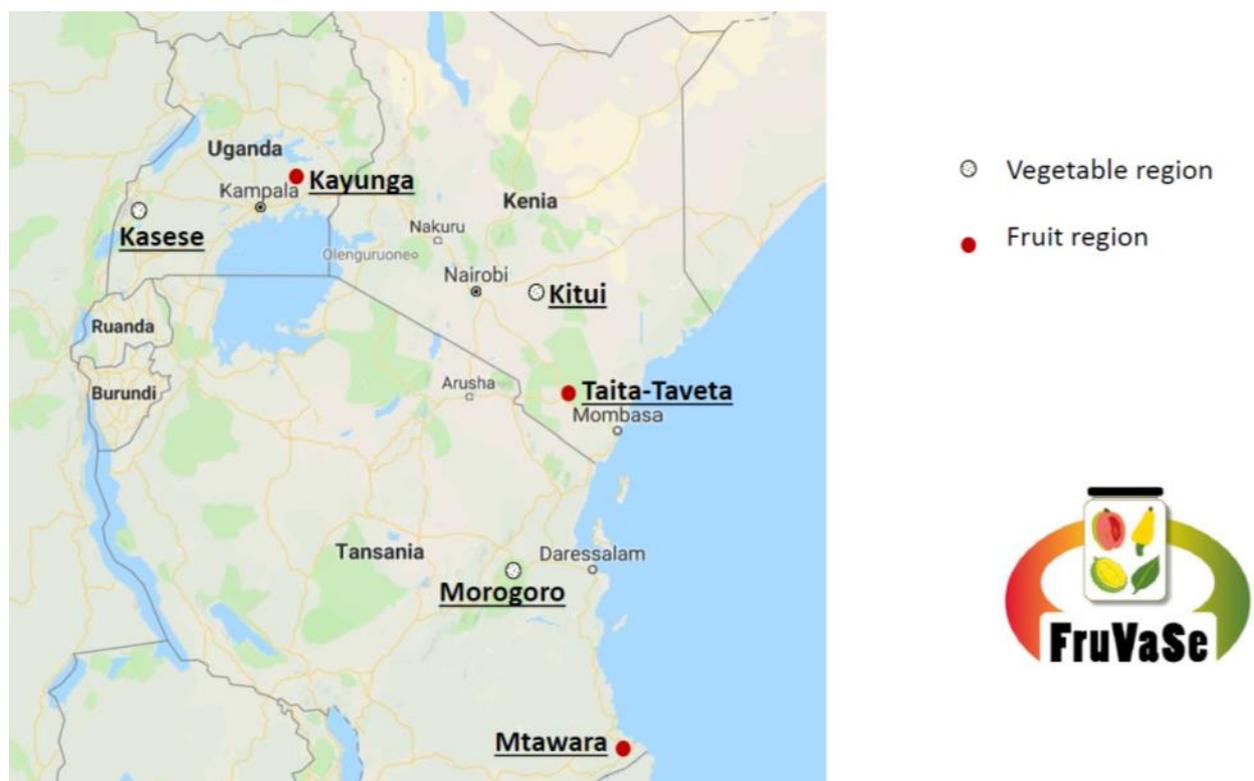


Projectupdate

| | |
|-----------------------|---|
| Geographical focus: | Kenia: Kitui and Taita-Taveta Tansania: Morogoro and Mtwara Uganda: Kasese and Kayunga |
| Call reference: | Innovative approaches to process local food in Sub-Saharan Africa and Southeast Asia, which contribute to improved nutrition, as well as qualitative and quantitative reduction of losses |
| Project titel: | Fruits and vegetables for all seasons: Improved resource-efficient processing techniques and new market solutions for surplus fruits and vegetables for rural development in Sub-Saharan Africa |
| Cooperating partners: | Georg-August-University Göttingen; Erfurt University of Applied Sciences; University of Nairobi and University of Eldoret, Kenya; Nelson Mandela Institution of Science and Technology, Tanzania; Makerere University, Uganda |
| Duration: | 1 st Mai 2018 – 31 st Dezember 2021 |
| Budget: | 792,511.27 € |



Map of the FruVaSe research regions in East Africa © Google Maps



Aim of the project

The FruVaSe project aims at combating deficiencies in vitamins and minerals in human nutrition and tackling seasonal waste of fruits and vegetable along the value chain in East Africa. Major objectives are (i) select the nutritionally most promising varieties of the target fruits and vegetables (FVs), focussing on guava, cashew apple, jackfruit, and the green leafy vegetables cowpea leaves, African nightshade and cassava leaves; (ii) develop new and evaluate traditional technologies for processing and prolonged shelf-life with a focus on juices, dried products such as fruit leather or fruit bars; concentrated vegetable pastes, sauces, chutneys and relishes as well as vegetable instant soup; and (iii) test the new products on consumer acceptance and possibly commercialize them in pilot projects.

