RETHINKING WASTE & WASTEWATER RECYCLING

SKILLICORN
Technologies LLC

SKILLICORN TECHNOLOGIES LLC

SKILLICORN Technologies LLC is a new company set up by a group of highly qualified water industry professionals experienced in wastewater treatment technologies, international finance, and project management -- focused specifically on addressing the challenges in recovering, recycling and reusing wastewater globally

In a constantly changing environment full of challenges, SKILLICORN Technologies is well positioned to bring in the best environmentally friendly technologies for effectively treating and recycling wastewater

SKILLICORN Technologies LLC has developed a revolutionary circular water system that is capable of desalinating brackish water as well as treating & recycling all industrial, agricultural and municipal solid and liquid wastes using a 100% natural and proven process.

SKILLICORN Water + SKILLICORN Energy

THE Skillicorn SYSTEM

PROVIDES A GLOBAL SINGLE FOOTPRINT SOLUTION

A complete water system

Desalinating brackish water and treating and recycling all industrial, agricultural & municipal liquid and solid wastes

A complete, "low water footprint" food engine

While phyto-desalinating brackish water & recycling wastewater: setting the global standard for production of carbohydrates, proteins, fish, meat & organic vegetables

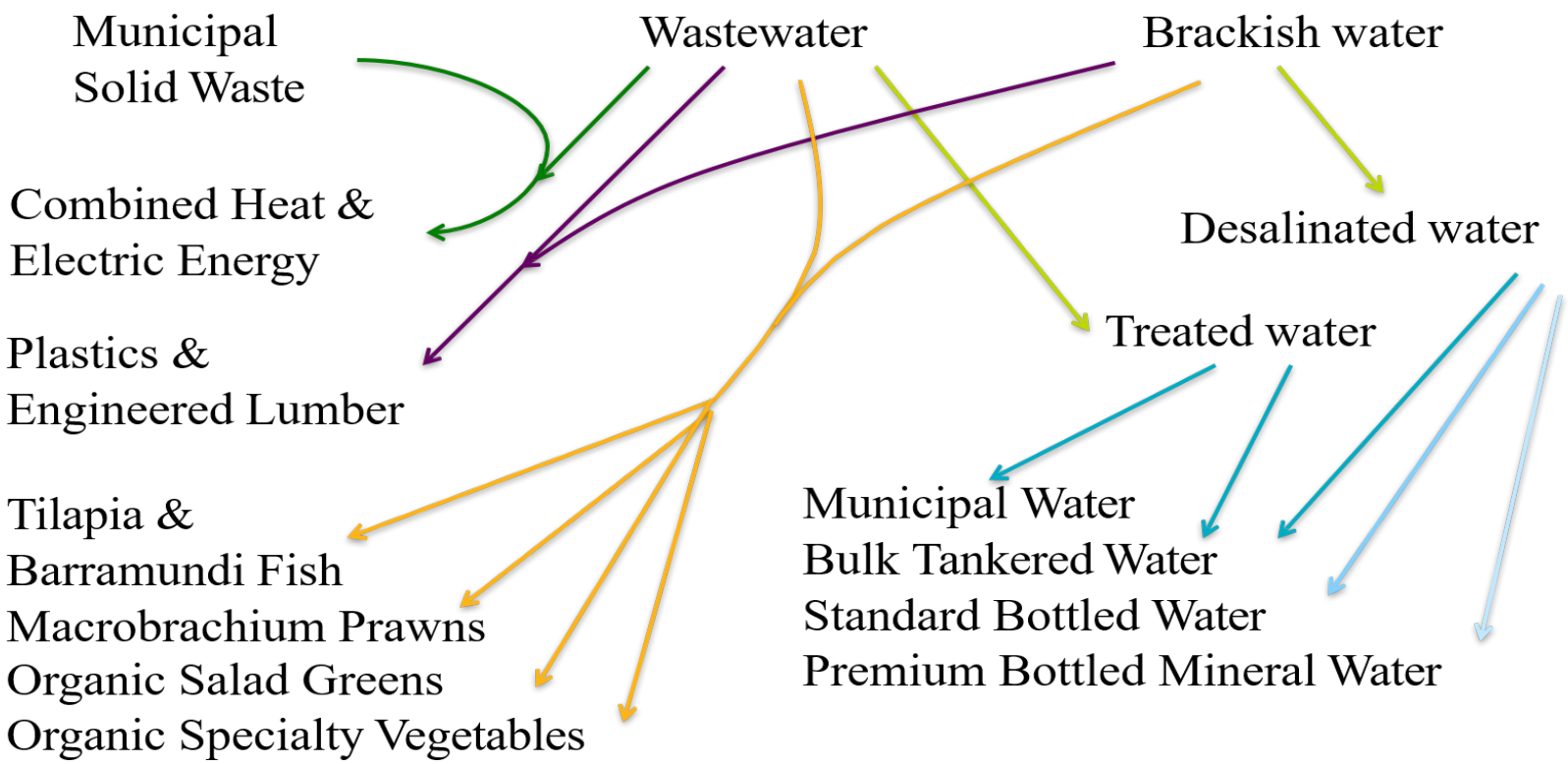
A materials production & CO_2 sequestration engine

While phyto-desalinating brackish water & recycling wastewater: setting the global standard for production of bio-plastics, binders, engineered lumber, biofilm media, pulp & paper.

