

# Darwin Initiative for the Survival of Species

## Half Year Report

<b>Project Ref. No.</b>	EIDPO11
<b>Project Title</b>	Biodiversity Education and Teacher Training (BETT)
<b>Country(ies)</b>	Kyrgyzstan
<b>UK Organisation</b>	“Field Studies Council”
<b>Collaborator(s)</b>	Ecological Movement “BIOM”
<b>Report date</b>	18.11.2007
<b>Report No. (HYR 1/2/3/4)</b>	HYR 2
<b>Project website</b>	<a href="http://www.biom.org.kg">www.biom.org.kg</a>

### 1. Outline progress over the last 6 months (April – September) against the agreed baseline timetable for the project (if your project has started less than 6 months ago, please report on the period since start up).

Against the agreed baseline timetable for the project, we have got the following progress:

#### 1. Creation of microreserves of wild nature by university groups

Now 3 of the 4 universities involved in the project have completed their work on the creation of the microreserves. In April – September 2007 the following work was completed (see pictures in Appendix 1).

Naryn State University. The territory of the reserve was cleaned of rubbish and a big rubbish pit was sorted and covered with soil. A great number of trees, including coniferous trees (native to Naryn mountain area) were planted. A demonstration stand with map of micro reserve and sign with Darwin’s and BIOM’s logos was placed. Areas of wild bushes, steppe and wild meadow were created and necessary water supply provided.

Issyk-Kul State university. We supported the University Botanic Garden and helped them to create 2 zones – zone 1 - sowing hotbed for growing young juniper trees and zone 2 - an area for planting roots of juniper trees. In 2-3 years this will allow university to contribute to the solution of the problem of juniper forests degradation in Issyk Kul region, as they plan to plant young conifer seedlings on the deforested mountain slopes using student groups. In addition, the university created a model of an alpine ecosystem with wild species of decorative and aromatic flowers native to Issyk-Kul region.

Kyrgyz National University. The micro reserve in KNU has been created in the courtyard of the university building where all the natural-science faculties are situated. Previously this was a dry abandoned area covered by construction waste. In July-August 2007 the territory was cleaned, covered by a layer of soil, supplied with water. In September- October 2007 more than 150 diverse wild species of Kyrgyzstan were planted in KNU micro reserve, and several ecosystem zones were organized, such as an ecosystem of south walnut forests, an area with conifer trees, a pond and an alpine hill, and areas with steppe and meadow plants, and a model of the ecosystem of Issyk-kul desert area.

Osh State University. The process of micro reserve creation in Osh university has not been completed, though the major part of work has been done. The territory of the reserve was cleaned from rubbish, a pit for the pond area was prepared, a summer class organized, and links made between the micro reserve and ecosystems of riverside bushes of Ak-bura river. Further steps include the university building a fence in order to protect area from cattle, creation of a zone of red list plants of Kyrgyzstan and completion of work on creating a pond area.

In all universities both teachers and students were involved in the process of micro reserve creation. The universities also received appropriate consultative support of experts (landscape designers, botanists, zoologists, foresters).

## **2. Curriculum and Course Planning – Assessment - Planning the Biodiversity Education Module (BEM) and supporting Resources**

This part of work was done during the visit of the FSC expert James Hindson to Kyrgyzstan in June 7<sup>th</sup> to 14<sup>th</sup> 2007. The FSC expert and project manager visited all project universities and conducted discussions about the structure and content of Biodiversity Education Module as well as the assessment system. The structure of the handbook for university teachers and other related materials aimed to support the realisation of BEM was also discussed and confirmed by all members of Development Team and university groups. (See picture in Appendix 2)

## **3. Development of Biodiversity Education Module (BEM) and supporting materials**

The process of preparing the Biodiversity Education Module was started at the end of June 2007 and completed in August 2007. During this period 16 lectures, 14 practical trainings, a large number of diverse student-centred learning activities, games and outdoor fieldwork were developed by project Development team for the course of “Biodiversity and the Basis of Sustainable Development”. A handbook with detailed module descriptions, texts of the lectures and activities was also developed and published (see pictures – Appendix 5). Additional materials, such as power point presentations, a CD, handouts, maps, and cards for games were also prepared. In addition to the power point presentations we prepared separate printed slides to support the delivering of the module, as very often teachers of regional universities of Kyrgyzstan doesn't have opportunity to use LCD projector on their lectures. The handbook and other materials of the module were distributed among teachers from project universities at the Capacity Building seminar for university teachers held in Bishkek in September 2007. In addition we have developed 3 different posters on the Biodiversity of Issyk-Kul lake, the Ecosystem functions of forests, and Biodiversity conservation and Sustainable Development. We printed these posters on large pieces of plastic style poster (2 metres x 3 metres) and placed them in the halls and training rooms of the four pilot universities of Kyrgyzstan. (see pictures – Appendix 5).

