

GeoTAK project

Towards new PhD programmes and technology transfer in geoinformation

Developing Interdisciplinary Postgraduate Programmes and Strengthening Research Networks in Geoinformation Technologies in Armenia and Kyrgyzstan

Erasmus+ Capacity Building in Higher Education

Education, Audiovisual and Culture Executive Agency

617695-EPP-1-2020-1-ES-EPPKA2-CBHE-JP

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Aim

To develop **postgraduate Higher Education programmes in Geoinformation Technologies (GIT)** and **strengthening the links in research and innovation** between Higher Education Institutions (HEI), industry and administration in Armenia and Kyrgyzstan

From January-2021 to January-2024

Consortium

| | Partner | Country |
|----------------|---|------------|
| UPV | Polytechnic University of Valencia | SPAIN |
| KTH | Royal institute of Technology | SWEDEN |
| VUB | Vrije Universiteit Brussel | BELGIUM |
| UL | University of Ljubljana | SLOVENIA |
| NUACA | National University of Architecture and Construction of Armenia | ARMENIA |
| YSU | Yerevan State University | ARMENIA |
| ANAU | Armenian National Agrarian University | ARMENIA |
| CCRA | Cadastre Committee of the RA | ARMENIA |
| MESCS | Ministry of Education, Science, Culture and Sports | ARMENIA |
| KSUCTA | Kyrgyz State University of Construction, Transport and Architecture | KYRGYZSTAN |
| KSMU | Kyrgyz State University of Geology, Mining and Natural Resources | KYRGYZSTAN |
| OshTU | Osh State Technological University | KYRGYZSTAN |
| Goscartography | Kyrgyz State Cartography-Geodetic Service | KYRGYZSTAN |
| MOES | Ministry of Education and Science | KYRGYZSTAN |



Objectives (1)

- ✓ To **identify research** and development **needs** of Kyrgyzstan and Armenia in the field of Geoinformation Technologies (GIT)
- ✓ To **create Research Nodes** in GIT to promote and harmonise collaborative innovation projects and joint research lines
- ✓ To improve and **update research laboratories** of GIT
- ✓ To **train trainers** in topics of GIT of special interest **for regional development** of innovation and environmental protection

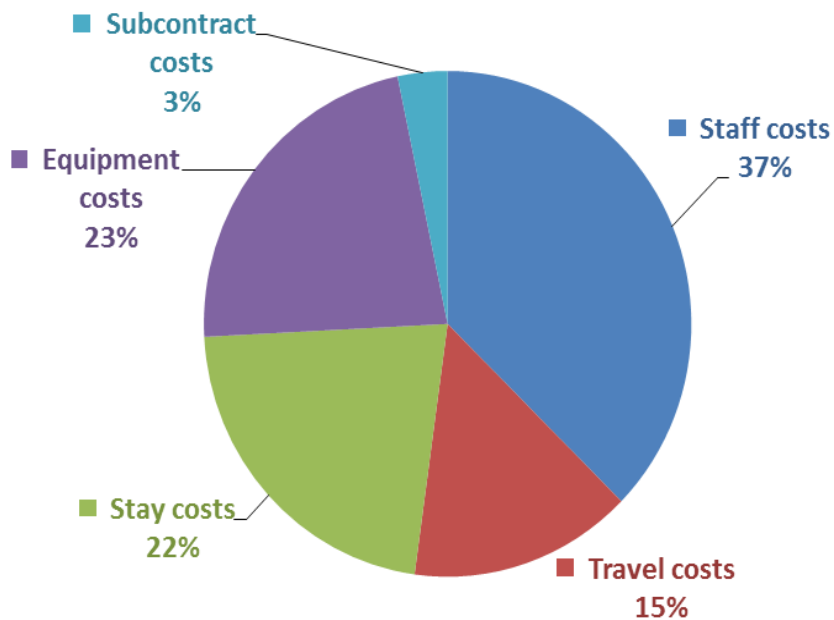


Objectives (2)

