



GARWARE
TECHNICAL FIBRES

GTFL:SEC:2020

September 01, 2020

BSE Limited

Corporate Relationship Department,
New Trading Ring,
Rotunda Building, P. J. Towers,
Dalal Street, Fort,
Mumbai 400001.

(Company code: 509557)

National Stock Exchange of India Ltd.

Exchange Plaza, Plot No. C/1, 'G' Block,
Bandra-Kurla Complex,
Bandra East,
Mumbai 400051.

(Symbol: GARFIBRES, Series: EQ)

Sub:- Disclosure under Regulation 30 of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015

Dear Sirs,

Pursuant to the aforesaid Regulations, please find below the schedule of investor / analyst meeting / conference to be held on as under.

Schedule of the Investor / Analyst Meet / Conference:

Date	Name	Mode of Meeting	Type of Meeting
September 02, 2020	Ambit Capital Conference	Virtual Platform	One-on-One / Group Meeting

Note: The above schedule is subject to change. Changes may happen due to exigencies.


A copy of the investor presentation to be made in the aforesaid meeting is enclosed for your reference and the same is also placed on the Company website i.e., www.garwarefibres.com.

Please acknowledge the communication.

Thanking you,

Yours faithfully,

For GARWARE TECHNICAL FIBRES LIMITED


Sunil Agarwal
Company Secretary
M. No. FCS6407

Registered Office

Garware Technical Fibres Ltd. (Formerly Garware-Wall Ropes Ltd.): Plot No. 11, Block D-1, M.I.D.C., Chinchwad, Pune 411 019, India.
T +91 20 2799 0000/0306 E pune_admin@garwarefibres.com www.garwarefibres.com CIN: L25209MH1976PLC018939

Better Ideas in Action

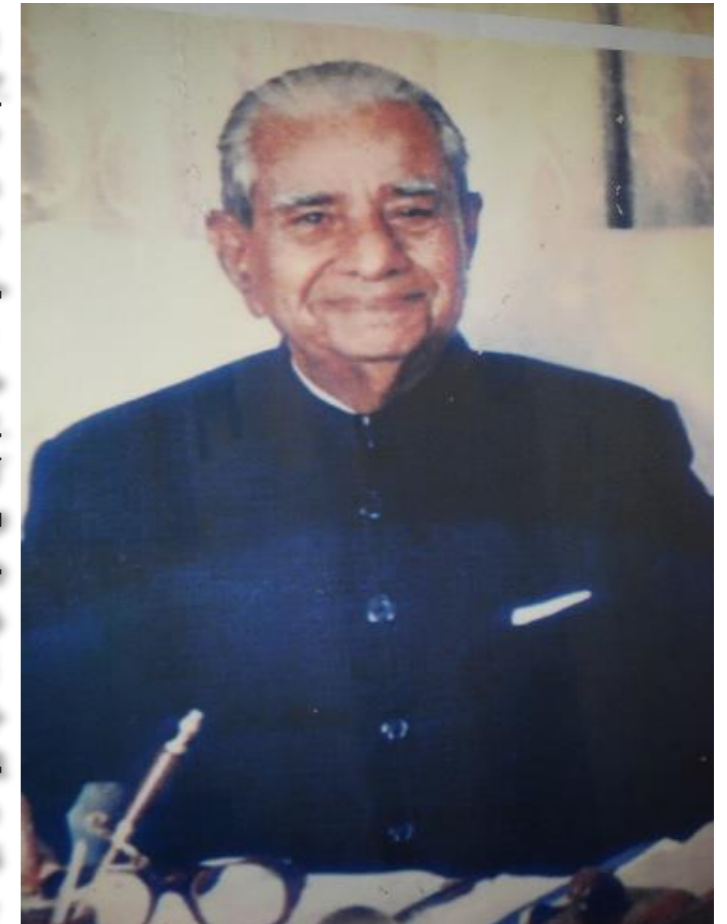
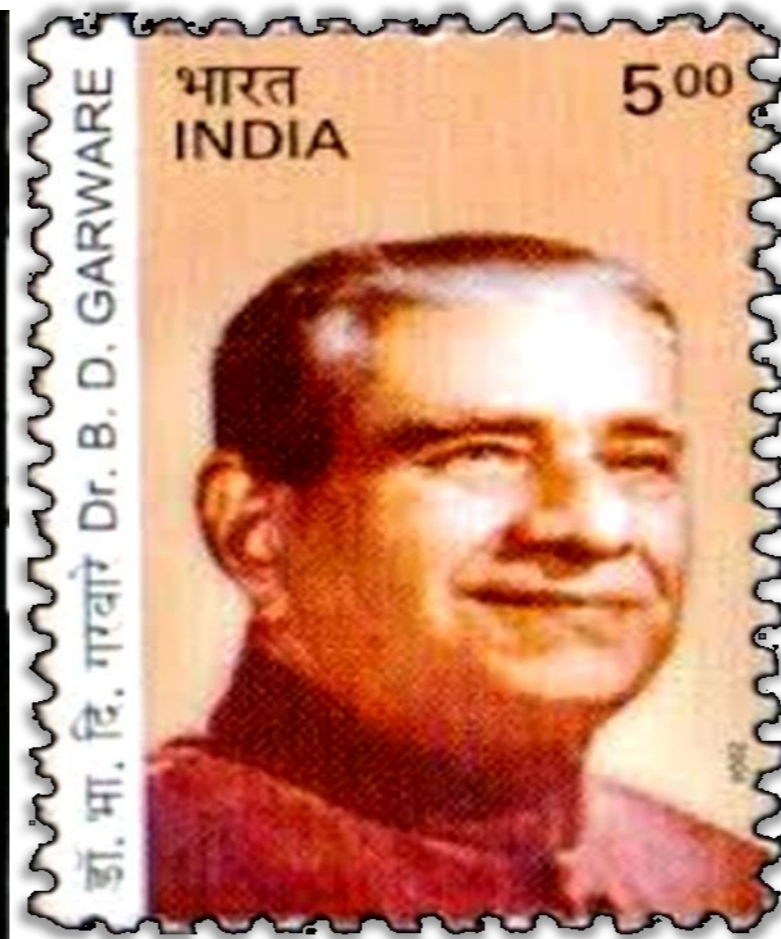


GARWARE
TECHNICAL FIBRES

www.garwarefibres.com

Garware Technical Fibres Limited: Genesis and History

- **Founded in 1976 by Padma Bhushan Abasaheb Garware** in Joint Venture with Wall Industries, USA
- First company in India to manufacture polymer ropes
- Soon started to manufacture twines and then forward integration into nets and fully fabricated products
- Now manufacturing over 20,000 SKUs for multiple applications



Garware Technical Fibres Limited: Genesis and History

Mr. Ramesh B Garware, Chairman Emeritus (1992-2013):

- **International expansion:** Expanded our product offerings to international markets especially the tough and demanding markets of Europe, N. America.



