

Teachers' Training in Environmental Education Mombasa, KENYA



September 2008 Seminar Report



Executive Summary

Teachers' Training in Environmental Education is a program designed to meet the environmental education needs of Kenyan primary schools in Coast Province through collaboration between Environmental Education Initiative (EEI) and other institutional partners.

The first phase of the program was carried out between 2003 and 2007. During this time training focused on deepening the teachers' understanding of ecology, exposing the teachers to additional methods for implementing environmental education (EE) and providing a forum for teachers to share their experiences. In this period, teachers (from Lamu, Malindi, Watamu, Kilifi, Mombasa and Kwale) were trained and they received certificates after successfully implementing projects to promote environmental consciousness in their schools

The present phase of the program, which is the second, recognizes the potential of schools to make positive contributions to the community. The focus of this phase is to build the capacity of previously trained teachers to promote environmental consciousness beyond their schools. The first seminar in this second phase was held from 1st – 5th September 2008 in Watamu and attended by 12 primary school teachers from Watamu, Kilifi, Mombasa and Kwale districts. One of the significant outcomes of the seminar is that each teacher developed a community area strategy detailing how they would reach out to neighbouring schools and their community in general.

The teachers are presently implementing these strategies and supporting each other through area networks. Assessment is on-going and successful teachers will receive a Trainer of Trainers' certificate.

This report documents input from partners and participants involved in the 2008 seminar. Results of the evaluations carried out during the seminar week and recommendations by participants are also included.

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**Brigid Mibei
Sarah Ater**

Acknowledgements

Strong institutional support through in-kind and cash contributions from partner organizations has always been a key component of the program. International Ocean Institute (East Africa), A Rocha Kenya and Gisela Nageli Foundation provided support to facilitate teachers from other districts to attend. In addition, A Rocha Kenya hosted the 2008 seminar with Watamu Turtle Watch (WTW) and International Fund for Animal Welfare (IFAW) providing in-kind support. Coastal Oceans Research and Development in the Indian Ocean (CORDIO) East Africa and ProZim Society continue to provide core funding.

We acknowledge Francis Kagendo of Nature Kenya for officially opening the seminar and Robert Markham, Project Manager of Watamu Turtle Watch for closing the seminar and presenting the certificates. We are grateful to co-facilitators Tsofa Mweni, the Education and Outreach Officer of A Rocha Kenya, Edward Mwamuye, the Education and Communication Manager of WTW as well as Nelson Mwamburi of the Local Ocean Marine Centre (WTW). We appreciate the graciousness of the entire A Rocha community for ensuring that our stay on their facility was pleasant and participating teachers for their enthusiasm and commitment to learn from and support each other.

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1 Introduction

1.1 Background information

Teachers' Training in Environmental Education (TTEE) is a program designed to meet the environmental education needs of Kenyan primary schools in Coast Province through partnership between Environmental Education Initiative and other institutions.

In the first two years of the program ProZim provided funding but the training was only available to teachers in Bamburi area schools of Mombasa district. In the third year (2005) an evaluation carried out indicated willingness of various institutions to be involved and support in various ways. Since then; Lafarge Eco Systems (LES), Watamu Turtle Watch (WTW) and International Ocean Institute (Eastern Africa) joined as partners facilitating teachers' participation with Coastal Oceans Research and Development Indian Ocean (CORDIO) providing a base for the program in the same year. Over the years World Wide Fund for Nature (WWF) Kiunga, Assist a Child to School (ACTS), International Fund for Animal Welfare (IFAW), Kenya Marine and Fisheries Research Institute (KMFRI), Kenya Wildlife Service (KWS), Buccaneer Diving and Wildlife Clubs of Kenya (WCK) have supported different aspects of the program both financially and in-kind.

The first phase of the program was carried out between 2003 and 2007. During this time training focused on deepening the teachers' understanding of ecology, exposing the teachers to additional methods for implementing environmental education (EE) and providing a forum for teachers to share their experiences. In this period, 54 teachers (from Lamu, Malindi, Watamu, Kilifi, Mombasa and Kwale) were trained and have received certificates after successfully implementing projects to promote environmental consciousness in their schools.

In phase one of the project, participating teachers received a certificate of participation at the end of the seminar and a certificate of merit after successful implementation of EE transfer through their school project. The training program was carried out as a 5-day seminar for teachers followed by EE transfer to their school through a range of activities including projects. 10 – 15 teachers were admitted annually for the seminars that comprised development of a school project by each teacher, guided marine and terrestrial excursions, discussions, group sessions and experience sharing sessions. Since 2003, 57 participants have been trained, 54 of them teachers and 3 from non-governmental organizations.