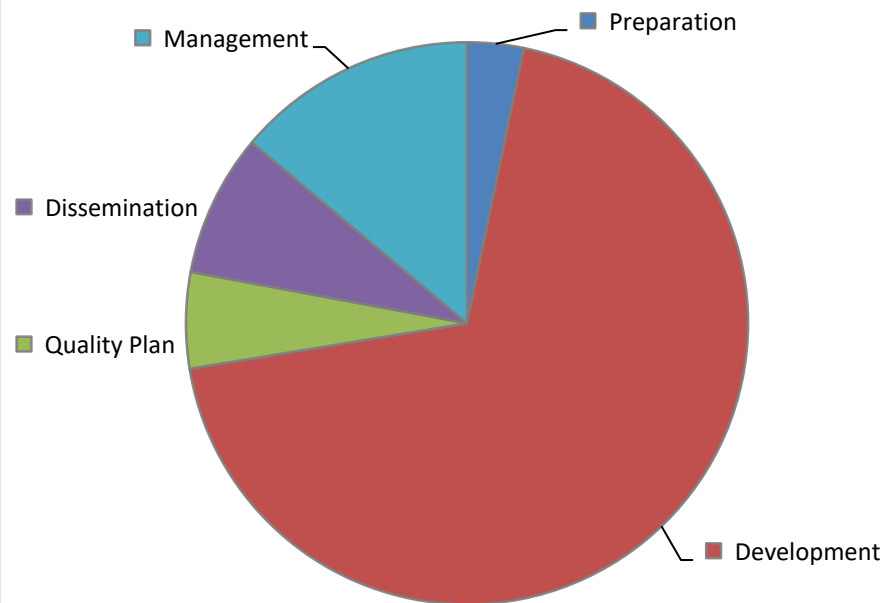
- ✓ To provide teachers and managers from HEI knowledge and **skills in transversal topics** of higher education following Bologna process
- ✓ To create **interdisciplinary postgraduate courses and PhD programs** that enhance the potential of GIT and focus research outputs on contemporary problems at regional and global scales
- ✓ To foster and strength the **cooperation** between **university and industry**
- ✓ To **share experiences and perspectives** between partner countries to stimulate new strategies in research and development

Total budget: 873,769 euros

Budget by Headings



Budget by WP Type





Project development

Work Packages

Social needs (KSUCTA)

- Identification of research & development needs
- Workshops research & innovation

Research networks (KTH)

- Creation of National Research Nodes in GIT
- Promoting industrial PhD thesis
- Intl. workshop: Sharing experiences in R&I

Research capacities (UL)

- Equipment, research labs
- Training teachers in GIT and transversal skills
- Curricula development at postgraduate level

Quality control (VUB)

- Quality plan and risk assessment
- Internal and external evaluation

Management (UPV)

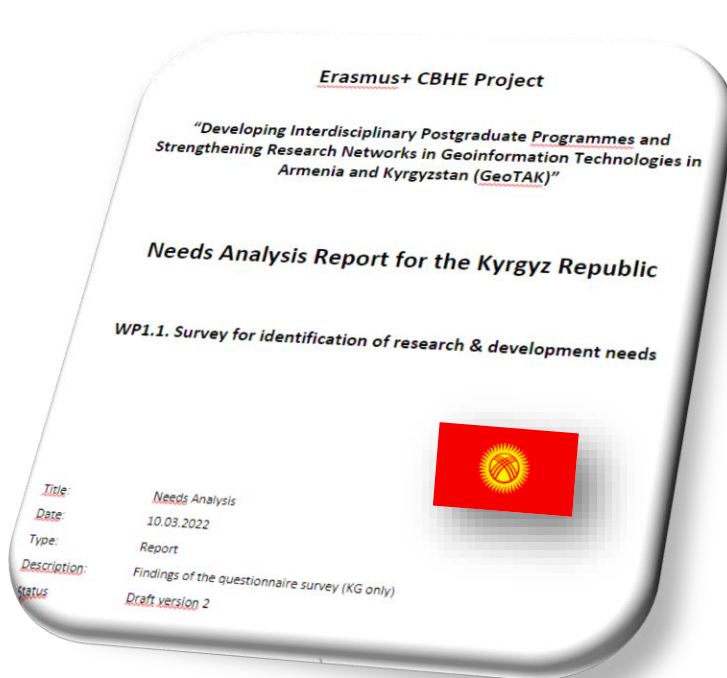
- Management committee
- Communication and reporting

