



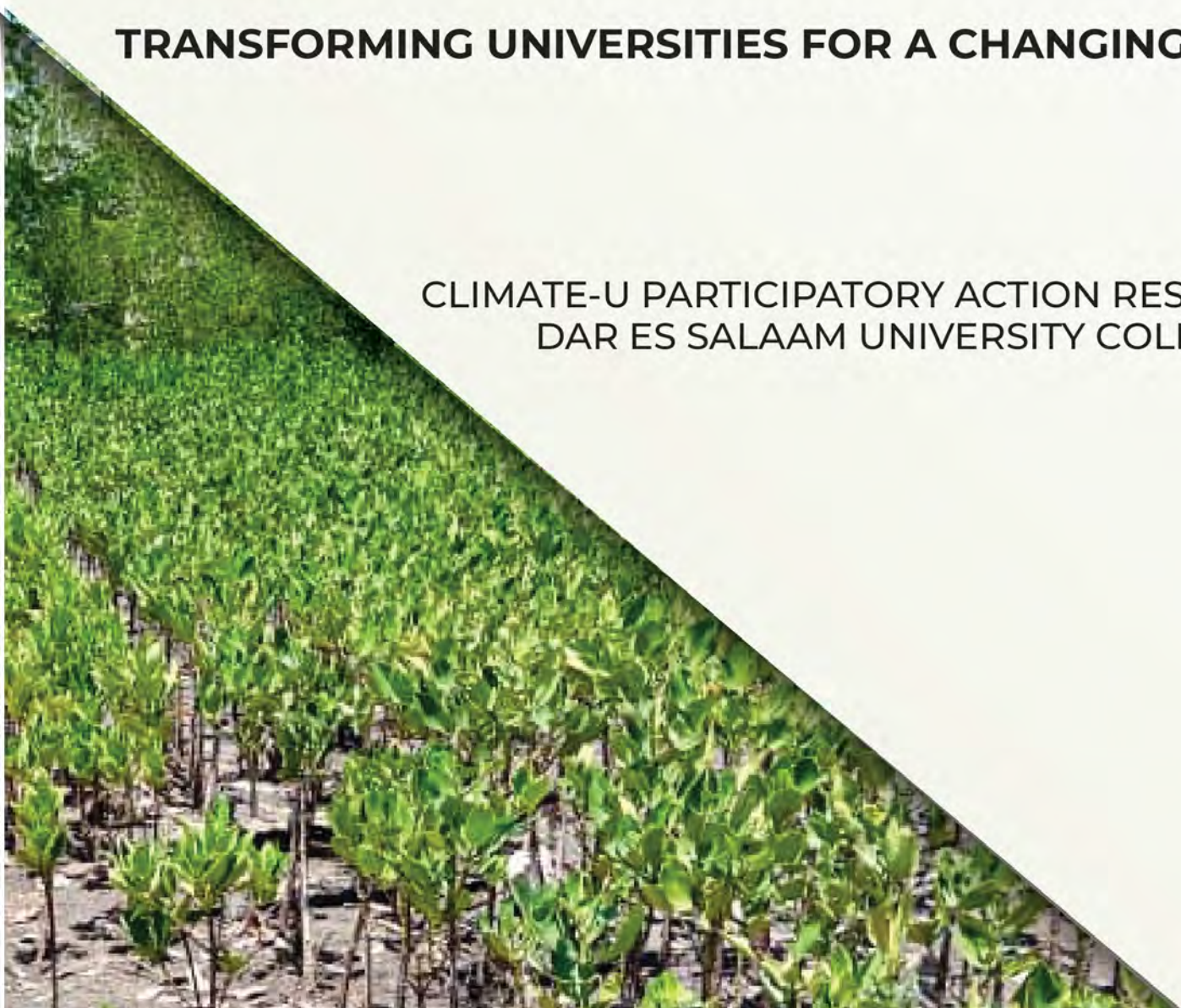
Climate-U

Transforming Universities
for a Changing Climate



TRANSFORMING UNIVERSITIES FOR A CHANGING CLIMATE (CLIMATE-U) PROJECT

CLIMATE-U PARTICIPATORY ACTION RESEARCH INITIATIVES AT THE
DAR ES SALAAM UNIVERSITY COLLEGE OF EDUCATION



RESEARCH BRIEF
2023

INTRODUCTION

The Dar es Salaam University College of Education (DUCE), which is a constituent college of the University of Dar es Salaam (UDSM), joined the Climate-U Project as an affiliate partner in 2022, and engaged in participatory action research (PAR) processes to generate local climate actions.

