

INTERNATIONAL COOPERATION AS A DRIVER FOR STUDENT DEVELOPMENT. A CASE STUDY BASED IN GEOSPATIAL INFORMATION TECHNOLOGY APPLICATION

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Agenda

Objectives

Service learning in international cooperation

Context – Cameroun and the baka people

Results and discussion

Conclusions and future work

PROJECT OBJECTIVES:

A service-learning strategy was started in collaboration with the nonprofit ZyL. Focused on achieving the following objectives:



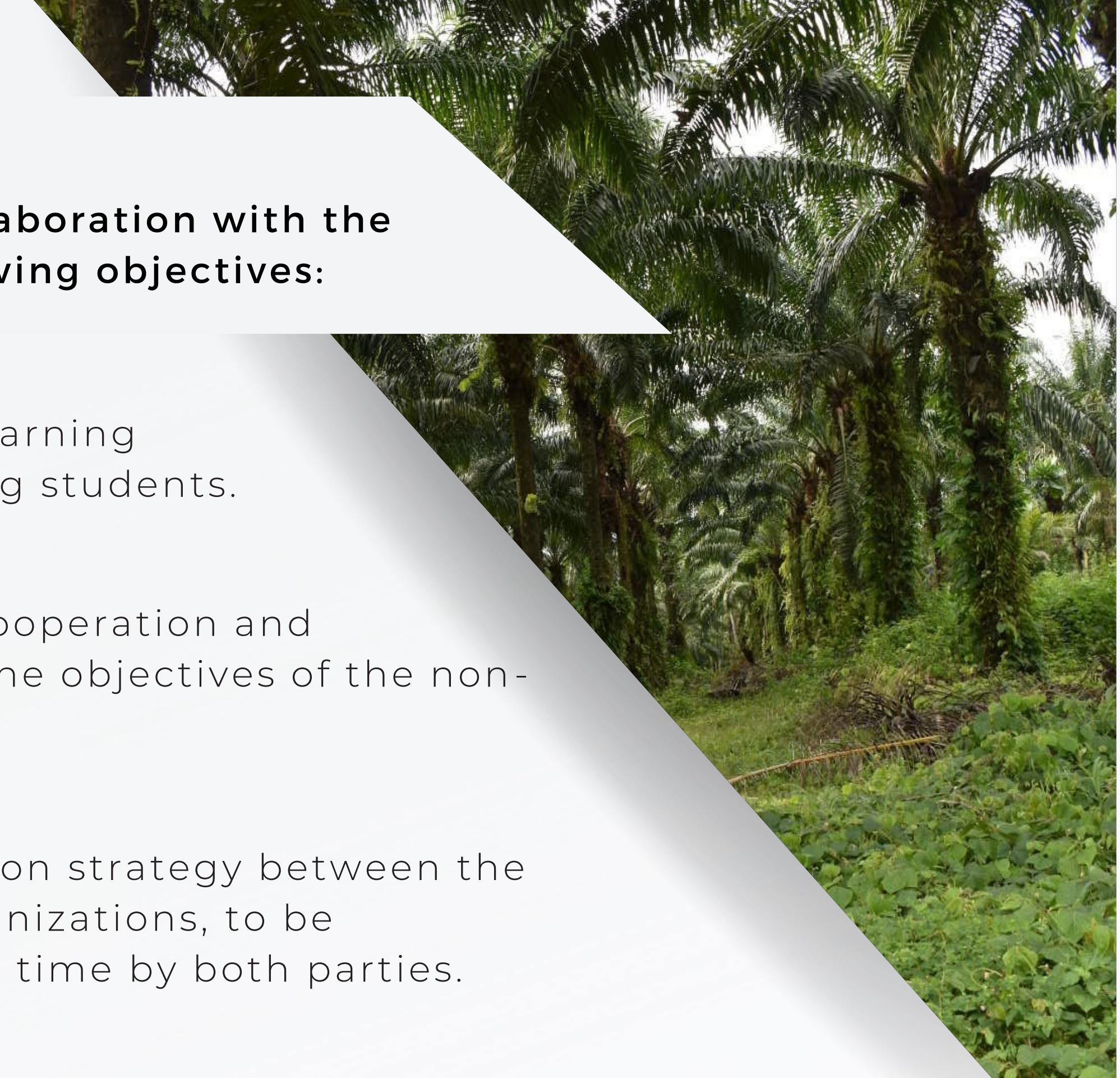
Implementation of service-learning methodologies in engineering students.



