



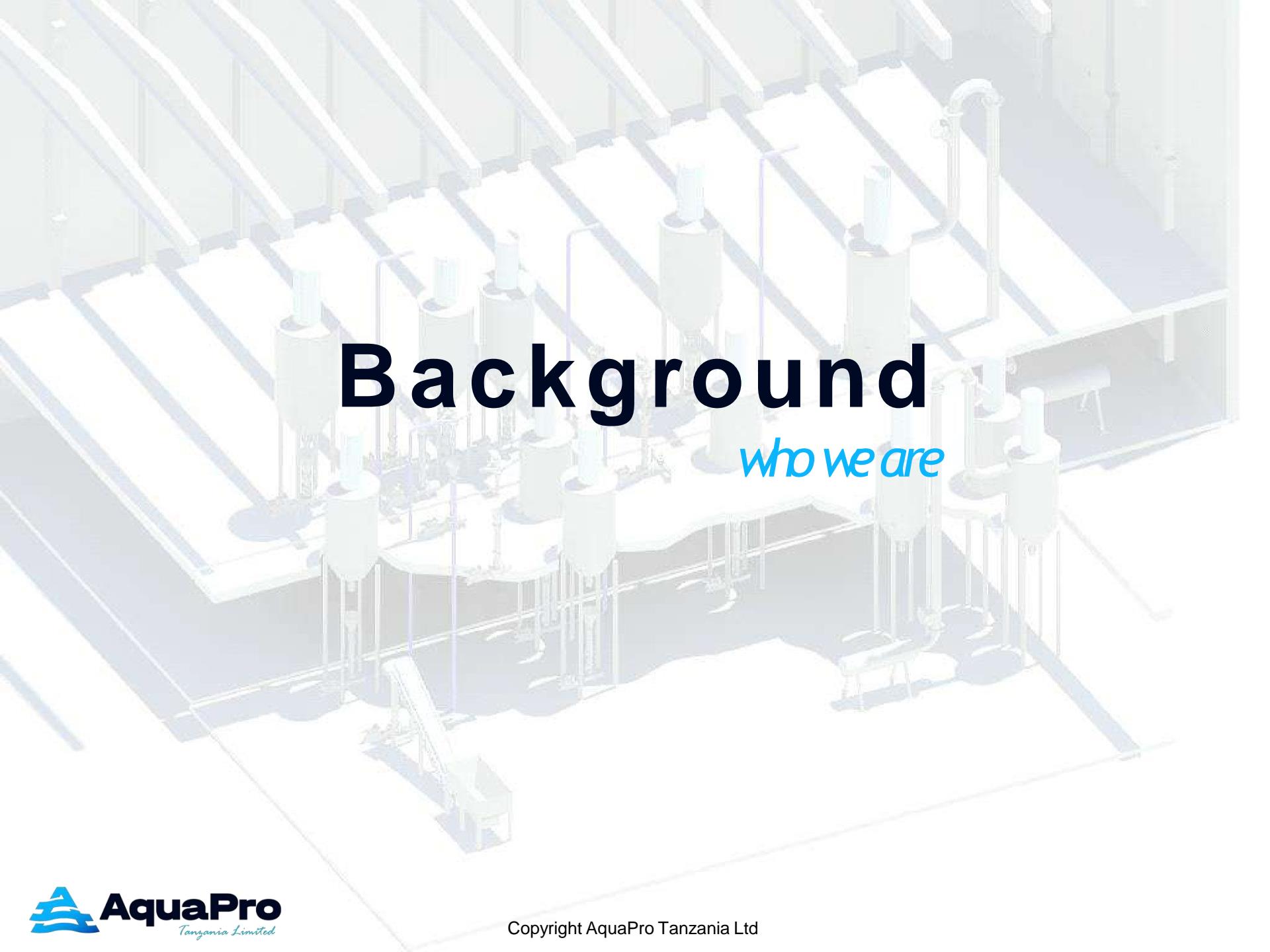
STATE-OF-ART SOLUTIONS FOR WATER TREATMENT

TACKLING WATER CHALLENGES IN TANZANIA



Background

who we are

A large industrial water treatment facility is visible in the background, featuring several large white cylindrical tanks of varying sizes, interconnected by a complex network of pipes and valves. The facility is set against a backdrop of a clear blue sky with a few wispy clouds. The overall scene conveys a sense of industrial scale and environmental focus.



AquaPro Tanzania Ltd (AquaPro) is a Tanzanian company that works in partnership with Aquaminerals Finland Oy and Aglotech Oy to deliver water treatment solutions to the region. The company pioneers cutting edge sorbent technology for heavy metal and metalloids removal used in wastewater treatment. These products have been chosen by the Geological institute of Finland as the Best Available Technology (BAT) due to high efficiency in adsorbing arsenic and other harmful metal ions at a cost-effective rate.

In addition to the sorbent products, AquaPro supplies various fixed and/or mobile state of-the-art water treatment technology that are developed to fit customer needs as well as accommodate any limitations.

All AquaPro water treatment projects are implemented in cooperation with expertized partners from Finland like A. Reponen Oy and Watman Engineering Oy. Quality certificates ISO9001, ISO14001, ISO3834-3 and EN1090-2 apply.

GROUP STRUCTURE

AquaPro (T) Ltd

Technology Partners

Aquaminerals (F) Oy

Water Treatment and Sorbent Technology

Tecwill (F) Oy

Concrete, Shotcrete and Backfill Mixing
Technology

Aqlotech (F) Oy

Engineering and Design of Special Purpose
Equipment

Implementing Divisions

Watman (F) Oy

VTT Technical Research Centre
of (F) Ltd

University of Oulu (F)

A.Reponen (F) Oy

HitsaCon (F) Oy

STATUTORY COMPLIANCE

AquaPro is in compliance with all Tanzanian regulatory requirements including Local Content with a documented **local content plan** approved by the Mining Commission. The current entity proudly boasts a Tanzanian identity with over **50% local ownership**.

AquaPro, which is based in Dar es Salaam, is committed to enhancing and developing local skills through prioritizing Tanzanian hires and sub contractors in line with Local content guidelines.

Further, the entity has a 5 year plan approved by the board which includes the establishment of a factory within Tanzania that will cater to the East and Central Africa regions. This plant will be responsible for producing various components that will be used to implement solutions across the region.



Products & Services

what we offer

POTABLE WATER TREATMENT SOLUTIONS

- AquaPro customizes and delivers complete portable water solutions to fit various applications and needs based on feed water characteristics and required output characteristics.