The complete renewable energy engine

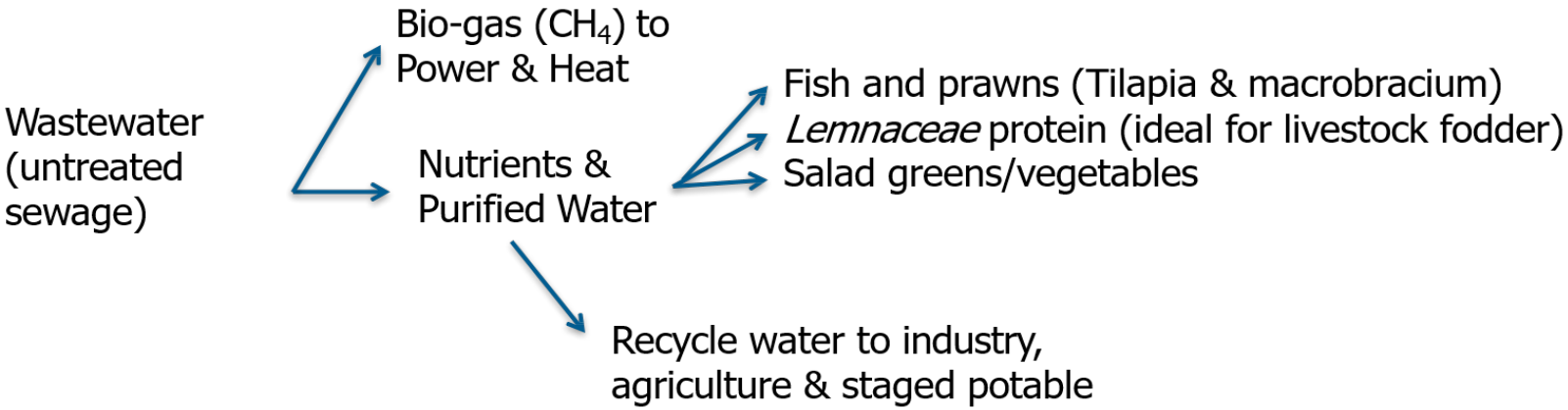
Balanced C/N anaerobic digestion producing the highest CH_4 syngas, allowing firming in a micro-grid of the most efficient local combination of PV, Stirling engine, sentinel wind, inline hydraulic kinetic energy, battery & calcium hydride storage.

ZERO NET ENERGY CONSUMPTION



THE SKILLICORN SYSTEM

SKILLICORN
Technologies LLC



Wastewater is generally a problem that costs money to fix. We see wastes as free energy, free nutrients and free water. We produce fresh food, renewable energy and clean water.

Treating wastewater makes step change in the health of communities.

Sweet-spots are: existing, poorly run treatment plants with nearby arid, unused or farmed land. There are many!

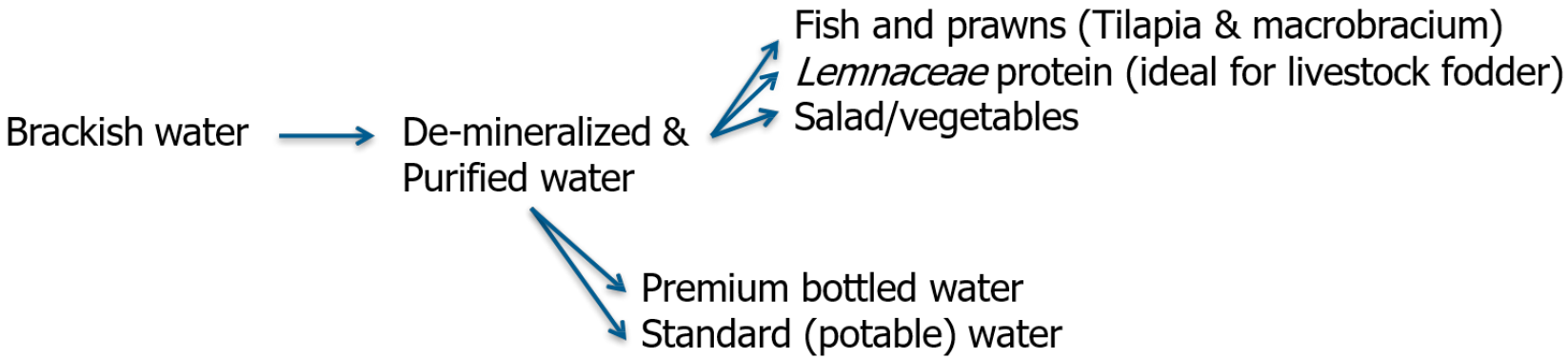
WASTEWATER

PROVEN TECHNOLOGY

- Treating wastewater to a fully recyclable condition
- Inexpensively removing salts, trace organic compounds, chemical pollutants and nitrates from surface and ground waters to create safe industrial water and even safe, potable drinking water.
- Producing high quantities of high protein *Lemnaceae* meal

Developing wastewater treatment projects in Peru, Mexico, Africa and India based on existing, poorly operated units.