Promotion of international cooperation and volunteering. (Aligned with the objectives of the nonprofit Zerca y Lejos.)



Development of a collaboration strategy between the university and nonprofit organizations, to be maintained and continued in time by both parties.



Service-learning relates two fundamental streams



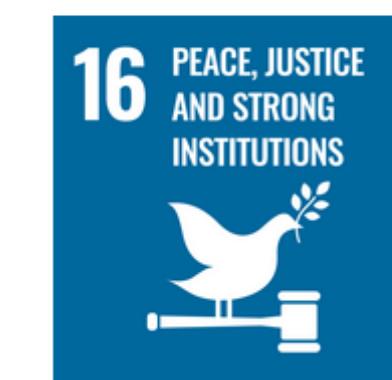
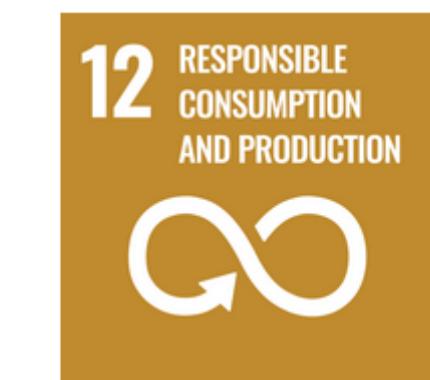
On one side
there must be
a learning
experience

On the other
there must exist a
service,
giving an answer
to a real need.

TIMES OF CRISIS, TIMES OF CHANGE

SCIENCE FOR ACCELERATING TRANSFORMATIONS TO SUSTAINABLE DEVELOPMENT

SUSTAINABLE DEVELOPMENT GOALS



Baka People

Challenges

Deforestation

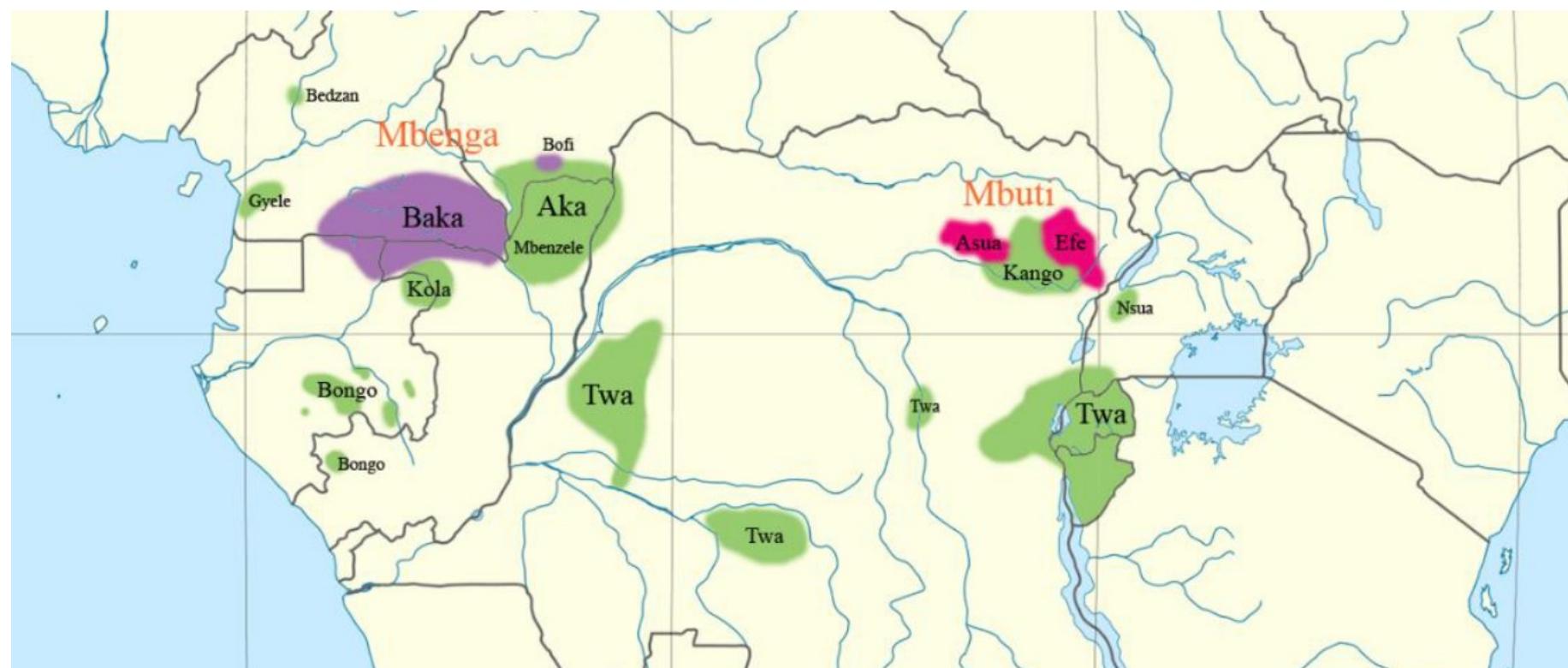
Ethic group located in the central African rainforest. The Baka are often discriminated against and marginalized from society.