Example of Standard Process Design



POTABLE WATER TREATMENT SOLUTIONS

- AquaPro relies on Two (2) main processes for the treatment of potable water:
- **Reverse Osmosis:** Pre-treatment is done by sand filtration or Ultra Filtration (UF) and ultimately chlorine dosing for disinfection. This method is ideal for raw water having a lot of salts (Cl, Ca, Mg, Na...) and high conductivity.

The process is scalable for flowrate which varies typically between 5-50 m³/h.

- **AQM Adsorption:** pre-treatment is not needed and typically combines activated carbon filtration, UV treatment and chlorine dosing for disinfection

The process is scalable for flowrate which varies typically between 5-50 m³/h and is ideal for raw water having a lot of harmful metal ions (Fe, Mn, As, Zn...) .

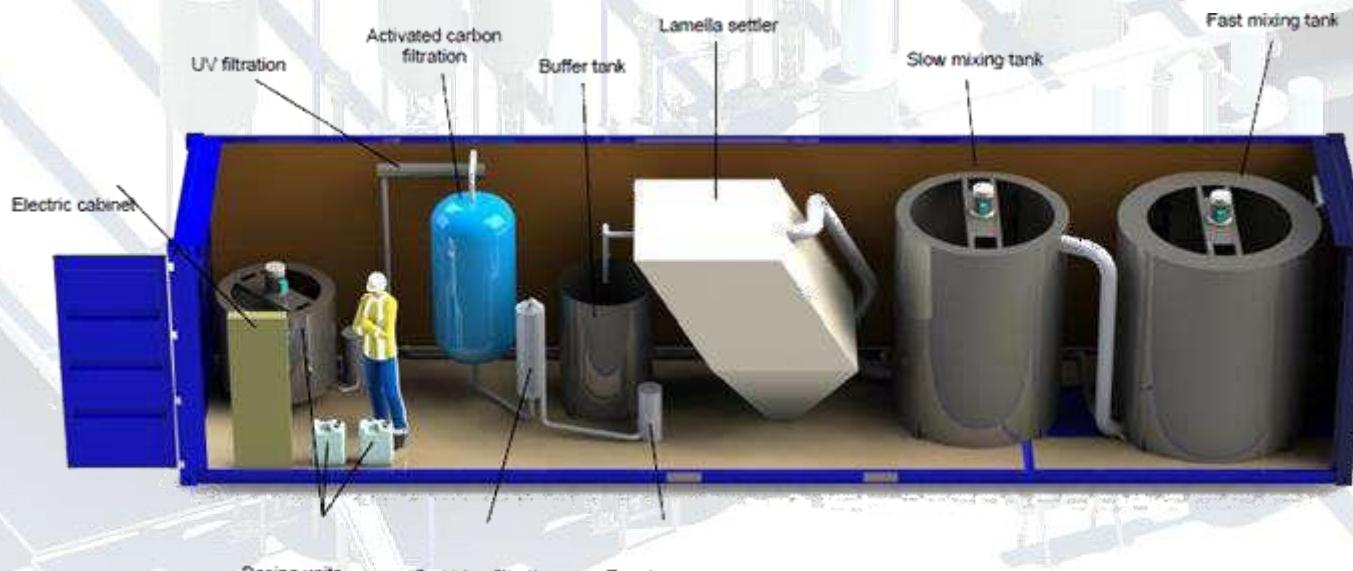
- If needed, the above methods can also be combined for more challenging feed water characteristics.

POTABLE WATER TREATMENT SOLUTIONS

- Key benefits of AquaPro portable water plants include:
 - Pre-installed and can be operated within a 20 foot container. This increases mobility and reduces costs related to commissioning/decommissioning when moving to a separate site;
 - Removes a large set of impurities and pollutants;
 - Plug and play technology for easy commissioning and decommissioning;
 - Low operating costs as a result of easy maintenance and low energy consumption.

POTABLE WATER TREATMENT SOLUTIONS

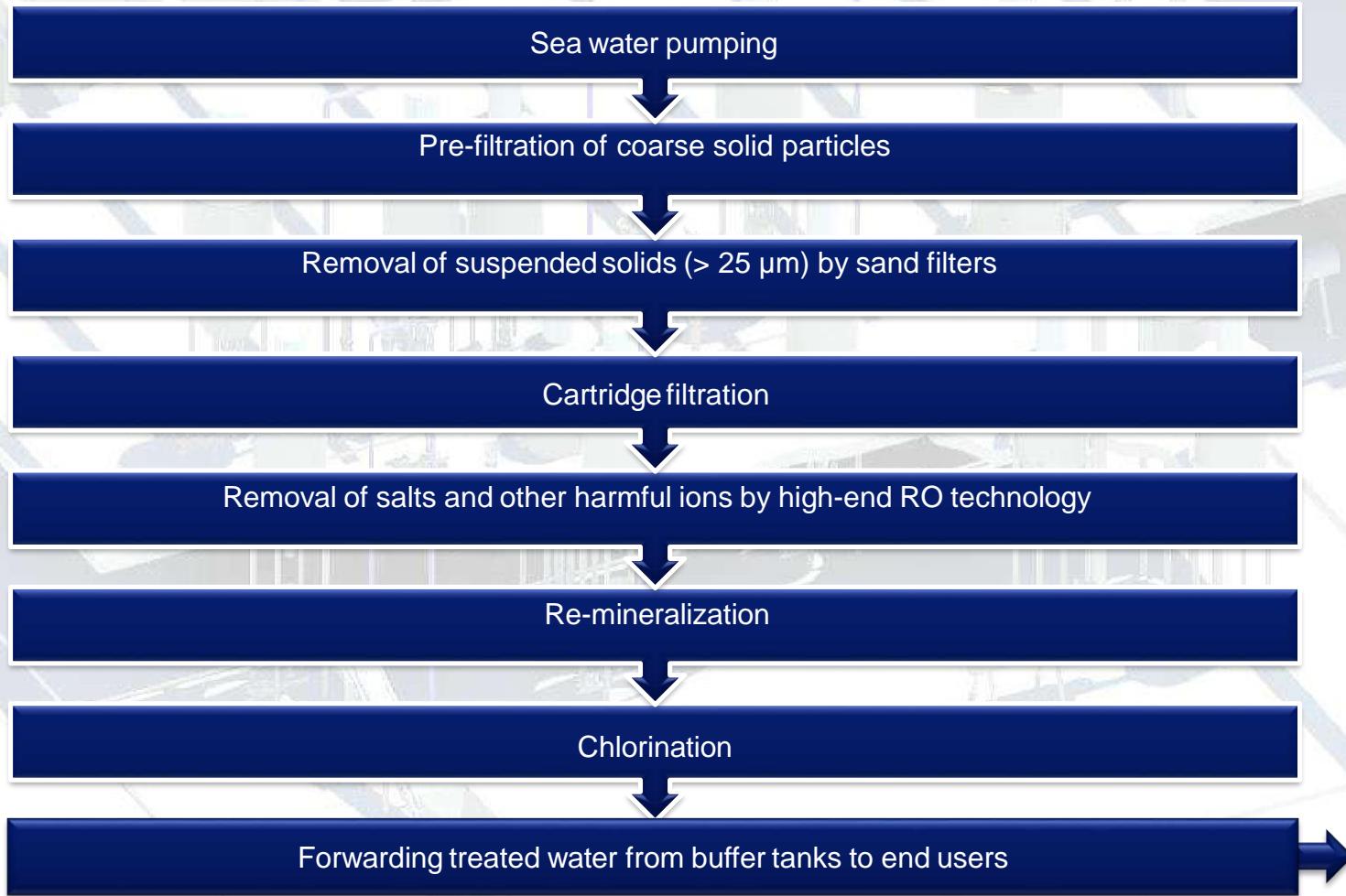
- Compact potable water plant (10-20 m³/h) setup and can be operated in a 20 foot container:



SEA/SALT WATER TREATMENT PLANTS

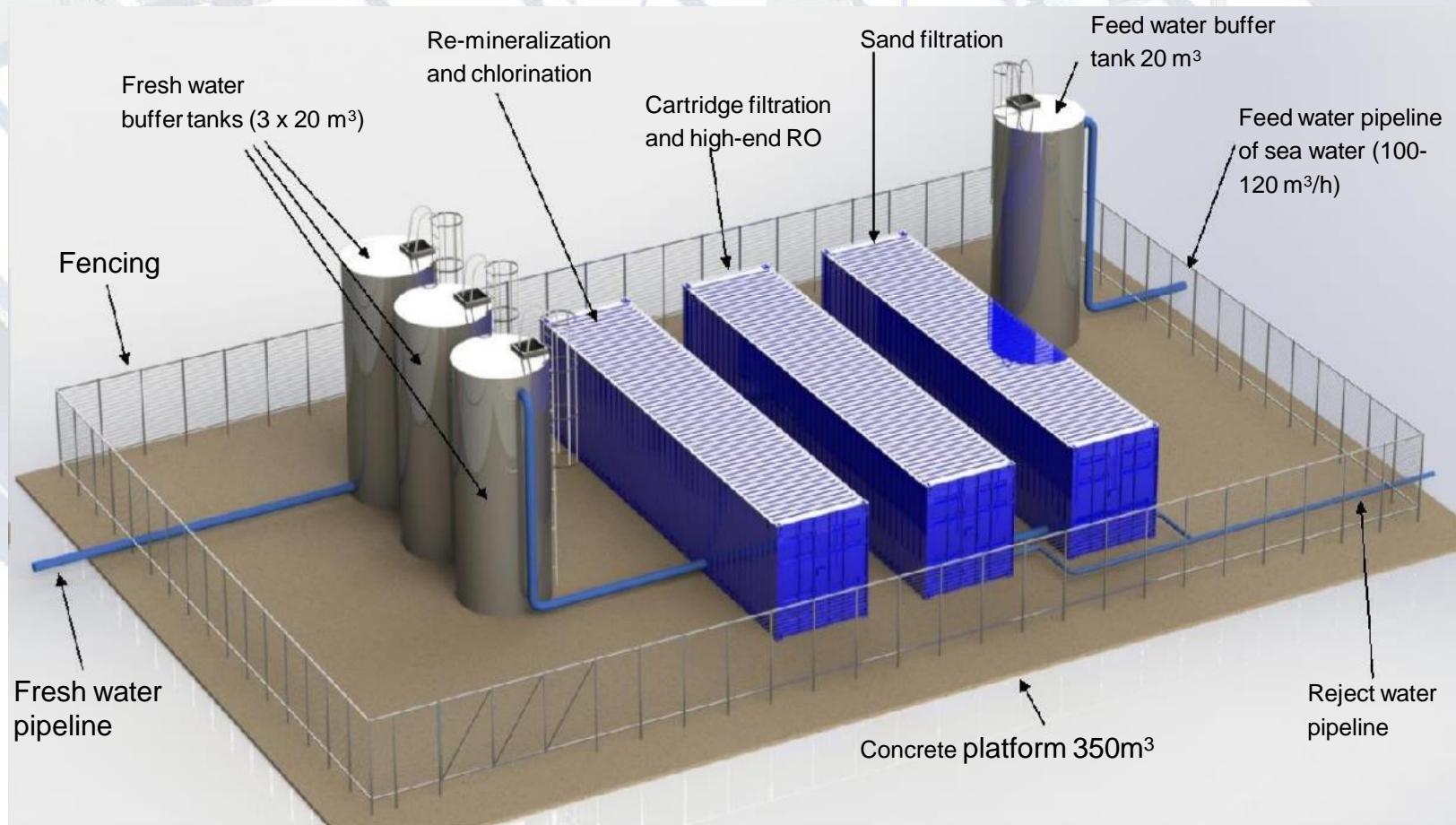
- AquaPro design, implements and maintained bespoke sea water treatment plants focused on desalination and removal of other harmful ions;
- The solutions feature an Aquamineral Reverse Osmosis desalination plant as the core and peripheral components based on feed water composition and output water requirements.

SEA/SALT WATER TREATMENT PLANTS



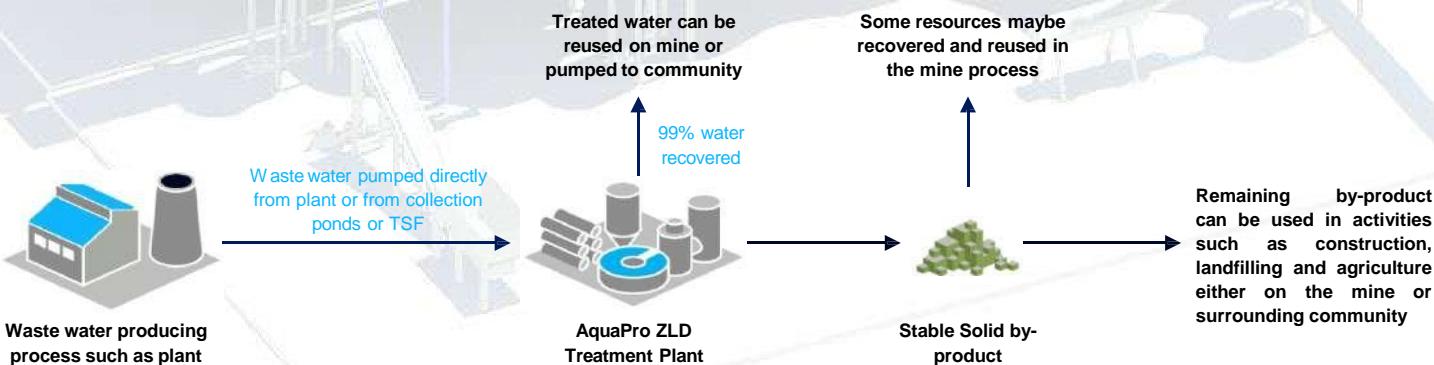
SEA/SALT WATER TREATMENT PLANTS

Potable Water Purification from Sea Water – capacity 1500 m³/day:



ZERO LIQUID DISCHARGE PLANTS

- AquaPro Zero Liquid Discharge (ZLD) plants treat waste water through recovery of water content and converting all contaminants (including **Sulphates, Ammonia, Mercury and Cyanides**) to a solid by-product that does not leach and can be reused in various activities. These plants are specifically designed for operations that:
 - require a high degree of water reuse due to resource scarcity or regulatory requirements;
 - are unable to economically dispose or post-treat liquid waste/brine resulting from other treatment options such as Reverse Osmosis;
 - are aiming at cost savings from the possible recovery and reuse of some resources present in their waste water.

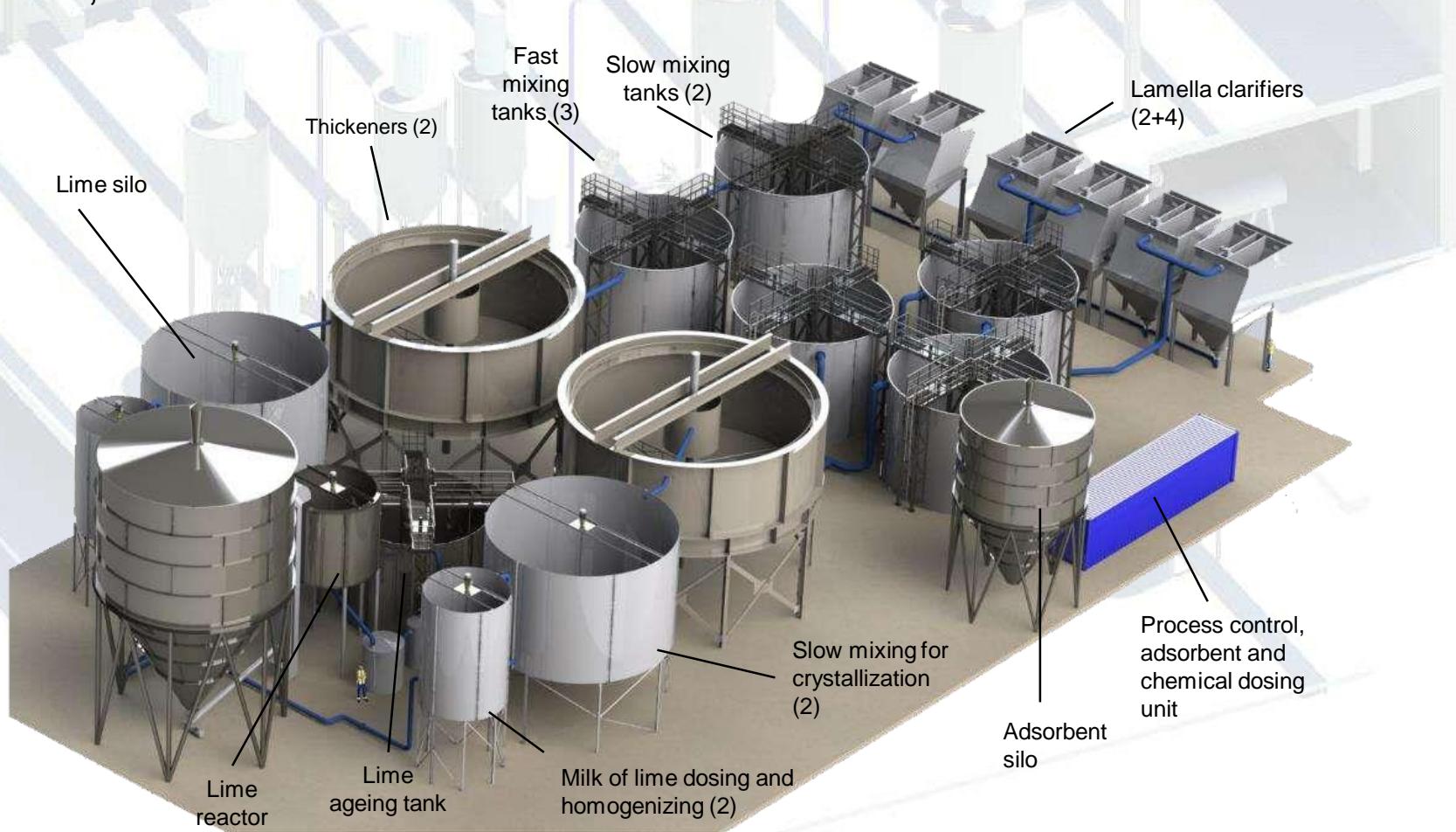


ZERO LIQUID DISCHARGE PLANTS

- Key benefits of AquaPro ZLD plants include:
 - effective removal of impurities from waste water resulting in a recovery rate of 99% which can be reused on the mine or channeled to the community for irrigation or animal use.
 - decreased waste volumes resulting in reduced costs associated with waste management such as offsite trucking of waste for disposal;
 - recovery of valuable resources present in waste water e.g. ammonium sulfate fertilizer. This is dependent on waste water content and plant design;
 - stable and environmentally friendly solid by-product that can be used in landfills, construction and agriculture;
 - improved environmental performance, and regulatory risk profile;
 - energy efficient process in when compared to other leading processes such as Reverse Osmosis (electricity consumption is only about 1/10 of that of an RO plant).