Lagoon 1 - India Reference Plant (Aonla)



Vast areas of the earth have brackish (mild salt) ground water that is not suitable for drinking or irrigation. We can desalinate using a very low energy biological process using one of the fastest growing crops on earth. This crop is integrated with intensive, hygienic fish farming making drinking water and food from "unusable" water.

BRACKISH WATER

Water (m^3) to produce 1 tonne	
Maize	1,222
Rice	1,673
Wheat	1,827
Soybean	2,145
Pulses	4,055
LEMNACEAE (OPEN AIR)	260
LEMNACEAE (ENCLOSED)	10

Source: UNESCO-IHE: THE GREEN, BLUE AND GREY WATER FOOTPRINT OF CROPS AND DERIVED CROP PRODUCTS, http://aquaponicsplan.com/

A system of intensive agricultural processes that desalinates and/or purifies water and produces food while using very little water itself.

INTENSIVE AGRICULTURE

AGRO SOLAR CONCEPTS

LET THE SUN WORK FOR YOU

BENEFITS OF AGRO SOLAR PROJECTS

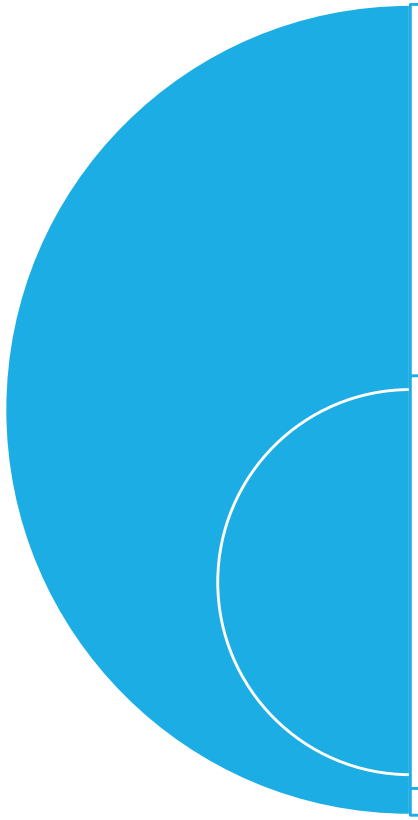
- 100% Renewable Energy
- Water Conservation
- Higher production
- Guaranteed Power
- Job Creation
- Conservation of Agricultural lands
- Pesticide free fruits & vegetables
- Higher profits for owners

AGRO SOLAR

A 1 MW Food-and-Energy Plant, erected on 1,8 ha in Southern Africa or the Middle East, delivers in 1 year:

490 000 kg of local produced food, 1700 MWh renewable solar energy, 83000 tons of CO2 savings, 75-100 sustainable jobs and trainings facilities.

AGRO SOLAR: FEATURES & BENEFITS



Our solar greenhouse system offers more than just the installation of PV modules on a greenhouse rooftop. The solution consists of specially designed greenhouses utilising sophisticated PV technology that ensures the highest energy production levels and contributes to the provision of optimised cultivation conditions.

- Custom designed greenhouses
- Top-tier PV technology (integrated modules or rooftop installations)

Our solar greenhouse system represents the perfect balance between sun, water and soil, energy and agriculture. Together with partners, STL provides turnkey solar greenhouse solutions – from development, structuring and financing, to planning, construction, commissioning and all the way through to on-going operation and maintenance.

- PV modules and greenhouse installations maximising energy production and optimising cultivation conditions
- Turnkey solution improving economics of agricultural sector

FUTURE ENERGY INTEGRATION

We can do more...

Good locations for *Lemnaceae* are also good for solar power

Photobioreactor efficiency remains high with intermittent shade, meaning that solar tower shadows are not a problem

We have large land areas connected to infrastructure

Key technologies being developed with third parties;