- Average heights of 1.52 meters (5 feet)
- Semi-nomadic lifestyles

Lack of rights



Relations with other local population



Pygmy ethnic groups distribution in central Africa (S. Bauchet 2012)

CAMEROUN

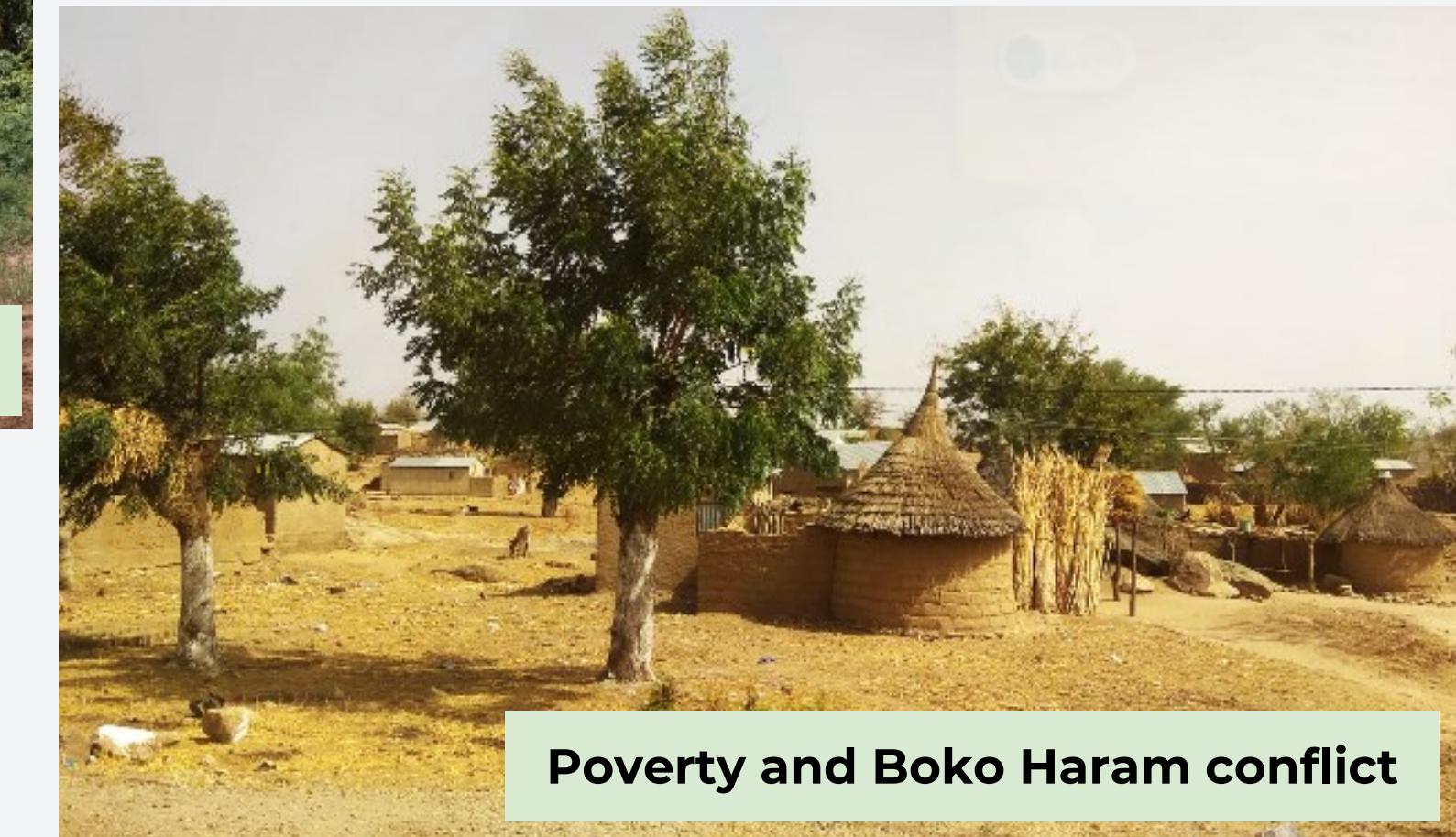
- Context -



Rights to land and territory



Deforestation



Poverty and Boko Haram conflict



Indigenous people



Education



ADH



Community



Health