Dissemination & exploitation (NUACA)

- Websites and social networks
- Promotion and sustainability of NRN-GIT
- Labour market days, final conference

Social needs (KSUCTA)

- 2 Reports on **social needs** in GIT





Research networks (KTH)

- Constitution of **Advisory Boards** and first meetings



Kyrgyz Advisory Board meeting



Armenian Advisory Board meeting



Creation of **National Research Nodes** in GIT

Research capacities
(UL)

- **Equipment acquisition**
- **Opening new Labs in GIT**

KSTU (KSUCTA)



KSTU (KMSU)



Research capacities (UL)

- **Equipment acquisition**
- **Opening new Labs in GIT**

OshTU



ANAU



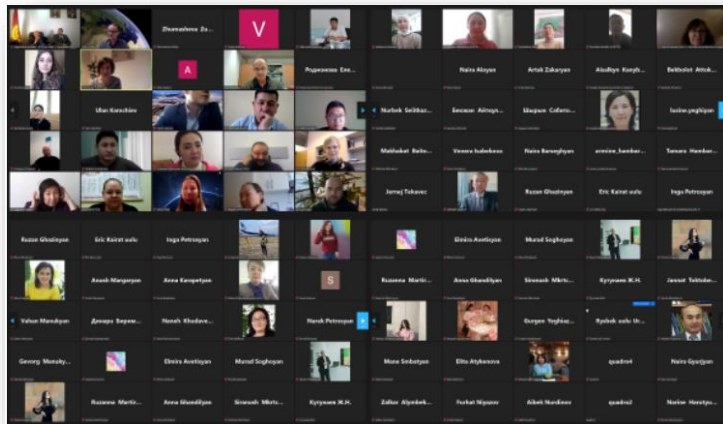
YSU



Research capacities
(UL)

- Technical **trainings** in GIT
- **Workshops** in Curricula development / Innovation

Online course: Basic concepts in
GeoInformation Technologies



(January 2022, online)

Workshop: Curricula development
(June 2022, Ljubljana)

Technical training: GIT for Natural Resources



(March 2022, Osh)

Technical training: Geodesy lectures

(March 2022, Bishkek)



Research capacities (UL)

- Technical **trainings** in GIT
- **Workshops** in Curricula development / Innovation

Technical training: GIT for Land Management (Ljubljana and Yerevan)



(June 2022, Oct. 2022)

Technical training: GIT in Cultural Heritage (Valencia, Nov. 2022)



Technical training: GIT for Natural Hazards (Brussels, Dec. 2022)



Research capacities
(UL)