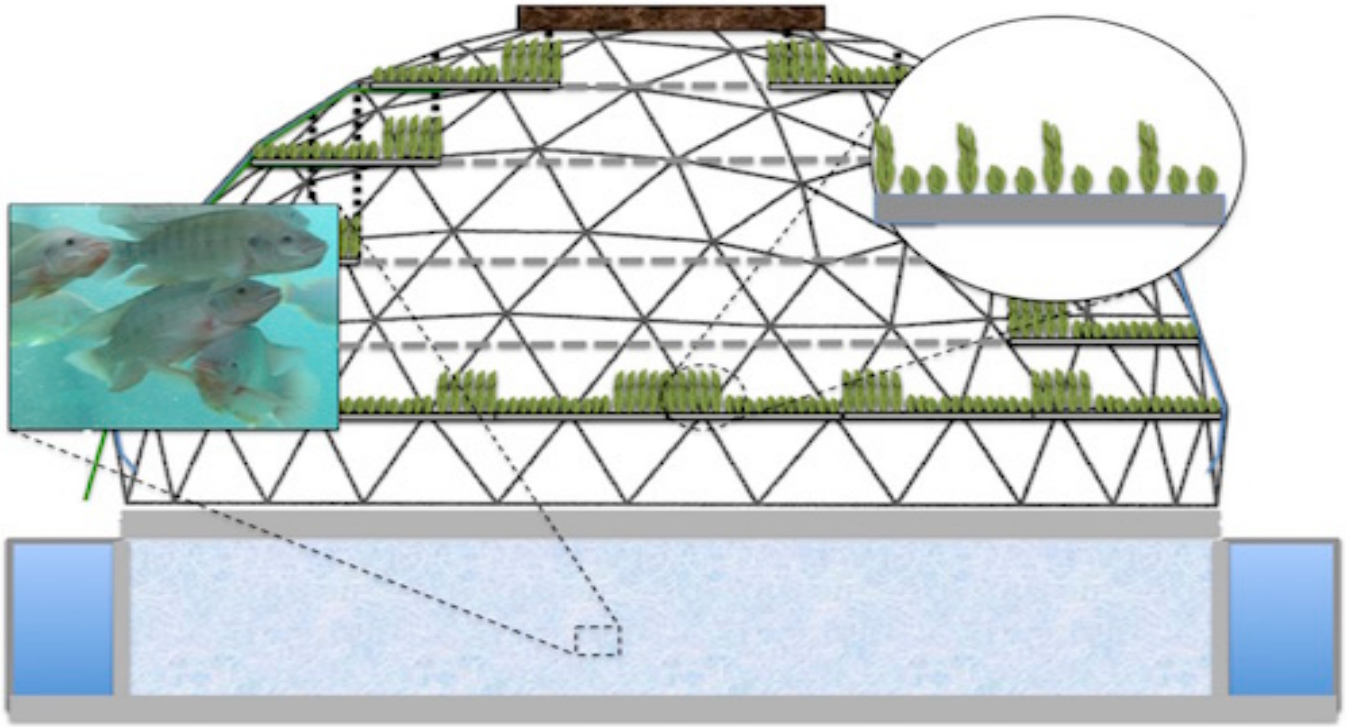
Novel thermal storage system. (better than current molten salt systems…)

Stirling engines coupled to thermal storage giving dispatchable power round the clock

Floating PV systems

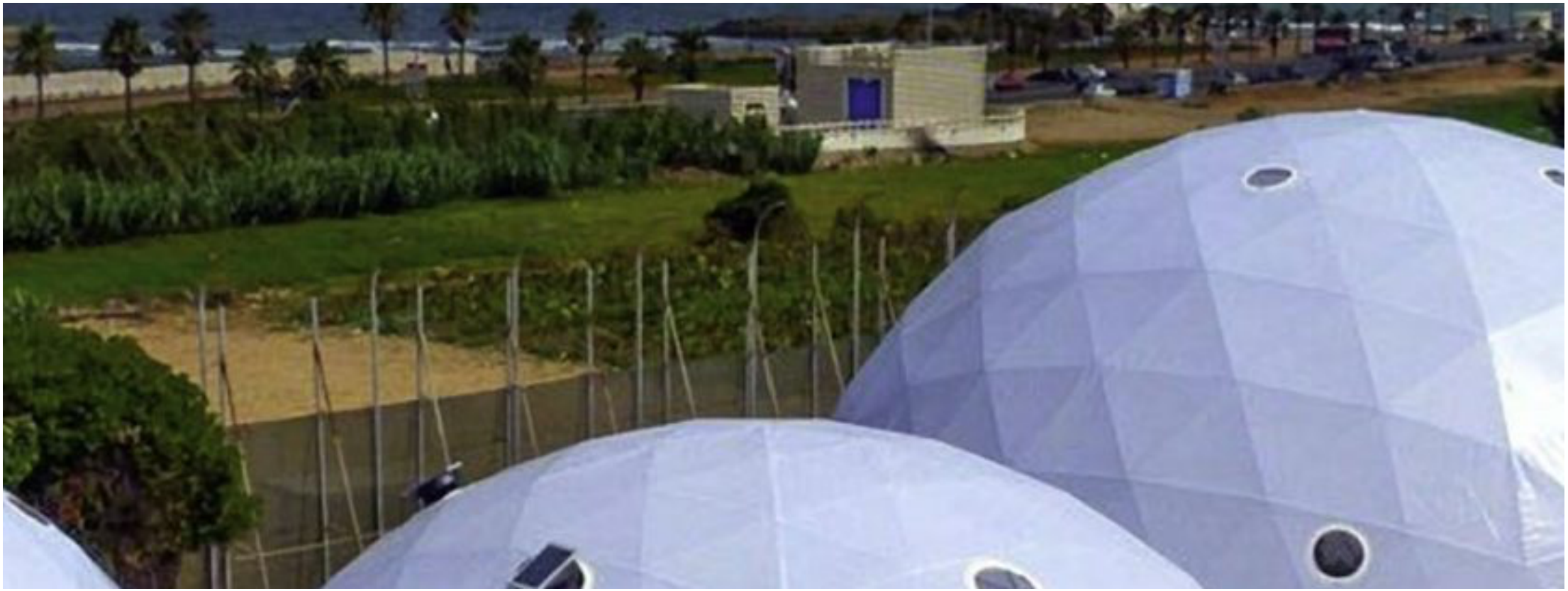
Integration with methane from anaerobic digesters

