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Evaluation of water management processes in terms of planning

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Abstract

The climate crisis has increased the importance of the water footprint. The imbalances in the current water cycle of the planet are obvious. In addition to the settlement pressure caused by rapid urbanization, increasing population and migration to cities, environmental pollution and distorted changes created by excessive water use also cause ecological damage. The study reveals the striking dimensions of the change in water consumption in recent years with field examples from the Central Anatolia Region. The administrative traces of the research show us that it would be appropriate to critically re-evaluate the apparent results and correct the causes without delay.

Introduction

The climate crisis has increased the importance of the water footprint. The imbalances in the current water cycle of the planet are obvious. In addition to the settlement pressure caused by rapid urbanization, increasing population and migration to cities, environmental pollution and distorted changes created by excessive water use also cause ecological damage.

Material and Method

The study explores applications in urban and rural areas within the scope of water using. It also evaluates technological developments in other smart solutions related to agricultural perspective.

Results

The most important reason for the environmental problems increasing with the effect of urbanization is the planning and design approaches where the human-nature relationship and interaction are not analyzed and evaluated, and landscape ecology is not considered [1]. In establishing the nature-human relationship, natural landscape features should be evaluated as a holistic rather than fragmented [2]. A study in which the sustainability indicators of cities [3] are given in tabular form clearly show the problems in artificial areas.

Like urban areas, problems persist in rural areas. In fact, field observations are sometimes encountered, which can be the scene of even more brutal agricultural water uses. However, rural life should set an example for the city with its non-destructive aspects that develop intertwined with nature and have an emphasis on sustainability, and its processes should be preserved in that way.

Ecological restoration: It is the process of helping an ecosystem that has lost its property, been damaged, or destroyed, to recover. Often, an ecosystem in need of restoration has been degraded, damaged, transformed or destroyed as a direct or indirect result of human activities [4].

Previously, studies were carried out on dams and ponds and irrigation canals with a focus on planning on the water resources that come to life in Sivas and the visible effects of climate change [5]. The study could be carried out in Niğde with similar approaches, but for now on geography and field observations with field trips.

The study reveals the striking dimensions of the change experienced in recent years with field examples from the Central Anatolia Region.

As the dam ponds in Niğde were increased in number, the underground water level decreased considerably. Despite this, the number of boreholes and wells was further increased, and the vineyards and gardens were left to dry. Due to the westward expansion strategy of the city, the pressure of construction has reached the dimensions that threaten the town of Fertek*.

The decrease in water in Mersin-Silifke Göksu Delta stands out as another obvious planning calculation error.

Discussion

The administrative traces of the research show us that it would be appropriate to critically re-evaluate the apparent results and correct the causes without delay. For this purpose, the results and recommendations of the study are summarized.

Figure 1. Akkaya Dam Pond

Conclusion

In this way, national dynamics adapted to global market conditions have become product and profit oriented. It has been observed that due to the uncontrolled cultivation of the farmers in the agricultural basins, the products that consume excessive water are given weight.

First, national dynamics adapted to global market conditions, as can be seen from the field examples above, have been turned into products and profit-oriented services, in short, they have been commodified. It has been observed that the farmers in the agricultural basins are given weight to the products that consume excessive water in the plantings that are left unsupervised.

In the example of Sivas, the area where the city was established is both farther from the Kızılırmak shore and wider than Niğde. As Niğde remained in a narrow corridor and blocked the water's path and kept it with dams, it expanded the city towards the plain under the dams.

Negative factors affecting the water cycle are not limited to these. The importance of agricultural areas has been forgotten, as energy production has taken precedence over agricultural production. While the underground waters are extremely valuable, the ecological balances based on the water cycle have been upset with the dams built on the ground (For example, The dam ponds in Niğde).

In addition, air, water, and soil pollution created by the deterioration of environmental conditions caused by industrial activities also caused a decrease in the quality of life (For example, leaving the Niğde Akkaya Dam Pond to dry).

The decrease in the water of Göksu, which spills from Silifke into the sea by making a delta, has reached a level that will destroy the delta in recent years. This is a striking result of the transfer of the resources that feed Göksu to other places.

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