

Steering Committee meeting, April 12-14, 2023

Participants: According to the list

Opening the meeting; Welcome by Yifang and Ali

End date of the project

- Project ends 14 May 2023
- Last date to submit financial reports (corrected and final): 14 May 2023
- Auditing: May-June
- Submission to EU: June

Logo

- UniZambeze and KTH have new logos. Update logos in all documents (Luigi)
- Add the logo of Academy of Science to all documents. Replace with "iap" logo.

Courses

- Course plans (10 + 5 ECTS) are final, uploaded in the project website.
- Course materials are updated based on opinion of experts (minor edits), and uploaded in the Moodle.
- All video lectures are translated, by adding subtitles to Videos. They are available in YouTube and in UEM Moodle.
- UEM gives the links to UniZambeze, UniLurio, and LU to add them to their Moodles (Deadline, Tuesday April 18, 2023).

ToTs

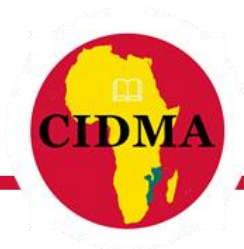
- ToT in Mozambique, hybrid mode (online and physical), April 2022.
- ToT in Lisbon, Sept 2022.
- ToT in Mozambique (Maria and Ali), Dec 2022.

Equipment

- Has been purchased according to the reports.
- Inventory list of the equipment, official and signed, is needed. Send it to Irma.

Installation of Moodle

- UEM: Moodle is installed. Login information has been provided.
- UniZambeze: Moodle is installed and available. Send Ali the link to the Moodle with Credentials to Access it (Deadline Tuesday, April 18).
- UniLurio: Moodle is installed and available. Login information has been provided.





Installation of DMT

- DMT is installed in UEM. Andrey checks to make sure that it is operational (working) and sends Ali a link with login information (Deadline Tuesday, April 18).

Staff contracts

- Employment contracts in English are needed (Irma has received contracts from Mozambican partners in Portuguese).

Contract with experts (pilot students)

- Make sure to have contract with all experts.
- Employed staff at the university are not allowed to be paid as expert (pilot student) by subcontracting.

Financial reports

- The financial reports of all partners were reviewed and discussed. It included missing documents, errors in the reports, not reported activities, etc. Partners should submit the financial reports according to the agreed deadline.

Dissemination

- Presenting a paper in GeoInformation for Disaster Management, 2020
- Presenting CIDMA in a panel discussion; Gi4DM Panel 3: Education for GeoDM, as part of Gi4DM conference, 2020
- Dissemination workshop, online, March 2022
- Dissemination workshop, December 2022 (Maria)
- Dissemination Workshop on 23 February 2023, by UEM, about DMT.
- Dissemination workshop on 18 March 2023, by UEM, about courses.
- Dissemination workshop in beginning of April 2023, by UniZambeze, local stakeholders.
- Dissemination workshop on mid-April 2023, by UniZambeze, local stakeholders.
- Publication in local newspaper, on April 2023, by Unizambeze.
- Dissemination workshop on 26 April, by UniLurio, local stakeholders.
- Dissemination workshop, on May 4, 2023, by Lisbon, UEM, UniZambeze and ACM.

Exploitation

- UEM uses the developed course materials in its existing BSc and MSc programs in GIS, in the Department of Mathematics and Informatics, since Spring 2022 (Winter Semester in Mozambique).





- UEM uses develop course materials in its existing MSc programs in Applied Meteorology and Climate Services, in the department of Physics, starting Autumns 2023 (Summer semester in Mozambique).
- UEM will teach courses as individual courses for vocational education, starting 2023 Autumn (Summer semester in Mozambique).
- UniZambeze is using course materials in its MSc program in Urban Planning and Environment, in the Department of Urban Planning, since Spring 2022 (Winter Semester in Mozambique)
- UniZambeze is going to teach the courses, as vocational training, offered by the Department of Meteorology and Food Security, starting Autumns 2023 (Summer semester in Mozambique).
- UniZambeze teach the courses in Master program in Environmental Management in Biodiversity Conservation Area, in the Gorongosa National Park, since Spring 2022 (Winter Semester in Mozambique)
- UniLurio uses develop course materials in its existing BSc program in Biological Science and the Natural Resource Management and Master program in Ecology in the Faculty of Natural Sciences, since Spring 2022 (Winter Semester in Mozambique).
- UniLurio will teach courses as individual courses for vocational education, starting Autumn 2023 (Summer semester in Mozambique).
- UniLurio is going to run a Master program in Climate Change, where the developed 3 courses will be taught there. The program shall start in 2024.