Plan is to retro-fit when these systems are ready for commercial deployment



Continuously Harvested Concentric Lane Aquaculture Tank

SKILLICORN WATER VILLAGE HOUSE – HOUSE HOLD LEVEL JV INITIATIVES



SKILLICORN WATER VILLAGE HOUSE – HOUSE HOLD LEVEL JV INITIATIVES

www.skillicorntechnologies.com

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Barranca WWT Plant in Peru – Proven Technology

BARRANCA WWT PLANT IN PERU: PROVEN TECHNOLOGY

Treating raw municipal wastewater to a fully recyclable, completely potable condition – the first such municipal treatment plant in Latin America.

Treating wastewater to a fully potable condition within the context of a beautifully landscaped science-eco park equipped with instructional bulletin boards and accessible by school children and the general public.

Confirmed Lemnaceae productivity: 55 MT of biomass/ha/year – pure protein production 21 tonne/ha/yr (Reference: Brazilian soybean protein production: 1.07 tonne/ha/yr pure protein production).

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Las Animas Secondary Effluent Treatment Plant (Colorado, USA)

www.skillicorntechnologies.com

WWT PLANT IN COLORADO – PROVEN TECHNOLOGY

Polishing secondary-treated municipal wastewater to the highest international advanced tertiary standards

The world's first phyto-desalination system (plant-based removal of salts from water): removing, along with wastewater nutrients & BOD, over 600 ppm of total dissolved solids in a single treatment cycle

Demonstrating the highest sustained productivity of plant protein in North America: Lemnaceae productivity of 55 tonne of biomass/ha/year – pure protein production 21 tonne/ha/yr (Reference: Colorado soybean protein production: 0.72 kg/ha/yr. pure protein production)

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FERRENAFE WWT PLANT: PERU – PROVEN TECHNOLOGY

At 25 ha, this was the largest duckweed wastewater treatment plant to date.

Managed by a landless worker association

Employed SEDELAM's Lambayeque facultative lagoon for primary settling, and the PRISMA denticular system for Lemnaceae production and nutrient removal

Produced an advanced tertiary effluent discharged into irrigation water canal

Revenues realized through sale of all harvested Lemnaceae to the Lambayeque Nestles factory as feed for the local dairy cattle herd

MIRZAPUR WWT PLANT: BANGLADESH – PROVEN TECHNOLOGY

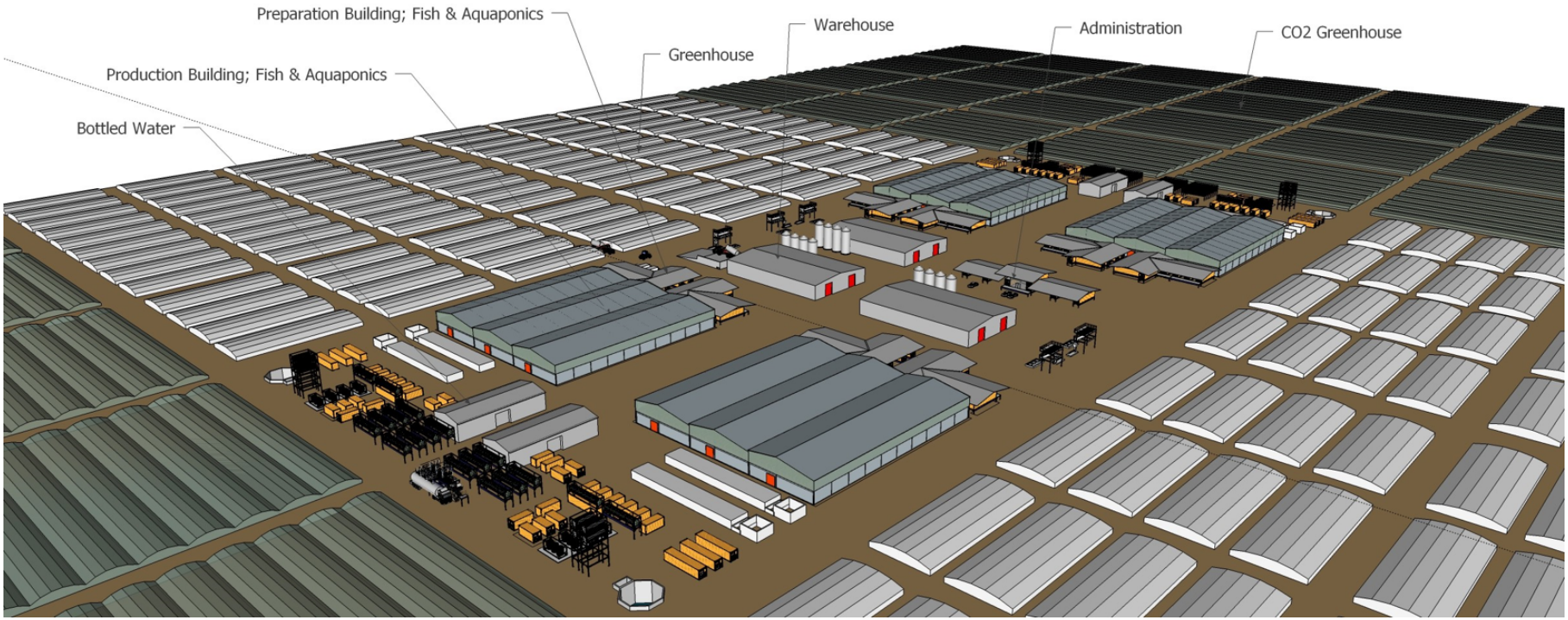
Source: https://www.youtube.com/watch?v=M93HZDoqhsE&t=58s

