered with yes and 4 said partly (for the scientific part no, for the tourist part yes)

5 Conclusion

Analyzing “Virtual phase” we should summarized that if take in account at about two weeks preparation to Summer school:

professors would like to attend to the phase at about 4 hours per day studding written presentations and articles, communicating with students in special Forum area and by e-mail. In site should be information about facilities, scientific equipment, detailed structure of the days including scientific plans;

students would like to attend to the phase at about 2 hours per day studding written presentations and video-based lectures, communicating with professors in special Forum area and using chatting possibilities. In site should be information about facilities, scientific equipment.

“f2f phase» analyzing we should noticed that: **both professors and students** said that students of foreign countries attract go to Lake Baikal Region the Unique region (unique flora, landscape, history and facts of lake), good conditions for learning and scientific activity and possibilities visiting foreign country. Another reasons were marked by students: adventure, low density of population and possibility for improving English skills. There are three questions about structure and number of participants. **Both professors and students** said that the ratio between native and foreign participants should be 50/50; in the most answers pointed out that the number of participants should be less than 20, the number of student in groups should be 5-10 persons.

In questions assessed expectations of expedition and has objective of the school “learning through research” achieved most **professors and students** answered “yes”, but it was also a few answers “partly” and “no” that says that the structure of activity of the school should be improved.

For analyzing question 4.2 we should discuss is a field work include excursions (I think it is) and what differences between laboratory work and practices. As a prospective in the school program should be included the next subjects: botany, geology, environmental science, ichtiology and some another disciplines in the context of the school theme.

After reading the evaluation of the questionnaire you have the impression that the participants were overall satisfied with the summer school at Lake Baikal.

6 Appendix

6.1 Evaluation Sheet: „Virtual Phase“–Teachers-

Questionnaire about the summer school

„Virtual Phase“

- Teachers -

Number	Questions	Answers	Frequency							
1	How many hours (overall hours) you would like to use "Virtual Phase" of activity?	28	1							
		50	3							
		depends on aim	1							
		no answer	1							
2	Which type of media should be provided by the "Virtual Phase" (Please rank the answers from 1 (the best) to 6 (the worst)):	articles	2.3	4	2	1	2			
		presentations (written)	1.8	1	1	3	2			
		lecturers (audio and video-based)	3.5	2	3	6	3			
		animations (3D)	5.0	6	6	5	3			
		interactive tests	3.5	3	5	4	2			
		skype	3.8	5	4	2	4			
3	What type of involvement you think will be appropriate for the communication between students and professors? (Please rank the answers from 1 (the best) to 5 (the worst))	Special area in forum	1.4	1	1	2		3	1	
		E-Mail communication	2.0	2	2		4	2	2	
		Chatting	3.6	5	5	1	2	5		
		White Board (chat combined with the possibility to work together on documents)	3.8	3	4		5	3		
		Video conferences	3.8	4	3		3	5		
4	Which information about the summer school in Bolshy Koty should be provided by the "virtual phase"? (Please rank the answers from 1 (the best) to 5 (the worst))	Facilities	2.0	3	1	3	1			
		Accommodations	3.5	4	4	5	1			
		Scientific equipment	2.3	1	3	4	1			
		Scientific papers	2.3	5	2	1	1			
		Personal information of the participants	3.0	2	5	2	3			
5	Which information you missed urgently?	Details on scientific equipment and facilities, this would allow a better planning and preparations of the students	1							
		A detailed structure of the days, including scientific plans	1							
		Onpersonal stuff	1							
		On scientific equipment	1							
		no answer	2							
6	Which additional disciplines you would like to have in limnological summer school?	Geology	1							
		Botany	2							
		Geobotany	1							
		Social science	1							
		Environmantal economy	1							
		Hydrochemistry	1							
		Nutrishent science	1							