- **Moving up the value chain:** Led R&D teams and manufacturing towards forward integration delivering value added solutions



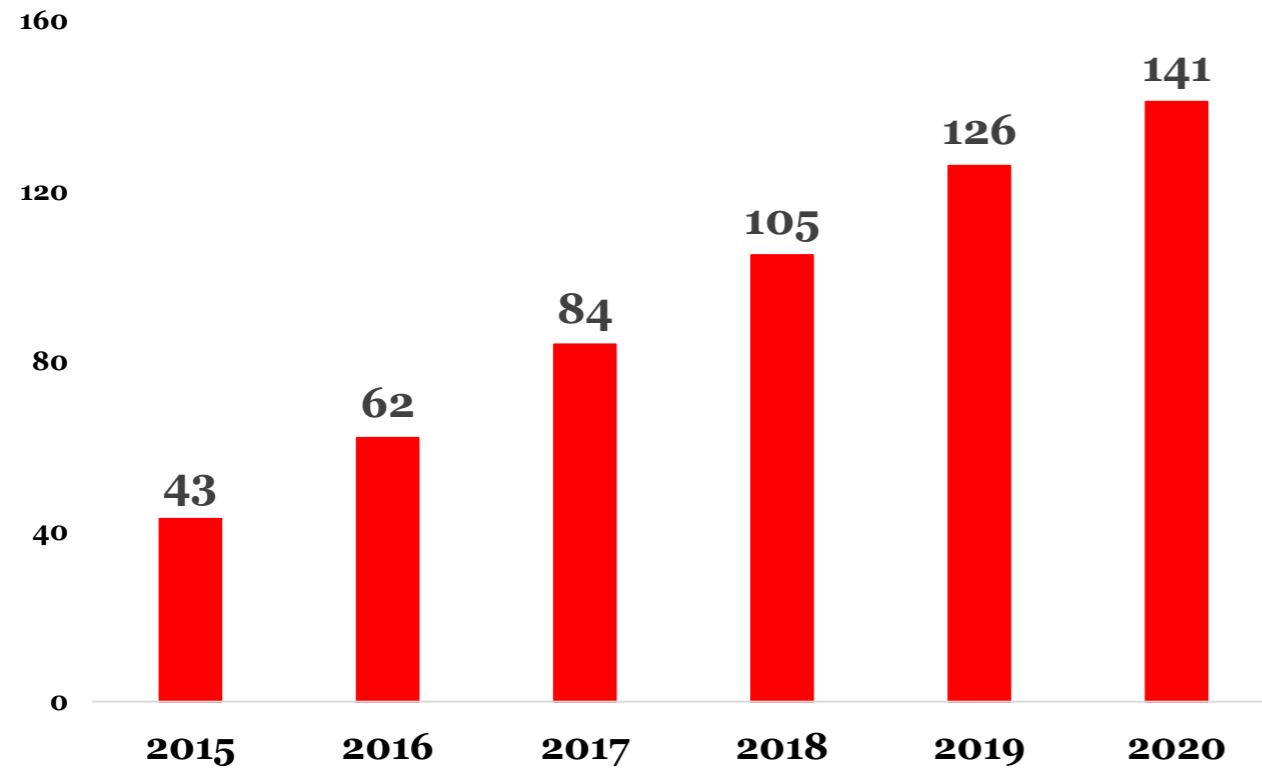


GTFL at a Glance...

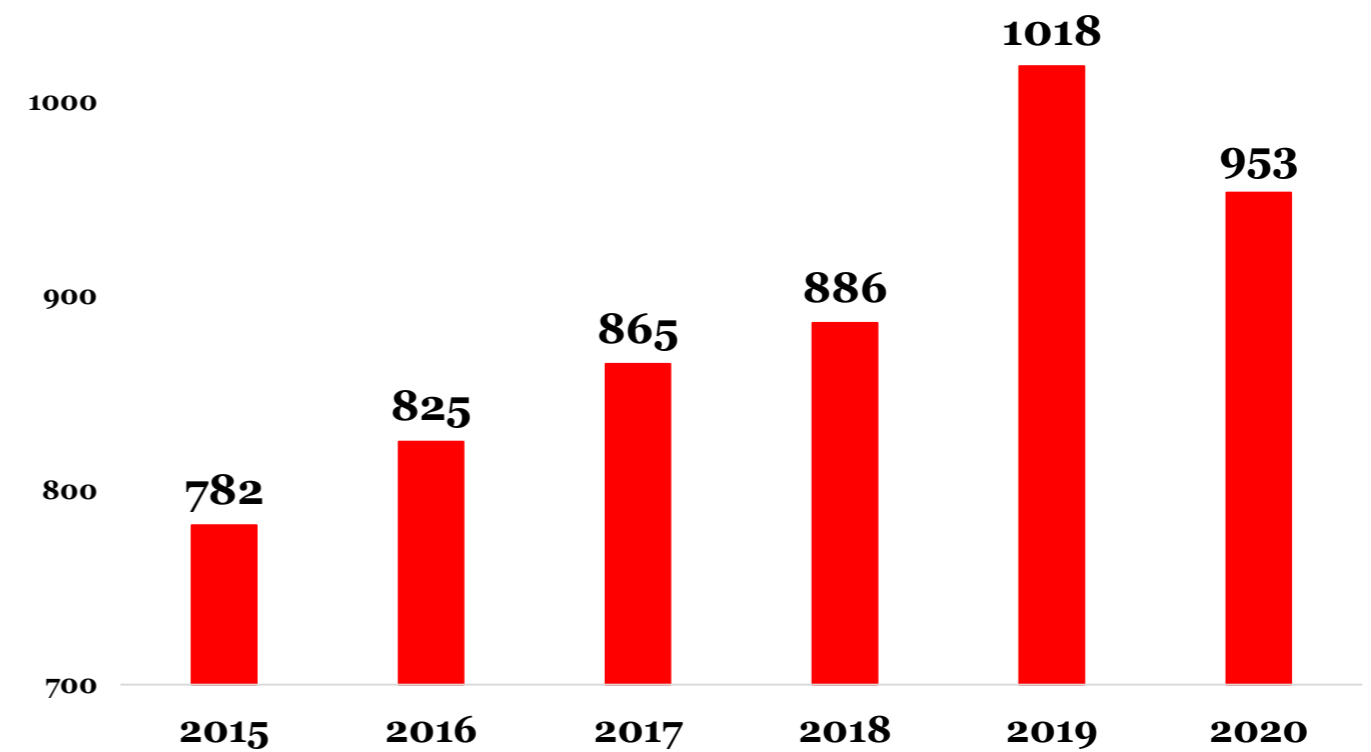
- Multi-divisional, Multi-geographical technical textile company
- Presence across India and more than 75 countries globally through 6 overseas offices across the Globe
- Carries ICRA's 'AA' rating for long term and 'A1+' for short term.
- Management of the company is overseen by Board of Directors headed by CMD, Mr. Vayu Garware
- Day to day operations are structured by a team of professional managers having techno- commercial expertise, vast industrial and marketing experience
- Net debt free company.

GTFL at a glance...

PAT (IN INR Cr)



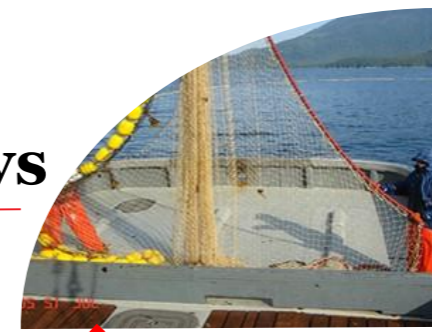
Net Turnover (IN INR Cr)



GTFL technical-textile products touch lives in unseen ways

Our Application Focused range of Products cater to the below industries:

- **Food:** Aquaculture, Fisheries, Agriculture
- **Sports:** Netting and other products for various sports
- **Infrastructure:** Geo-synthetics



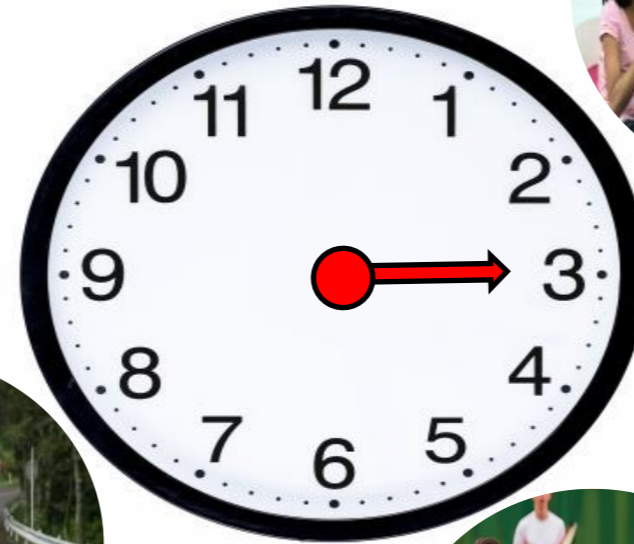
Fisheries India

- Livelihood of 1.4 million people in India
- USD 4 billion industry
- Exports of USD 2 billion



Aquaculture (Salmon) Global

- USD 15.4 billion industry



Agriculture: Protected Cultivation Global

- USD 300 billion industry



Geosynthetics India

- USD 2 billion



Sports Netting

Superior quality nets for all kind of sports

Awards & Recognitions -2020



The Economic Times Polymer Awards 2020 for X12 Lice Skirts



FORTUNE INDIA The Next 500 Companies



World HRD Congress Top HR Minds



Silver Medal in India Green Manufacturing Challenge 2019

Mission

“To Provide innovative,
application focused
solutions to enhance value of our
customers globally”



GARWARE
TECHNICAL FIBRES



Our Four Pillars of Value





Great Place to Work

Garware Technical Fibres Ltd is certified amongst India's "Best Companies to Work for" in the category of Small & Mid-size Organizations as per survey conducted by The Great Place to Work Institute (GPTW) – India. GPTW Survey is considered as the most comprehensive tool to assess and rank workplace culture in India.