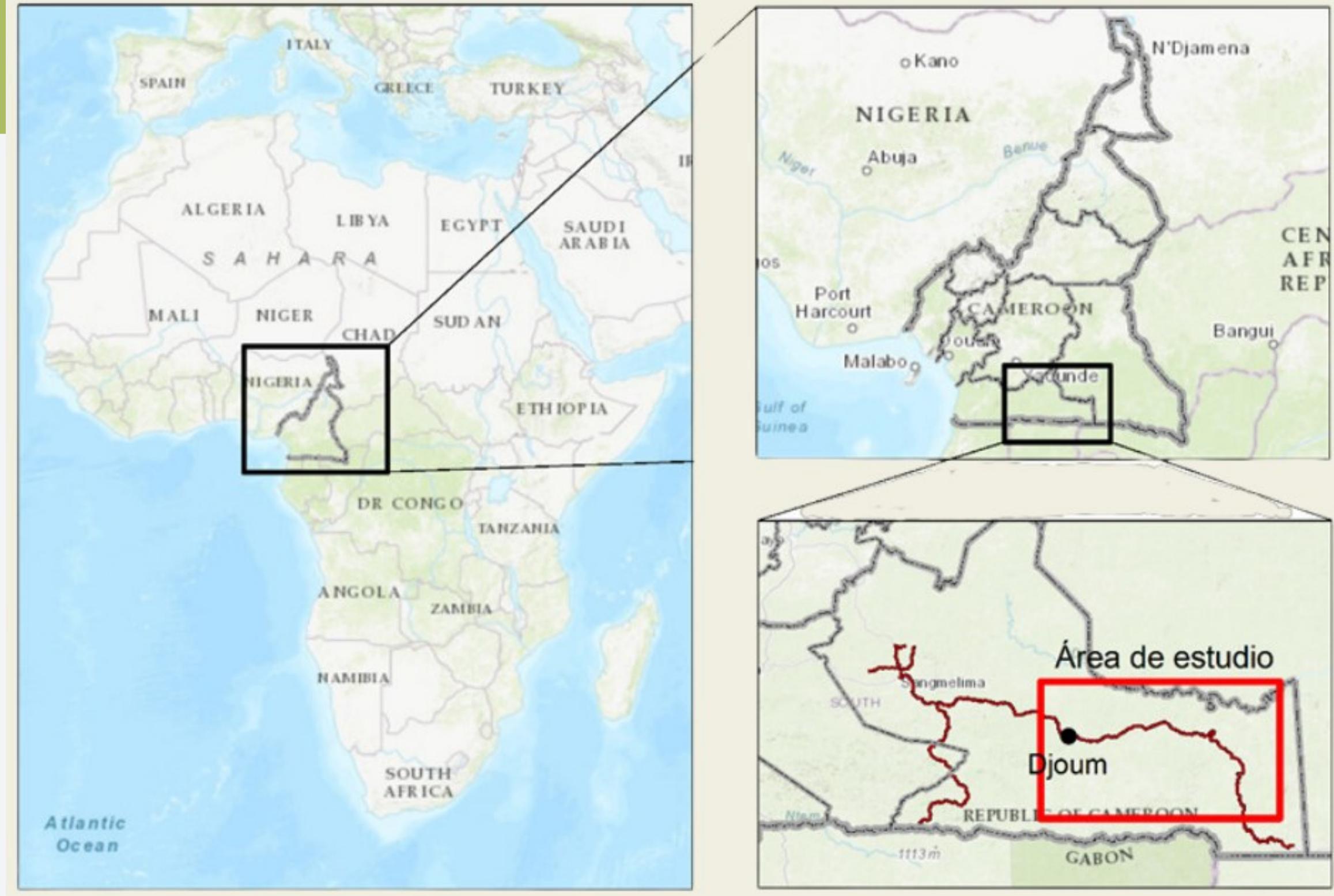
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Case of study

Area of study focused in the points of action of Zerca y Lejos

Objectives:

- Information compiling and review – Cartographic, Social, Economic, etc.
- Development of a capacitance model for subsistence agriculture of the baka people.
- Analysis of change and development of the study area in time.