- PhD licenses in partner universities
- Curricula development & implementation

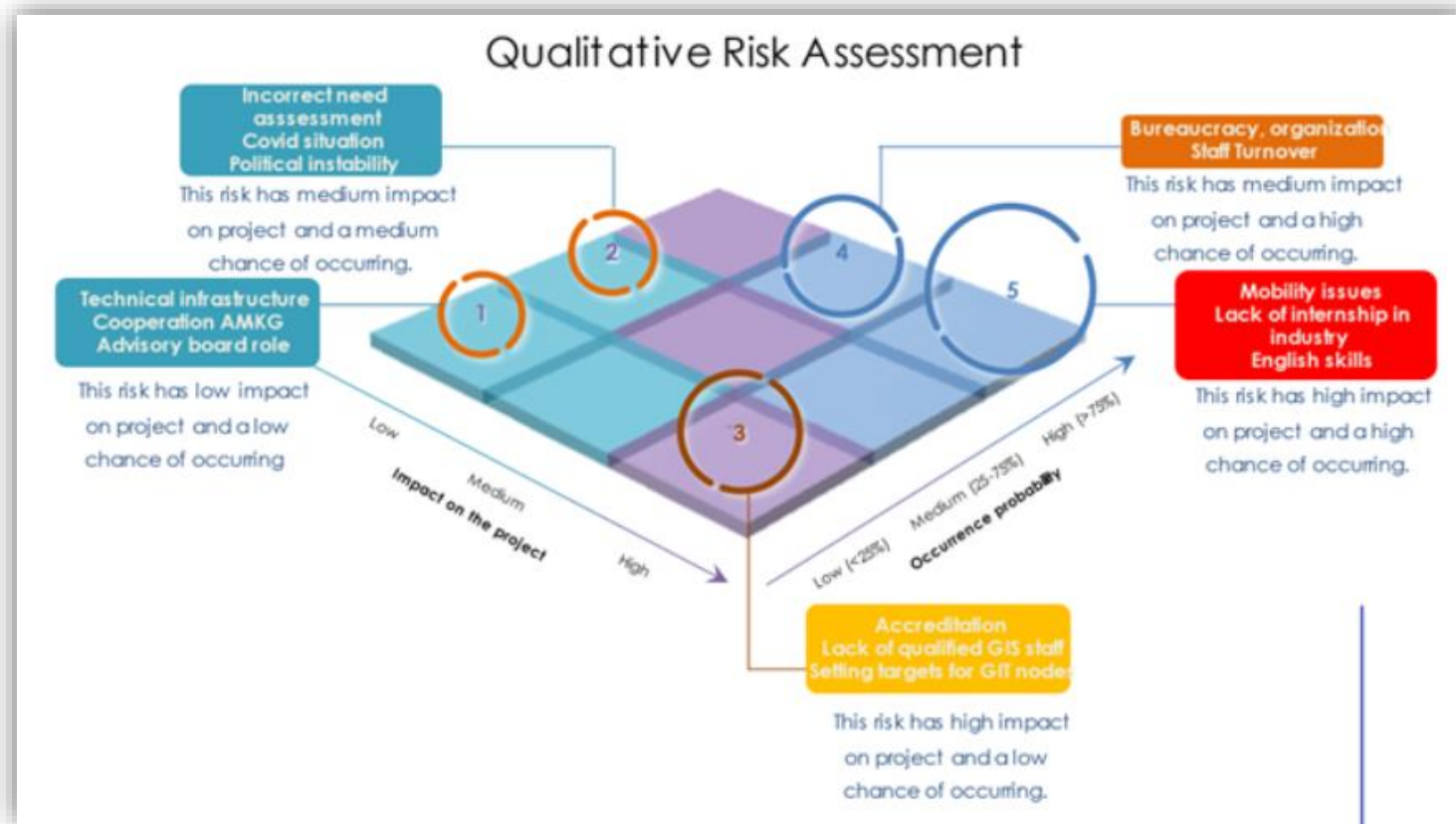
5 new PhD programmes have been created: 1 joint degree in Armenia, 3 already licensed in Kyrgyzstan and other waiting for license



| GENERAL COURSES | | ECTS |
|-----------------------------|--|------|
| Geoinformation technologies | | |
| NUACA | | |
| 1 | Scientific research methodology | 2 |
| 2 | Processing Methods of Aerospace Image for Spatial Analysis | 5 |
| 3 | 3D modeling | 5 |
| D.1.4. | YSU | 12 |
| 1 | Modern teaching methods | 2 |
| 2 | Geospatial Data Mining | 5 |
| 3 | Scientific GeoComputing (GeoPython) | 5 |
| ANAU | | 12 |
| 1 | Applications of Remote Sensing in land use and environmental engineering | 4 |
| 2 | Land cadaster and information systems | 4 |
| 3 | Land management and land use planning | 4 |
| Total | | 12 |