In the present phase of the program the schools are used as entry points to promote environmental awareness in the community. The focus of this phase is to build the capacity of previously trained teachers to promote environmental consciousness beyond their schools. The first seminar in this second phase was held from 1st – 5th September 2008 in Watamu and attended by 12 primary school teachers from Watamu, Kilifi, Mombasa and Kwale districts. One of the significant outcomes of the seminar is that each teacher developed a community area strategy detailing how they would reach out to neighbouring schools and their community in general. Out of the 12 teachers participating in the seminar, 8 had successfully gone through the first phase of the program. The decision to include a minority that had not participated in phase one of the project was to help identify challenges and opportunities that could face teachers who do not participate in the first phase of the program. However, those 4 teachers were already carrying out various activities to promote environmental awareness in their schools. 10 of the

teachers were resident at the seminar venue.

In addition to the formal learning, much emphasis was put on group work, discussions and sharing of experiences. Already, all participants are implementing their area strategies on the basis of which they will receive the 'Trainer of Trainers' certificate.

1.2 Objectives

The aim of the seminar was to build the capacity of teachers to become environmental ambassadors in their communities who have an impact on their school, neighbouring schools and communities. The objectives were:

1. To equip the teachers with knowledge and skills to generate community interest and cooperation in projects
2. To expose the teachers to different methodologies that are effective for EE knowledge transfer
3. To provide a forum for teachers to interact and share experiences

2 Participation

Teachers who had participated in phase one of the program were invited to submit applications indicating their interest and how the program would benefit them. Participating teachers were nominated on the strength of their applications and status of school project implemented after the first training. The teachers who had not undergone the first phase of the training were nominated by partner organizations on the basis of the environmental awareness activities they were already carrying out within their schools. As such, all the teachers were on an equal footing having been involved in various activities to promote environmental awareness in their schools.

2.1 Participating Organizations

2.1.1 ProZim Society

The ProZim Society is a Charity Organization involved in capacity building of Kenyan primary school teachers particularly in the area of environmental education (EE) in partnership with local organizations. ProZim provided core funding for logistics, administration and a link to Gisela Nageli to facilitate participation of teachers

2.1.2 Coastal Oceans Research and Development Indian Ocean-(CORDIO) East Africa

This is a regional research organization involved in research in the coastal area with respect to ecology, management and socioeconomics. CORDIO-EA also assists in implementation of national and regional coastal conservation initiatives. Apart from providing a base for the program, it covered costs of some participants' accommodation.

2.1.3 A Rocha Kenya

This is a Christian based conservation organization that carries out research for the conservation and restoration of the natural world as well as different environmental programs. A Rocha facilitated participation of 3 teachers from Kilifi with their Education Officer being a co-facilitator during the seminar.

2.1.4 International Ocean Institute (IOI)

This is one of the regional centers of the IOI network which focuses on promotion of education, training and research to enhance sustainable use of ocean space and marine resources. IOI

facilitated the participation of two teachers.

2.1.5 Watamu Turtle Watch (WTW)

WTW participated by providing facilitators, including a guided tour of the rehabilitation centre, a turtle release session for the teachers and guidance at their education centre.

2.1.6 International Fund for Animal Welfare (IFAW)

IFAW works to improve the welfare of animals by reducing commercial exploitation of animals, protecting wildlife habitats and assisting animals in distress. IFAW supported the seminar by providing t-shirts for the participants.

3 The Proceedings

The seminar was officially opened by Francis Kagema of Nature Kenya, Malindi. Sessions ran daily from 8:30am to 5pm and participants had assignments to hand in on each day and engaged in informal discussions and group work after dinner. All 12 participants were in attendance the whole week and time was well observed as majority of the participants were resident. English was the main language of communication during discussions, group work, demonstrations, and talks from guest speakers, guided excursions and individual presentations.



of school projects including challenges and how to handle them as well as ideas for the implementation of an exchange box project. A post seminar questionnaire handed back on the last day summarized the participants' perceptions on all aspects of the seminar. Daily evaluations were used to determine relevance, level of importance and get suggestions for improvement regarding different topics and how they were covered on each day. The ratings and comments by participants provide useful insight into areas needing emphasis and improvement. Results from the evaluations are presented in section 4.