GTFL Infrastructure



Manufacturing facility at Pune is strategically located in close proximity to Mumbai

Pune manufacturing facility conforms to ISO 9000:2015 standards and boasts state-of-the-art machinery

Products

Ropes
Rope Articles
PPMF Yarns

PPMF Twines
Geo Textiles
Metal Gabions

Cargo Nets
Gangway Nets





Manufacturing facility at Wai is the largest unit in India and spread across 30 acres

Wai manufacturing facility conforms to ISO 9000:2015 and ISO 14001:2015 standards and boasts state-of-the-art machinery

Products

Aquaculture Cage Nets
Plateena (Dyneema)
Fishing Nets
Net Assembly

Sports & Adventure
Nets
Safety Nets

Agricultural Nets
Coated Fabrics



Extrusion



Knotless Netting



GTFL's Vigour

GTFL's Strengths...

Diversified
business
portfolio



Strong R&D
with dedicated
team of multi
disciplinary
scientists



Relentless
Focus on
Value added
Products



Effective mix
of Domestic &
Export
Revenues



High Brand
Recognition
& Awareness



Financially
strong with
high credit
rating



Optimum
Blend of Youth
& Experienced
Personnel



High degree of
manufacturing
excellence with
best in class
processes



GTFL

Application Areas

Our Innovative, Application focused Solutions Portfolio...



Fisheries

- Fully assembled Trawls
- Purse Seine Nets
- Gill Nets
- Dole Nets
- Pelagic Nets
- Ropes & Twines



Aquaculture

- Cage Nets
- Predator protection Nets
- Anti Bird Nets
- Mooring System
- Sea Lice Solutions



Shipping & IPD

- 8 Strand Shipping Ropes
- 3 Strand Industrial Ropes
- Specialty Ropes
- 12 Strand Ropes
- Safety Nets
- Cargo Nets
- Braided Ropes
- Rope Articles



Sports

- Tennis Nets
- Volley Ball Nets
- Basket Ball Nets
- Ski Nets
- Cricket Nets
- Badminton Nets
- Golf Practice Nets
- Soccer Nets
- Batting Cages
- Handball Nets

Our Innovative, Application focused Solutions Portfolio...



Agriculture

- Anti Bird Nets
- Anti Hail Nets
- Shade Nets
- Sericulture Nets
- Floriculture Nets
- Insect Nets
- Grape Nets
- Crop Support
- Stacking Cord
- Banana Ropes



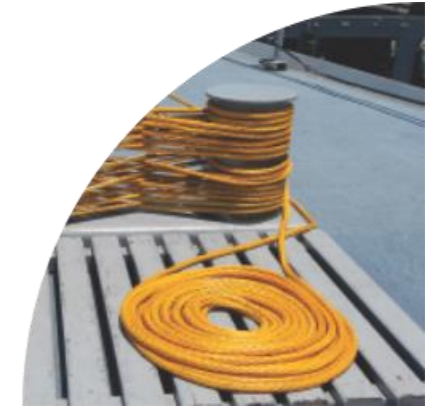
Geosynthetics

- Reinforced Soil Structures
- Landfill
- Coastal & River Protection
- Rock fall Protection
- Gabion Walls
- Geosynthetics Lining
- Erosion Control



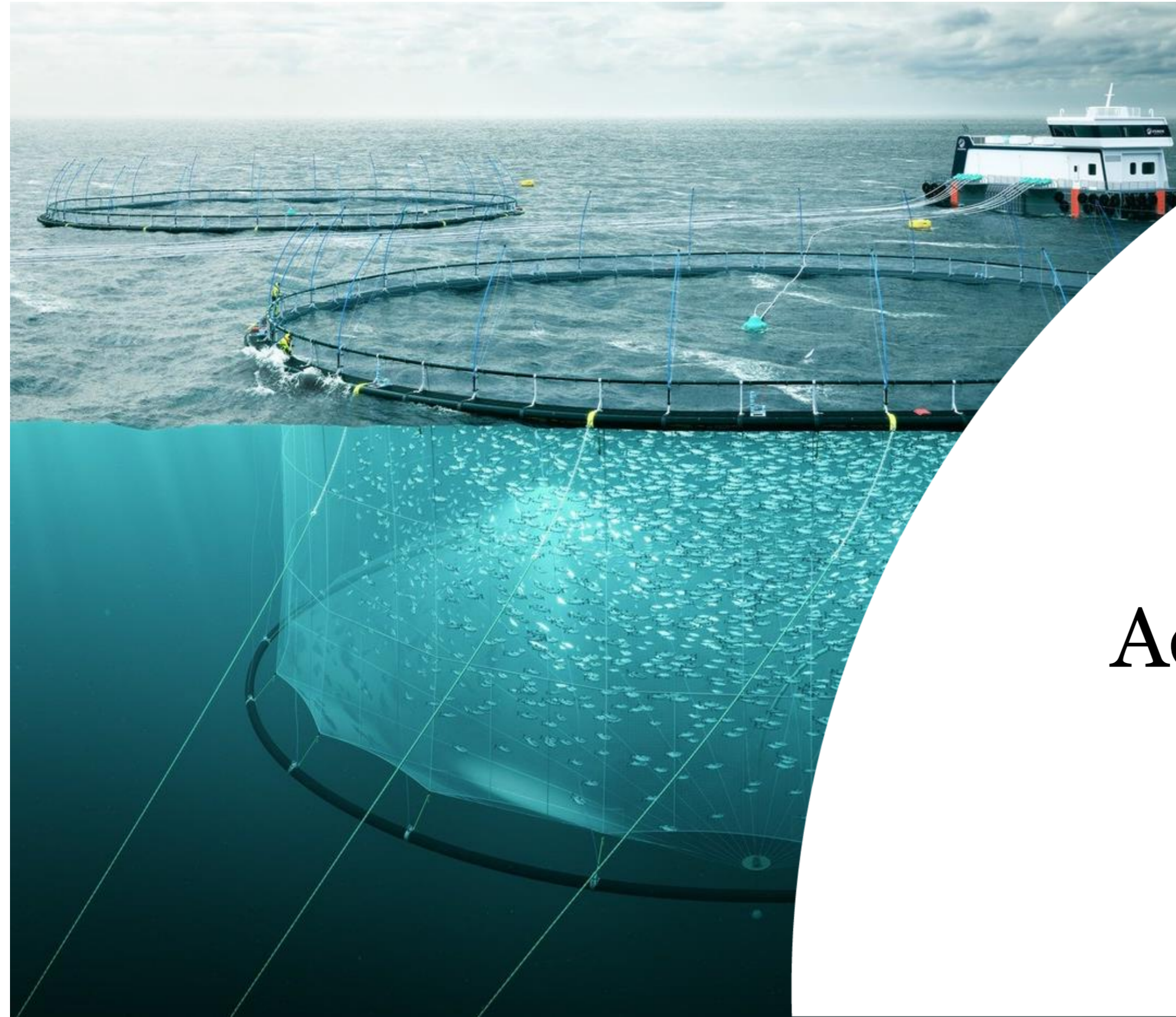
Coated Fabrics

- Tarpaulins
- Hanger Covers
- Awnings
- Inflatables
- Biogas Covers
- Tents
- Pandals
- Pitch Covers/ Ground Covers



