SenSPa

Sentinels for Sustainable Pasture management

A Tool for Sustainable Pasture Management in Central Asia

Funded by the European Space Agency

Interested in having up to date information to make important pasture management decisions for an area of interest?

Need easy access to high-resolution satellite imagery, plant cover, forage production and grazing capacity data?

Interested in monitoring pastures in a cost and time efficient manner?

Background

In Central Asia and neighbor countries rangelands occupy 65% of the total land area. In these countries, population relies greatly on livestock farming and pastures condition but due to lack of significant information and data, pastures are degrading having direct impact to rural societies.

Governmental authorities, policy makers, land managers and livestock farmers have to take decisions about sustainable pasture management according to the rangeland productivity and status. However, collecting field data regarding the current condition of vegetation (plant cover, forage production) is time and labor intensive. Coping with these challenges, SenSPa is fostering the introduction of a new Earth Observations (EO) application concept and an EO based tool for stakeholders and users

supporting sustainable pasture management in developing countries.

SenSPa aims to demonstrate the potential of the integrated use of satellite-derived data, ground measurements, and livestock statistics, to derive relevant geo-information products that will significantly enhance the capacity of stakeholders to define efficient and sustainable pasture management policies and measures. Sentinel-2 data will be linked with field measurements and other ancillary data to assess grassland productivity, rangeland condition and determine grazing capacity. The information will be made available via a web-based tool that will be tested in a use case in Azerbaijan. SenSPa will also leverage on relevant products derived by operative Copernicus Services.

Funding for the implementation of the SenSPa project comes from the European Space Agency (ESA) / European Space Research Institute (ESRIN). The SenSPa team consist of kartECO - Environmental & Energy Engineering Consultancy (Prime Contractor), GMV Innovating Solutions Ltd and Democritus University of Thrace (Subcontractors). The team is supported by two local collaborators for the implementation of the case study in Azerbaijan: Integris LLC and the Agro Research Center.

The Tool

The SenSPa tool is intended to be a platform that will assist sustainable pasture management, decision making, planning of activities and in the long-term pastures' restoration by providing useful, up to date information for sustainable pasture management. The information will be available to local and national public administrations, public and private stakeholders and end-users, whereas the tool will be tested in a use case in Azerbaijan.

Who Can Participate and Benefit?

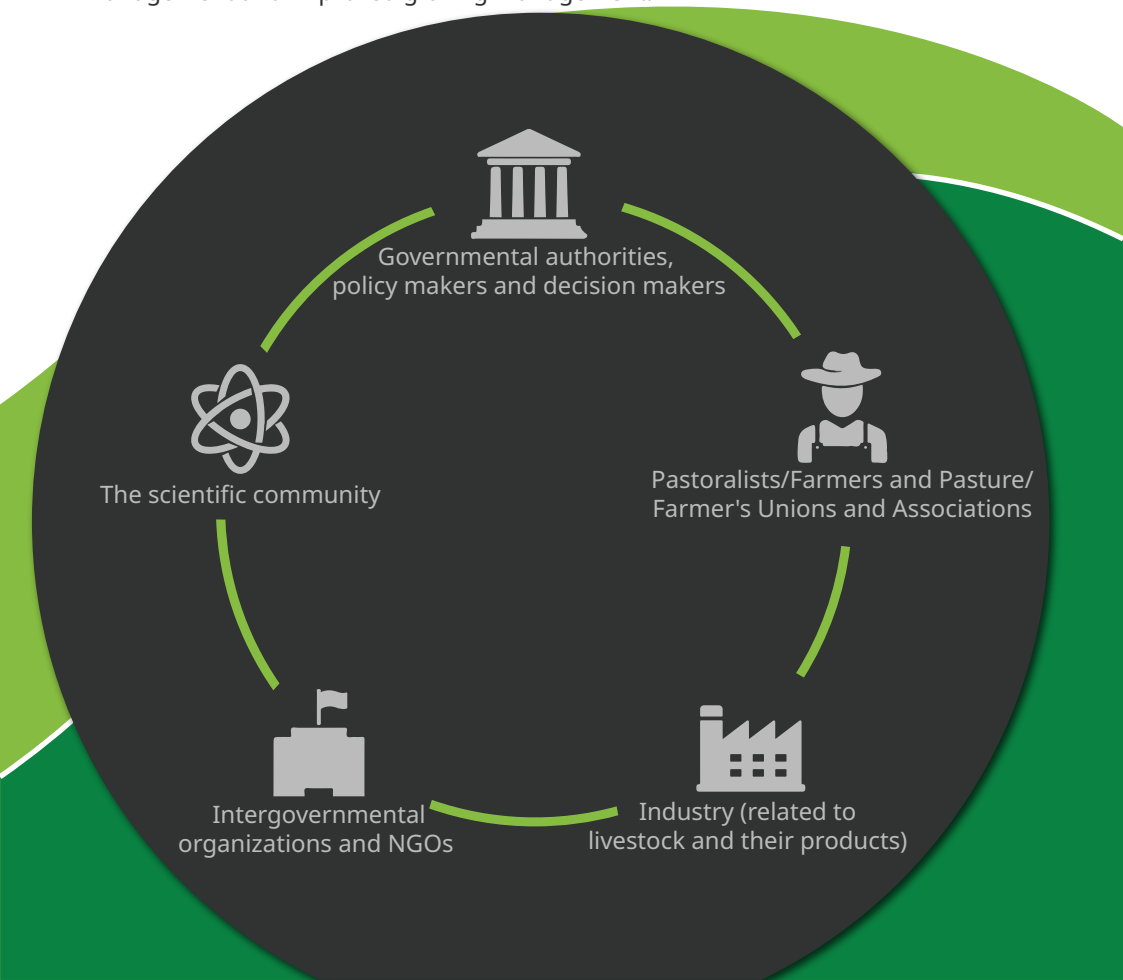
SenSPa promotes a multi-actor working scheme, where EO experts come together with pasture management scientists, ICT experts, policy makers, agri-business representatives and farmers (including unions and cooperatives), and act in a multi-disciplinary and synergistic way to provide added-value, cost-efficient and real-life-tangible solutions to various user categories:

Stakeholders with an interest in pastures would benefit from the SenSPa through access to a wide range of resources that, among others, can help to:

- understand local, national and regional dynamics;
- support Sustainable Pasture Management; and
- improve access to pasture related information.

Impact and benefits

SenSPa is addressing activity line 6 "Earth Observations (EO) for Sustainable Development" of the ESA/AO/1-9101/17/I-NB call topic, which intends to support international responses to global societal challenges. The expected impact and benefits arising from the innovative outputs of SenSPa correspond to societal, economic and environmental benefits and increase of livelihood due to sustainable pasture management and improved grazing management.



SenSPa contributes to reach the following UN Sustainable Development Goals:

SenSPa Tool Launch

The SenSPa tool will be developed and launched by December 2019. Its development will follow three main phases:

(i) assess the data and information needs of interested stakeholders to inform the SenSPa tool design;
(ii) conduct a use case in Azerbaijan to test and validate the tool; and
(iii) investigate solutions to ensure the long-term technical and funding viability of the tool.

Interested stakeholders are encouraged to actively participate in the SenSPa tool development.

For more information about the SenSPa project please visit:
senspa.karteco.gr

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