Daily evaluations were carried out while gradual contribution to the area strategy was developed in bits by producing daily outputs. These included: preparation of a school policy file, proposed plan to expand EE knowledge in the school, presentation



4 Evaluation and discussion

4.1 Seminar evaluation results

While ranking the importance of topics covered; 25% of the teachers indicated sharing the vision, aims and objectives while another 25% ranked outcome based education as most significant. These were followed in order of priority by school policy files and the role of religion in conservation- using the A Rocha example.

The proposed school policies developed by the teachers broadly covered waste management, energy, water and soil conservation. Some of the strategies to be adopted included encouraging the use of dustbins and recycling measures, promoting lights off and ensuring taps are closed as well as defining footpaths to reduce running down of grass areas in the schools. In addition, some would establish tree nurseries and plant flowers.

The teachers rated the delivery of topics covered at the seminar by choosing from a range of unsuccessful to very successful as indicated in the figure below:

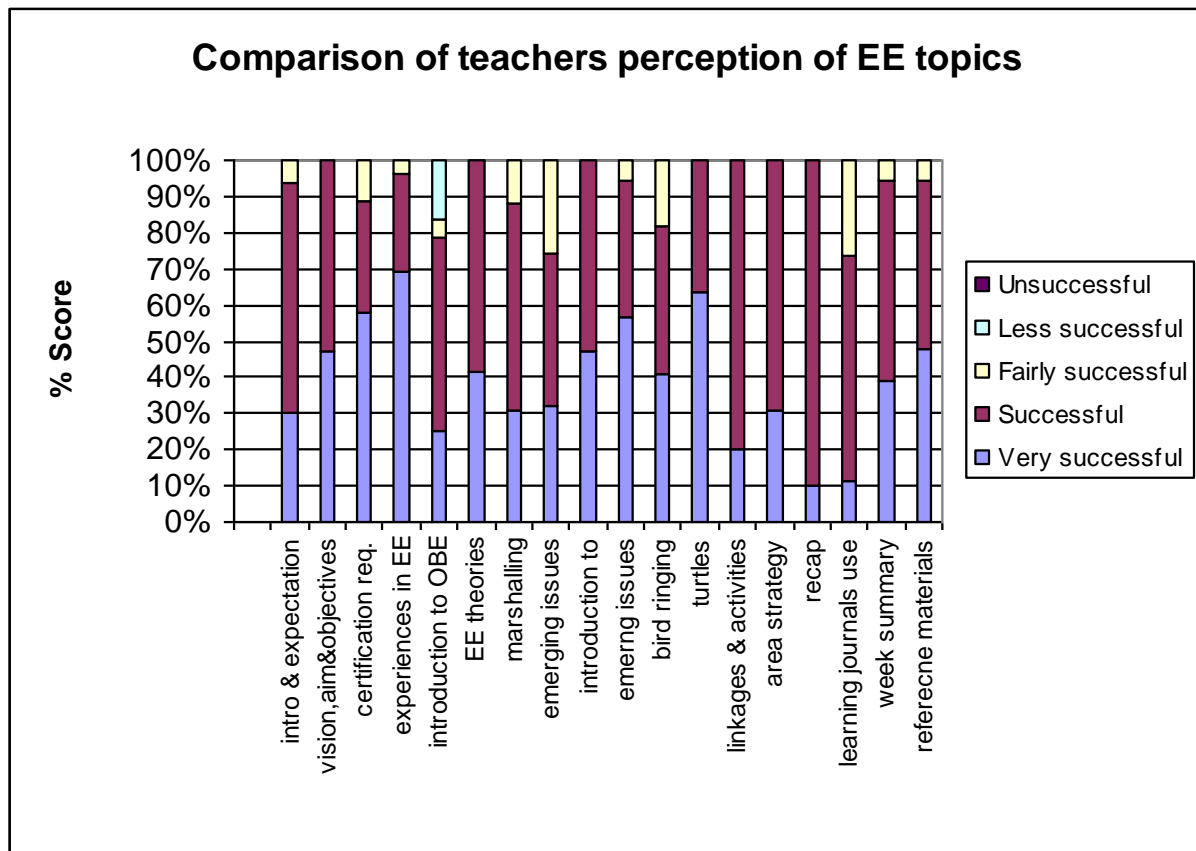


Fig 1: Chart showing teachers' views about delivery of EE topics

The topics which the teachers felt were covered very successfully were turtles, sharing experiences in EE and emerging issues. Topics that were rated as having been covered either very successfully or successfully were: vision, aims and objectives; EE theories, turtles, linkages and activities, presentation of area strategies and the recap. All other topics except outcome based education were rated within the very successfully, successfully and fairly successfully. As introduction to outcome based education received a less successful rating, a repeat session was offered where the questions and unclear areas were addressed.