Plateena

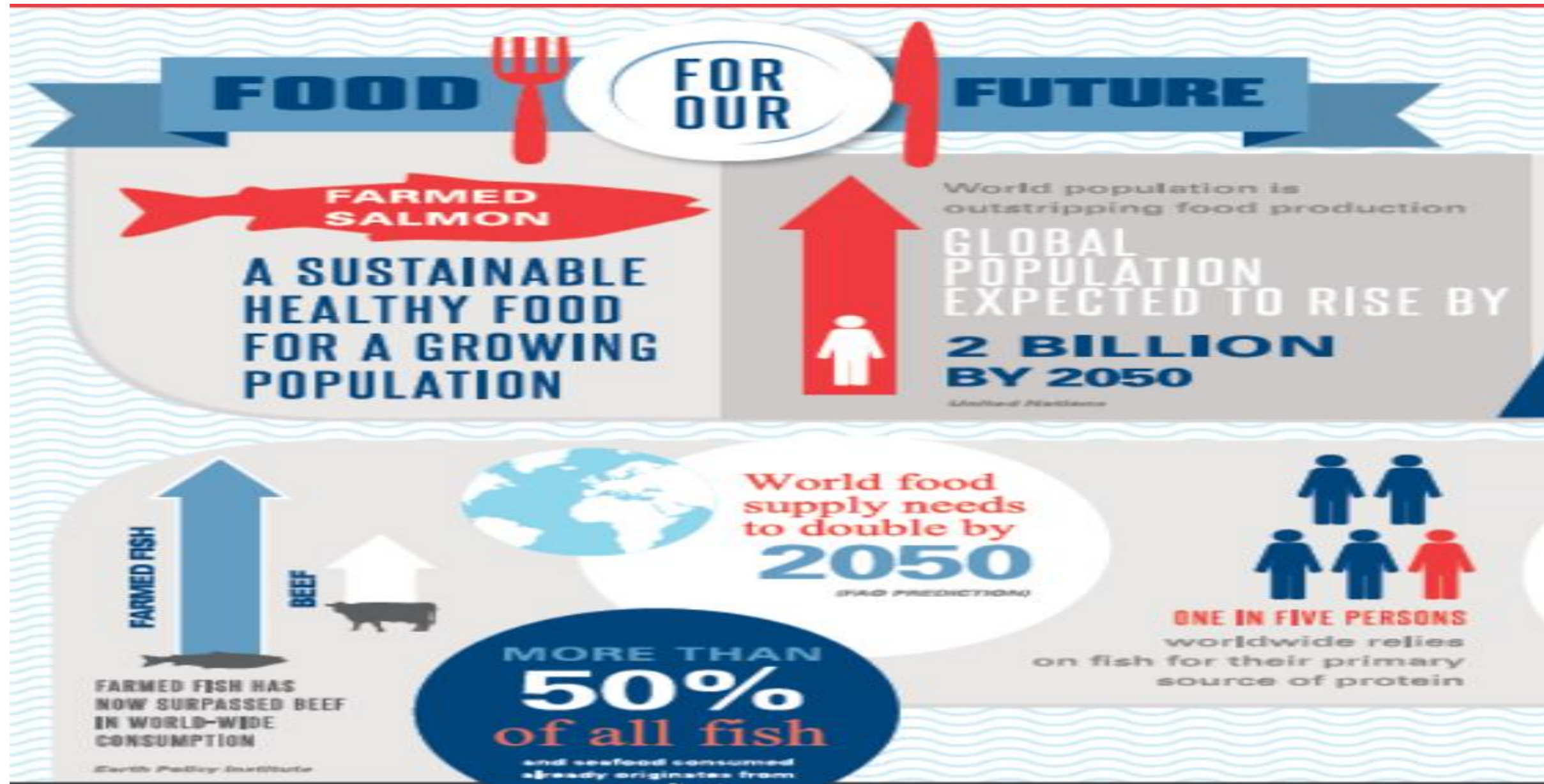
- Aquaculture Cage Nets
- Mooring & Towing Ropes
- Trawl Nets
- Purse Seine Nets
- Conductor Cable Pulling
- Hot Line Stringing
- River Cross Cable Pulling



GTFL

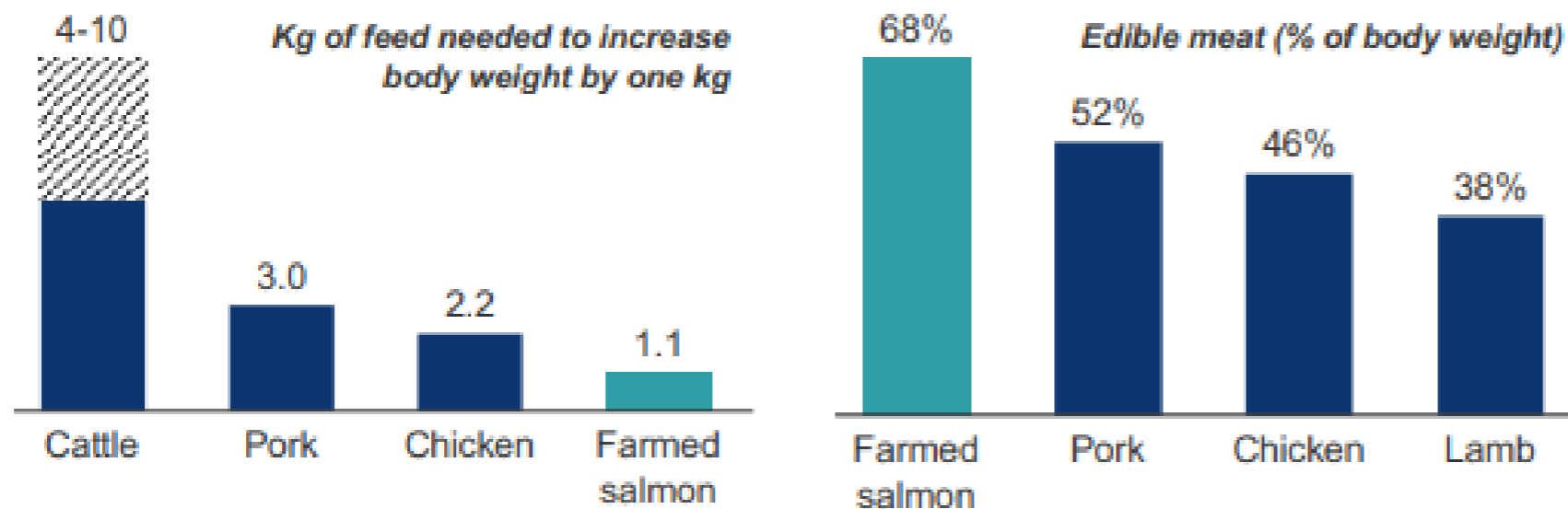
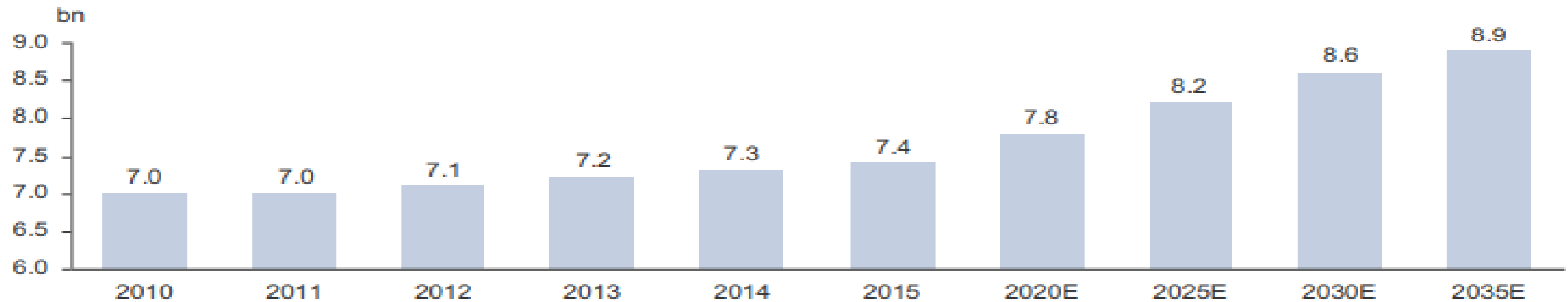
**Aquaculture
Business**