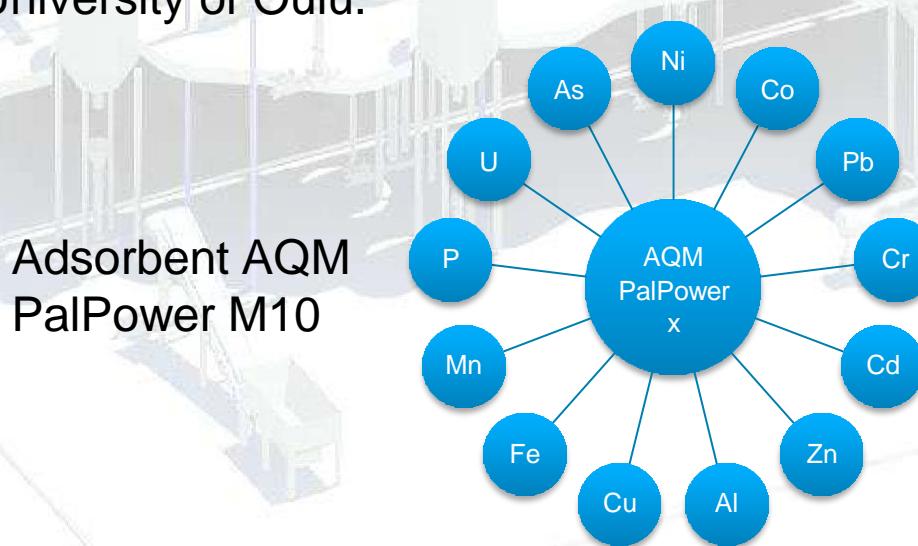
ZERO LIQUID DISCHARGE PLANTS

- Sample ZLD Treatment plant with a processing capacity of up to 1,600m³/h.



METAL ION REMOVAL PLANTS

- AquaPro combines various industry leading technologies with company proprietary tech to tailor solutions for water treatment challenges that occur in mining sites. These plants ensure the elimination of a wide range of pollutants including **heavy metals, arsenic, suspended solids, organic materials, iron, manganese and other specific ions.**
- AquaPro approach to ion removal revolves around proprietary adsorbents that were developed by Aquaminerals in close partnership with the University of Oulu.



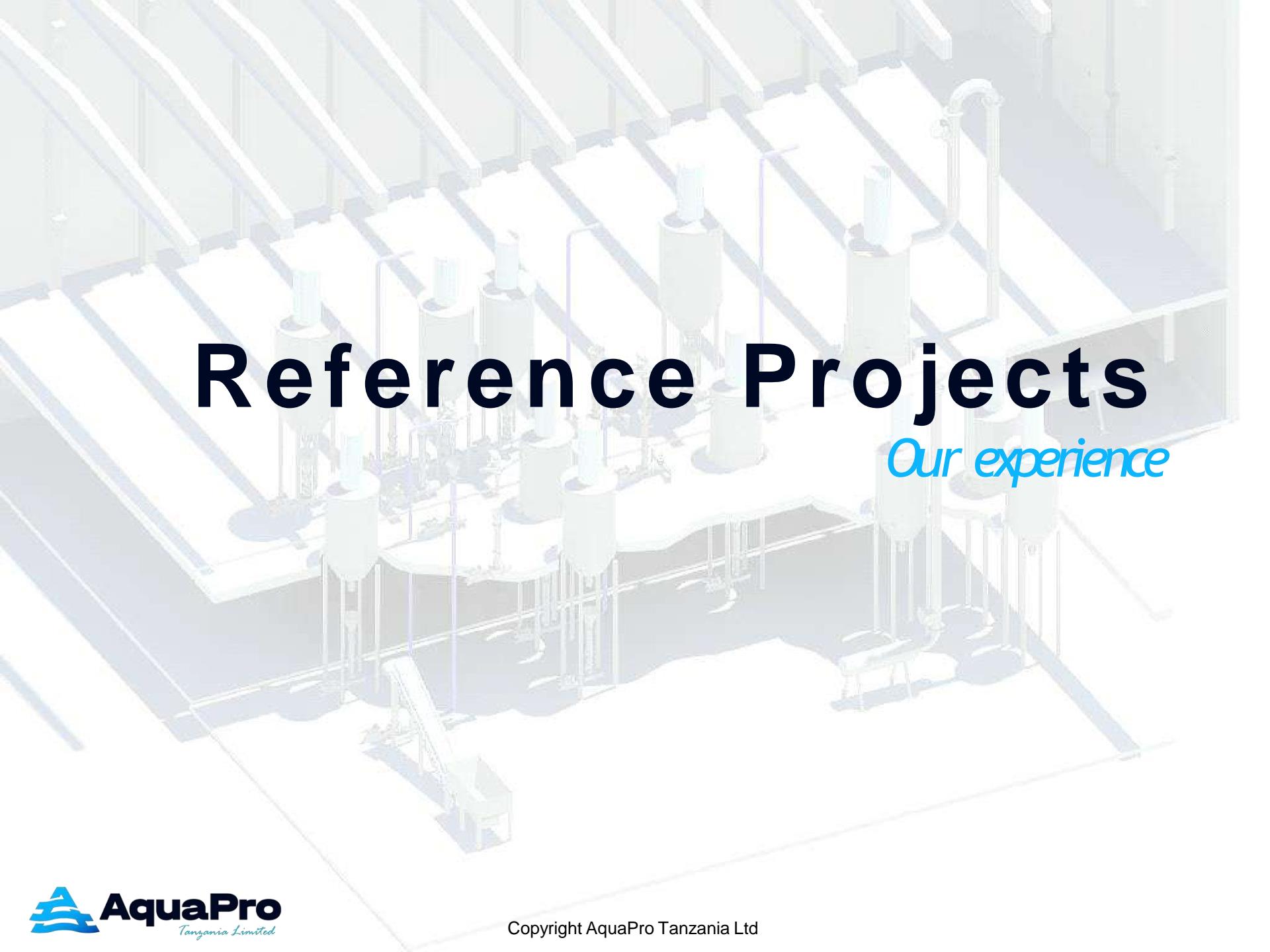
METAL ION REMOVAL PLANTS

- Key benefits of AquaPro adsorbents and metal ion removal plants include:
 - **effective in removal of soluble metals and harmful free ions** from any type of water where the abstraction efficacy can be adjusted by altering the adsorbent dosage and retention time;
 - **reduction in pre-treatment and pH adjustment costs** as adsorbents work over a wide pH range;
 - **no formulation of brine** when adsorbents are used which is in contrast to the ion exchange process. final saturated adsorbent deposits that remain after the process are stable, environmental friendly and do not dissolve or leach metals. This significantly reduces post-treatment and/or waste management costs;
 - **compact and scalable plants** with capacity ranging from 5 - 2,200 m³/h that are cost effective in terms of both CAPEX and OPEX.