The following graph shows teachers' rating of the importance of topics to their work:

Importance of topics as ranked by teachers.

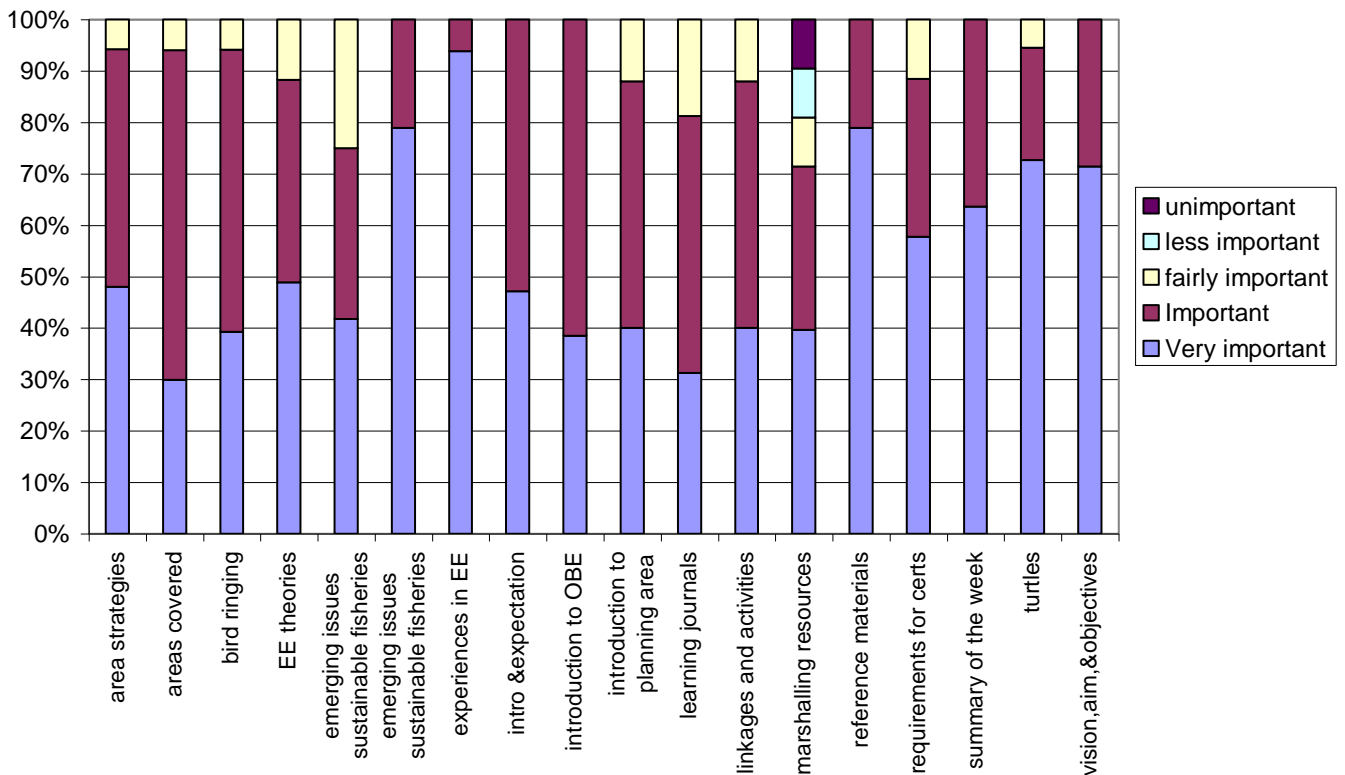


Fig 2: Chart showing importance of topics covered for teachers' work

In rating the importance of topics to their work; emerging issues, sharing experiences, and reference materials were rated as very important for the teachers' work. Topics rated only within the important and very important categories included introduction, sharing the vision, outcome based education and summary of the week. All other topics ranged from fairly important, through important to very important. Marshalling resources was the only topic which received ranking as less important and unimportant.