Long term Operation of Duckweed treatment is practical – Kumudini Welfare Trust in Bangladesh.

Treating municipal and hospital wastewater to the highest international advanced tertiary standards.

For 23 years, a highly productive, non-aerated extensive aquaculture facility averaging over 10 tonnes/ha of mixed carp species & tilapia production.

For 23 years, a productive commercial production of high quality vegetable protein for feed stock: 30 times soy on a unit area basis.



TYPICAL SKILLICORN TECHNOLOGIES LARGE SCHEME - LAYOUT

SKILLICORN
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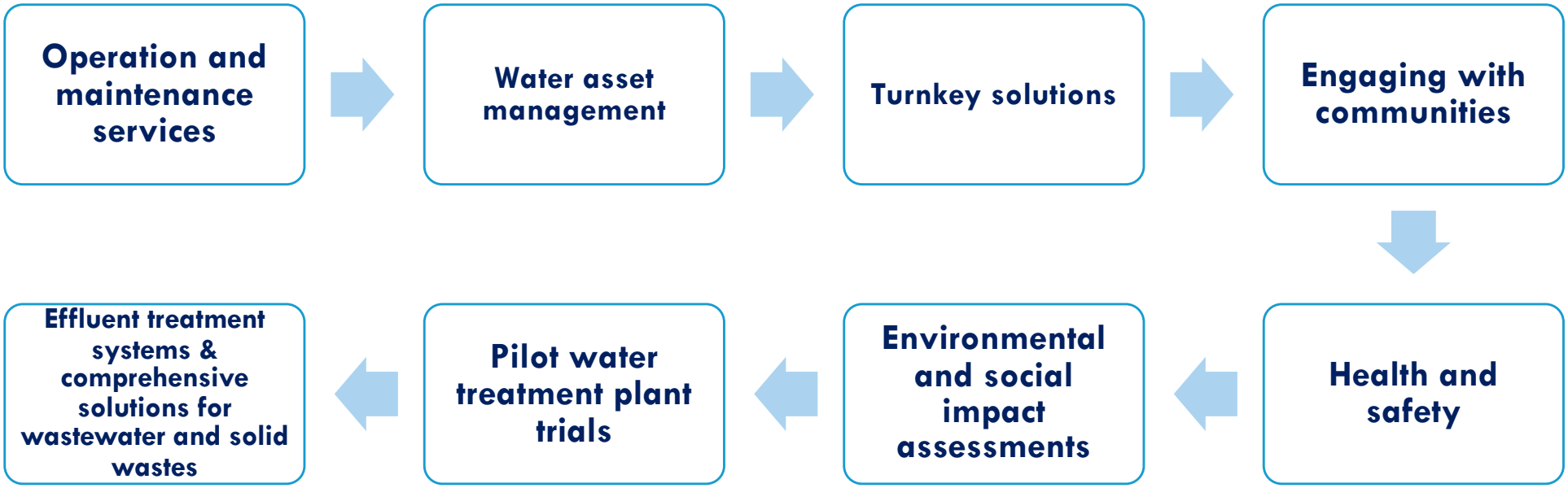
SERVICES OFFERED

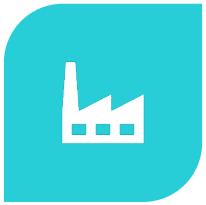
- Biological treatment services
- Municipal wastewater treatment
- Municipal solid waste treatment – Waste to energy and waste to nutrients technologies
- Brackish water desalination, water reuse and membrane treatment
- Redevelopment of existing wastewater treatment plants
- Design capabilities
- Project finance

