
Programme: Private Sector Development and TVET in South Caucasus (PSDTVET SC)

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Activity: Support to the development of Geographic Information Systems (GIS) and Remote Sensing (RS) training programme as a precondition of digitalisation of agricultural services

Period: 06/2018 - 09/2019

1. Brief information about the programme

The Private Sector Development and Technical Vocational Education and Training programme which has been developed jointly with the Public partners and private sector in the South Caucasus Countries, aims at promoting the private sector development with a high attention to employment impacts and a close integration of vocational education and training.

Due to the small domestic markets with limited purchasing power, the South Caucasus Countries have focused so far on expanding foreign trade to promote economic development. The export-dedicated strategy achieved only limited success in improving the employment situation and living conditions. Employment growth in sectors that afford the greatest potential for *pro-poor growth* and employment promotion in comparable economies and also in South Caucasus, such as tourism and agricultural, cannot be sustained, because businesses lack well-trained skilled labour.

The core challenge consists thus in the difficult framework conditions for sustainable economic development in the sectors relevant for employment. The capacities available are not yet sufficient to generate the envisaged employment and growth momentum.

Therefore, the programme **module objective** is: The conditions for sustainable economic development have improved in selected sectors relevant for employment.

The programme will adopt the integrated approach of German development cooperation in employment promotion. It will address both the supply and demand side of the labour market to lay a better foundation for employment. Development assistance will focus primarily on involving the private sector in vocational training.

To do this, the programme will operate in three intervention fields:

Intervention field 1 will aim to strengthen capacities for improving competitiveness in the sectors relevant for employment.

In **intervention field 2**, private and public actors will cooperate to improve the labour-market relevance of selected training courses for these sectors.

Intervention field 3 will seek to strengthen the regional and international exchange of experience in sustainable private sector development and dual-oriented vocational training.

Improving the promotion of economic development will contribute to raising demand for labour. At the same time, supporting vocational training and qualification will increase the supply of qualified labour, i.e. trainees that have successfully completed initial and continuing education and training will be better prepared to cope with the requirements and their tasks in enterprises. In the medium and long term, this will make a contribution to reducing structural unemployment and underemployment and to social and sustainable economic development.

The programme is scheduled for a term of 3 years (from April 2017 to March 2020).

2. Context and current situation in the field of assignment

Driven by the imperative to increase economic competitiveness and ensure sustainable economic growth, the RA Government has initiated the development and implementation of an active industrial policy since March 2011.

As a result, the RA Government developed “The Strategy on Export-Led Industrial Policy”, which was adopted by the Government on December 15, 2011. According to the adopted Policy, Wine Sector is considered by the Government of Armenia as one of priority areas for which the Government elaborated “Wine Sector Strategy and Action plan” with support of GIZ.

Over the past 7 years, the wine industry in Armenia has seen impressive growth. Since 2007 large investments have been made in the winemaking sector, especially for purchasing progressive technologies and modernisation of production processes. However, the sector is still negatively impacted by unfavorable weather conditions and natural disasters. There are quite a few challenges in viticulture sector in Armenia. Among most prominent is the inconsistent wine quality which in turn creates problems in accessing export markets. To ensure both their place and growth in local and export markets, new technical knowledge on proper wine processing through trainings and practical demonstration is required. The respective service offer that could be used by the private sector is not existing to the extend and in the quality as needed or is completely missing.

An important framework condition to manage the wine sector is the availability of information about the location of vineyards, vine varieties, yield parameters etc. In many countries, such information is collected and archived in a Vineyard Cadastre System (VCS). A national vineyard cadaster system (NVCS) in Armenia does not exist. The ministry of Agriculture and „Vine and Wine Foundation of Armenia“ (VWFA) are planning to create a comprehensive database which will give clear picture about the location of vineyards, their size, ownership, vine varieties, yield

parameters the potential for enhancement. Based on that information targeted programs for improvement of vineyards will be development and implemented. Geographic Information Systems (GIS), GPS (Global Positioning System), and Remote Sensing (RS) are applicable to a wide range of fields and industries that have an intersected interest with geographical location information. Especially within recent years, a growing use of GIS, GPS and RS applications have been witnessed in agriculture, environmental and resource management, urban and transportation planning, healthcare, and businesses. This knowledge and skills can evidently help strengthen one's qualifications and provide a leading edge in the job market. With more competitive skills and profiles, job offers are likely to start with a higher salary and opportunities to grow are much more vibrant. Unfortunately, in Armenia there is no specialized short term training program to educate and train students in today's GIS, GPS and RS technologies and relevant applications.

Conditions of the assignment

3.1 Objective and tasks

The goal of the project is to:

- Develop and establish a **geospatial technologies curriculum** that meets to the goals and missions of the implementation of Vineyard Cadastre System.
- Educate and train participants in today's geospatial technologies and relevant applications. Introduce new **digital solutions for agriculture** on example of grape production (For example, the production of NDVI maps for vineyard).
- Promote and strengthen exchange and strategic partnerships between international and local training providers.

3.2 Deliverables and resources

Tasks – Deliverables	Timeline	Expert days
Identification of one international partner one local expert and two international experts (more than 5 years' experience) <i>Deliverables: partnership agreement</i>	05/2018	own contribution of applicant
Develop a geospatial technologies curriculum that covers the fundamentals of geospatial technologies and their practical applications. It should cover GIS, GPS and RS applications.	07/2018	10 international expert days

Tasks – Deliverables	Timeline	Expert days
<p>The curriculum should be developed in partnership with international known training/education provider.</p> <p><i>Deliverables:</i> <i>geospatial technologies curriculum.</i></p>		10 local expert days
<p>Implementation of the training course. Case-studies, project-based learning, real data and examples, production and interpretation of NDVI maps should be part of the course.</p> <p><i>Deliverables:</i> <i>developed modules, Case-studies, presentations list of participants.</i></p>	08-11/2018 05-09/2019	80 international expert days and 60 local expert days
Interim report in English	Nov/2018	
Final Report in English	Sep/ 2019	

3.3 Conditions and payment terms

The activities should be realized in a 19-month period. The number of experts and Expert days is envisaged as follows:

- 2 International Experts - 90 days (50% of the expert days is foreseen as an own contribution of the applicant)
- 1 Local Expert - 70 days
- Necessary equipment (10 networked PC workstations, 1 instructor's PC station 3-4 GPS units and 1-2 drones) is foreseen as an own contribution of the applicant

It is envisaged to have 2 payments according to the following time frame and deliverables, presented below:

Timetable, Deliverables and Payments

Expected date	Deliverables
Nov.2018	<p>First interim payment based on interim report</p> <p><i>Deliverable:</i></p>

	<i>Geospatial technologies curriculum is developed and necessary equipment is in place for providing the training. First round of the course for at least 10 participants is offered.</i>
Sep 2019	Final payment based on final report <i>Deliverable:</i> <i>Second round of the course for at least 10 participants is offered.</i>

3.4 Submission Requirements

The offer needs to include:

1. Short description of the activity
2. Budget
3. CVs