Pass NetZero Research Progress Report

Reporting Period: March-April 2025 (6-week update)
Report Date: April 17, 2025

Status Overview

Phase Status

- **NUST (Namibia)**: Phase 1 nearing completion
- **LUANAR (Malawi)**: Phase 1 initiated
- **University of Botswana**: Agreement pending signature
- **NEW: Multi-Country Kavango Ecosystem Team**: Framework development in progress

Budget Status

- **NUST Team**: Phase 2 payment (€10,000 or 2x€5,000) pending test specifications approval
- **LUANAR Team**: Phase 1 initial payment (€2,833) disbursed
- **Botswana Team**: Phase 1 payment (€3,750) to be released upon signature
- **Communications Team**: approximately €700 monthly expenditure (5,600€ until the end of the year)
- **Overall**: Within forecasted parameters, maintaining contingency reserve

Significant Development: Expansion of Research Capacity

The development of a fourth research team focusing on the Kavango River ecosystem represents a major step forward for Pass NetZero. This multi-country collaboration (Namibia/Botswana/Angola) will significantly expand our research footprint and enhance regional impact. With plans to offer six additional scholarships, we anticipate doubling our student researcher numbers by year-end once Botswana operations commence. This growth aligns with our strategic goal of building comprehensive carbon capture knowledge across diverse aquatic ecosystems in Southern Africa.

Team Updates

NUST Team (Namibia)

- **Key Progress**: Experimental methodologies developed, initial Ulva rigida samples collected, material requirements established
- **Challenges**: Limited geographic data, slow industry response
- **Next Steps**: Procurement, sample processing, field collection scheduling

LUANAR Team (Malawi)

- **Key Progress**: Funding released, initial literature review begun
- **Challenges**: Communication difficulties, internet connectivity issues
- **Next Steps**: Academic approval of research topics, potential site selection

UB Team (Botswana)

- **Status**: Research agreement in final review stages, research could begin next semester
- **Challenges:** Administrative requirements
- **Next Steps**: Sign agreement, begin Phase 1 next semester, identify student researchers

Communications Team

- **Key Progress**: Website improvements, social media presence, standardized reporting
- **Focus Area**: Framework development for Kavango ecosystem research team
- **Challenges**: Identifying and retaining appropriately skilled team members, Knowledge gap, Balancing multiple priorities with limited resources
- **Next Steps**: Finalize MoU with NUST, formalize cross-team information sharing

Looking Ahead

The next period will focus on finalizing NUST Phase 1 deliverables, supporting LUANAR's initial research, completing the Botswana agreement, and developing the framework for the Kavango ecosystem team. With our expanded research capacity, we anticipate accelerated progress toward understanding regional aquatic plant carbon sequestration potential.

Attached: Detailed NUST student progress reports

Student Advancement Report

Institution:	**Namibia University of Science and Technology (NUST)**
Name(s):	**Clifford Clide Hansen**
Date:	**31/04/2025**

Current Progress
• **Developed experimental Design.** • **Formulated the experimental methodology and created a material list.**

Challenges
• **Confirming specific geography of selected plant species.**

Next Steps
• **Organise lab logistics while ensuring that reagents and analysis instruments are available.** • **Confirm specific location of targeted species.** • **Plan Field Sampling - Set up site visits and collection schedules for harnessing biomass for analysis.**

Other Notes

Student Advancement Report

Institution:	**Namibia University of Science and Technology (NUST)**
Name(s):	**Dumeni, Veruschka**
Date:	**26/03/2025**

Current Progress
- Establishment of research topics. - Contacting industry professionals/experts/academics of wetland ecosystems/ecology and from the water/wastewater management facilities for information on recent geographic distribution data of the chosen species for sample collection, recent water quality data as well as insight into the prevalent challenges the water systems/bodies face, respectively. This is to establish feasibility and substantiate the research questions, respectively. - This step also explores potential industry liason (s) i.e with NamWater or Gammams Wastewater Reclamation. - Collecting inventory on the analysis equipment needed and available. - Narrowing down research topics based on feasibility.

Challenges
- Limited recent data on geographic distribution of chosen species – the most detailed record was in 1991. This information is needed for time-efficient and cost-effective sample collection process. - Slow response time from industry contacts for information.

Next Steps
- Following final choice of research topic and experimental design, is designing of a protocol, acquisition of materials needed, finalizing possible industry liasons collaboration agreements/plans.

Other Notes
N/A

Student Advancement Report

Institution:	**Namibia University of Science and Technology (NUST)**
Name(s):	**Fenni Amadhila**
Date:	**31 March 2025**

Current Progress
● **Developed the experimental methodology and compiled a materials list.** ● **Liaised with the laboratory team regarding the required materials.** ● **Prepared quotations for the materials not available at the lab.** ● **Collected *Ulva rigida* samples**

Challenges
N/A

Next Steps
● **Finalise procurement of materials needed** ● **Proceed with washing and drying of *Ulva rigida* samples**

Other Notes
● **Further studies into biofuel production**