

**ECAP**

**Enhancing Competencies of Central Asian  
Universities in Agricultural Policy focused  
on Environmental Protection & Land  
Management**

**Presentation of project results**

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# Partnership

- \* P1 Slovak University of Agriculture in Nitra – SUA
- \* P2 University of Natural Resources and Life Sciences – BOKU
- \* P3 Czech University of Life Sciences Prague – CULS
- \* P4 Kazakh National Agrarian University - KazNAU
- \* P5 Republican State Enterprise operating under the right of economic management A. Baitursynov Kostanay State University of Ministry of Education and Science of the Republic of Kazakhstan – KSU
- \* P6 Samarkand State University – SamDU
- \* P7 Karakalpak State University named after Berdakh – KarSU

# Project aim

- \* The aim of this project is to contribute to the enhancement of the theoretical approach towards the land management and environmental protection in Central Asia countries through **developing an innovated programme curricula in the field of “Environmental protection and Land Management”** – in the context of Agricultural Policy principles.

# Project partial aims

- \* to **develop an innovated programme curricula** within the related study programme in order to improve a quality of education in Central Asian countries in the field of environmental protection and land management in the context of new CAP;
- \* to **increase an awareness of students from Central Asia** on legal tools supporting environmental friendly agricultural practices;
- \* to **create a partnership of European and Central Asian higher education institutions which will benefit from mutual support of education in the field of environmental protection and land management**, exchange of knowledge and skills concerning environmental friendly agricultural practices and legal tools development in the field of environmental protection and land management.

# Project duration

15.10.2015 - 14.10.2018

# Workpackages

- \* **WP1 PREPARATION**
- \* **WP2 DEVELOPMENT**
- \* **WP3 QUALITY PLAN**
- \* **WP4 DISSEMINATION & EXPLOITATION**
- \* **WP5 MANAGEMENT**

# WP2 DEVELOPMENT

Project implementation – development of project outputs

## **Deliverables/results/outcomes**

- \* Target Group Needs Analysis
- \* Methodological Manual for Curricula Development
- \* Electronic Platform - Training Curricula and Courses
- \* Pilot Testing

# WP2 DEVELOPMENT

## Project implementation – development of project outputs

### **Target Group Needs Analysis**

- \* Analysis describing training needs of CA partners as an input for training curricula innovation or creation
  - \* general information on partner universities (number of students, staff, academic units, study programmes),
  - \* information on higher education on environmental protection and land management (academic units with focus on subject fields, expert staff),
  - \* courses offered by each partner university and cooperating institutions – decision and policy making bodies, research institutes, other universities, etc.



# WP2 DEVELOPMENT

## Project implementation – development of project outputs

Level	SUA	BOKU	CULS	KazNAU	KSU	SamDU	KarSU
Bc.	Analysis of Agricultural Policies I	Surveying and Mapping	Sustainable Use of Natural Resources	Environmental aspects of natural science	Ecology and Sustainable Development	Ecology	General land science
Bc.	EU Agricultural Policy	Land Consolidation and Land Development	Economics and Management	Basics of natural resource use	Soil science	Introduction to environmental science	Geography of the amelioration
Bc.	Ecology (Principles of Ecology)	Welfare Economic Analysis of Agricultural Policy: Theory and Applications		Biogeochemistry and ecotoxicology	Agroecology	Land management	Geoecology
Bc.	Cadastre of Real Estates	Agricultural Political Economy		Geoecology	Agrochemistry	Natural resources management	Soil amelioration
Bc.		Agro-environmental Law		Environmental monitoring	Protection of soil from erosion	Ecological tourism	Landscapes and soil degradation
Bc.		Sustainable Land Use in developing countries		State registration and accounting of lands	Sustainable agriculture	Climate change and ecological adaptation	Ecology of a soil
Bc.		Spatial Planning		Land cadastre	Soil protective forest planting	Geoecology	Soil fertility enhancement
Bc.		Regional Planning/Rural Development		Management of land planning and cadastral works	Monitoring and management of soil fertility	Radiobiology	Soil ecology and agroecology

