

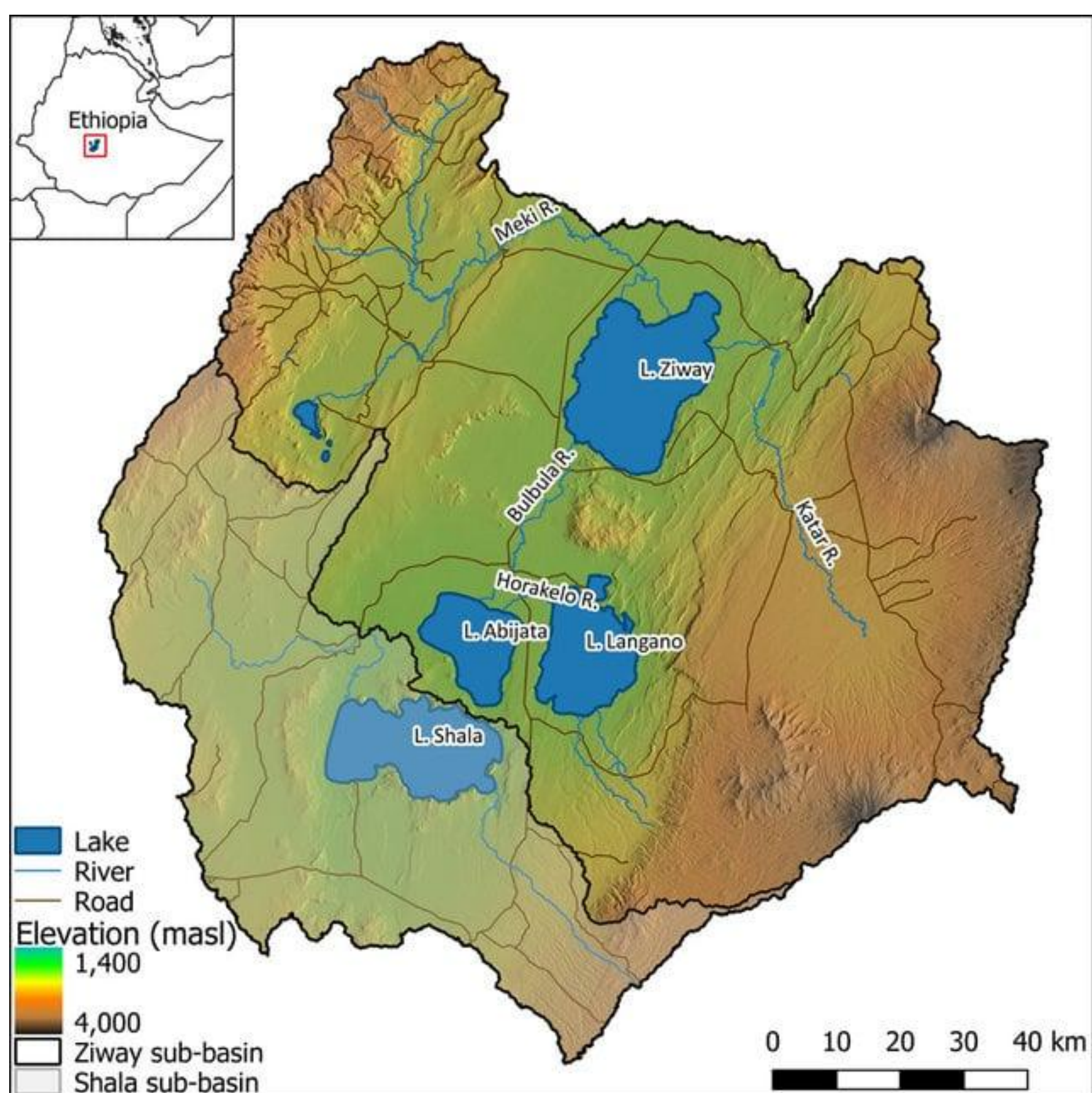
Using Soil & Water Conservation (SWC) strategies to reduce erosion & sedimentation in Lake Ziway & the Meki watershed, Ethiopia

1. About Wetlands International (WI):

- WI is a global non-profit whose mission is to “inspire and mobilise society to safeguard and restore wetlands for people and nature”. The organisation works as a network of 18 independent regional offices, delivering impact in 100 countries, and a global office based in Ede, Netherlands which has a focus on funding, advocacy and knowledge innovation. The organisation has three focus streams: Rivers and Lakes, Coasts and Deltas, and Peatlands.