6.2 Evaluation Sheet: „Virtual Phase“–Students-

Questionnaire about the summer school „Virtual Phase“

-Students-

Number	Questions	Answers	Frequency															
1	How many hours (overall hours) you would like to use "Virtual Phase" of activity?	<10	3															
		10-20	4															
		20-40	4															
		40-60	3															
2	Which type of media should be provided by the "Virtual Phase" (Please rank the answers from 1 (the best) to 6 (the worst)):	articles	3.2	1	5	5	1	4	2	1	1	4	5	5	4	4	3	
		presentations (written)	2.9	2	1	1	2	2	3	3	2	5	6	4	2	3	5	
		lecturers (audio and video-based)	3.0	5	4	3	4	1	1	6	4	1	1	6	1	1	4	
		animations (3D)	3.9	3	6	2	3	6	5	2	5	2	4	3	6	2	6	
		interactive tests	3.6	4	3	4	5	5	6	4	3	3	2	2	3	5	1	
		skype	4.4	6	2	6	6	3	4	5	6	6	3	1	5	6	2	
3	What type of involvement you think will be appropriate for the communication between students and professors? (Please rank the answers from 1 (the best) to 5 (the worst))	Special area in forum	2.4	2	5	1	4	1	1	1	1	2	3	3	4	4	1	
		E-Mail communication	2.8	4	4	2	3	4	4	3	2	3	2	2	1	3	2	
		Chatting	2.4	3	1	3	2	2	2	2	4	1	4	1	2	2	5	
		White Board (chat combined with the possibility to work together on documents)	3.7	1	3	5	5	5	5	4	3	4	1	5	3	5	3	
		Video conferences	3.7	5	2	4	1	3	3	5	5	5	5	4	5	1	4	
		4	Which information about the summer school in Bolshy Koty should be provided by the "virtual phase"? (Please rank the answers from 1 (the best) to 5 (the worst))	Facilities	2.8	5	4	2	1	1	3	3	1	2	4	1	2	5
Accommodations	3.5			4	5	5	4	4	5	2	5	3	5	3	1	1	2	
Scientific equipment	2.5			3	3	1	3	5	2	4	2	1	1	2	3	4	1	
Scientific papers	2.8			1	1	3	2	2	1	1	4	5	3	5	5	3	3	
Personal information of the participants	3.4			2	2	4	5	3	4	5	3	4	2	4	4	4	2	4
5	Which information you missed urgently?	Nothing	3															
		Facilities	2															
		Schedule	1															
		Answers from Russian to Germany students	1															
		Information about German songs to sing at the party	1															
		Information about participants	1															
		Information about environmental "thinking" of people	1															
		Economic, Toxic, Geologic aspects	1															
		History of the village Bolshie Koty	1															
		Information about pollution	1															
6	Which additional disciplines you would like to have in limnological summer school?	Geology	5															
		Botany	3															
		Geobotany	1															
		Terrestrial zoology	1															
		Economic aspects	1															
		Environmental science	4															
		Ichtiology	3															
		Toxicoecology	1															

6.3 Evaluation Sheet: „Face to Face Phase“–Teachers-

**Questionnaire about the summer school
“Face to Face Phase”**

Teachers

Number	Questions	Answers	Frequency						
1	What can attract students of foreign countries go to Lake Baikal Region?	Unique region (unique flora, landscape, history and facts of lake)	3						
		Foreign country	1						
		Good conditions for learning and scientific	2						
2	What teaching form do you think should be prevailing? (more than one answer is possible)	Lectures	3	1			1	1	
		excursions	3				1	1	1
		practises	3			1		1	1
		seminars	4		1	1	1	1	
		field work	6	1	1	1	1	1	1
		laboratory work	4		1	1	1	1	
3	Does the school comply with the objective: learning through research? (when your answer is “no”, please explain why)	Yes	4						
		No	1						
		Partly	1						
4	What should be the appropriate number of persons in the summer school?	< 30	1				1		
		< 20	4	1	1	1		1	
		< 12	1						1
5	Which ratio between Russians and foreign people you think will be appropriate?	50:50	6	1	1	1	1	1	1
		more foreign people	0						
		more Russian people	0						
6	How many people should be in every working group?	> 10	0						
		5-10	4		1	1	1	1	
		< 5	2	1					1
7	Were your expectations met by the expeditions?	yes	3						
		nothing	1						
		partly (scientific - no, touristic - yes)	2						

6.4 Evaluation Sheet: „Face to Face Phase“–Students-

Questionnaire about the summer school																		
“Face to Face Phase”		- Students -																
Number	Questions	Answers	Frequency															
1	What can attract students of foreign countries go to Lake Baikal Region?	Unique region (unique flora, landscape, history and facts of lake, culture)	13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		Foreign country	2	1	1													
		Population density is low	1	1														
		Advanture	2	1	1													
		Improving English skills	1	1														
		Good conditions for learning and scienrific	6	1	1	1	1	1	1									
2	What teaching form do you think should be prevailing? (more than one answer is possible)	Lectures	4		1							1	1	1				
		excursions	10	1			1	1	1	1		1	1		1	1	1	
		practises	6	1			1		1		1		1		1			
		seminars	5		1	1			1		1		1					
		field work	9	1	1				1	1	1			1	1	1	1	
		laboratory work	5	1		1		1		1				1				
3	Does the school comply with the objective: learning through research? (when your answer is “no”, please explain why)	Yes	8				1	1	1	1	1		1		1	1		
		No	2									1		1				
		Partly	4	1	1	1	1											
4	What should be the appropriate number of persons in the summer school?	< 30	3		1		1						1					
		< 20	11	1		1	1		1	1	1	1	1	1	1	1		
		< 12	0															
5	Which ratio between Russians and foreign people you think will be appropriate?	50:50	14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		more foreign people	0															
		more Russian people	0															
6	How many people should be in every working group?	> 10	0															
		5-10	11	1	1	1	1	1	1	1		1	1		1	1		
		< 5	3							1				1	1			
7	Were your expectations met by the expeditions?	yes	10	1	1		1	1	1	1		1	1	1	1			
		no	0															
		partly (scientific - no, touristic - yes)	4			1					1					1	1	