

1<sup>st</sup> GlobalGEOTECHNICAL AND WATER RESOURCE ENGINEERING SUMMIT  
September 18-19, 2017 Hong Kong**Rationalization of sustainability of water resources in Azerbaijan under intensive agriculture****Mehman Agarza Oglu Rzayev**

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**Statement of the Problem:** Azerbaijan Republic suffers from insufficiency of internal water resources. Trans-boundary inflow from neighboring countries is amounted averagely 70% from total renewable freshwater resources. 70.6% of total fresh water was consumed for irrigation in 2015. Future sustainability of water resources depends on the volumes of inflows into the country and irrigation management, including modernization of the existing infrastructure. Recently the government has outlined strategic goal to achieve sustainable usage of land and water resources in agriculture by establishment of the environmentally friendly food production systems and improvement of irrigation. This task requires elaborating integrated measures based on the assessment of the functioning of the existing irrigation infrastructure.

**Methodology & Theoretical Orientation:** The peculiarities of irrigated agriculture and climatic changes have been considered as the key indicators, directly affecting to the sustainability of water resources usage at national and basin level. The current irrigated agriculture practices and influencing factors have been reviewed with the analysis of statistic data, reports from service entities, findings by the international organizations, collected own data as well as other sources devoted to this problem.

**Findings:** The current problems of irrigation is originated from drastic agricultural land fragmentation, significant water losses during abstraction, distribution and irrigation in the field, outdated irrigation facilities, poor irrigation management especially at on-farm level, the number of deficiencies observed in the current farming system. The newly adopted road map needs to be realized through supported integrated and interlinked measures to balance with environment friendly agriculture production and sustainable water usage in irrigation.

**Conclusion & Significance:** The policy of efficient water resource and its use can be achieved in case if proposed, measures are applied on integrated and uninterrupted way in all levels of irrigation management. These measures cover engineering and institutional improvements for better water resource management in irrigation.

**Biography**

Mehman Agarza Oglu Rzayev has significant experience in irrigation investigations, agriculture water management. He deeply investigated water sector transition from planned economy to the market economy, participatory irrigation management practices. He has proposed application of multilevel assessment approach to define shortages in functioning of the irrigation systems observed at various levels and based on the result of such assessment prioritization of investments required for its modernization. He has suggested applying integrated approach for improvement of irrigation management to achieve sustainability in irrigated agriculture. His recent articles devoted to the analyses of water management techniques at various levels, comparable analyses of irrigation sector reforms and state water management policy.

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