DEPARTMENT OF ARCHITECTURE AND
CIVIL ENGINEERING
Chalmers University of Technology

CHALMERS
UNIVERSITY OF TECHNOLOGY

Kandidatarbete
Examenskod ACEX11

Partnership for the sustainability goals: Application of natural mineral binders for production of Interlocking Building Blocks (IBB) in Sub-Saharan Africa

Concrete is globally the mostly used building material. In residential building in Sub-Sahara Africa (SSA) cement price plays a key role for building material affordability.

In this proposed bachelor thesis project, we are aiming to explore potentials of using low cost/low carbon innovative binders for production of interlocking building blocks. The work involves laboratory wok, studying the reactivity of alternative cementitious binders in Africa as the first step and the second step involves production of building blocks in the lab, to investigate the expected strength properties. Are you interested to help African societies in reaching to construction mate-rials they can afford? Then you are welcome to contact us and join our team.

Literature recommendation: H. Van Damme, H. Houben, Earth concrete. Stabilization revisited, Cement and Concrete Research, 114 (2018) 90-102.

Target group of students
TKSAM, TKKMT, TKBIO, TKKEF
Group size
3-6
Special requirements
No requirements

Suggestion from
Name: Arezou Baba Ahmadi
E-mail: arezou.ah-madi@chalmers.se
Phone: 072 157 0916

Supervisor
Name: Amrita Hazarika
E-mail: am-rita.hazarika@chlmers.se
Phone: +463317724631

Examiner
Name: Arezou Baba Ahmadi
E-mail: arezou.ah-madi@chalmers.se
Phone: 072 157 0916

Can the project be duplicated?
Yes

☐Digitalization
☒Sustainability
☒Climate change
☐Gender equality, equal treatment and diversity
☐Other