The PAR Team

- Four DUCE researchers
- Two DUCE postgraduate students
- Sixteen members of Shirika la Hifadhi ya Mazingira na Watu Wenye Mahitaji Maalum (SHIMAWWA)
- Twenty members of Kikundi cha Utunzaji Mazingira na Matumbawe (KIUMAMA)
- Nineteen members of Somanga Environment Group (SEG)

The PAR team endeavored to establish spaces for knowledge-based and action-based learning about climate change, and for co-designing and implementing culturally sensitive climate actions in the coastal communities of Somanga and Songosongo in Kilwa District, Tanzania.



Map showing the PAR sites of Somanga and Songosongo villages

Credit: Tanzania PAR Team

PAR CONTEXT

It was noted that coral reefs and mangroves, which are habitats and breeding grounds, shelters and primary sources of food for aquatic biodiversity, are under great threat as a result of natural and human factors.

Tanzania is recording a decline in coral coverage along its coastline and islands due to destructive blast fishing practices and the effects of climate change.

30

Blast fishing contributed to the destruction of more than 30 coral reefs in the unprotected areas of Kilwa and Kibiti districts.

+27°C



The high sea surface temperatures recorded in 1998, 2005, 2016 and 2020 contributed to the bleaching and death of corals in Mafia, Kilwa and Rufiji.

The Tanzanian coastline is experiencing a shocking loss of its mangroves due to overexploitation for poles and timber, the conversion of mangrove forests into agricultural land, the conversion of mangrove forests into salt production, and climate change

The greatest mangrove losses were recorded in the Rufiji Delta. The coverage of mangroves declined from 51,941 hectares in 1991 to 45,519 hectares in 2015.

The observed effects of mangrove degradation are the decline in prawn fishery due to the dependence of prawns on mangrove vegetation as their nursery grounds, and increased coastal erosion, which has led to a loss of property, land and infrastructure (URT 2022).

The PAR team considered the above facts and resolved to implement three interventions:

- Coral reef-rebuilding and coral restoration activities at Mwamba Fisi
- Mangrove restoration along Somanga Bay
- Climate change awareness campaigns targeting pupils at Songosongo Primary School

RESTORATION OF MWAMBA FISI CORAL REEF AT SOMANGA, TANZANIA



Attaching and cementing pieces of corals into the three holes of the small bricks



Attaching and cementing pieces of corals into the three holes of the small bricks



Handing the bricks with corals to divers who put them in the seabed



Divers placing the small bricks with coral on the seabed



Planted corals on the seabed



Growing coral

Coral Restoration at Mwamba Fisi between May 2022 and April 2023

Date	Planted Corals	Status as of 18 March 2023
12/05/2022	813 corals	Average growth 28 cm
13/05/2022	600 corals	Average growth 28 cm
18/07/2022	600 corals	Average growth 22 cm
25/09/2022	600 corals	Average growth 18 cm
11/12/2022	720 corals	Average growth 12 cm
18/12/2022	720 corals	Average growth 12 cm
07/01/2023	900 corals	Average growth 8 cm
08/01/2023	900 corals	Average growth 8 cm
14/01/2023	1,065 corals	Average growth 8 cm
TOTAL	6,918 corals	