Sustainability

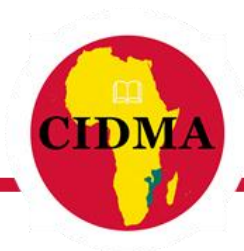
Courses as part of a Curriculum

For existing programs, the developed course materials are used, to teach existing courses. However, the three Mozambican partner universities are discussing to develop a joint program related to climate change and Geotechnologies, in which the three developed courses in this project will be part of the curricula. Having the courses as part of the curricula, it will be continuously used by the students, students get very focused knowledge and skills about the topic, will be updated and ensures the sustainability.

Number of students

Each university partner can admit and train the following number of students per year.

- *Students for existing programs:* UEM admit about 25 students at the BSc and 25 students at the Master level, who are studying the developed courses. UniZambeze admits 40 MSc students in their two master programs. UniLurio admits 25-30 BSc students and 20 MSc students.
- *Students for vocational training:* UniZambeze admits about 20 students for vocational training. 25 students per year for vocational training by UniLurio. UEM is planning to run vocational training, where 20 students are expected to be trained.



- *New joint program:* The three Mozambican partner universities are discussing developing a joint master program, where 20-25 students per university are expected to be admitted.

Considering above, there will be enough students in Mozambique to study the courses for at least the next 5-10 years.

Quality of students

- The students speak Portuguese. English could be difficult for some students. Our exiting lectures have already been translated to Portuguese. But students need to be motivated to improve their English language to be able to read up-to-date scientific papers which are mainly in English.
- For vocational training, students have a better English reading/speaking skill than master students.
- There are two group of students in terms of background knowledge and skills. Those who has work experience in the field (better skills), and with no skills. The former group are more motivated and want to fill their missing knowledge.
- Students admitted to all universities study for about one-year mathematics, when they start the program. This background knowledge is very beneficial to help students to understand and follow GIS/RS/SDI topics.

Generally speaking, Students have a good quality of knowledge and skills, when they start to study the courses. Mozambique needs to invest on improving the English language of the students.

Job/labour market in Mozambique

- Private institutions are using GIS/RS to a very high extent.
- In public organizations related to this project, e.g. Disaster Management Institution and Meteorological Institution are also using GIS/RS.
- Other public organizations such as Municipalities, Unitivity organizations (water, electricity, etc.) also use GIS.
- A big project on transportation (FAMBA) is happening in Maputo, by Maputo Metropolitan Agency ,where a lot of GIS is used. The project needs GIS experts.

There is a good and growing GIS/RS market in Mozambique to increase chance of employability of the students after graduation. This also supports the sustainability of the project.

Number of teachers

- There are enough number of teachers in UniZambeze and UniLurio to teach GIS/RS courses.
- UEM needs to employ more GIS/RS teachers. Currently, in the context of a SIDA funded project, PhD students (future teachers) in GIS and RS are studying in Lund University and KTH.



There is no limitation in terms of teachers to teach the developed courses in the Mozambican partner universities.

Quality of teachers

- The quality of teachers has significantly improved in UEM. Specially with the opening of the new Master program in GIS in the university.
- The quality of teachers in good, but also improving in UniZambeze and UniLurio, due to different capacity building projects that the universities are involved in.

There are good teachers to support teaching the developed courses in this project.

Finances (internal and external)

- Internal finances are limited. Courses are updated as part of regular duties of the teachers.
- Fee paying students are a source of income. Both master students and vocational training students pay fees.
- FDI (Higher Education Development Fund) in the ministry of higher education receives donation from big funders such as UN and World Bank. Mozambican Universities can apply for educational development fund from FDI. UniZambeze has already won a fund from FDI to support the sustainability of the CIDMA project.
- There are different possibilities to apply for external finances to support developing new course materials and updating exiting ones, examples are Erasmus+, SIDA, etc.

By the support of internal and external funders, the sustainability of CIDMA can be guaranteed.

Technical challenges (servers, software, electricity, Internet etc.)

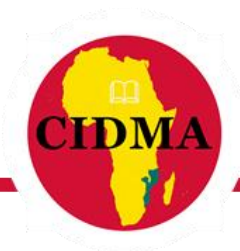
- Electricity is stable in Mozambique. But there is problem with the internet speed that makes online education a bit difficult, especially in GIS/RS where students have to download maps and satellite images. By giving students more time or hybrid online/offline education the issues can be handled.
- Open Source GIS and RS software are available and can easily be used. Such solutions were used for developing CIDMA courses.
- Servers and computers are available in labs. External funds have provided the universities to equip their labs to a good level.

There is no major technical issue at the universities.

Accreditation of courses

- All three courses have been officially accredited by the three Mozambican partner universities.

The courses have been recognized and are being already used in the universities. There are plans to make further use of the courses in other programs and projects, as mentioned above.





Co-funded by the
Erasmus+ Programme
of the European Union



Quality of courses

Based on the evaluation of European and Mozambican experts, the courses have a high quality to train students on using GIS/RS/SDI for climate change induced disaster management.