Aquaculture



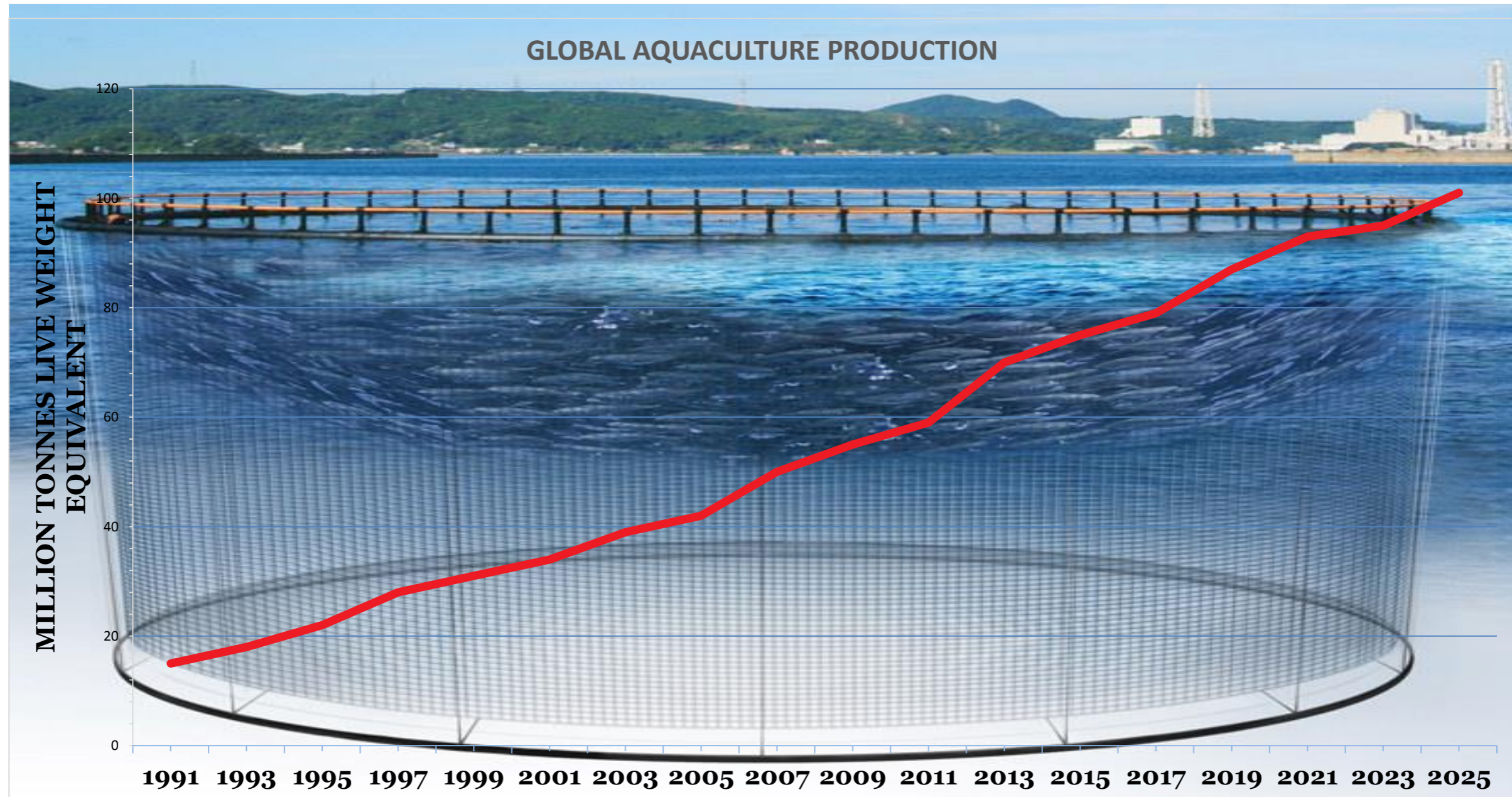
Salmon – More efficient Protein Source

World population forecasted to grow by ~1.5bn towards 2035¹



- Compared to Land based animal Proteins, Salmon offer higher protein and resource efficiency

Aquaculture – Production Volume



Salmon Aquaculture – Industry Insights

Sea Farming requires 2-20° C sea Temperature..

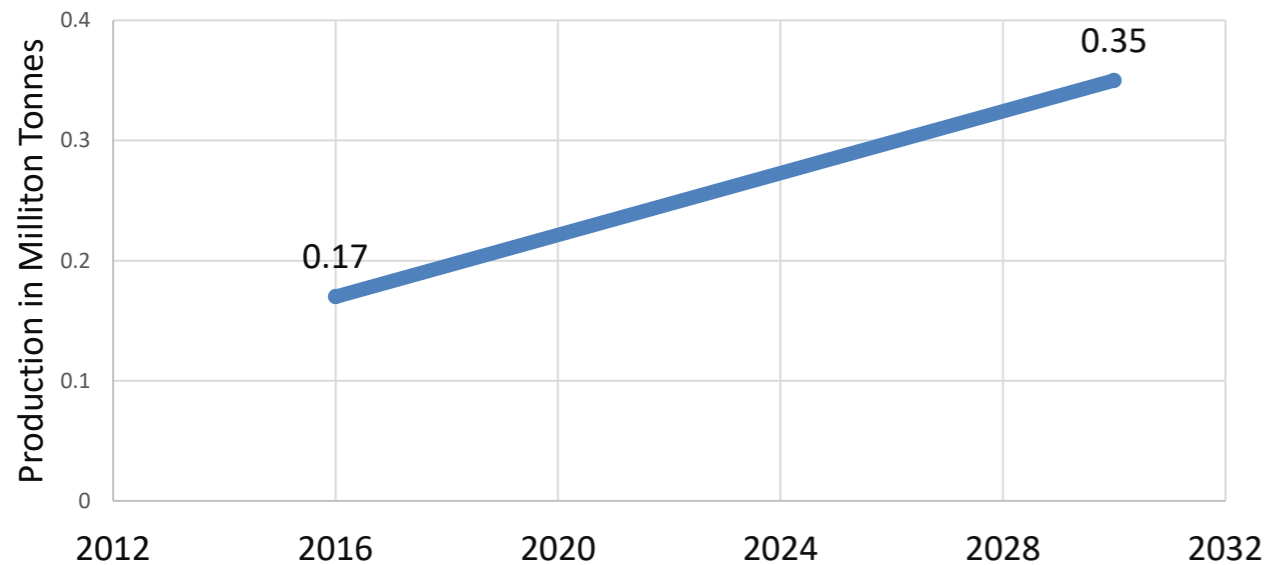


- More than 99% of the Global supply of Salmon is produced in Sea based net pens
- Sea Based production is dominated in Norway, Chile and Canada due to vast area with suitable conditions

