

Tamara Jakovljevic

High School “ETS Jovan Cvijic”

Strpce, Kosovo

Kosovo, Factor 2: Water scarcity

Food factor : Water Scarcity

Currently there are many factors affecting the plants growth in my country, and one of the most important one is “the water scarcity”.

Water scarcity and various diseases affect the plants growth as well as their quantity and quality. If the plants/crops don't receive sufficient water the rural family will be unable to produce enough product, and it is bonded with trade/selling their products on the market so they will be unable to earn sufficient income for the family. Given that their income is reduced, their ability to provide adequate and nutritious food for the family is reduced as well.

Recently, in rural area where I currently live, due to high temperatures in the past two months, the drought severely affected crops and plants. That influenced the families' income as well.

Naturally, this factor improves once the rain levels increases. However, the families use the irrigation systems in order to water the plants and crops, for example the irrigation system used in rural area in my country, for raspberries. The irrigation system called “drop by drop” consists of a tank full of water used by the farmers during the drought seasons, by which the water is delivered directly to the root of the plants. But the reservoirs for the drop by drop system, is filled by the natural water resources, which depends on the amount of rain during the season.

How we could solve this problem?

In the area where I live there are no specific solutions as to improve the water scarcity factor, however, I am of an opinion that in order to successfully resolve this problem the population should be adequately educated as to use the water supplies rationally. Currently, in my country there are no projects for rationalization of water, however, I would propose that in the future the Government invests in building the water irrigation system which population may use during the drought seasons for their crops/plants.

However, in order to implement that, such a plan requires the construction of central irrigation systems, which would cover all the agricultural area for planting raspberries and other berry fruits. This would allow both new plantations on the surfaces where at this point that is not possible, due to lack of water, and far higher yields on existing plantations. The construction of these systems in Strpce/Shterpce until recently was a need, however, due to weather conditions is now a necessity.

The territory of the Municipality of Strpce/Shterpce is very rich in water, and has such a construction of the terrain which allows to agricultural irrigation systems could be build with a quite simple engineering solutions, with water free fall, without the use of pumps, motors and other devices.

In order to achieve these objectives, it is necessary to draw up a detailed plan, the main project, for the construction of the central systems for irrigation of agricultural land in the municipality of Strpce/Shterpce.

The water factor is highly influenced by the current climate as well as the utilization of water by the agricultural families. During the drought season the population use the water heavily ,which naturally, depletes the water supplies.

In order to reduce the misuse of water supplies by the populations, the specific actions/laws established by the Government should be implemented. The use of pesticides should be stopped as they affect the quality of food which in returns affects people health as well. Overall, increased agricultural activity and the use of pesticides and other chemicals is one of the indirect impacts and risks on water and the environment that are always related to the construction and use of such systems for irrigation. However, in the area of Strpce so far all production was based mainly on traditional methods, so-called. organic production, with very little or no use of pesticides and other chemicals. The construction of irrigation systems will cause increased use of fertilizers through the use of irrigation water enriched with them. However, if we limit the use of fertilizers in the prescribed concentration and quantity, that should not have negative impacts on the environment, as they need to be fully accepted by the crops that are irrigated. Because of this, in terms of prevention of impact it is necessary to apply the measures which are primarily related to ongoing education of farmers about regulations methods of irrigation and good agricultural practices including integrated pest prevention measures on which the municipality administration works.

The construction of the irrigation system will ensure the economic, social and environmental benefits, to land users and to local communities in this area. The experience of similar projects, saying that the project will have many positive impacts on the environment through the promotion of good land use practices, methods of cultivation and pest management. The project should help to strengthen local capacities in ecologically sustainable approaches to agricultural

development. Potential positive impacts on the environment through the implementation of this project include better control over the use of water resources; rational use of water resources through improved operation and maintenance; reducing the risk of water contamination by chemicals.

Additional employment

There will be the following social benefits of additional employment:

- Increasing the number of jobs during the implementation of the investment (temporary effect);
- The increase in jobs due to the need for the performance of maintenance;
- New jobs as a result of economic development, which has enabled the implementation of investments. What will in this age of global escalation of migrants, have a positive effect, because it will be prevented through self-employment migration. People will remain to cultivate their land because they will be provided with the conditions for such a thing. And those people who have moved because of the difficult conditions for the processing of agricultural land, will have the motivation to return.

The United Nations (through their organizations like FAO (Food Agricultural Organization) or WFP (World Food Programme)) or World Bank, should take the leading role in assisting the counties resolving the water scarcity factor.

The main social issues regarding the reforms supported by the IDP (Irrigation Development Program)

The most important social questions regarding the reforms and changes that can bring the realization of the project of irrigation development, are related to employment, increase revenue, and positive changes in improving agricultural production. Implementation of the project will

enable the development of irrigation and strengthening local communities through improved institutional capacity in the public and private sectors. Agricultural production at this location has a significant potential for development, especially fruit growing, and the representatives of local authorities have an interest to invest in its improvement. These are prerequisites for the further continuation of the project and its possible extension to other individual farmers around the project site. Calculation predicted increase in revenue due to the implementation of the project of irrigation development project for the location of the municipality of Strpce was done, and assumptions are that after the implementation of the irrigation project on this site lead to significant revenue growth from 70 up to 80%.

As an proof of interest of the people in rural development and agriculture in our municipality, are the donor organizations which were through various projects enabled local people starting capital for development. When we talk about raspberry production in Strpce, we can say some informations, that may be interesting.

Initial results of raspberry production in Strpce/Shterpce Municipality shows that environmental conditions in Strpce/Shterpce provides better quality raspberry fruit and higher yields per unit area than in most other countries, the greatest raspberry producers (Poland, Hungary, Chile, England, etc.). So far in Strpce/Shterpce is planted about 100 ha of raspberry, and the plan is to reach the 300ha in next 5 years.

For these reasons, a large number of households are interested in planting raspberries, because they can achieve a higher yield then dealing with other branches of agriculture. Raspberry market is almost unlimited and raspberry producers can sell their product as much as they can produce. According to a research conducted in Strpce/Shterpce by Agricultural Institute from

Cacak / Serbia, the plantation of raspberry on 0.2 ha can provide a good living condition for a family of four members.

Proposed project activities and their social and political context

The construction of modern irrigation system is only the first step in supporting agricultural activities. Agricultural production includes a range of different institutions and users. A quality product is the first instance, after which open other equally important issues: the question of the funds to sustain the project, the issue of expansion of the project, the issues of product placement, the issue of uniform law regulations. So, with the modernization of the irrigation system certainly opens up a new network, a new path of development of agriculture. But that does not mean that only the implementation of the Project of irrigation will give great effects in the field of improving the economic situation. The expected positive effects of the project on agricultural production are: an increase in yields, the introduction of new crops in production, wealth creation, employment. Participants in the study emphasize the importance of individual involvement of farmers in the irrigation project, so the project could achieve greater impact. Also, by strengthening the capacity of public and private sector, will allow the indirect impact on the conditions in which individual farmers engaged in agricultural production. As mentioned above, a significant percentage of respondents, after getting acquainted with the basic information on the project indicated that the improved irrigation will affect greatly on their agricultural production. They expect this impact to be positive, to improve production and yield, reduce the negative impacts of drought, etc. Most respondents were interested in connecting to the planned irrigation system. Almost all would definitely or probably participate in the costs of maintaining the new irrigation system, which show the interest and importance of building the irrigation system in our municipality, which will solve the water scarcity problem.

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