An integrated systems' approach (water-energy-food-waste (WEFW) nexus) shall be followed, aiming at (iv) the model development of an energy autonomous, resource-efficient processing procedure embedded in a business model empowering rural women. In a life-cycle approach most parts of the plants will be used, for human nutrition, animal feed (guava as chicken feed in Kenya) and for biogas production (jackfruit in Uganda). Additionally, (v) a water re-use concept will be established as well as an analysis and innovative purification of drinking water for juice production.

Results

After the FruVaSe project started in September 2018 a kick-off workshop took place in October 2018 in Arusha, Tanzania. The detailed work plan/ gantt chart was discussed as well as different logistics and organisational issues regarding the general framework of the project agreed upon, for example communication, data exchange, data saving, budget applications and financial reports. In 2018, a total of 9 PhD students and 5 MSc students prepared a research proposal for which work will be carried out in the coming months and years.

MSc students

| WP | Name | Topic | Timeline/ start | Institution |
|----|-------------------|--|--------------------|-------------|
| 1 | Sam Agaba | Jack fruit processing | Oct 2018 | MUG |
| 2 | Michael Wasswa | Optimizing cowpea leaves' processing and preservation techniques for nutrient retention, storage stability and utilization | Oct 2018 | MUG |
| 3 | Dorothy Nabakabya | The lowest cost of a nutritious diet including selected local fruits and vegetables in Kayunga and Kasese districts | Nov 2018 | MUG |
| 4 | Tadeo Mibuulo | Profile appropriateness of jackfruit waste co-digestion with cow dung to maximize biogas production | Oct 2018 | MUG |
| 4 | Soeren Richter | Biogas baseline in Uganda | Oct 2018 | EUAS |



PhD students

| WP | Name | Topic | Timeline/ start | Institution |
|----|--------------------|--|--------------------|-------------|
| 1 | Angela Aluko | Processing of cashew apple for value addition reduction of post harvest loss in Tanzania | Oct 2018 | NM-AIST |
| 1 | Sophie Nansereko | Jack fruit (<i>Artocarpus heterophyllus</i>) processing and preservation using refractance window drying technology and other conventional methods | Nov 2018 | MUG |
| 1 | Duke Gekonge | Production, Characterization and Shelf stability of Guava nectars produced from Keyan Cultivars | Sep 2018 | UoN |
| 1 | Frederike Sonntag* | Processing and preservation of fruit with a long shelf life by producing fruit leather | Sep 2018 | UGOE-QP |
| 2 | Frank Sangija | Processing and preservation of African nightshades for improving quality, shelf life & sensory attributes of relish/pickle | Oct 2018 | NM-AIST |
| 2 | Sheilla Natukunda | Potential of cassava leaves in improving micronutrient nutrition in Kasese district | Nov 2018 | MUG |
| 2 | Joshua Ombaka | Physico-Chemical, Sensory and Keeping Qualities of Instant Soup Mixes From Cowpea Leaves | Sep 2018 | UoN |
| 2 | Amina Ahmed | Quality characteristics of juice and chutney incorporated with African leafy vegetables | Nov 2018 | UGOE-QP |
| 3 | Jacob Sarfo | Contribution of processed fruits and vegetables towards sustainable nutrition in East Africa: studies from Tanzania, Uganda, and Kenya | Nov 2018 | UGOE-QP |
| 5 | Johanna Meinecke | Consumer acceptance of novel healthy food products in Tanzania, Uganda and Kenya | Oct 2018 | UGOE-MA |

*Financed by University of Göttingen



The FruVaSe project team at the kick-off workshop in October 2018 at Nelson Mandela African Institution of Science and Technology in Arusha, Tanzania © Edna Makule



Stand 07.04.2017



Visit at the World Vegetable Center, Arusha, Tanzania during kick-off workshop and getting information about different vegetable processing techniques, i.a. different solar driers © Gudrun Keding



The Autarcon water purification apparatus that had already arrived at NM-AIST and was inspected during the kick-off workshop by the FruVaSe project team © Gudrun Keding





Jackfruit being solar dried at Kayunga fruits of the Nile grower's association, Uganda – an association visited during the pre-visit in Kayunga district © Sophie Nansereko



Project team with guava fruits in Taita Taveta, Kenya during pre-visit of the project site © Duke Gekonge

