

OASIS: FROM ILLIGAL DUMPING GROUND TO URBAN ASSET

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INTRODUCTION

The presented work deals with the urban transformation of a completely desolated land in Kakanj, one of the most polluted cities in Bosnia Herzegovina and home to roughly 39,000 residents. Immediately adjacent to the city centre, was a 5,500 m² of land which within the last 30 years has been turned into an illegal dumping grounds. While this is in itself very adverse, in the past decade, with the expansion of the city, the location became active slums of Roma population. The city has been making efforts to urbanize and improve living conditions in the area by building social housing units for the settled population but this did little to remedy the overall situation.

To resolve the problem, a project was initiated explore the possibility of improving the area by transforming the neglected grounds into a functional urban form. The project faced several challenges. The location is a former mining waste dumping site that has been turned into an illegal dumping ground where communal and construction waste was redirected by those aiming to avoid fees of proper waste disposal. The goals for improvement were unclear and very limited funding was available for ecological and development initiatives including this project. Roma population that lives in improvised housing units have high unemployment and low education rates. Their main source of income is picking and gathering of secondary materials which also made relocation obsolete as it would not offer long term solutions. All these points were considered and in further text we describe the development of the project and show how communities could benefit from exploring urban design models that address human needs in parallel to building ecologically conscious spaces even in low-income communities where resources are scarce.

SIGNIFICANCE AND APPROACH

The initial design land improvement parameters for the available space was simply defined as recreational space. This solution provided badly needed open space for local residents of all ages. The motivation to develop a design model was rooted in the central issue of environmental justice that everyone deserves to live in a community where they can reach their full potential. Research suggests that the place where one lives can be a major predictor of important life outcomes such as health, academic and career success due to direct relationship between the quality of a neighbourhood's built environment and access to the economic, political, and social resources needed to thrive [1][2]. Unfortunately, residents of this location live in a community that lacks the investments of these key resources.



BEFORE: illegal dumping ground with active slums



During construction. Large amounts of debris has been removed.

However, our approach successfully improved the living conditions of the area. The design model had two main features: educational and ecological. *Educational aspect*: the goal was to stimulate children's natural curiosity by learning through play. This was achieved by intertwining a children's playground area with numerous low-cost high-impact educational activities and curiosities that include an Outdoor Classroom, a Weather Learning Station, a Human Sundial, numerous informational plaques, a Bee Garden and a Sun's Energy Station. These units allow for a higher degree of rapprochement with the environment, the elements and the interaction between them. Accounting the proximity of the town's soccer stadium, the remaining area was levelled and landscaped to offer conditions for various sports and recreational activities. In addition to increasing beautification of levels of the neighbourhood, the *environmental aspect* focused on carefully selecting and combining the vegetation (trees, shrubs, perennials) based on their specific capabilities of absorbing large amounts of pollutants in short amounts of time with the ability to attract important pollinators (butterflies, bees, fireflies, insects etc.) by producing different types of foods (seeds, pollen, berries etc.) while blooming and/or producing fruit at specific times of the year thus ensuring availability of nourishment for these important providers of ecosystem services year round.



AFTER: Educational areas with playground with sports field under leveling works. Photograph taken from top floor of a newly constructed social housing unit.

RESULTS AND DISCUSSION

The result is a successfully completed urban transformation and design model that improved the living environment of the local residents who now spend time in uplifting and energizing surroundings. Both project and design model can be easily replicated to create similar environmentally conscious solutions in other communities that address human needs (social, psychological, educational, integration etc.) in parallel to building ecological components of to support biodiversity and increase the provisioning of vital ecosystem services. As this project demonstrates, it can be achieved with very limited resources. This project cost substantially less than it would have been to demolish and redevelop the area, and serves as a precedent for adaptive reuse.

CONCLUSION

Transforming abandoned and abused spaces in the urban fabric into enjoyable and useful urban forms area appears to be a key solution to converting city processes into more sustainable and circular urban environments. Instead of remaining as hindering areas in urban fabric, or being removed from existence, new unique uses can be found for these places which stimulate the community, city and economy. Furthermore, successful urban transformation projects rely on collaboration and input between government institutions, non-governmental and professional stakeholders. Though this type of collaboration often significantly complicates and lengthens the planning and design processes, it appears to be the formula for success for the redevelopment of abandoned inner-city structures.

REFERENCES

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