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A GREEN ROADSIDE PROJECT

Hüseyin Toros¹, Tülay Toros², Sükrü Dursun³, Mustafa Arslan^{4*}, Bahtiyar Efe¹, Ali İhsan Öztürk⁵, Yüksel Demirkaya⁶

¹*Istanbul Technical University, Faculty of Aeronautics and Astronautics, Department of Meteorology, Maslak, 34469, Istanbul, Turkey, toros@itu.edu.tr, efeba@itu.edu.tr*

²*Ekrem Cevahir Multi-Program High School, Hamidiye Mah, Kağıthane, İstanbul, Turkey, tulaytoros@yahoo.com*

³*Selçuk University, Department of Environmental Engineering, Selçuklu/Konya, Turkey, sdursun@selcuk.edu.tr*

⁴*Yıldız Technical University, Faculty of Education, Davutpaşa Campus, 34220 Esenler – İstanbul, Turkey, arslanm@yildiz.edu.tr*

⁵*Harran University, Department of Chemistry, Yenisehir Campus, 63300 Sanliurfa, Turkey, ahsanozturk@yahoo.com*

⁶*Marmara University, Local Governmet Research Centre, Sultanahmet Campus, İstanbul, ydemirkaya@marmara.edu.tr*

Abstract: Desire of earn and consume more contempt of people leads to aggravate their environment. As a result, the air, water and soil have been affected and continue to this effect. Extinction of various species creatures and colorful plants is most important problem of recent decades. As a result, the ecological balance is affected negatively. While it is important to take precautions in preventive medicine before illnesses, it is important to keep clean the environment instead of cleaning after environmental pollution. Because cleaning process after environmental pollution requires great cost than keeping clean. The important thing is to keep the environment clean and use it without polluting. It is obvious that world is giving a distress signal because of contemptible and selfish usage of environment. Climate change and meteorological disasters are being adversely affected by the waste of resources. For a beautiful future, must be avoided from waste and green areas must be increased. Only one tree may be conducive to rid our planet. In this study, it has focused on the feasibility and the benefits of the projects which include the replanting of our environment particularly the roads sides.

Keywords: Environment, pollution, climate, green road, solution, life

Introduction

In the last century, increasing industrialization and use of fossil fuels has created many environmental problems. For a healthy life, eat, drink and breathe should be quality and natural. For a peaceful world, preventing our environment is important from damaging by material and spiritual aspects. As much as early solution is required for the damages of earth. The produced solutions for these problems must be environmentally friendly. Recently, many researchers indicated that, our planet gives distress signals because of contemptible and self-centre usage of the world's resources and excess of consumption. Climate is changing and meteorological, disasters is increasing on many places all over the world (Toros, 2012). Atmospheric scientists have beautiful expressions like "If a butterfly wings in Mecca; it can break the storm, in Istanbul". In the same way, a grain of rice left in our dish or a piece of bread left on the dining table negatively affect our world. The major influence is on climate. Although, a germ is too small, but it can kill the creature which it entered. Beside a person is disturbed when his/her body temperature rises 1-2 degrees, the global warming has many negative results, for life.

***Corresponding:** Prof. Dr. Mustafa Arslan, Yıldız Technical Un., Education Faculty, Davutpaşa, 34220 Esenler, İstanbul, Turkey, E-mail: arslanm@yildiz.edu.tr, Mob.:+90 533 4171779, Work: +902123834809

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Trees provide value in other road contexts. A series of studies surveyed how shoppers respond to a business district streetscape that includes a quality urban forest (Wolf, 2005). Across small, medium, and large cities in the U.S. visitors to forested central business districts claim they will spend 9 to 12 percent more for products and services. In addition, based on the cues of care provided by well-maintained trees, people judge merchants in forested districts to be more responsive and knowledgeable.

- **Material and methods**

The methodology for the project is to reduce air pollution and noise pollution by using special plants at road sides. Filtering of air and noise pollution by forestation of the surroundings of the roads and buildings for healthy environment is the part of methodology. The plant species will be investigated whose are convenient to climatic conditions and filter noise pollution, and then the public is going to be informed. Figure 1 shows an example for the application of green roadside. This application shows both tree and grassland.



Figure 1. Two different sample applications for green roadside

Within the framework of the project, roofs, balconies, in fronts, fences of the houses and streets are going to be planted by appropriate plant species. The public will be informed and illuminated and research will be supported by the government for the research is applicable. At the same time governmental bodies, especially local government organizations will also be informed and some kind of trainings will be held for the staff from local government and related civil society organizations.