METAL ION REMOVAL PLANTS

- Metal ion removal from mine discharge water (1,000 m³/h, clarification in a lamella settlers):





Reference Projects

Our experience

REFERENCE PROJECTS



EAST AFRICAN
CRUDE OIL
PIPELINE



REFERENCE PROJECTS



Client Name: Shanta Gold	Country: Tanzania
Location: Ikungi, Singida	Start Date: 2021 Completion Date: June 2023
Address: Shanta Mining Company Limited 202, Renaissance Plaza, Plot No. 498, Haile Selassie Road, P.O. Box 79408, Dar es Salaam, Tanzania	Approximate value of services: Confidential but if required can be provided upon approval from client.
Narrative Description of project: Provided 28,500LPH potable water treatment plant preinstalled in 40 foot sea container for the Singida mine site. The plant had Ultra Filtration as pretreatment and Reverse Osmosis as the core treatment technology due to high salt content in source water.	

REFERENCE PROJECTS



Client Name: Buckreef Gold Company Limited	Country: Tanzania
Location: Mnekezi, Geita	Start Date: 2022 Completion Date: November 2023
Address: Tanzania Gold Corporation Limited Plot 19, Mkadini Road, Oysterbay P.O. Box 84, Dar es Salaam, Tanzania	Approximate value of services: Confidential but if required can be provided upon approval from client.
Narrative Description of project: Provided 3,000LPH potable water treatment plant preinstalled in 20 foot sea container for the Buckreef mine site. The plant included Ultra Filtration as core treatment technology along with water softening (due to hardness of source water), activated carbon filtration and chlorination.	

REFERENCE PROJECTS



EAST AFRICAN CRUDE OIL PIPELINE

Client Name: East African Crude Oil Pipeline (EACOP)	Country: Tanzania and Uganda
Location: Tanzania and Uganda	Start Date: 2023 Completion Date: Ongoing
Address: Msasani Peninsula, Plot no. 1403 Bains Avenue off Chole Road. P. O. Box 23139, Dar es Salaam, Tanzania	Approximate value of services: Confidential but if required can be provided upon approval from client.
Narrative Description of project: Provide 9 potable water treatment plants preinstalled in 20-foot sea containers for EACOP Tanzania and EACOP Uganda	

REFERENCE PROJECTS



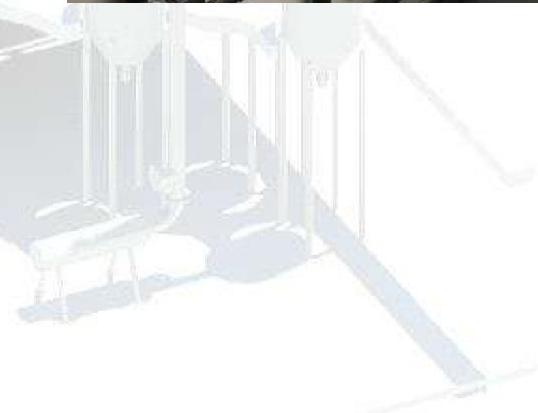
Client Name: Anglo Gold Ashanti	Country: Ghana
Location: Obuasi, Ashanti	Start Date: 2021 Completion Date: Ongoing
Address: Obuasi Gold Mine 121 Obuasi High Street, Obuasi, Ghana	Approximate value of services: Confidential but if required can be provided upon approval from client.
Narrative Description of project: Treatment of 11,000 tons of toxic material to remove Arsenic Trioxide by Geopolymerization in order to meet the criteria of TCLP/USEPA and European Council Directive 2003/33/EC Annex II to Directive 1999/31/EC;	

REFERENCE PROJECTS



Client Name: Ghana Manganese Company (GMC)	Country: Ghana
Location: Tarkwa, Western	Start Date: 2018 Completion Date: 2019
Address: Western Tarkwa, P.O. Box 2, Nsuta-Wassa, Ghana	Approximate value of services: Confidential but if required can be provided upon approval from client.
Narrative Description of project: Provided 20,000LPH potable water treatment plant preinstalled in 40-foot sea container for the North mining camp with internal mixing/buffer tanks for the GMC mining community.	

REFERENCE PROJECTS



REFERENCE PROJECTS







COMPANY CERTIFICATED



TANZANIA



Certificate of Incorporation of a Company

Section 15

No: 144154916

I HEREBY CERTIFY THAT

AQUAPRO TANZANIA LIMITED

is this day incorporated under the Companies Act, 2002
and that the Company is Limited.

GIVEN under my hand at Dar es Salaam this 8th day of
OCTOBER TWO THOUSAND AND TWENTY.



PRINC ASST. REGISTRAR OF COMPANIES



THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF MINERALS
THE MINING COMMISSION



16th October, 2023

In reply, please quote:
Ref. No: CA 231/250/01J/175

Managing Director,
Aquapro Tanzania Limited,
P.O. Box 111,
KAHAMANA.

RE: APPROVAL OF THE LOCAL CONTENT PLAN FOR AQUAPRO TANZANIA
LIMITED

Kindly refer to the above-captioned subject.

2. The Mining Commission is pleased to inform you that your Local Content Plan submitted to the Mining Commission for Contractor Services to the Mineral right holders has been **approved** by the 22nd meeting of the Local Content Committee held on 10th October, 2023. The approval has been granted as per Regulation 11(5) of the Mining (Local Content) Regulations, 2018.

3. Please be informed that the approved Local Content Plan is operative only for the period of one year from the date of this approval. In this regard you will be required to submit another annual Local Content Plan not later than 10th October, 2024. During this period, you will also be required to submit to the Mining Commission quarterly reports in respect to the performance of the local content plan.

4. Furthermore, in accordance to Regulation 37 of the Mining (Local Content) Regulations, 2018, you are required within forty-five (45) days of the beginning of each year to submit to the Mining Commission an annual Local Content Performance Report covering the period from when your Local Content Plan was approved.

5. It is our hope that you will implement the plan effectively while taking into consideration all other requirements of Section 102 of the Mining Act Cap 123 and its Mining (Local Content) Regulations, 2018. This includes a requirement for a non-indigenous Tanzanian Company which intends to provide goods and services to incorporate a joint venture company with an indigenous Tanzanian Company and afford that company an equity participation of at least twenty percent (20%) as per Regulation 8 (6) of the Mining (Local Content) Regulations, 2018.

