GREEN BALCONIES AND TERRACES: A SOLUTION FOR CLIMATE CHANGE

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INTRODUCTION

Climate change is one of the greatest concerns in the world today. This research project is part of the mitigating measures to solve the problem of increased temperatures. It intends to find out how green balconies and terraces contribute to regulating temperatures within the buildings. Moreover, the recycling and reusing plastic materials added aesthetic value to the balconies and terraces.

RESEARCH QUESTIONS

1. Are there any "green" balconies and terraces in buildings within Nyali area of Mombasa County?
2. Can recycled material be designed to make planting pots to create green balconies and terraces?
3. Do green balconies and terraces help in purifying the air and regulating temperatures?

MATERIALS AND METHODS

- Used plastic containers / bottles /milk cartons
- Glue (Wood / Office)
- Cutting tools (scissors, knife, blades)
- Beads and glitters
- Wall paint (different colours)
- Brushes and turpentine
- Camera or Smart phone

Procedure

Step 1: Collection of plastic containers and milk cartons

Step 2: Planting and watering of the seedlings

Step 3: Cleaning the containers

Step 4: Marking, cutting and painting the containers

Step 5: Decorating the containers

Step 6 : Transplanting the seedlings into the containers.

Step 7: Measuring of temperature using the GLOBE Protocol (Atmosphere – Surface Temperature)

Current bare balconies in Mombasa City

Our Vision of green balconies

RESULTS

The results of this research project showed that;

- There are very few green balconies and terraces within Nyali area of Mombasa County.
- Recycled materials can be used to make planting pots to create green balconies and terraces.
- Green balconies and terraces help in purifying the air and regulating temperatures within the buildings.

Sample(s)	Temperature for balconies with potted plants. (°C)	Temperature for bare balconies (°C)
Sample 1	32.0	35.5
Sample 2	32.0	35.7
Sample 3	33.6	36.0
Sample 4	33.0	36.1
Sample 5	32.5	35.8
Sample 6	32.4	35.7
Sample 7	33.0	36.0
Sample 8	33.1	36.1
Sample 9	33.0	35.8
Average	**32.7**	**35.80**

CONCLUSION

The findings of our research have shown that human activities have greatly contributed to the climate change in the world today. The places identified by this study which did not have any potted plants had higher temperatures which brought much discomfort; however, places with some potted plants had good air circulation. This explains why green balconies and terraces are necessary in regulating the temperatures as well as purifying the air. Our study has also shown that it is possible to transform bare balconies to green balconies. This has been achieved before, in countries like Italy and China, and it is possible to achieve this in Mombasa City. This study will come in handy in creating awareness to the general community of Nyali and the world on the importance of vegetation towards restoring the planet Earth.

Transformed green balcony