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# Rare vegetation monitoring in the Azerbaijan Republic (follow-up)

With funding from Rufford Small Grant Foundation (RSGF), Azerbaijani scientists be permitted to continue a Project on spatial monitoring of rare vegetation distribution in Gobustan National Park, Azerbaijan, Previously the project team has been awarded of the Planet Action grant which provided SPOT satellite images and GIS software.

#### Date and location of event:

Country: Azerbaijan

Project Period (years): 2010-2011

The Gobustan is located between the southern outcrops of the Caucasus Mountain range and the Caspian Sea, some 60 km south of the capital Baku.

The desert communities in the Gobustan State National Park represent the most ecologically important habitat, from a botanic point of view. The great age of many of the desert communities and their slow growth rate further enhance their botanic significance. The importance of this habitat type is one of the reasons that the Gobustan desert has been proposed as a State National Park, so that some level of protection is offered to this desert.

## Primary organizer(s):

This project is being carried out by scientists from Institute of Botany of Azerbaijan, Azerbaijan National Academy of Sciences and specialists in Geographic Information Systems and Remote Sensing.



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- 1) Yelena M. Gambarova Project Leader (Aeronavigation Applications Development Department, R.I.S.K. Company, Baku, Azerbaijan)
- 2) Adil Y. Gambarov Project Mentor (SAHIL IT Company, Baku, Azerbaijan)
- 3) Rustam B. Rustamov Senior scientist (Institute of Physics of the National Academy of Sciences, Azerbaijan)
- 4) Maral H. Zeynalova Senior scientist (Institute of Biology of the National Academy of Sciences, Azerbaijan)

### Objective of the event

From a botanic point of view, the Vegetation communities in the Gobustan present the most ecologically important habitat. A big age of many desert communities and their slow growth rate enhances their further botanic significance. The great age of many of the desert communities and their slow growth rate further enhance their botanic significance. The importance of this habitat type is one of the reasons that the Gobustan desert has been proposed as a State National Park, so that some level of protection is offered to this desert. Plant communities such as these, which develop very slowly are particularly susceptible to this disturbance and are easily lost, taking many years to recover (at least 10-12 years)

#### The activities undertaken

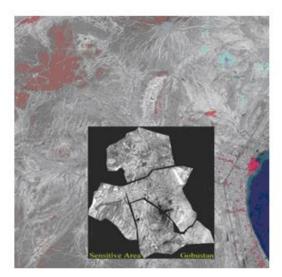
The "academic" information based on biodiversity in Azerbaijan is outdated. Therefore, data on distribution and abundance needs updating for most of groups. Present status of the foregoing issue for habitat and ecological community data urgently need to be updated. In accordance with this the need is to move from an academic approach to biodiversity conservation to a more development-oriented approach where accurate spatial information from high-resolution satellite images is the tool for planning and development. Geoinformatics-based management of biodiversity is taking into account as the perspective instrument within the study area.

The methodological approach of this Project includes theoretical and practical training on field identification and census methods and the use of standardized monitoring methods.

Remote sensing and monitoring using satellite images can provide important information for rare vegetation distribution.

#### The results of the event

An Environmentally Sensitive Area (ESA) is a type of designation for agricultural area which needs special protection because of its landscape, wildlife or historical value. Change in rare **vegetation distribution** over time is focused on the Sensitive Area within the Gobustan National Park (Figure 1).



Our long-term goal is to contribute towards the effective conservation and sustainable use of protected area within the proposed research area.

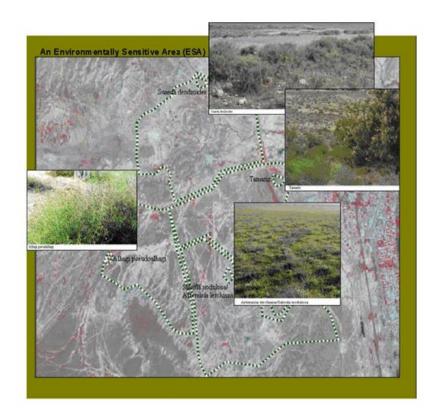
#### Our results are:

- Development of the methodology on recognition, monitoring and change detection of rare vegetation distribution;
- Development of the organizational practice in rare vegetation monitoring;
- Assessment of the potential for future participatory conservation initiatives with local stakeholders.

During the project and after its completion the members of the project team will organize several lections and slide shows in a local schools and organizations. At these meetings representatives of the team will be providing schoolchildren that information about the project. The results of our study were be published in local and international scientific journals.

# Lessons learned about organizing such events

Previously the project team has been awarded of the Planet Action grant which provided SPOT satellite images and GIS software (June, 2009). This technical capacity is intending to use for the investigation of the conservation of Rare Vegetation Communities. Within those studies, a special attention expected to be paid to the vegetations, which have been included into the Azerbaijan Red Data Book. At the same time, there is an opportunity to carry out the field works, supply needed technical facilities for field works, obtain a new or special functioning hardware and at all within the framework of the Rufford Small Grant project which is the excellent source of the project implementation success.



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Yelena Gambarova is Leader of Project team of Rare Vegetation Monitoring in the Gobustan National Park, Azerbaijan. This project is funded by the Rufford Small Grants Foundation.

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Learn more about the program at

www.ruffordsmallgrants.org/

This project was featured by United Nations Convention to Combat Desertification (UNCCD) on website: http://www.unccd.int/publicinfo/partners/stories.php?newch=gobustan