# WP2 DEVELOPMENT

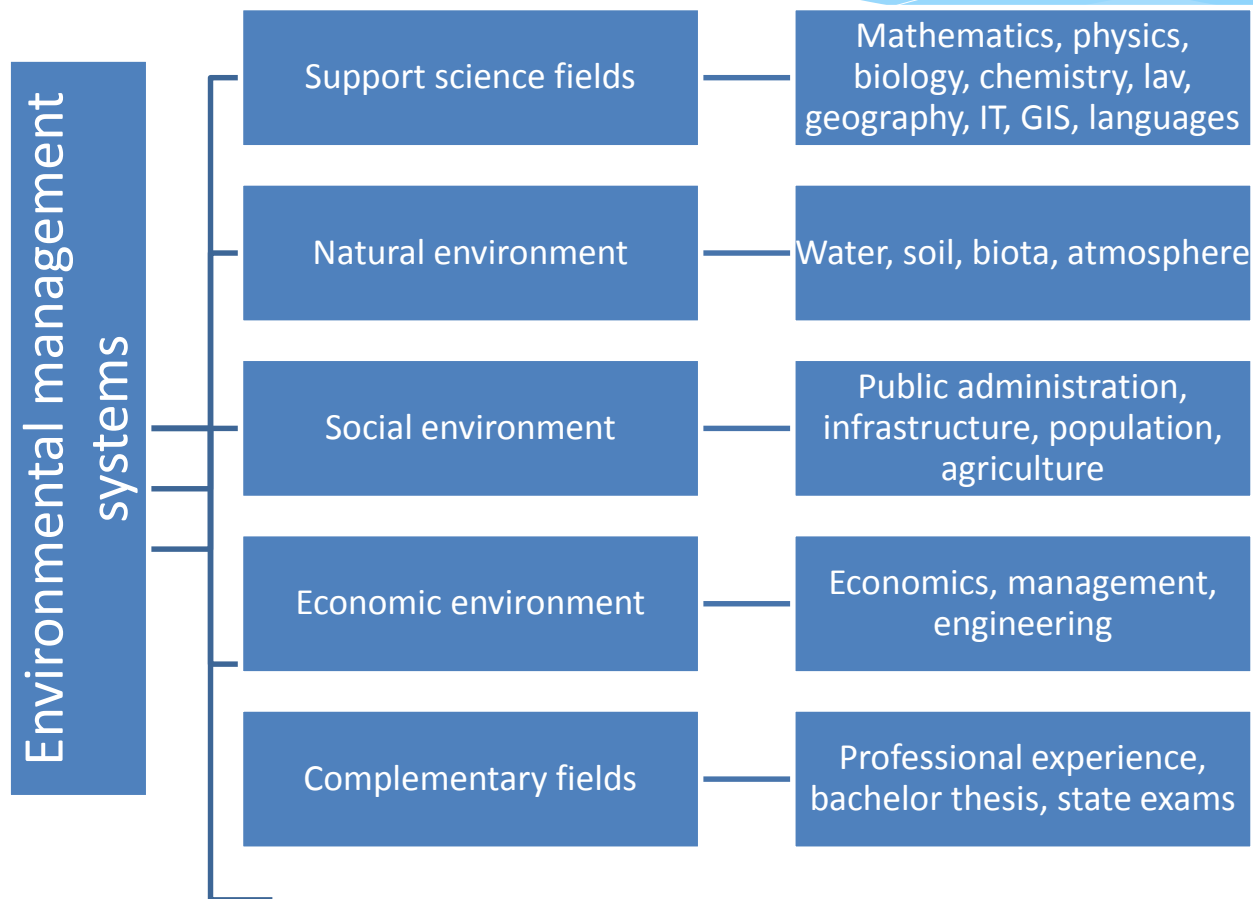
## Project implementation – development of project outputs