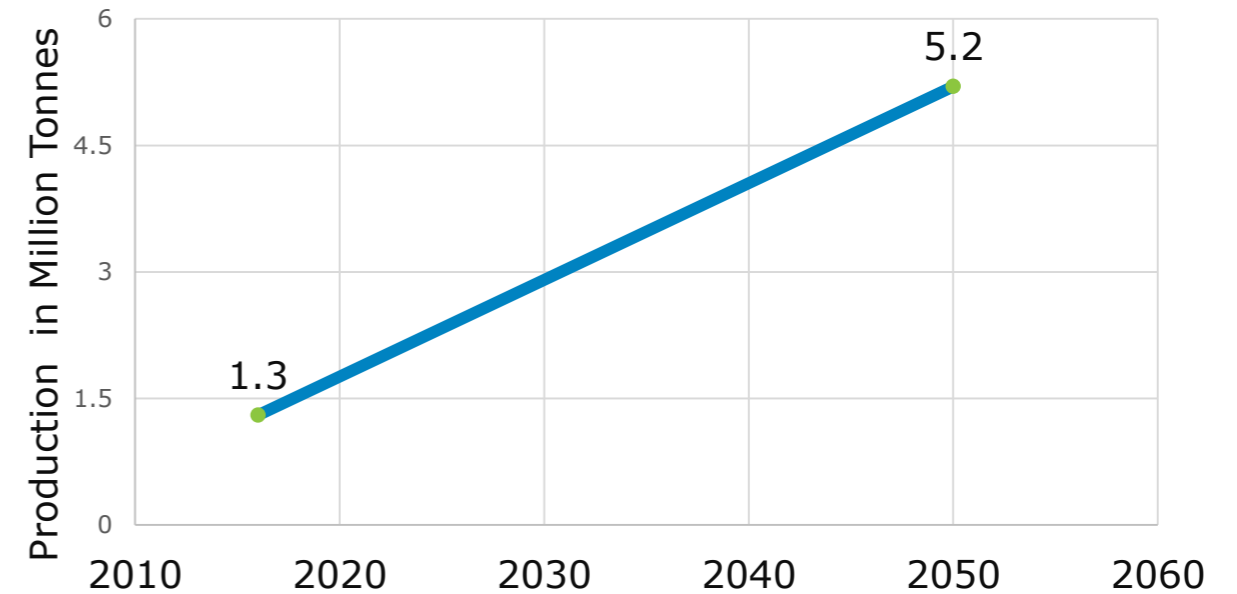
Salmon Aquaculture – Volume Growth Forecast

Ref: <https://aquaculture.scot/> & Norway PwC Seafood Barometer 2017

Scotland



Norway



➤ The Aquaculture industry leadership group formed to double salmon production by 2030.

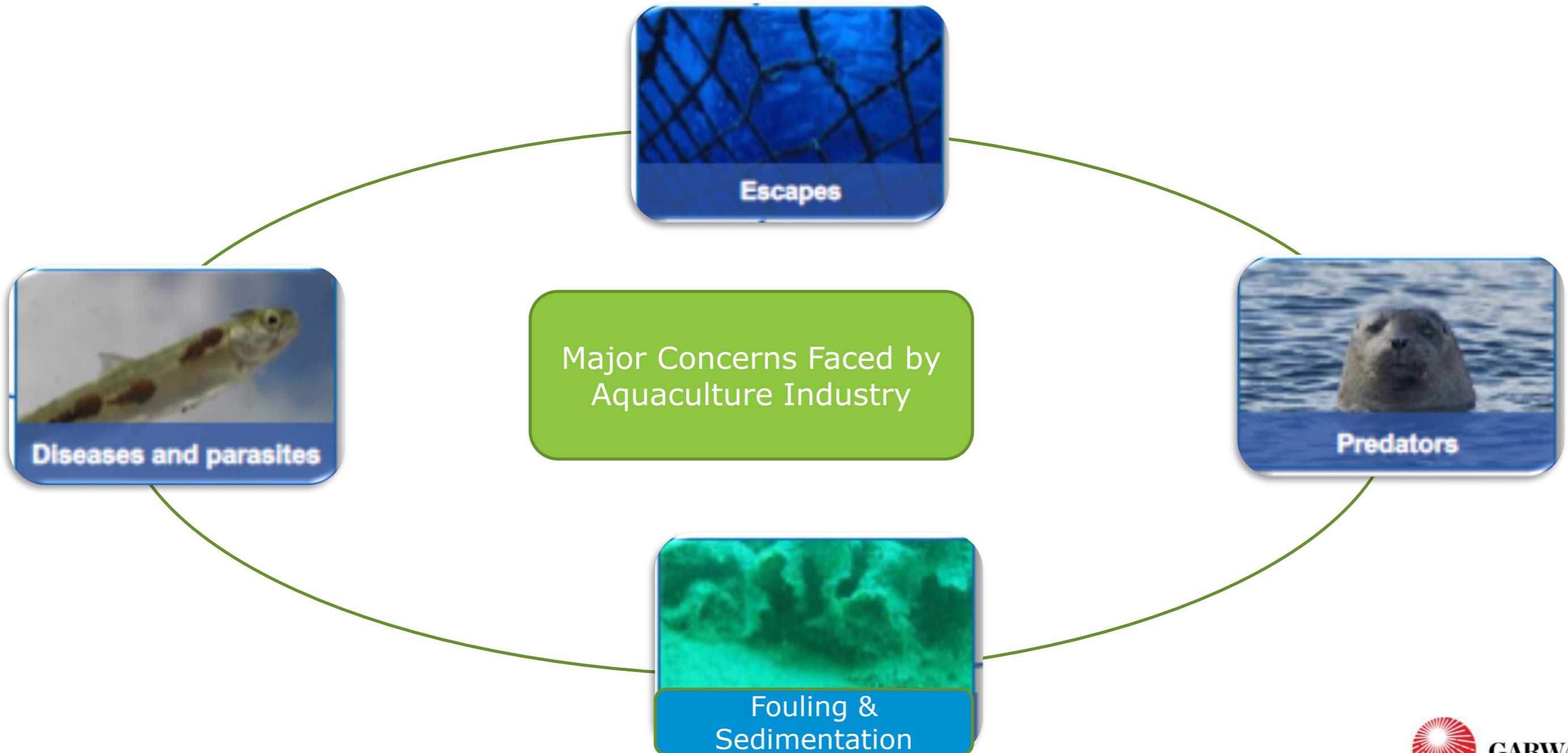
➤ Norway government has taken a goal of 5 million tonnes sustainable aquaculture production by 2050.

Aquaculture

- In farmed salmon aquaculture, each cage holds 800-1000 MT of salmon valued at USD 4-5 million (e.g. : 205m circumference * 35m depth/ 163m circumference * 55m depth)
- The cage nets used have to be extremely resilient to the currents, predators and also ensure no fish escape
- We are the No.1 supplier of cage nets in UK, Canada and have significant shares in Norway and now Chile



Challenges Faced by Aquaculture Industry



Fish Escapes & Predation – GTFL PE Solutions

Increased salmon farm protection leads to drop in seal culls

🕒 4 February 2019

f 📧 🐦 ✉️ Share



A salmon producer has reported seeing a reduction in seal culling after introducing new nets to keep them away from fish.