SERVICES OFFERED

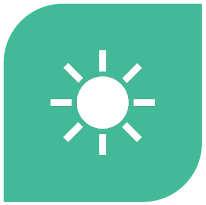


SKILLICORN TECHNOLOGIES – BENEFITS

USES BIOLOGICAL – MECHANICAL PROCESS WITHOUT ANY CHEMICALS: ENVIRONMENTALLY FRIENDLY



PREVENTS UNTREATED / PARTIALLY TREATED SEWAGE WATER POLLUTING THE AQUIFERS, RIVER AND OTHER WATER SUPPLY SOURCES



EEFFICIENTLY CAPTURES AND STORES SOLAR ENERGY TO PRODUCE FIRM ON DEMAND HEAT AND POWER

RECYCLES ALL THE WASTEWATER / BRACKISH WATER GENERATED BY CITIES TO MULTIPLY THEIR EXISTING WATER SUPPLIES & ALLOW ALMOST UNLIMITED URBAN GROWTH

PRODUCES VALUABLE PLANT PROTEIN, FISH, PRAWNS AND ORGANIC FRUITS AND VEGETABLES IN THE PROCESS

SKILLICORN TECHNOLOGIES - BENEFITS

The Lowest Water Footprint (25-1 versus Soybeans)

Less than ten liters of H2O for one kg of protein, versus 250 liters of H2O for one kg of lower quality soy protein

Massive Increase in Productivity

55+ tonnes of high protein meal per hectare versus less than 2 tonnes of soy protein meal per hectare

Massive Intensification & High Value Added Agriculture

Production of only high valued products and Nth degree value added for all product streams

Consumes Wastewater & Municipal Solid Wastes, discharges nothing,& monetizes everything through high value-added

SKILLICORN TECHNOLOGIES - BENEFITS

- Extracts and uses, remuneratively, all energy and nutrients from municipal solid wastes and wastewater solids
- Treats Polluted & Salinized Water to Fully Recyclable Level
- All water now becomes an asset that can be fully used and repeatedly recycled = high profits
- Productivity and Production are Independent of Soil Quality
- Once unproductive soils can be fully optimized for productivity – Skillicorn Water System operates above the soil
- Brackish and Salinized Water Becomes a Valuable Asset
- Skillicorn Water System thrives in brackish water while also rendering the water itself fully potable

SKILLICORN
Technologies LLC

MANAGEMENT TEAM

The Management Team comprises a highly accomplished team of experts, project developers and investment bankers with more that 40 years experience in leading edge water treatment technologies, finance and infrastructure development internationally.

Dr. Paul Skillicorn, Founder, Managing Partner & Technical Director – Paul is a Development Economist and Environmental Engineer by background with 40 years of experience as both designer and manager in the international water, wastewater and renewable energy business. Paul has historically worked extensively with the World Bank, The United Nations, ADB and many NGO's interested in the sector.

Mani Vannan, Co-founder, Managing Partner & Financial Director – Mani is a Development Economist, Environmental Management Specialist and former banker with more than 35 years of experience as a banker, corporate finance practitioner, renewable energy & clean technology expert and as an adviser to Governments, public and private companies and to not for profit organizations on commercially viable climate change mitigation solutions.

MANAGEMENT TEAM

Robert Eric Kottler (Bob) - Water Sector Advisor: A Professional Civil Engineer with over forty years' experience, mainly in International Markets working with leading contractors. In addition to Operational Management skills, Bob has worked extensively in Strategic Development and Business Procurement. This has covered Project winning through to Company acquisitions. Bob has held executive positions on a number of Boards for over 20 years with full P&L responsibility

Dr. Ramiro Priale - Commercial Director: Over 30 years of experience in wastewater treatment, agri-business, Information Systems design, applied informatics and project management. Ramiro has been involved in the management of international information systems projects at UNDP, IICA-OEA and Pan-American Health Organization – PAHO/WHO, Washington DC since 1993. Ramiro has been the project manager for the pilot project for treatment of wastewater using phyto-remediation systems in Barranca, Peru. Ramiro has a Ph.D in wastewater treatment systems and corporate social responsibility.

BOARD OF ADVISORS

Dr. Rolf Selset

Managing Director, Calcus AS and BioBase AS

Rolf is the Managing Director of Calcus AS and BioBase AS, two companies that are on the cutting edge of global innovation in aquaculture – both marine and freshwater.

Rolf Selset has fish and aquaculture related market, consulting and business interests that range from North and South Europe to Africa and South America. As with The Olmito Project and Skillicorn Holdings, his companies have a strong interest in developing and promoting Lemnaceae species as both treatment agent and high protein feed for fish species.