### **Methodological Manual for Curricula Development**

- \* Methodological guidelines which facilitate development and/or modification of programmes and courses taught at universities in Kazakhstan and Uzbekistan.
- \* Although the material starts from European standards concerning creation of study programmes, Kazakh and Uzbek partners creating their study programmes will have to reflect their national conditions of accreditation bodies and other relevant stakeholders
- \* It includes template of the real study programme in the field of environmental protection tailored for conditions of Kazakh and Uzbek partners on the basis of particular problems the countries have to face

# WP2 DEVELOPMENT

## Project implementation – development of project outputs



# WP2 DEVELOPMENT

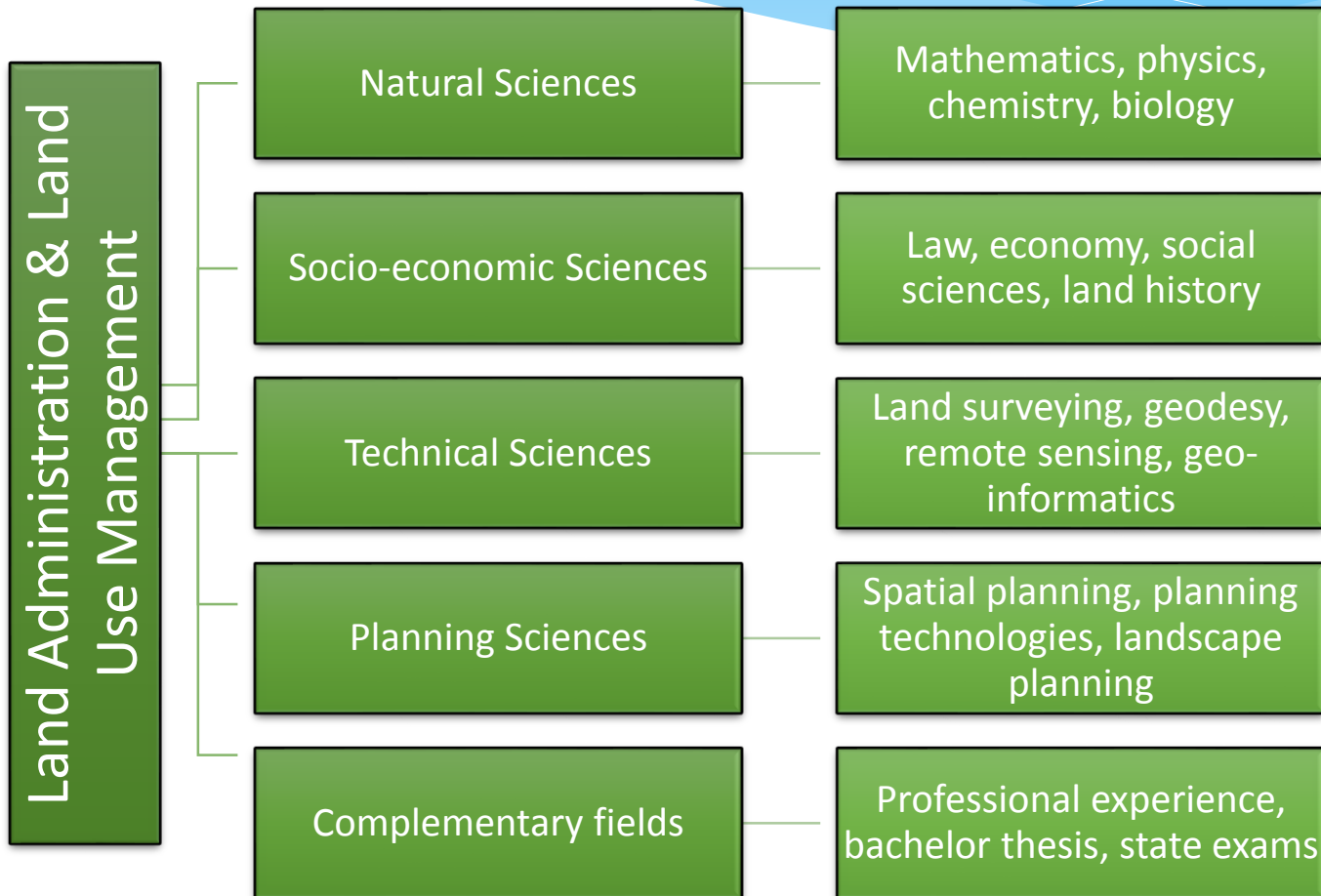
## Project implementation – development of project outputs