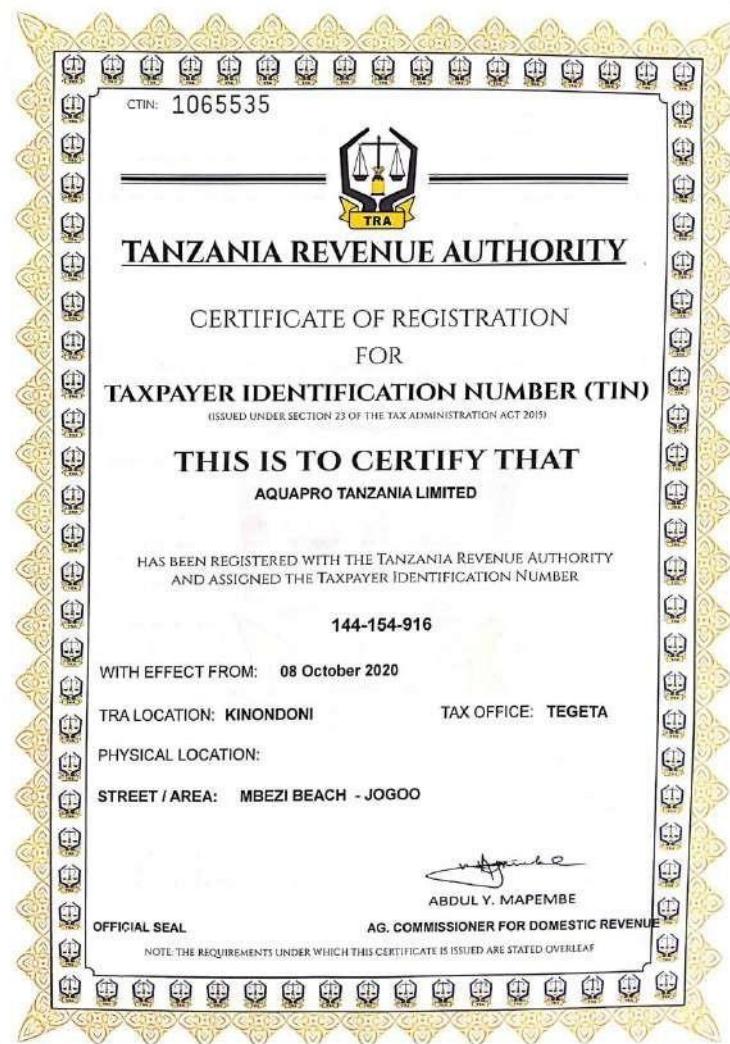
6. You are also reminded that non-compliance to Local Content Regulations will subject you to penalties as stipulated under these Regulations.

7. Thank you for your continued cooperation.

Andrew F. Mgaya
For: EXECUTIVE SECRETARY

Mining Commission Head Office, P.O. Box 2292, Dodoma, Phone: +255 26 2323828, Fax: +255 26 26 2323827,
Email: info@tumemadini.go.tz, ceo@tumemadini.go.tz, Website: www.tumemadini.go.tz

COMPANY CERTIFICATED



COMPANY CERTIFICATED



THE UNITED REPUBLIC OF TANZANIA

BUSINESS LICENCE

B.L.No: 20000080157

The Business Licensing Act No. 25 of 1972 (R.E. 2002)

1. Issuing office : BUSINESS REGISTRATIONS AND LICENSING AGENCY
2. Tax Identification Number: 144-154-916
3. Licence issued to: AQUAPRO TANZANIA LIMITED for the Business of : Manufacturer Representative As Sole Distributor Or Supplier
4. Business Location
Region: Dar Es Salaam
District: Kinondoni Municipal Council
Ward: Kawe
Street: Mwanga Tower
5. Principal/Branch: Principal
6. Amount of fee paid: TZS 400000 Receipt No: 5301997 on: 03/12/2024
7. Renew of Licence No: 20000060536 Dated: 10/01/2024
8. Date of Issue: 04/12/2024 Expiring date: 14/11/2025





This digital copy does not require a signature authority

NOTE - This Business Licence must be kept in a conspicuous position at the principal place of business . Any change in the particulars originally registered must be notified to the Licence Issuer.

ISO 9001: 2008 CERTIFIED VAT 108



TANZANIA REVENUE AUTHORITY

**Certificate of Registration
for
Value Added Tax (VAT)**

(ISSUED UNDER SECTION 3(2) OF THE VALUE ADDED TAX ACT NO. 10 OF 2014)

THIS IS TO CERTIFY THAT
AQUAPRO TANZANIA LIMITED

WHOSE TAXPAYER IDENTIFICATION NUMBER (TIN) IS
144-154-916

HAS BEEN REGISTERED FOR VALUE ADDED TAX (VAT)

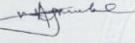
AND ASSIGNED VAT REGISTRATION NUMBER (VRN)
40-043600-Q

FOR BUSINESS LOCATED AT MBEZI BEACH - JOGOO U/SURV
Dar es Salaam

WITH EFFECT FROM 23 September 2021

GIVEN UNDER MY HAND

THIS 23rd DAY OF September 2021



ABDUL Y. MAPEMBE
COMMISSIONER FOR VAT


NOTE: THE REQUIREMENTS UNDER WHICH THIS CERTIFICATE IS ISSUED ARE STATED OVERLEAF

NATIONAL DEVELOPMENT


FOR NATIONAL DEVELOPMENT

COMPANY CERTIFICATED



COMPANY CERTIFICATES



Certificate

Ceriff Oy testifies that the Management System of Aquaminerals Finland Oy has been founded in accordance with the requirements of the management system standard below.

