Xeriscape design to solve the region problems

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Abstract:

xeriscape design is one of the modern types of landscape design, and it is one of the practical solutions to the modern region crises such as the water crisis, energy crisis and global warming, it is known as the process of coordinating the site in a way that preserves water and reduces the use of fertilizers, pesticides and maintenance work, while preserving the achievement of the aesthetic, functional and environmental goals required for the landscape designed. The starting of xeriscape approach was in Denver, Colorado, USA, in 1981, and the main reason for thinking about this idea of landscaping was the county exposure to severe droughts since 1977 until a team of workers at water management in Denver, Colorado created this concept of xeriscape in landscaping, whose primary goal was to conserve the water used in the landscape. The word xeriscape comes from two syllables, the first, xero, which is a Greek word meaning dry, and the word scape, taken from the word landscape, which means site or location. The use of drought-resistant plants that consume little water began after the education and awareness of the largest number of users and garden designers that water is a very important resource and it is sometimes considered rare, and that it is the right of future generations to conserve water for them, also we find the close connection between the concept of sustainability and The concept of xeriscape, both refer to the necessity of preserving natural resources (water) and the right of future generations to it. Thus, xeriscape is considered one of the tools for achieving the concept of sustainability for the designer, and research has shown that designing sites using the xeriscape method can reduce water use by 60% at the site. Its environmental advantages are: Saving water, Create a suitable environment for wildlife and local plants, Improving soil properties, Minimize the usage of chemicals, such as fertilizers and pesticides, Its economic advantages are: Save maintenance and energy costs, Saving water consumption cost, Saving effort and time required for maintenance. Its aesthetic features: The use of various materials in the design of the landscape, which enriches the design and makes it attractive, Improving the visual quality of the site, 3 (Preserving the environmental identity by using local plants and natural materials as much as possible. The seven principles of Xeriscape are: Design: designing landscapes after careful analysis of all site conditions, Soil preparation: improving poor soil to improve its aeration and water absorption properties, Appropriation plant-selection: Choose plants that are naturally acclimatized to the surrounding environment of the site. Problem statement: water scarcity and global warming had become two of the most enormous problems that face the world, affecting the life of man and other creatures on the planet, that’s why all scientific and applied fields must work in hands to face these problems, and as a landscape designer I could tell that people working in this field can do a lot regarding this problem by using green methods and technology in their designs instead of wasting high quality water to irrigate softscape. Significance: The research is interested in highlighting the role of xeriscape system in reducing the aggravation of climate problems and water scarcity and taking landscape design as a tool to achieve sustainability and preservation of the planet. Objectives: Proving that xeriscape design can contribute to solving the problem of climate change, water and energy shortages and The aesthetic and functional aspects of the design can be balanced without harming the environment. Methodology: Descriptive analytical method. major results and recommendations: Choosing local plants is one of the most important points towards achieving a sustainable landscape that benefits the environment and does not harm it, xeriscape can achieve the desired goals of saving water and energy while maintaining the achievement of its functional and aesthetic goals, high quality Drinking water should not be over-used in irrigation works for plants, Landscape designers must join hands in solving environmental problems with the rest of the world, xeriscape design should be taken into consideration when designing parks and squares in new cities in the country, Setting a timetable to renew and replace all green spaces that consume water and energy in the Arab Republic of Egypt and the Arab world with new green water saving approaches like xeriscape.

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