### 4.1.2 Structure of the model study programme – environmental protection

Structure of 4 years' study programme Environmental Protection									
	No. credits	I. Year		II. Year		III. Year		IV. Year	
		WS	SS	WS	SS	WS	SS	WS	SS
1	5	Mathematics, basics of statistics	Environmental microbiology	GIS software and its application	Nature protection	Landscape ecology	Environmental management	Environmental monitoring	Environmental economics
2	5	Environmental biology	Environmental chemistry	Economic geography	Basis of water management	Sustainable ecosystems	Environmental management systems	Environmental protection	Circular economy
3	5	Climatology	Soil science	Basics of agriculture	Basics of forestry	Environmental ethics	Protection of biodiversity and landscape	Management of arid vegetation area	Socio-economic function of vegetation
4	5	Informatics	Hydrology	Plant ecology	Protection of water resources	Methodology of scientific research	Project environmental management	Management of flooded areas	The concept of sustainability
5	5	Environmental policies and law	Environmental ecology	Geo-ecology	Protection of natural resources	Eco-technology	Renewable resources in the environment	Ecological disasters	**
6 *	5	World language	World language	Discussion on climate change	Practices of microbiology; Practices of	Eco-tourism and	Methods of bioremediation *	Invasions and invasive organisms	***

# WP2 DEVELOPMENT

Project implementation – development of project outputs



# WP2 DEVELOPMENT

## Project implementation – development of project outputs

### 4.2.1 Structure of the model study programme – land management

Structure of 4 years' study programme Land Administration and Land Use Management

No. credits	I. Year		II. Year		III. Year		IV. Year		Course completion	
	WS	SS	WS	SS	WS	SS	WS	SS		
5	Mathematics & Basics of statistics	Mathematics & Geometry	Geodesy	GNSS	Cartography & Mapping	Geoinformatics	Land Administration Systems	Land Valuation		
5	Physics and Chemistry	Basics in Ecology	Basics in Water Management	Land Law & Land Rights	Image Processing	Photogrammetry	Remote Sensing	Advanced Remote Sensing		
5	Legal Basics & Land Law	Planning Theory	Land Use Planning	Rural Development	Advanced Land Use Planning	Advanced Geodesy	Advanced Geoinformatics	Time Series of Satellite Images		
5	Informatics	Fundamental of Economics	Business Administration	Environmental Protection	Land Economics	Landscape Planning	Project Management	Integrative Project		
5	Land Surveying	Land Surveying	Protection of Natural Resources	Land Policy & Land Governance	Disaster Management	Land Market	Real Estate Management	Elective Courses		
5	World language	World language	Landscape Planning	Landscape Architecture	Moderation & Communication	Project Management	Methodology of scientific research	State Exam		
30 credits per semester									Σ	%
Σ	30	30	30	30	30	30	30	30	240	100
Obligatory courses	5	5	3	3	2	2	2	2	24	50
Obligatory elective courses	0	0	2	2	2	2	2	2	12	25
Elective Courses	1	1	1	1	2	2	2	2	12	25
Courses / Modules	6	6	6	6	6	6	6	6	48	100