## **4. Capacity building workshop on training university teachers to deliver BEM**

This workshop took place in Bishkek from the 17<sup>th</sup> -19<sup>th</sup> of September 2007 and was aimed to raise capacity of teachers from universities in delivering the newly developed Biodiversity Education Module and share information and experience in the sphere biodiversity education between project partners. The seminar was conducted by BIOM team and expert of FSC, James Hindson. The workshop was very practical and included demonstration of key themes of the module – both content and activities. One third of the lectures and activities at the workshop were conducted by teachers themselves and this allowed partners give feedback to each other and practice providing the most difficult elements of the module. One of the important issues for discussion at the workshop was Student Centred Learning and Learning out of the Classroom. These were discussed with participants in each session. (see pictures – Appendix 3, see program of the seminar in Appendix 6).

## **5. Delivering of new module and monitoring visits**

Since September 2007 Issyk-Kul and Naryn State universities started delivering the new Biodiversity Education Module for 3<sup>rd</sup> and 4<sup>th</sup> year students of ecological and biological specialities. *In Naryn State University* the module is officially integrated into curriculum of two specialities – “Course 553500. Protection of environment”, and “Course 540100. Natural science education (Biology)”. The module includes 102 hours (64 hours - for lectures and practical training and 38 hours for self-dependent work of students). *At Issyk-Kul State University* new module is officially integrated into the curriculum of speciality “Course 511101 Ecology” as selective course for students. It includes 70 hours in total - 32 hours taught course work (22 hours for lectures and 10 for practice) and 38 hours for self-dependent work of students. The students will pass examinations at the end of course and the course will be included into the list of courses, marked in a special Attachment to the Diploma. The work in Osh will start in 2008.

In October and November 2007 BIOM organized monitoring visits to universities to check the process of realisation of the module. The results of the visits showed, that the process is moving smoothly and

course has success in students' and teacher's opinion. (see pictures in Appendix 4). In addition, meetings were held with the senior management of each University that confirmed the sustainability of the modules and the strong level of support for the courses that have been developed.

## 6. Project surveys

There are 2 types of the survey within the project.

1. Pre and post-project survey on biodiversity of the micro reserve area before the start of the project and after creation of the micro reserve. Now we have completed the first step of this survey. Each of the universities has conducted a flora inventory on their territories at the initial stage of micro reserve creation. All universities made lists of plant species and calculated index of biodiversity. They also made a photo record of the site before the creation of the micro reserve. A report about results of the survey will be available at the end of November 2007.

2. Survey on assessment level of knowledge and skills of student before and after participating in the newly developed Biodiversity Education Module. For this survey we developed a questionnaire for assessment of knowledge and skills of students and defined the groups to take part in the survey. In December 2007 and January 2008 we will collect data from students, who will be trained within the course ( in Osh State University) and from students, who will complete their education within the course (in Naryn and Issyk-Kul State Universities). After that we shall be able to prepare a report about pre-project survey.

## 7. Work with school network

One more important step within the project was our ongoing work with School Green Land network. In September 2007 we renewed our contacts with the school coordinators and involved new schools to the network through the distribution of educational materials (posters and water identification keys). We also prepared documents to announce a new school competition to motivate schools in the network. At the beginning of December we also plan to conduct two capacity building workshops for schools - in Bishkek and Osh cities in cooperation with Norwegian energy-saving project "SPARE".

## 8. Project representation

1. Project results were presented at several ecological conferences and meetings in Kyrgyzstan. 2 radio broadcasts and 2 articles in national level newspapers were also made.

2. Project Newsletter 3 was produced in October 2007. It includes information about the results of the International Belgrade conference which BIOM attended as an NGO representative from Kyrgyzstan, the announcement of the new Biodiversity Education Module and other project news, a summary of a scientific article about principles of biotic regulation in forest ecosystems, presentation of the current ecological initiatives in the sphere of forest conservation, methodical recommendations on conduction activities for students, information about central Asian Youth ecological network and other news. We are in the process of collecting materials for Newsletter 4.