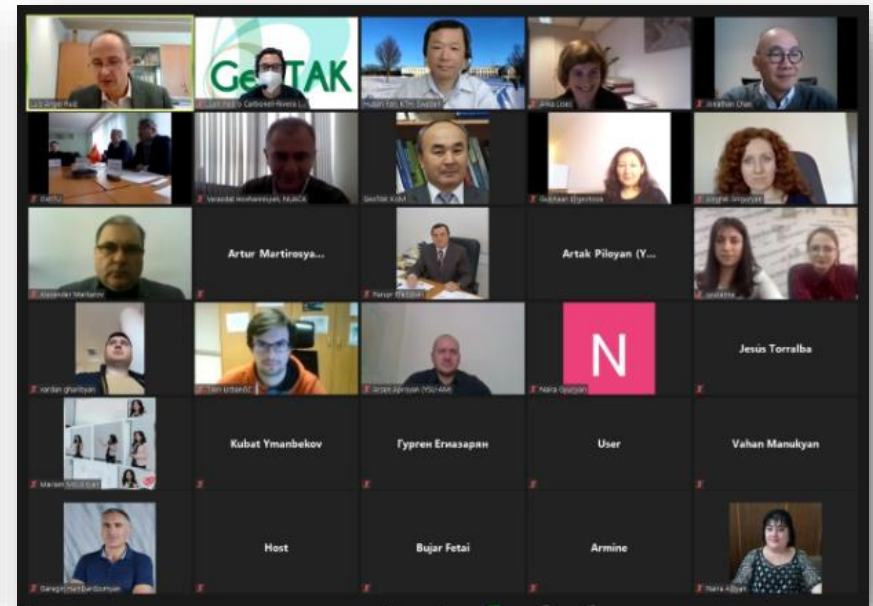
Quality control (VUB)

- Quality plan and control
- Risk assessment



Management (UPV)

- **Kick-off meeting**
- **Management committee**
- **Project management meetings**



Dissemination & exploitation (NUACA)

- **Websites & social networks**
- **Other dissemination activities**

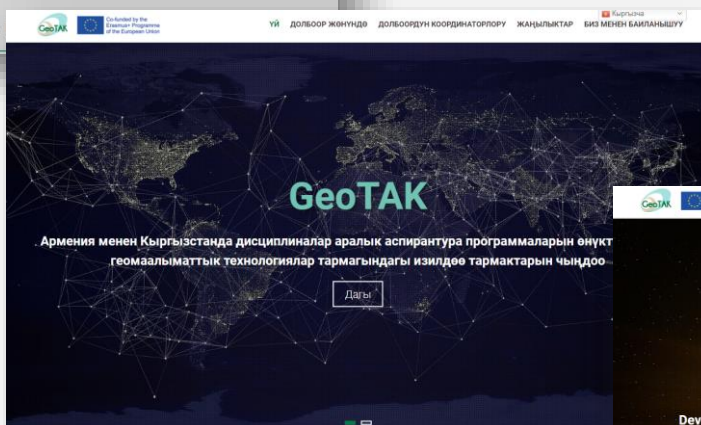


<https://geotak.nuaca.am/>

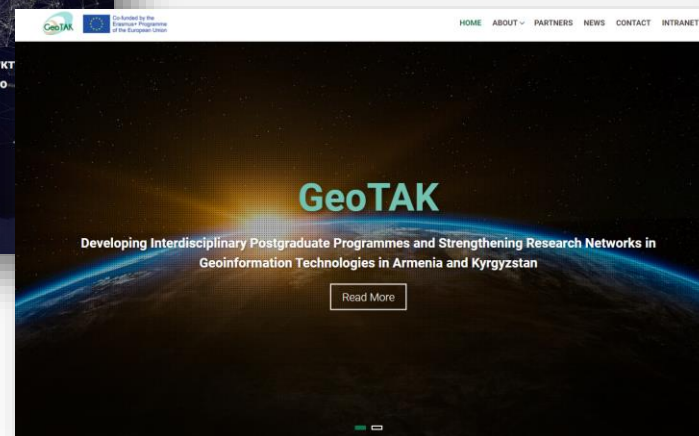
Logo, identity materials, promotional videos and brochures

<https://geotak.org.kg/>

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<https://geotak.webs.upv.es/>



Dissemination & exploitation (NUACA)

- **Websites & social networks**
- **Other dissemination activities**

Information Day (NUACA)



GISCA - 2023

Participation in GISCA 2022 & 2023

University collaboration
agreements

Visit Goscartography



Erasmus+ Days





Thank you for your attention!

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