# WP2 DEVELOPMENT

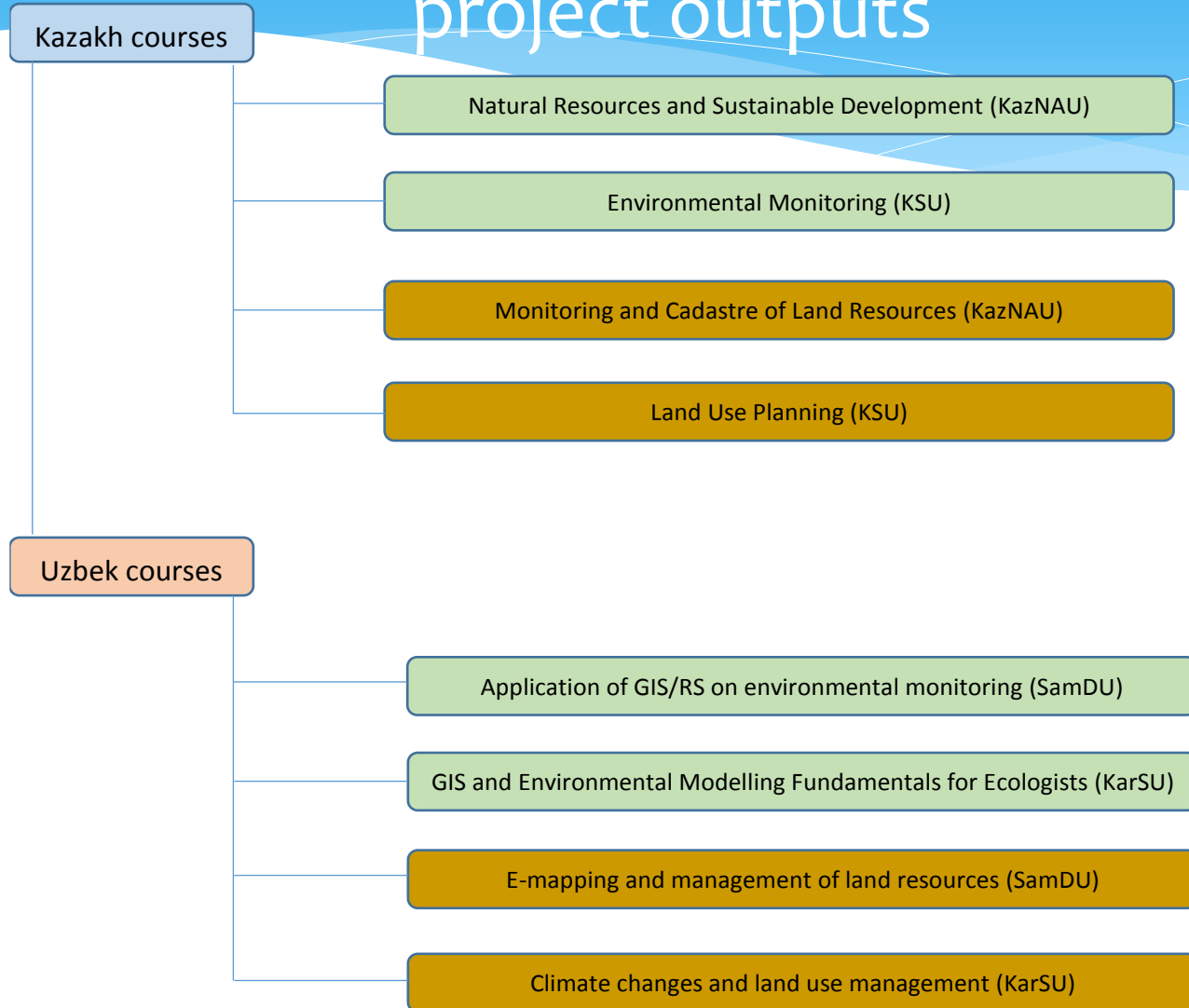
## Project implementation – development of project outputs

### Electronic Platform - Training Curricula and Courses

- \* Aimed to have a simple access to information for target groups within the training programme
- \* Multimedia study texts published on internet, containing adequate scale of text and graphic information, animations and hyperlinks represent adequate study materials to be comfortably used in higher education, and a in a case of training material placed on internet there is also an opportunity of easy update of learning content.