**2. Give details of any notable problems or unexpected developments that the project has encountered over the last 6 months. Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.**

There were no problems in the project during last 6 month.

**Have any of these issues been discussed with the Darwin Secretariat and if so, have changes been made to the original agreement?** No

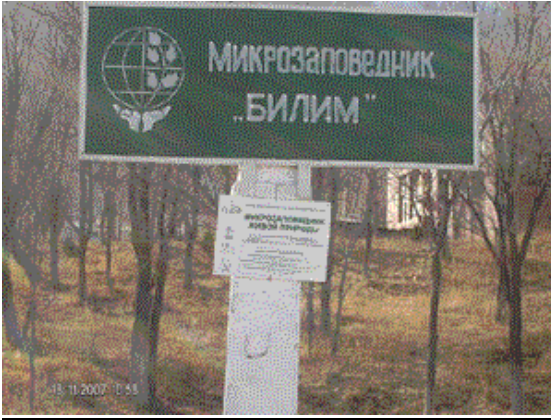
**Discussed with the DI Secretariat:** no/yes, in..... (month/yr)

**Changes to the project schedule/workplan:** no/yes, in.....(month/yr)

**3. Are there any other issues you wish to raise relating to the project or to Darwin's management, monitoring, or financial procedures?** No

**Appendix 1 – Microreserves in universities**

**Naryn state university**



**Issyk-Kul State university**



**Osh State University**



**Kyrgyz national University in Bishkek**



**Appendix 2 - DT meetings on developing Biodiversity education Module**



**Appendix 3 – Workshop on training teachers to deliver a new developed Module on biodiversity**



**Appendix 4 – Monitoring visits - lectures and practical work within new Biodiversity education module**





**Appendix 5 – Project publications - banners, water key, Educational Package for universities (Manual for university teachers with lectures and activities, case with printed slides, CD, etc.)**

## Вузы Кыргызстана за сохранение биоразнообразия

### ЖИЗНЬ СОЗДАЕТ УСЛОВИЯ ДЛЯ ЖИЗНИ

Естественные экосистемы Кыргызстана и планеты в целом создают и поддерживают условия для существования Жизни на Земле.

**Экосистемные функции:**

- Формирование, регуляция и стабилизация климата (температура, влажность)
- Регуляция газового состава атмосферы
- Образование и повышение плодородия почв, предотвращение эрозии почв
- Привлечение осадков, водорегуляция и очистка воды

**Социум**  
**Экономика**  
**Искусственные экосистемы**  
**Естественные экосистемы**

### УСТОЙЧИВОЕ РАЗВИТИЕ

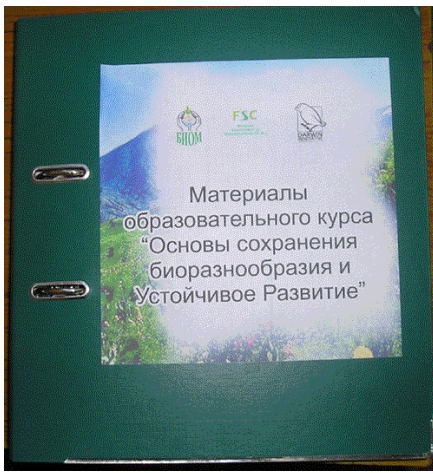
На модели показаны компоненты устойчивого развития, и взаимодействие между ними. Культура и цивилизация, организация социальной, а тем более экономической сфер жизни общества базируются свое существование на использовании ресурсов экосистем.

При этом важно различать искусственные экосистемы, тесно связанные с жизнедеятельностью человека, и естественные, которые поддерживают Жизнь как таковую, а значит, и всю систему нашего общества.

**УР = Социум + Экономика + Естественный капитал**

### Естественные экосистемы - основа для Устойчивого Развития

Департамент образования и науки, Министерство образования и науки Кыргызстана, 2008. © ИКОМ, Кыргызстан, КАЗР. Карта составлена проф. К.А. Шереметьевым, Д.А. Давыдовым, И.А. Давыдовым. Издательство "Издательство "Издательство "Издательство"





**Appendix 6 – Program of the seminar**



БИОМ

FIELD STUDIES COUNCIL

DARWIN INITIATIVE FOUNDATION  
ECOLOGICAL MOVEMENT "BIOM"

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## PROGRAM

### OF THE SEMINAR

# *«Raising quality of ecological education for biodiversity conservation in universities of Kyrgyzstan» - phase 2*

Place: Bishkek city

Date: 17-19 September 2007

#### 17 September 2007

**9.00 – 9.30**

Registration of the participants

**9.30 – 9.45**

Opening of the seminar. Discussion of the program.