STANDARD

ISO 9001:2015
ISO 14001:2015

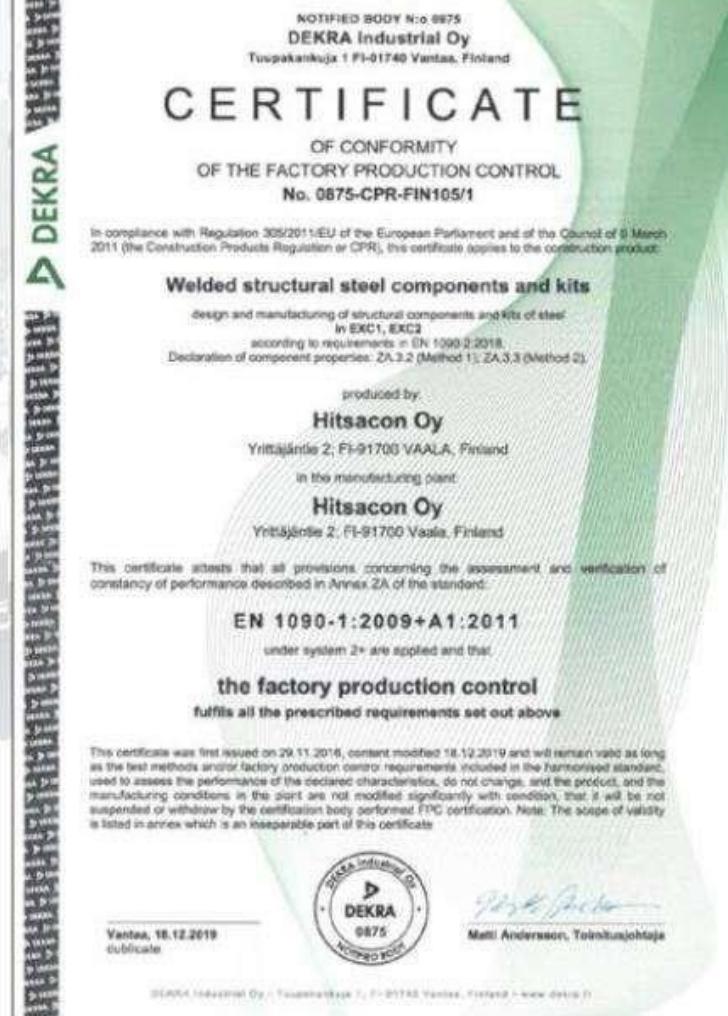


Kajaani, FINLAND 23.01.2017

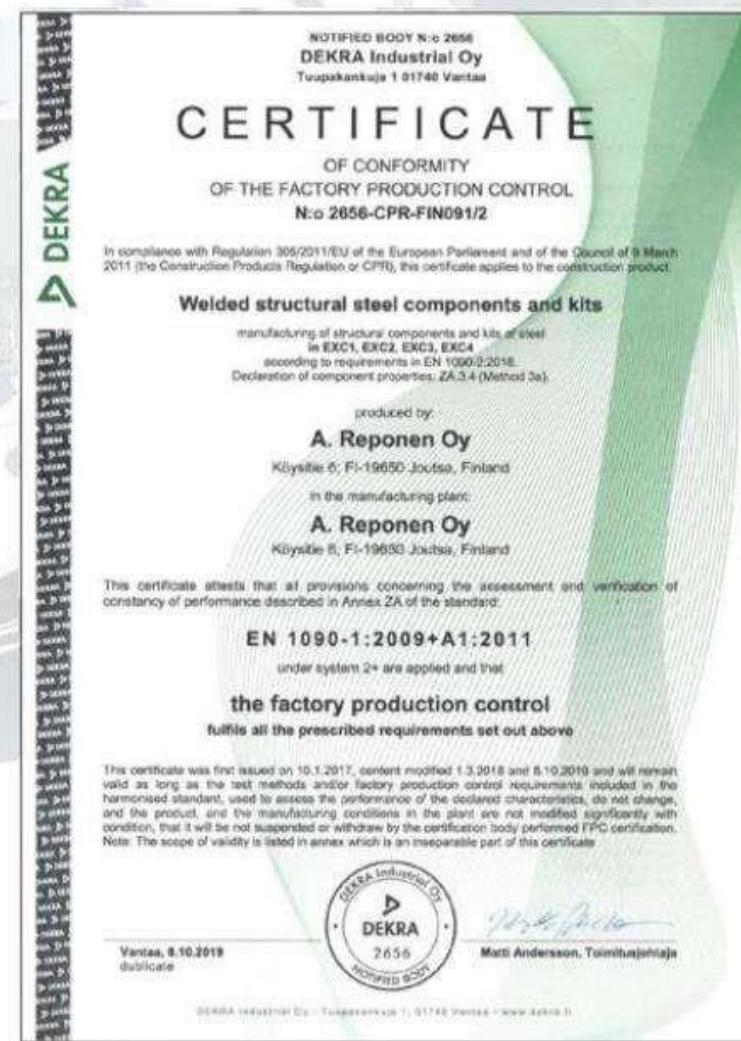
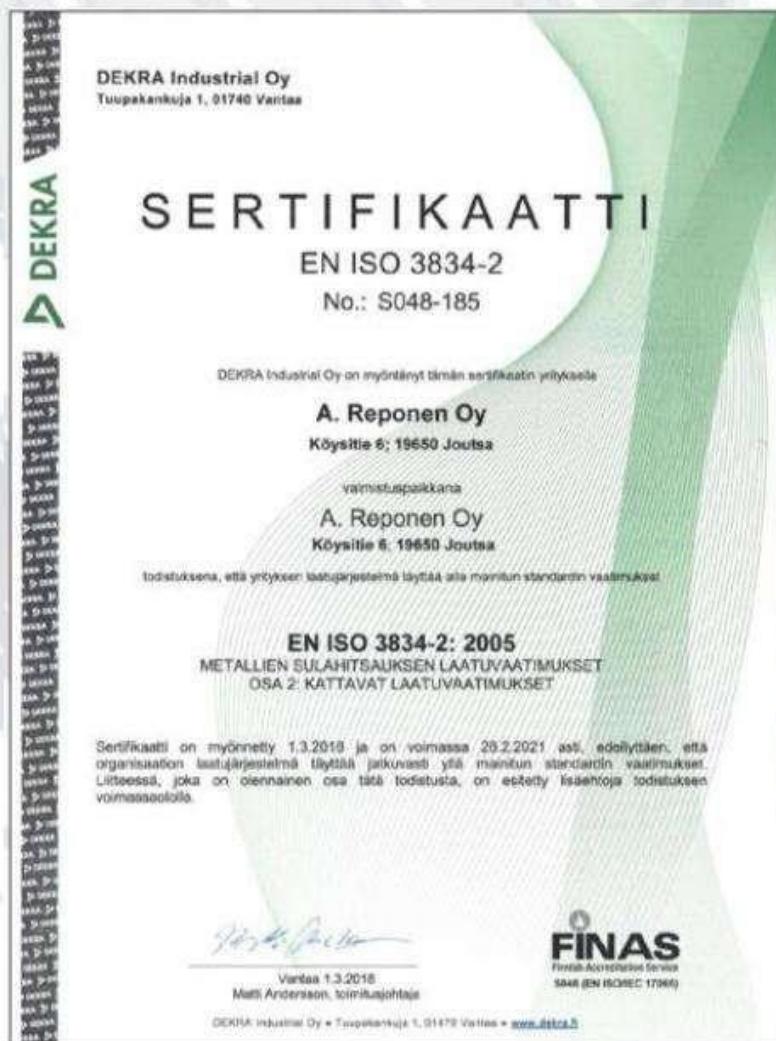
Ceriff Oy



Mikko Kettunen
Managing Director



COMPANY CERTIFICATES



LOCAL CONTACT



JONATHAN MASANJA ANDREW

Chief Executive Officer - Tanzania

AquaPro Tanzania Ltd

jonathan.andrew@aquapro.co.tz

www.aquapro.co.tz