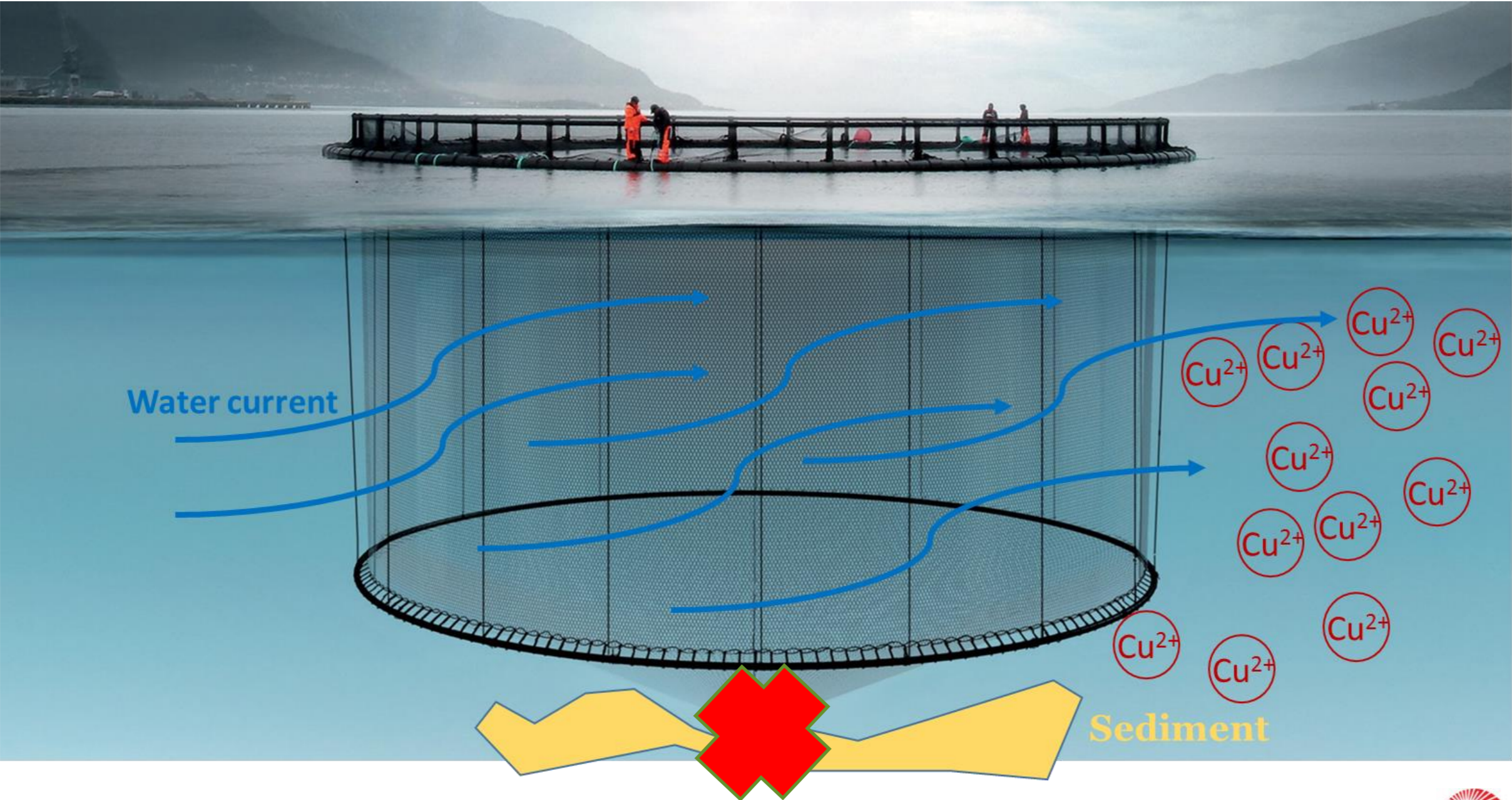
“SSF said new Seal Pro netting was piloted at its Orkney fish farms. Since it was installed in 2016, SSF claims no culls were required there.”

Drop in Seal Culls

Article Featured in BBC

BBC article : <https://www.bbc.com/news/uk-scotland-47108133>

GTFL Solution – Reduce Bio fouling & Sedimentation – V2 Nets



GTFL's V2 technology- patented built-in antifouling properties- Fish farmer – Aug'20

Biofouling: A 'Gluey Constrictor'

Garware's V2 technology has built-in antifouling properties



The famous phrase by Captain Jack in Timon's "Billions of Blue" (stating "Barnacles!" would be one of the first introductions to biofouling species in our childhood). Any surface submerged in water is susceptible to the growth of aquatic species, both micro and macro, and this effect is known as biofouling. Each year, the control of biofouling on various marine industries such as shipping, oil & gas and aquaculture costs billions of dollars.

A growing global population, combined with factors such as changing socioeconomics, will place increased pressure on the world's resources to provide not only more but also different types of food. The world population is projected to reach more than nine billion by 2050. With a third more mouths to feed by 2050, and most of the land-based resources being overexploited, aquaculture farming shows great promise for meeting the growing protein demand. Fish is a vital source of food for people. It is the single most important source of high-quality protein, providing ~15% of the animal protein consumed by the world's population, according to the Food and Agriculture Organization.

Marine aquaculture is one of the fastest growing industries in the food sector and contributes significantly to the national economy of many countries. Globally, commercial marine aquaculture has evolved into one of the most developed sectors in the food industry over the last decade. However, marine aquaculture is plagued by problems such as biofouling, sea lice infestation, diseases, harsh environmental conditions, and predators leading to heavy losses.

Typical aquaculture farms use nylon or polyester nets to farm fish like salmon, trout, sea bass, sea bream, etc. Both micro and macro fouling stick on the nets and start constricting the mesh leading to reduced water exchange in the aquaculture cage. Additionally, biofouling on nets leads to increased drag and load on the mooring system. The additional drag leads to reduction in effective volume of the cage net, which is detrimental to the fish. Biofouling can be very aggressive in summer times and the settlement on nets in winter times is generally very low in the salmon farming countries. In some

parts of the world, biofouling can be observed year round and the cost to control can be sizeable.

Two major strategies are used to control biofouling growth on the nets: (i) antifouling paints and (ii) manual cleaning of nets. Antifouling paints chip off and sink causing elevated copper levels in the sediment. Elevated levels of copper can be toxic to the benthic organisms. Nylon nets are often treated with cuprous oxide based antifouling paints. The paint lasts for 3-9 months depending on the geography and time of the year. Therefore, the nets may need to be coated twice in one production cycle. The oxides (copper oxide) leach into the environment over a period and remain toxic to non-target species.

Nylon nets suffer from a major problem (i.e., nylon absorbs water and subsequently the strength drops after absorbing). More recently, polyolefin nets such as high-density polyethylene (HDPE) netting have been introduced into the fish farming industry. HDPE does not absorb water and hence does not show the same level of reduced strength. However, high-density polyethylene nets have some drawbacks. Due to the low surface energy of HDPE, it is hard to bind antifouling paints to the HDPE nets. Therefore, HDPE nets require frequent manual washing to assist in maintaining dissolved oxygen levels inside the pen. The same attribute also results in easy cleaning of this type of net.

Garware Technical Fibres, the world's largest manufacturer and supplier of salmon cage nets, has come up with an innovative composite yarn called V2 that has a built-in antifouling property. The highly specialized extrusion technology involves the formation of a composite yarn by an extrusion process involving HDPE along with metallic copper in the case of nets made of V2 yarn. Biofouling resistance is achieved by the slow release (corrosion) of copper ions from the surface of the copper present in the V2 composite net, when immersed in seawater.

The V2 net has gone through a full production cycle of 12 months and the feedback received from the fish farmer was that on an average they are observing up to 80% reduction in manual cleaning frequency on the most recent versions. Additionally, the V2 net has been recognized by the Aquaculture Stewardship Council (ASC) and can be used at ASC certified sites as per ASC guidelines.

V2 TECHNOLOGY
Patented technology from Garware that has in-built antifouling properties



www.fishfarmermagazine.com

V2 TECHNOLOGY

Patented technology from Garware that has in-built antifouling properties

Unique HDPE netting with in-built antifouling technology and one of the first sustainable antifouling technologies with negligible emissions.

This is why fish farmers across the world are seeking V2 technology nets from Garware Technical Fibres.



V2 composite yarn is made by a highly specialized extrusion process using High Density Polyethylene (HDPE) and Metallic Copper (which is naturally found in the environment)



Reduced operational costs and improved fish health

Up to 50%+ reduction in cleaning activity.
Reduced fouling aids in lesser stress and better environment for the fish.