Credit: Tanzania PAR Team

MANGROVES RESTORATION AT SOMANGA, TANZANIA



Planting mangroves in a 4 ha coastal land in Somanga Bay



Planted mangroves in a fenced 4 ha coastal land in Somanga Bay



Mangroves growing in 6 ha coastal land in Somanga Bay

Mangroves restoration activities at Somanga between May 2022 and April 2023

Date	Activities	Place
15/06/2022	Planting 2,000 mangroves	4 ha of coastal land in Somanga Bay
01/08/2022	Planting 1,500 mangroves	4 ha of coastal land in Somanga Bay
07/10/2022	Planting 1,200 mangroves	4 ha of coastal land in Somanga Bay
10/12/2022	Planting 1,500 mangroves	4 ha of coastal land in Somanga Bay
01/02/2023	Planting 2,000 mangroves	4 ha of coastal land in Somanga Bay
02/02/2023	Planting 1,250 mangroves	6 ha of coastal land in Somanga Bay
10/02/2023	Planting 1,250 mangroves	6 ha of coastal land in Somanga Bay
24/02/2023	Planting 1,435 mangroves	6 ha of coastal land in Somanga Bay
28/02/2023	Planting 2,100 mangroves	6 ha of coastal land in Somanga Bay
03/03/2023	Planting 2,000 mangroves	6 ha of coastal land in Somanga Bay
21/03/2023	Planting 1,500 mangroves	6 ha of coastal land in Somanga Bay
TOTAL	17,735 mangroves	10 hectares

Credit: Tanzania PAR Team

CLIMATE CHANGE AWARENESS CAMPAIGN AT SONGOSONGO



Pupils observing effects of coastal erosion



Pupils observing poor waste management practices



Pupils visiting the protected natural forest



Pupils visiting the drying natural well due to drought



Pupils visiting the well cared natural well



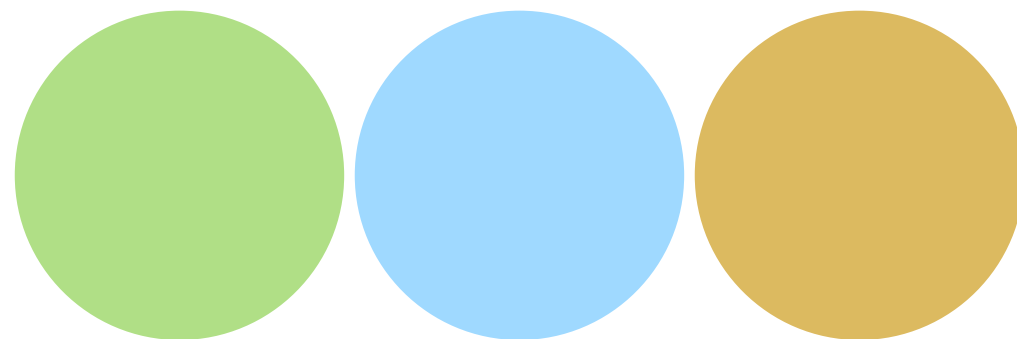
Planted tree well taken care

LESSONS LEARNT

- There are many opportunities for climate action that can be unlocked at the university and in the coastal communities.
- Universities have diverse expertise that could facilitate better comprehension of the climate crisis and the finding of solutions to some of its worst effects.
- Universities are capable institutions and are better placed to create platforms for the diverse stakeholders to engage in dialogue to find solutions to the different forms of climate crisis in their localities.
- Communities are highly concerned about the climate crisis, have accumulated relevant local knowledge about it, and have innovative ideas for redressing its worst effects.
- Climate change-stricken communities are eagerly waiting university researchers to help them devise and implement diverse climate actions.

PAR Leaders

Dr Almas Mazigo (DUCE, PI)
Dr Emiliana Mwita (DUCE, Co-PI)
Dr Maregesi Machumu (DUCE)
Dr Jovitha Mayenga (DUCE)
Mr Said Chande (KIUMAMA)
Mr Ally Winda (SEG)
Mr Haji Ibrahim (SHIMAWWA)



For more information contact the PI:

mazigo.almas@udsm.ac.tz
almas.mazigo@duce.ac.tz