

Civil Engineering

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| Partner organisation | SASOL FOUNDATION |
| Country | KENYA |
| Fieldwork period/year | 2012 |
| Disciplines | Civil Engineering |
| Title of the assignment | Building a sand storage dam |
| Area of work, region, housing, accommodation, transport | Students will be working in MPC-South. Accommodation in Kyangu market. Transport by public service vehicles (matatus) or by taxi where possible organised by SASOL. |
| Organisation(s) (NGO, training education institute, community | SASOL, MPC-South community. |
| Context, situation, problem(s) (regarding sector program) | Kitui South (New Ikutha district) lies in arid and semi arid region. Since Colonial time people from these regions have suffered from water inadequacy. On average the community traverse approximate 5km to max. of 20km distances in search of water for domestic and livestock use. This has impact on the other daily household chores as the attention is directed to water related chores. SASOL has in the past worked in this region in assisting the community to have water at a closer distance by building sand storage dams and an off take well on the embankment of the dam. These dams have improved the situation of the community by a certain percentage which we thought is not yet enough. In MPC-South, SASOL is developing the land to be a training centre for community. Irrigation is one of the training to be offered in this centre. Water used to irrigate the |

Objectives (project and program level)

Brief project description including major activities

demonstration farms will be lifted from shallow wells from the sand storage dams. That's why we are interested in having students in developing these areas.

1. Building a sand dam as a community water provision source.
2. Building a sand dam as a practical experience for civil engineering /masonry students.

Sand dam is a masonry wall build across an ephemeral river for the purpose of impounding sub surface flow of water, creating a reservoir up stream of the dam within the riverbed. The main function of a sand dam is to store water in the sand and therefore increased volume of sand in the riverbed. It involves site identification which means walking along a stream and pointing out the potential site for development. The stake holders involved during this exercise are local communities who are the beneficiaries of the project and the implementing organisation (SASOL).

Activities under objective 1

1. Mobilisation of materials and human resource.
2. Site confirmation.
3. Preliminary dam Design and bill of Quantities.
4. Site management (To be involved in making by laws, record keeping, work plans and duty allocation.)
5. Final dam design
6. Set-out trench.
7. Excavation of the trench.
8. Construction
9. Reporting

Activities under objective 2

1. Guidance, supervision and

Expected results (project and program level)

- discussions with technical supervisors
- 2. Involvement and discussions at all steps and levels by both Dutch and Kenyan students for exchange of knowledge
- 3. Participation in multicultural events
- 4. Attend trainings (entrepreneurship, life skills and ICT)
- 5. Reporting

- 1. Complete sand storage dam.
- 2. Students should have the ability to mobilise, design manage the whole process of sand storage dam implementation.
- 3. Students should have the ability communicate and relate across cultures
- 4. Exchange of knowledge between the Kenya and Dutch students and also between all the students and the community.
- 5. Give recommendations to the next team.
- 6. A draft report.

Project phasing

First week – Orientation
 In between weeks – Project activities
 Last two weeks – Report writing

Level Dutch and Kenyan students/graduates

University, Higher Education, Secondary Vocational Education – graduates or undergraduates, Polytechnic students

Supervision and guidance (name(s), function)

Evaluation and progress meetings done after every two weeks by SASOL staff.