Basic cartography and information

Population and settlements

- Small settlements, smaller the farther away from main cities
- Located along the main roads



Points of interest

- Irregularity in basic resource access
- Mapping of water, health and education points



Way of life and work distribution

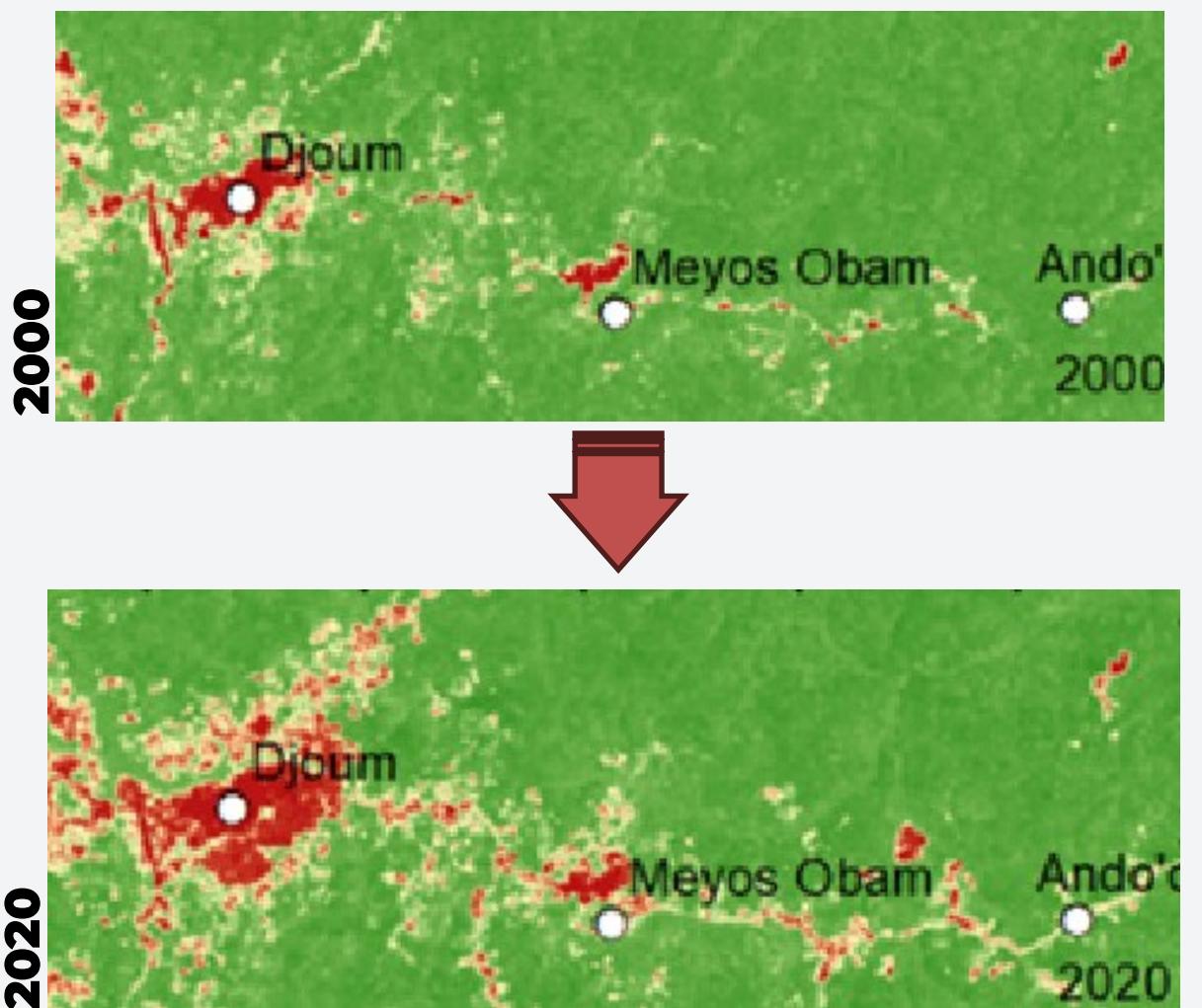
- Basic activities distribution
- Hunter-gatherer lifestyle is still prevalent in many communities.