In general, participants agreed that the topics covered were important for their work in class and confirmed as club patrons that they would use the knowledge acquired at their schools and in the surrounding community.

The table below shows some of the issues the participants viewed as important to apply in class.

Table 1: Relevance of topics covered to class lessons

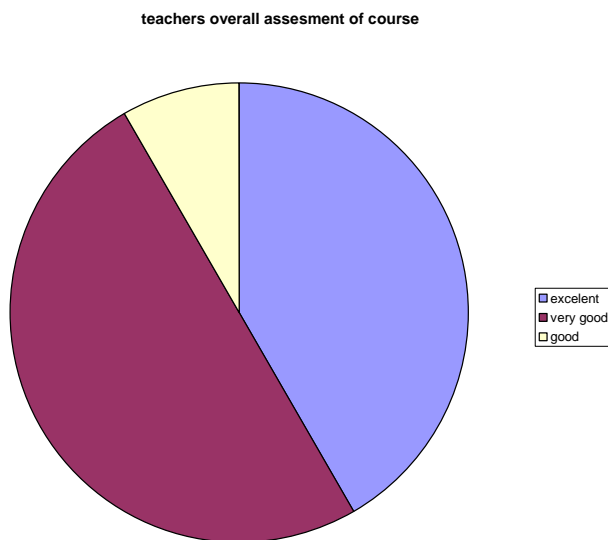
Issues	Relevance to Class lessons
Climate change	In covering the topics on waste, pollution and global warming
Outcome Based Education	To focus teaching on skills developed in addition to good grades
Practicals	In the use of real objects, improvised materials and teaching aids
Marine life	In covering topics on fish, turtles

The next table shows some of the issues the participants viewed as being relevant to club activity

Table 2: Relevance of topics covered to club activity

Issues	Relevance to Club activities
Environmental conservation	Nursery establishment, waste management, tree planting , clean ups, Introduction of tip taps (modified to control amount of water flowing)
Resource mobilization	Group discussions, brainstorming projects, sharing of experiences in EE, intensive networking
Marine conservation	turtle and fish conservation
Climate change	Importance of waste management, pollution
Outcome Based Education	Encouraging participation of students in club activities irrespective of strengths and weaknesses in learning.
Environment	Teaching about the environment, using environmental games to teach

The following pie chart shows the teachers' overall assessment of the seminar at the end:



The pie chart shows that 42% and 50% of the teachers gave the overall rating as excellent and very good respectively while 8% regarded it as fairly done. Participants were very pleased with the atmosphere at the seminar, the facilitators, food and location of the seminar. They particularly liked the opportunity to share ideas with fellow participants; although they preferred the future seminars to be organized during holidays to make it easier to get permission away from school. Suggestions made for improving future seminars were listed as: having more learning materials, involving different guest speakers, including sessions to teach proposal writing, increasing the duration of the seminar as well as providing seminar topics and the timetable much earlier. They

were however very pleased with the opportunity to visit a school project which had been recommended for inclusion during phase one (I) of the programs.

5 Monitoring

Each of the participants received an information CD and posters for their school libraries. Most of the teachers have already started implementing their area strategies and some of the progress is highlighted below:

5.1 Mlaleo Primary School

The school is situated in a residential area in Mombasa, close to main roads. Its compound has largely been bare and the project is intended to engage the pupils in the club while raising awareness among the other pupils of the need to plant trees and flowers. The club patron is reaching out to Kisauni primary- with which they share a compound and Khadija primary while working closely with the patron of Desliz primary.

5.2 Mida Primary School

The school is situated in Gede area close to Malindi road. Projects that have previously been carried out in the school include beautification and setting up of a resource center. The latest project in the school is that of a bird bath so as to provide an opportunity for the pupils to watch and learn about birds. The patron has recruited other teachers to support club activities and is in the process of reaching out to neighbouring schools.

5.3 Kakoneni Primary School

The school is situated in the rural areas of Malindi and has a large compound. Although the school has a large number of indigenous trees, more have been planted and pupils have specific trees to take care of generating interest among other pupils. In order to reduce the threat of being eaten by goats or attacked by pests the pupils are mainly planting neem trees. The club patron is reaching out to Kakoneni girls secondary school.

5.4 Mwaroni Primary School

The school is in Kwale and the patron is reaching out to St .Mercy Academy and supporting them in setting up an environmental club. The club members are planting flowers around the school and have set up a compost pit to produce manure to support the plants.