- **Results**

Increasing the greenery around us is a kind wearing clothes of our planet. Thus, extreme heat and cold will help protect our regional environment. With greenery and will strengthen the lungs of our planet. Greenery will be clean water, which we will drink, and filter air, which we breathe, and reduce noise, which it disturbs our psychology. The appropriate plant species in different regions for the sensitive plants to burn the edges of the trunk road, ornamental plants and plants as a tool that will be implemented to reduce air pollutants and noise effect will be determined. The project plans created under the city tried to establish green areas for allocation of public opinion. Dry to dry some of the things that go against an informed community is created instead of moving work to a planned schedule. More importantly, local government will have a green strategy for the sustainable cities and aware of best practices around the world for greener cities and sustainable development.

There may be rules about not growing woody plants like trees or shrubs, and there may be amount of place by the road related with the road and distance between both sides of building and other contraction. Tree species are most important factor in this type of project that they will be suitable for the application place and also favourable species should be selected for the good view of the people living around the

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application area. Some of the selected plants for these application are *Acer platanoides*, *Ailanthus altissima*, *Alliaria petiolata*, *Berberis thunbergii*, *Berberis vulgaris*, *Celastrus orbiculatus*, *Cynanchum nigrum*, *Cynanchum rossicum*, *Elaeagnus umbellate*, *Euonymus alatus*, *Heracleum mantegazzianum*, *Iris pseudacorus*, *Ligustrum obtusifolium*, *Lonicera bella*, *Lonicera japonica*, *Lonicera morrowii*, *Lonicera tatarica*, *Polygonum cuspidatum*, *Rhamnus cathartica*, *Rhamnus frangula*, *Rosa multiflora*, *Lavandula hybrida*. An application species is given in Figure 2.



Figure 2. A sample species Lavender (*Lavandula hybrida*) most commonly used for green side applications

- **Discussion**

Regulations regarding plant height or what types of flowers and grasses may be planted. The government may even prefer to just keep mowing the roadside. Even if you own the land yourself, there may still be rules about how close the roadside you may plant trees or shrubs. After we have gotten the green light from the highway department, prepare your roadside site by removing any garbage, pulling up any noxious weeds, smothering or tilling up the turf grass (if necessary) and applying a heavy layer of organic compost. It will be prepared water at roadside planting occasionally throughout the first growing season, until the plants become established; deep, infrequent watering is best, because it encourages the roots to dig deep into the soil (URL_1).

Roadsides are often dirty, smelly places, but roadside plantings can help clean them up. However, it must be chosen strong plants that can tolerate motor oil, road salt and car exhaust. Tough, pollution-tolerant trees and shrubs include serviceberry, eastern red cedar, white oak, crabapple, honey locust, dogwood and sumac. For flowers and grasses, consider daylilies, artemisia, bluestem and hostas. Consult your local agriculture extension office for specific recommendations for your area (URL_2).

The impermeable surface of highways can create a lot of runoff, washing away topsoil and allowing pollutants to seep into the watershed. The root systems of plants help hold the soil in place and also help filter out chemicals. Choose plants with deep, robust root systems. If the local highway department won't let you plant trees or shrubs, ask if you can plant a low-growing forbs. Native wildflowers generally have deeper roots and provide better erosion control than introduced or cultivated species. Most roadside sites will do best with plants that are drought tolerant, such as lupine, while drainage ditches will benefit from marsh plants such as cattails (URL_3).

Although many people like planting gardens to attract wildlife to their yards, a roadside setting is not the best place for it. Plant thick shrubs and tall grasses far away from the roadside so that deer and other animals trying to cross the road will be more visible by drivers before the animals leap out into traffic. Avoid planting fruit trees that could attract animals next to heavily trafficked roads. On quiet country roads with little traffic, or in urban setting with little wildlife, this may be less of a issue (URL_4).

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• • Conclusions

Recent research adds new perspectives on roadside vegetation and traffic safety. Road design and engineering standards (more accurately regarded as guidelines) favour a design philosophy of “forgiving” roadsides that provide wide shoulders and clear offsets. Most of the research basis for these prescriptions was done on rural roadways in past decades. Thus urban transportation design is largely premised on the operating assumptions and characteristics of rural roads and highways. Results suggest that trees in urban roadsides may be associated with reduced crash rates. Fewer crash incidents, and less severe injury outcomes, are associated with slower vehicle speeds. On the other hand, all road segments are alike; there are differences in crash rates at intersections, on the outside of curves, along medians, and midblock. Planning and design for liveable cities should include roadside vegetation and trees that are placed appropriately, based on actual crash risk rather than generalized assumptions.

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