3. My LiA project aims:

- To use hydrological modelling tools to understand which SWC strategies, in which locations, would be most effective at reducing erosion in the Meki catchment and reducing sediment inflow to Lake Ziway.
- To communicate with key stakeholders to understand the needs of the catchment, and to combine this knowledge with the data from the modelling to recommend conservation strategies.



2. About the project area - Lake Ziway:

- Abijata-Shalla National Park comprises of the catchments of four lakes, including Lake Ziway, in the Central Rift Valley, Ethiopia, and is Ethiopia’s most important wetland for migratory waterbirds.
- Lake Ziway is the only substantial freshwater lake in the area, and is used for fishing, drinking water and abstraction for irrigation for smallholder farming. The basin supports 1.5 million people.
- Floriculture and soda-ash extraction industries have rapidly expanded, creating jobs, but causing degradation of the surrounding land and water quality problems Lake Ziway. Chemical concentrations now exceed WHO drinking-water guidelines, and the annual fish catch fell from ~2,300 to 1,127 tonnes over a single decade.
- Erosion in the Ziway catchment and sedimentation of the lake is a pressing issue: nutrient-rich topsoil is washed away, and sedimentation in the lake makes it shallower, increasing evaporation rates and eventually drying up the lake.
- The amount of sediment flowing into Ziway is incredibly high: 43,100 t/ha/year from the Meki River (and 32,300 t/ha/year for the Katar) over 1985–2010.

Goal:

Action:

Outcome:

Understand the needs of the area to make sure recommendations are achievable and sustainable

Spoke to key stakeholders to ask advice, including in person, by email and over the phone

All strategies modelled were achievable, sustainable ones that had been recommended to me. I was able to consider costs vs benefit of different strategies.

Use modelling to back my recommendations with evidence, finding useful new information

Learnt how to use a new model; researched data availability & model parameter settings

Was able to model 5 different strategies across the entire watershed, and recommend the most effective strategies and locations for sediment reduction

Synthesise information and communicate recommendations clearly & widely

Presented to colleagues from Global and Ethiopia Offices, produced an 8,000-word, 30-page report

My recommendations will influence future work in the basin. 40+ colleagues engaged with my presentation; we discussed the use of my results for advocacy.

Laidlaw 3 C’s developed:

Capacities:

People:

Adapting my communication style & method when speaking depending on who I was talking to; approaching conversations with humility & willingness to learn

Process:

Improved at small, regular goal setting to keep up momentum; recovered from setbacks; using judgement to manage the scope of my project to keep it achievable.

Performance:

Produced an 8,000-word, 30-page report of SWC recommendations, communicated my results to over 40 stakeholders.

Change-maker values:

The key values developed were:

Ambitious – to strive for a comprehensive & accurate evaluation of SWC strategies, and
Determined – when overcoming errors & setbacks and debugging when modeling.

Curious – I needed to continually dig deeper into the working of the model, asking ‘why?’ when finding results, and ask questions about the needs of the area.

‘Curious’ needed to be balanced with

Fast – to achieve useful outputs and translate everything into actionable recommendations by the end of the 6 weeks.

Character dimensions:

I put my learning through the Oxford Character Project into practice, developing:

Drive – working swiftly and independently to produce tangible results in 6 weeks

Collaboration – learning from others and communicating my results

Humility – to regularly ask questions and listen to others to improve my work

Judgement – making the decisions on the scope and direction of my project to keep it manageable and deliverable

Integrity – being honest and actively explaining the limitations of the modeling.

Sustainable Development Goals:



My project leverages my modelling and analysis skills to make concrete recommendations for how erosion and sedimentation can be best reduced. This will help to conserve life both on land and below water, enable improved water quality and fishing catches for local communities, and ensure the long term sustainability of Lake Ziway - contributing to the four SDGs above almost equally. One can think of goal **11) ‘Sustainable Cities and Communities’** as the primary goal, ensuring that Lake Ziway and the surrounding catchment can continue to support the 1.5 million people that live there.

Check out my profile on the Laidlaw Network for my full reflections on my character development!

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