**Evgenia Postnova**, EM "BIOM", coordinator of programs

**9.45 – 10.15**

Presentation of progress on project:

- *Naryn State University, Omurov Nurlan*
- *Issyk-Kul State University, Muhambetalieva Gulnara*
- *Osh State University, Hamidulina Shahida*
- *Kyrgyz National University, Timur Toktosunov*
- *Presentation of the module "Bases of biodiversity conservation and Sustainable Development", Evgenia Postnova*

*Presentation of the main themes of the module*

**10.15 – 10.45**

*«destruction of the natural ecosystems – central aspect of the global ecological crisis».*

**Evgenia Postnova**

**10.45 – 11.00**

*Coffee break*

**11.00 – 12.00**

*Climate change and destruction of ecosystems*

**James Hindson**, executive director «FSC» (UK)

**12.00 – 12.30**

*Presentation of educational pack on climate change*

**12.30 – 13.00**

*«Ecological footprint as method of assessment of human impact on environment».*

**Alexander Yaroshenko**, EM “BIOM”, coordinator of programs

13.00 – 14.00

*Launch*

*Presentation of the main themes of the module*

*(continuation):*

**14.00 – 15.00**

*Wild ecosystems - mechanism of support conditions for Life on the Earth.*

**Gulnara Muhambetalieva**, ISU

**15.00– 16.00**

Theory of Biotic regulation of the environment. Water biotic pump in forest ecosystems.

**Ilia Domashov**, vice chair of Council of EM “BIOM”, coordinator of programs

**16.00 -16.15**

*Coffee break*

**16.15 – 17.00**

*Exercises on exploration of parameters and modeling of ecosystems.*

**Ruslan Ustimenko**, EM “BIOM” coordinator of programs

**17.00– 17.30**

Assessment of work and closing of the 1-st day.

### **18 September 2007**

**8.00 – 8.30** *«Specter of field studying methods».*

**Ruslan Ustimenko**

**8.30 – 9.00** *«Ecosystem approach to management of pastures».*

**Sagynbek Shermatov**, NGU

**9.00 - 13.00**

Field excursion to area of steppes and pastures

*«Specter of strategies and methods of exploring grasslands»*

**Ludmila Penkina**, expert

Field excursion to the pond

*«Methods of exploring biodiversity of water ecosystems»*

**Lidia Kustareva**, expert

**13.00 – 14.00**

*Dinner*

**14.00 - 15.30**

*Visit to the microreserve in KNU*

*Visit to the sun exhibition in Bishkek*

**15.30 – 15.45**

*Coffee break*

**15.45 – 17.15**

Discussion about new experience.

**17.15 – 17.30**

Assessment of work and closing of the 2-nd day.

### **19 September 2007**

**9.00 – 9.45** *«Sustainable Development».*

**Evgenia Postnova**

**9.45 – 10.45**

*«Mechanism of achievement of SD».*

**Ilia Melyakov**, EM “BIOM” coordinator of programs

**10.45 – 11.00**

*Coffee break*

**11.00 -12.00**

*«Biodiversity conservation at the international, national and local levels ».*

**Anna Kirilenko, Dmitry Vetoshkin**, coordinators of BIOM’s programs

<b>12.00 -13.00</b>	The role game « <i>Meeting of the parties of Convention on biodiversity</i> »
<b>13.00 – 14.00</b>	<i>Dinner</i>
<b>14.00 - 14.30</b>	UN Decade on ESD <b>Evgenia Postnova</b>
<b>14.30 - 15.30</b>	ESD: content and methodological bases. <b>James Hindson</b>
<b>15.30 - 16.30</b>	Student-oriented approach in ESD <b>Roksana Aganisyanev</b> , information manager of BIOM«БИОМ»
<b>16.30 – 16.45</b>	<i>Coffee break</i>
<b>16.45 – 17.00</b>	Discussion of the further steps on the project. <b>Evgenia Postnova</b>
<b>17.00 – 17.30</b>	Assessment of work and closing of the seminar.