# WP2 DEVELOPMENT

## Project implementation – development of project outputs







## Log in

Username

Password

Remember username

Log in

[Forgotten your username or password?](#)

Cookies must be enabled in your browser ?

Some courses may allow guest access

Log in as a guest



You are not logged in.

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- 2 Sampling of ambient air
- 3 Systems of Monitoring of air quality

Navigation

Administration

## Lecture Thesis



### 1 Monitoring of the level of atmospheric pollution

The organization of the atmospheric pollution level monitoring in populated areas is carried out in accordance with state standards in this area. **Monitoring of the level of atmospheric pollution** is carried out at a **post** that is a place chosen in advance for this purpose (a point of terrain) in which a pavilion or a car equipped with appropriate instruments is located. The post is located on an open site, ventilated from every side (on asphalt, solid ground, lawn).

The observation posts for atmospheric air pollution (figure 5) have categories: stationary, mobile (route and sub-flare). A *stationary post* in the form of a special equipped pavilion ensures continuous registration of the content of pollutants or regular sampling of air for subsequent analysis. Among the stationary posts, basic posts are allocated to identify long-term measurements of the content of the main and most common specific pollutants. The *route post* is designed for regular air sampling in cases where it is not possible (unreasonable) to establish a post or it is necessary to study in more detail the state of air pollution in certain areas, for example, in new settlement areas. Observations on route posts (stations) are conducted using an equipped mobile laboratory. One car for a working day travels 4-5 posts in the same order, so that the detection of impurity concentrations is carried out on a regular basis. The *sub-flare post* serves for sampling under a smoke (gas) torch in order to identify the zone of influence of the emission source at points located at a defined distances from the source.



Time	SO <sub>2</sub>	NO <sub>2</sub>	NO	CO	O <sub>3</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	PM <sub>10</sub> / PM <sub>2.5</sub>	Temp	Humid	Wind	Dir	Pres
2017-01-10 08:00:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	65	1.5	180	1013.0
2017-01-10 08:05:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	65	1.5	180	1013.0
2017-01-10 08:10:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	65	1.5	180	1013.0
2017-01-10 08:15:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	65	1.5	180	1013.0
2017-01-10 08:20:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	65	1.5	180	1013.0
2017-01-10 08:25:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	65	1.5	180	1013.0
2017-01-10 08:30:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	65	1.5	180	1013.0
2017-01-10 08:35:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	65	1.5	180	1013.0
2017-01-10 08:40:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	65	1.5	180	1013.0
2017-01-10 08:45:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	65	1.5	180	1013.0
2017-01-10 08:50:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	65	1.5	180	1013.0
2017-01-10 08:55:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	65	1.5	180	1013.0
2017-01-10 09:00:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	65	1.5	180	1013.0



# WP2 DEVELOPMENT

## Project implementation – development of project outputs

### Pilot Testing

- \* in order to evaluate a quality of training module a pilot testing of this output was be necessary to carry out
- \* Each partner will provided minimum of 30 participants to attend the course. The group of trainees consist of teachers, students and experts in the field

# WP4 DISSEMINATION & EXPLOITATION

## Dissemination and Exploitation of Project Outputs

### **Dissemination online and printed materials**

- \* Creation of online and printed materials:
  - \* newsletters (1st and 2nd newsletter realised, 3rd newsletter to be realised)
  - \* Leaflets
  - \* Poster
  - \* Social networks (facebook)
  - \* Web page

# WP4 DISSEMINATION & EXPLOITATION

## Dissemination and Exploitation of Project Outputs

### **Dissemination events**

- \* Organising and participation at workshops, seminars, conferences