Pueblo/Producto	Agricultura													
	Plátano	Mandioca	Cacahuate	Maíz	Ahuia roja	Pepino	Name	Calabaza	Macabó	Cacao	Gombo	Amaranto	Patata	Tabaco
Assok	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Doum	1	1	1	1	1			1	1					
Bemba II	1		1					1	1	1	1	1	1	
Akom		1	1	1	1						1			
Oudoumu	1	1	1											
Mimbi	1	1	1		1		1	1					1	1
Ndjidjibot	1	1		1						1				1
Bifolone	1	1	1							1				

Change and development in time

Changes in the tree coverage (2000 – 2020)

Alarming deforestation rate: loss of a 31,5% tree area of >20 m in Djoum and 14,2 % in Mintom influence zones.



Changes in the Normalized Difference Vegetation Index (NDVI).
Significant increase of areas with $NDVI < 0.2$, associated to land usage without vegetation.



CONCLUSIONS



01

The project provided an extensive learning experience for the student, both in a personal and academic manner.

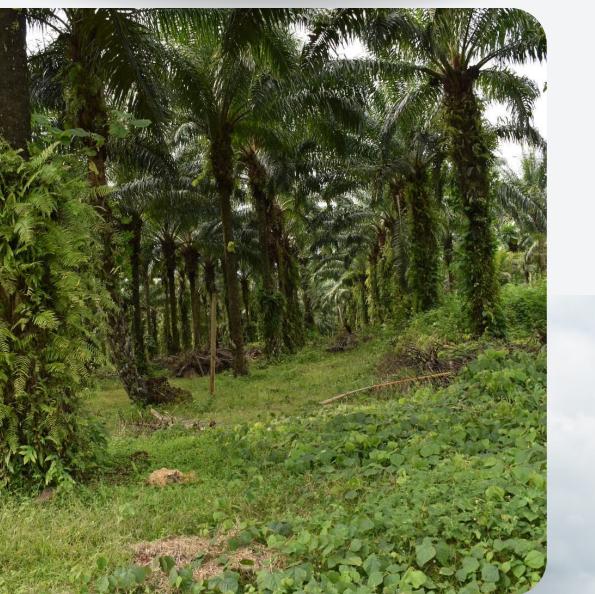
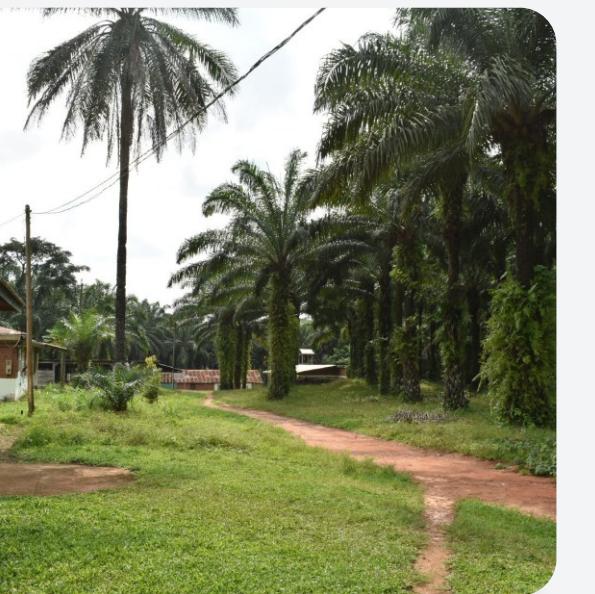
02

Service-learning initiatives in Africa offer a symbiotic relationship; African communities benefit by the resources and knowledge brought in by international partners while the students gain a valuable experiential learning and a deeper understanding of African cultures and challenges.

03

Beyond the primary objectives of the project, these initiatives facilitate rich cultural exchanges. Participants on both sides gain insights, dispel stereotypes and foster global understanding.





THANK YOU