5.5 Mkokoni Primary School

The school is in Kwale district and the pupils have actively been involved in teaching their peers from other schools during exchange visits. There is a well established nature trail and tree nursery as well as over 5000 trees planted in the school compound. The patron who was trained and was working with the students has been transferred to Namuyumba Primary and the club activities have reduced as a newly assigned patron is not very keen.

5.6 Namuyumba Primary School

Also situated in Kwale; the school has a newly established club formed by one of the trained teachers who was transferred to the school recently. The students are establishing a tree nursery and have already embarked on a waste management project.

5.7 Yeje Primary School

The school is in Kwale and the patron has been involved in tree nursery establishment and waste management projects where dustbins have been improvised from cement bags and strategically

placed within the school compound. As part of their outreach; the club Patron is supporting Bweka Primary club and has helped them acquire tree seedlings for planting.

5.8 Desliz Primary School

The school is situated in Mombasa town and is currently carrying out a waste management project which involves separating the rubbish and placing the biodegradable waste in different places. In addition to working closely with the patron of Mlaleo who was also trained; the patron has identified other neighbouring schools to work with.

5.9 Denyenye Primary School

The school is situated along Kwale road and faces severe water shortages especially during the dry seasons. They have succeeded in planting over 3000 trees that have created a cool micro-climate in the school and their tip-tap project is helping to conserve water by allowing only a small volume to be used up at a time. In addition to setting up their own compost, the patron is working with the neighbouring school, helping them set up a compost.

5.10 Mwamdudu Primary School

The school is in Kaloleni area and the newly established club has been involved in waste management which has significantly improved the cleanliness of the schools. As part of her outreach, the patron is reaching out to Bonje primary and has been able to organize an exchange visit for Bonje students to learn from her students.

6 Conclusions and recommendations

In order to enhance the follow-up aspect of the seminars, the teachers are encouraged to have exchange visits with neighbouring schools to learn from each others projects as well as organize activities such as competitions and community days.

Whereas a significant proportion of the seminar costs cover accommodation, the aspect of having participants staying at a common venue has reduced absenteeism and lateness. The guesthouse setting was particularly conducive for activities enabling the teachers to participate fully in all sessions and get involved thus making it easier to work together in developing area strategies.

Although participants recommended increasing the seminar duration to cover more topics, it is hoped that after certification, the teachers will be involved in training fellow teachers in their localities which will help enhance sustainability of the program. There is however still need to continue with the five day seminars as a platform to share experiences, additional teaching and learning strategies as well as address issues such as fundraising skills for project support. It is also important to develop and avail a range of reference materials which the teachers can use.

In some cases where teachers have left or been transferred, club and project activities have suffered as other teachers sometimes did not have the interest or capacity to support them. Although the program has encouraged trained teachers to train their colleagues; there is need to work more closely with school administrators to encourage them to appreciate and support club activities. In schools that have had more than one patron, teacher transfers have sometimes been beneficial as the teachers establish clubs in their new schools.

As the local area training is being implemented by the teachers, it is important to continue to strengthen the already established partnerships in order to maintain support for the teachers on the ground.

7 Appendices

Appendix 1: list of participants

Participants	School	Address	School project	Phone
Jane Duo Parmena	Mlaleo primary	Box 878 Mombasa	School beautification	0733933813
Rose Tazana Dlomo	Mwamdudu primary school	Box 82423 Mombassa	Waste management	0720751415
Leonard Onyango Oduor	Desliz primary	Box 84113 Mombasa	School beautification	0727856423
Mwakurichwa H. Ali	Yeje primary	Box 23 Matuga	School beautification	0722628954
Kairo Wagenye	Mwaroni primary	Box 144 Ukunda	School beautification	0724426728
Serah M.Divisi	Kakoneni primary	Box 1477 Malindi	Tree planting	0721234625
William Kathithe	Dida primary	Box 817 Kilifi	Waste management	0721712790
David Jali	Mida primary	Box 39 Gede	Bird bath	0722281339
William Mwaro	Bogamachuko primary	Box 32 Vitengeni	Tree planting	0723063637
Henry M.K.Mwachitu	Nyari primary	Box 384 Kilifi	Tree planting	0736936308
Hassan A. Mwadima	Mkokoni primary	Box 96458 Likoni	Tree nursery	0721527169
Mwanajuma M. Ganyuma	Denyenye primary	Box 96128 Likoni	Tip-taps	0721953658