



RCE Port Harcourt 2017 Annual Report

by

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Overview

Poverty
Reduction and
Human Capital
Development

- **Economic empowerment (capacity building / skills transfer)**
- **Waste-to-wealth**

RCE Port Harcourt
(3 Core Projects)

Ecosystem Conservation
and Restoration for
Sustainable Development

- **Bioremediation of degraded environment due to mineral exploration & exploitation (solid & liquid minerals)**
- **Greening environment for mitigating climate change**

Green Science Education
- Science on Wheels
Flagship Project

- **Capacity building of science teachers (train-the-trainers)**
- **Encourage science teaching & learning at primary & secondary schools**



Project 1: Poverty Reduction and Human Capital Development

Sub-Project 1.1:

Economic Empowerment (capacity building / skills transfer)



- **Skills for Life** - trained 171 youths and women through soap making & craft production (shoes; hand bags)



- **Green Power Technology** - developed 18 hours pilot green noiseless electricity generating system for 4 households

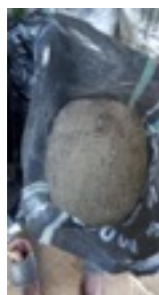


- **GoTech** - trained 22 teenagers on ICT and Android programming

- **Chokor Oven** - constructed smokeless fish drying ovens for 30 women smoked fish sellers in Choba (host community)



- **Agro-Fertilizers**



- one community impacted (18 more communities targeted)
- 5 tonnes of waste has been recycled (20 tons would be recycled in the next 12 months)
- 33 farmers, currently, use the agro-fertilizer with capacity to neutralize acid soils
- produced and 2 youths undergoing training on producing the agro-fertilizer



Project 1: Poverty Reduction and Human Capital Development (cont'd)

Sub-Project 1.2:

Youth Involvement in Economic Empowerment (waste-to-wealth)

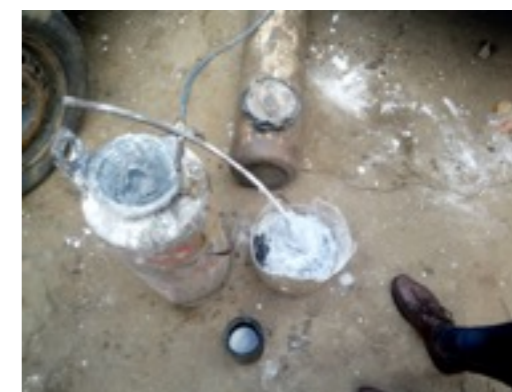
- **Schools Laboratory Chemicals** - from scrap coke cans to useful chemicals
 - ALUM (dyeing fabrics; manufacture pickles; for canning food; water purification)



- **Industrial Chemicals** - from welders' wastes (calcium carbide-water reaction residues)

- Calcium chloride
- Calcium phosphate

- Calcium sulphate
- Calcium nitrate





Project 2: Ecosystem Conservation and Restoration for Sustainable Development

Sub-Project 2.1:

Bioremediation of degraded environment due to mineral exploration & exploitation (solid & liquid minerals)

- **Ecosystem Services Restoration and Conservation** - mangrove restoration for ecosystem services in selected Niger Delta communities of Nigeria:



- Mangrove plants predominate in coastal ecosystems and are important for sustainable livelihood.
- Anthropogenic (man-made) activities threaten mangrove existence.
- Community engagement necessary for sustaining potential gains from project.



- **Recommendation 1:** Advocacy to Ministries of Environment and Niger Delta Affairs to establish Mangrove Protected Areas (MPAs)
- **Recommendation 2:** Support communities to diversify income sources from other rural livelihoods
- **Recommendation 3:** Clean up of oil spill impacted mangroves for eco-restoration and wellness



Project 2:

Ecosystem Conservation and Restoration for Sustainable Development (cont'd)

Sub-Project 2.2:

Greening Environment for Mitigating Climate Change

- **Tree Planting** - yet, to be implemented
- **Urban Agriculture** - yet, to be implemented



Project 3: Green Science Education - Science on Wheels Flagship Project

Sub-Project 3.1:

Encourage Science Teaching & Learning at Primary & Secondary Schools

- **Transformative Indigenous Knowledge for Disease Control** - production of Ciklavit[®], a biopharmaceutical product from organic products:



- Ciklavit[®], first Nigerian natural nutritional supplement, produced from *Cajanus cajan* (Pigeon pea)

- Ciklavit[®] has anti-sickling properties for effective management of sickle cell disease

- Ciklavit[®]; success story of commercializing research outcomes resulting from a novel inclusive community-university-industry partnership with relevant professional bodies

- Ciklavit[®] has no known deleterious side effect and is acknowledged/endorsed by World Health Organisation (WHO)





Project 3:

Green Science Education - Science on Wheels Flagship Project (cont'd)

Sub-Project 3.2:

Capacity Building of Science Teachers (train-the-trainers)

- **Science Teachers Empowerment** - training teachers for sustainable science education at the primary and secondary schools levels

Sub-Project 3.3:

Encourage Science Teaching & Learning at Primary & Secondary Schools

- **Raise Awareness in Science Courses** - help pupils and students generate interest in the study of science courses as a long term strategic succession plan for sustainable science education



Partnerships and Collaborations

- **University of Port Harcourt, Nigeria (UniPort)** - founding member and secretariat
- **Centre for Environment, Human Rights and Development (CEHRD)** - founding NGO
- **Centre for Inter-Relations and Community Interface (CIRCI)** - founding NGO
- **Entrepreneurs in Action Through Us, UniPort (ENACTUS - UniPort)** - youth group
- **Others** - are still being, gradually mobilized



Funding Pattern and Sources

- **World Bank Africa Centre of Excellence in Oilfield Chemicals Research (ACE-CEFOR)** - trained 171 youths and women through soap making & craft production (shoes; hand bags)
- **Self Funding** - resources mobilization from members
- **Solicit External Donor Support** - develop concept notes and fundable proposals for grants
- **Options for Internally Generated Revenues** - establish a self-funding source to support minor RCE activities



Policy Recommendations by RCE Port Harcourt

- **Capacity Building** - Human Capital Development in Science, Technology, Engineering and Mathematics (STEM), at all levels, of African Educational System for Sustainable Development
- **Ecosystem Services Restoration** - Ecosystem Conservation, particularly, coastal regions (Mangrove-Protected Areas, MPAs), National Parks/Game Reserves, and Restoration of Degraded Environment for Sustainable Development
- **Multi-Stakeholders, Inclusive and Strategic Partnerships** - Triple Helix Model is transforming Conventional Universities to Entrepreneurial Universities. Triple Helix Plus⁺ Model (copyright - RCE Port Harcourt) involving Governments (all tiers), Universities, Industry Partners, Professional Bodies and Community Engagements for Sustainable Development of Africa



Thank you