Dr.Ven Subiah

CEO of PhytoPharmacon, and BioProcess LLC

Dr. Subiah holds 25 patents and patents pending. He owns the largest plant extract collection and attendant database in the world – over 25,000 discrete samples. He has published over 80 publications in peer-reviewed journals and presented more than 60 presentations at national and international scientific meetings. He has become an acknowledge world leader in both the science and business of plant and natural extracts. He will assist the Company with selection, production, and processing – as well as global sales and marketing of its plant extract products.

BOARD OF ADVISORS

Dr. Charles Taylor

CEO, KENAF Industries of South Texas

Dr. Taylor has worked tirelessly during the past 30 years to develop the basis for a vibrant kenaf industry in the United States. He has pioneered design and manufacture of kenaf farming, harvesting, preprocessing, processing (decortication and reduction), handling and post-handling equipment and systems – and continues to do so. He has developed, helped develop and promoted numerous kenaf fiber applications, ranging from such extremes as soil and drilling mud additives to extruded kenaf-reinforced plastics and biofuels (butanol). Charles Taylor is also an acknowledged leader in the fields of rural and smallholder development – notably in Latin America and Southern Africa.

Mr. Stanford Harmon

Consultant, SKILLICORN Technologies LLC

Stan, was the regional director for Suez, the French multinational company, ranking only behind Veolia as the second largest water and wastewater services company in the world. He received several state awards in recognition of his expertise. He is an expert in treatment and recycling of wastewater. He "knows" aquaculture in a visceral, almost personal way such as few commercial aqua-culturalists ever experience – koi owners inevitably become very close to their fish.

BOARD OF ADVISORS

Mr. James von Krosigk

President, Custom Resources Inc.,

Mr. von Krosigk holds twenty patents and patents pending with the USPTO. These fall, generally, into 4 fields: micro-emulsions, fungicides and fungal controls, drilling fluids, and production of dissolved oxygen enhancement in water-based fluids. He has also worked extensively in kenaf-based systems for remediation of petroleum residuals and production of advanced "next generation" biofuels.

BOARD OF ADVISORS

Mr. Ali Fuat Yuruker

Senior Consultant & Country Representative, Turkey

Fuat has more than 40 years of experience in infrastructure projects in Turkey and the Middle East. He is also experienced in project management and trading. Fuat has a bachelor's degree in Civil Engineering and is based in Istanbul. His expertise covers business development modelling in construction and renewable energy projects. Fuat has held senior positions in various major companies including;

Turkey Office Director, IKEA Trading SE
Purchasing Chief, ENKA Construction, Saudi Arabia
General Manager, Palmet-Terasen Natural Gas Distribution,
Renewable Energy Advisor, ILK Construction Inc

SKILLICORN TECHNOLOGIES - PROJECT PIPELINE

1. Los Fresnos Wastewater Treatment Project, Cameron County	Brownsville, Texas, USA	$20.00m CAPEX
2. Niger River Restoration Project	Guinea - Conakry	$100.00m+ CAPEX
3. Wastewater & Agro Solar Projects	Rangpur, Bangladesh	$2.00m CAPEX
4. Wastewater & Agro Solar Projects	Samuel Adegboyega University, Nigeria	$100.00m CAPEX
5. Wastewater Recycling Project	Bulawayo Town Council, Zimbabwe	$35.00m CAPEX
6. Wastewater Recycling project for an iron ore mine	One of the leading steel producing companies - Quebec, Canada	$20.00m CAPEX

SKILLICORN TECHNOLOGIES – SCOPE OF SERVICES

- Biological treatment services
- Municipal wastewater treatment
- Municipal solid waste treatment – Waste to energy technologies
- Brackish water desalination, water reuse and membrane treatment
- Redevelopment of existing wastewater treatment plants
- Design and construction capabilities
- Debt finance up to 70% of the total project cost + last mile equity where required
- Operation and Maintenance Services

SKILLICORN TECHNOLOGIES – SCOPE OF SERVICES

- Innovative and bespoke agro solar / aqua solar solutions
- Hybrid renewable energy solutions
- Turnkey solutions
- Tailings and mine waste management
- Industrial scale ecosystem restoration
- Environmental and social impact assessments
- Effluent treatment systems and solutions for commercial and industrial wastewater

SKILLICORN
Technologies LLC

OUR BUSINESS PARTNERS

TEXAS A&M UNIVERSITY

Texas Water Development Board

NanoPV

ptloton8

GEI Holdings S.p.A

KENAF INDUSTRIES of SOUTH TEXAS L.P.

OUR BUSINESS PARTNERS

RBI SOLAR

RUTGERS
THE STATE UNIVERSITY OF NEW JERSEY

RBI
ROUGH BROTHERS, INC.
building the greatest places for plants, since 1932

ENMAS INDIA

ARGOS (AGRI PROJECTS) LTD.

BCAS

SKILLICORN SYSTEM IS ARGUABLY THE MOST SUSTAINABLE & PROFITABLE SYSTEM OF ANY KIND IN THE WORLD

www.skillicorntechnologies.com

SKILLICORN
Technologies LLC

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WHERE TECHNOLOGY MEETS SUSTAINABILITY

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