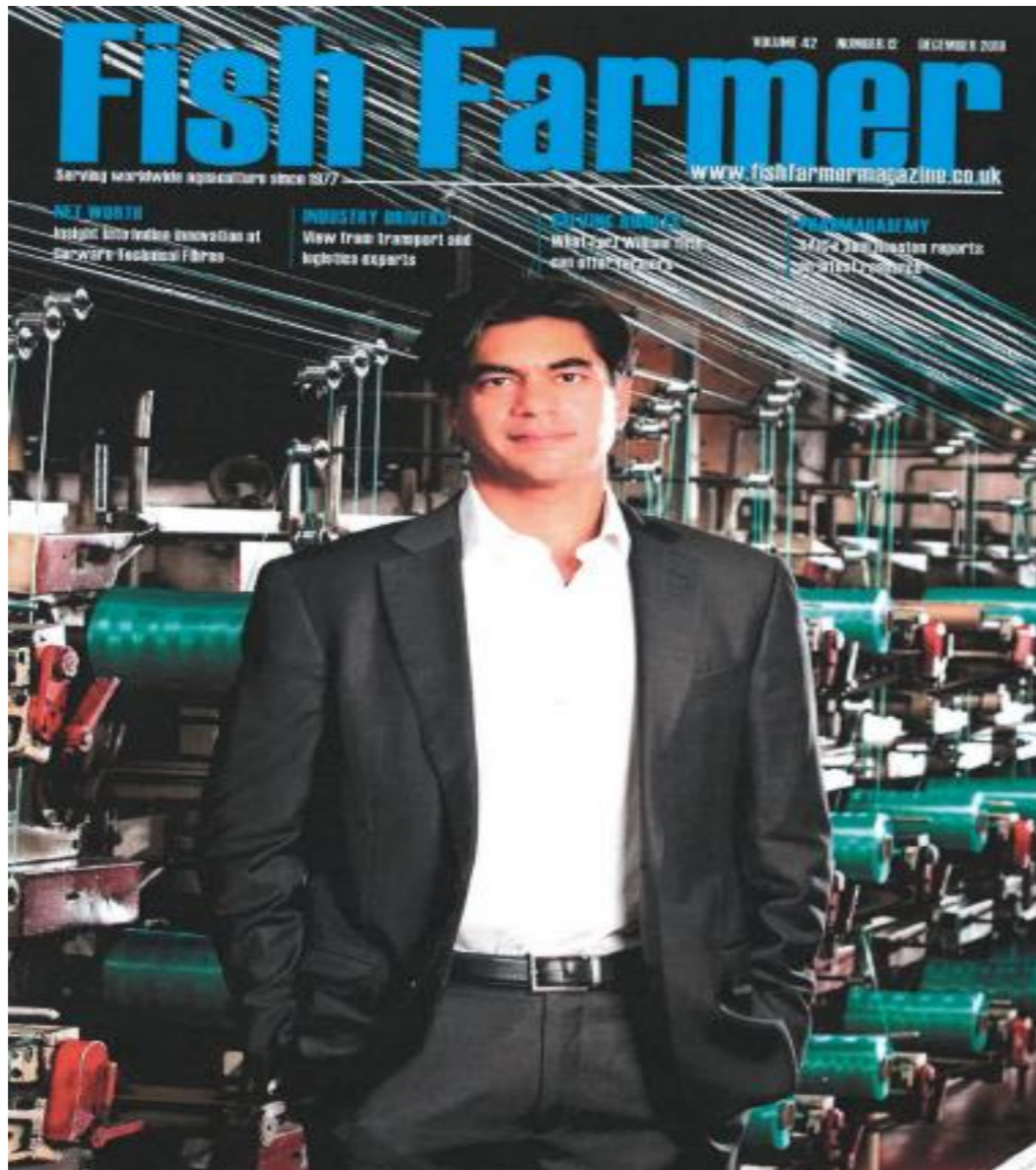
Our Partner in Scotland and Ireland

KNOX
FISH FARMS

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GARWARE
TECHNICAL FIBRES

Fish Farmer Magazine – Dec'19



Garware's global network

Fish Farmer editor Jenny Hjul tours technical textiles giant to see first hand how Indian innovation is improving salmon farming around the world

A HILL station in the Indian state of Maharashtra may seem a world away from the Atlantic salmon farms of Scotland, Norway, Canada and Chile.

But here, at a factory in Wai, is where the aquaculture industry's favourite and predator nets are made, where novel solutions to sea lice are conceived, and where a potentially game-changing self-cleaning copper-infused yarn is evolving.

It is also the place where the netting for one of Norway's most exciting development concepts is being put together.

Garware Technical Fibres has undergone a transformation in the past decade, driven by the family firm's third generation dynamic leader, Vayu Garware.

In the past year, the listed company, which is 51 per cent family owned, had a market cap of £265 million with profits up 29 per cent on the previous year, placing it in India's top 500 league of businesses.

It has applied for 45 patents in the last five years, exports its products to 75 countries, and employs around 1,200 people directly, with many more, mainly women, involved in piecework in the local villages.

Garware is a big name in India and globally in the industries it supplies. The company scores high in Great Place to Work surveys, has won awards for individual products, and was ranked by Fortune India magazine as one of the top five value creators in India.

It all began in 1976 when Vayu Garware's grandfather, Shri B.D. Garware (fondly known as Abasaheb or 'grandfather'), met the American owner of a company called Wail Industries on a plane to New York.

Described by his grandson as a 'serial entrepreneur', Abasaheb, then 72, was already making nylon yarn for fishing nets. But he was looking for one more business and set up a joint venture with his new American friend, primarily supplying polymer ropes to the Indian fishing industry.

He quickly outgrew his US partner and purchased all the shares, but the name, Garware Wail Ropes, survived – until a re-branding last year to Garware Technical Fibres.

Today, ropes are a much smaller part of the Garware portfolio, and are manufactured at the original factory and company headquarters, located in Pune.

There, Vayu Garware explained to Fish Farmer how he has built on the legacy of his grandfather and father, Shri R.B. Garware, to cement and expand his family's fast growing technical textiles empire.

The current success, he said, can be traced back to a meeting he held with 25 of his key team nine years ago – and the mission statement they devised collectively.

'We debated what is our purpose in coming to work every day, and what the purpose of this company is,' he said.

'Many companies have a mission saying they want to be at 'x' value of sales in so many years' time, but we said, what happens after you do



that, does the company no longer have a purpose? It has to have a purpose beyond that.

'We employed an interesting process of silent brainstorming, people weren't allowed to speak so they couldn't influence others' views.

'They had to put what they thought were the key purposes in words, star them, top, next and third, and this was democratically added up and made into a statement.'

This 'Provide innovative, application focused solutions to enhance the value of our customers globally', followed by four core values - is posted on boards around the company's facilities and is at the heart of the Garware ethos.

'We are a business to business company, all our customers are businesses, whether farmers or fishermen,' said Vayu.

'They don't buy our products based on look, or taste or smell. They buy it because it works in the application.'

Editor: Vayu welcomed Fish Farmer editor Jenny Hjul at Garware's Pune HQ.

Specialist: The Garware factory at Wai, India, Garware managers meet regularly.

www.fishfarmermagazine.com

https://issuu.com/fishfarmermagazine/docs/fish_farmer_december_2019 (Page No - 40 to 50)

Net gains in aquaculture net technology - Global Aquaculture Advocate – June'20



Innovation & Investment

Net gains in aquaculture net technology

Monday, 29 June 2020
By Hank Hogan

Advanced materials and automated maintenance are both being put into play



Net pens made of high density polypropylene, like these on salmon farms off the coast of Norway, retain strength better and last longer than nylon. Photo courtesy of Garware Technical Fibres Ltd.

Aquafeeds are typically cited as the biggest operating expense in aquaculture. So the netting to keep fish in and predators and pests out may end up being overlooked.

The industry is now paying more attention to net technology, said Vayu Garware, chairman and managing director of Garware Technical Fibres Ltd. (GTFL) of Pune, Maharashtra, India.

"Nets are a small part of the overall cost but can significantly impact the bottom line," he told *The Advocate*.

What's more, innovations in net materials and technologies promise even bigger boost to the bottom line. Examples come from GTFL itself, which has become one of the leading suppliers of netting materials to the Norwegian farmed salmon sector.

The company gets a substantial portion of its revenues from aquaculture, with its products found all over the world. According to Garware, GTFL's latest nets are made of high-density polyethylene (HDPE), instead of the more traditional nylon.

While acknowledging nylon is the stronger of the two materials in dry-state tests, "It's not only about strength. It's about the actual application in wet conditions," Garware pointed out.

Nylon is hydrophilic, or water loving. So, when immersed, nylon readily absorbs water and undergoes accelerated breakdown. Thus, nylon gets weaker in water over time and nets made of it generally last only five years, Garware said.

<https://www.aquaculturealliance.org/advocate/net-gains-in-aquaculture-net-technology/>

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GTFL
Marine Fisheries

Fisheries

- Capture fishing is a traditional business in India but has evolved globally
- The trawling vessels range from 200-300 HP in India to 18000 HP in global markets

India



Up to 300 HP

Global

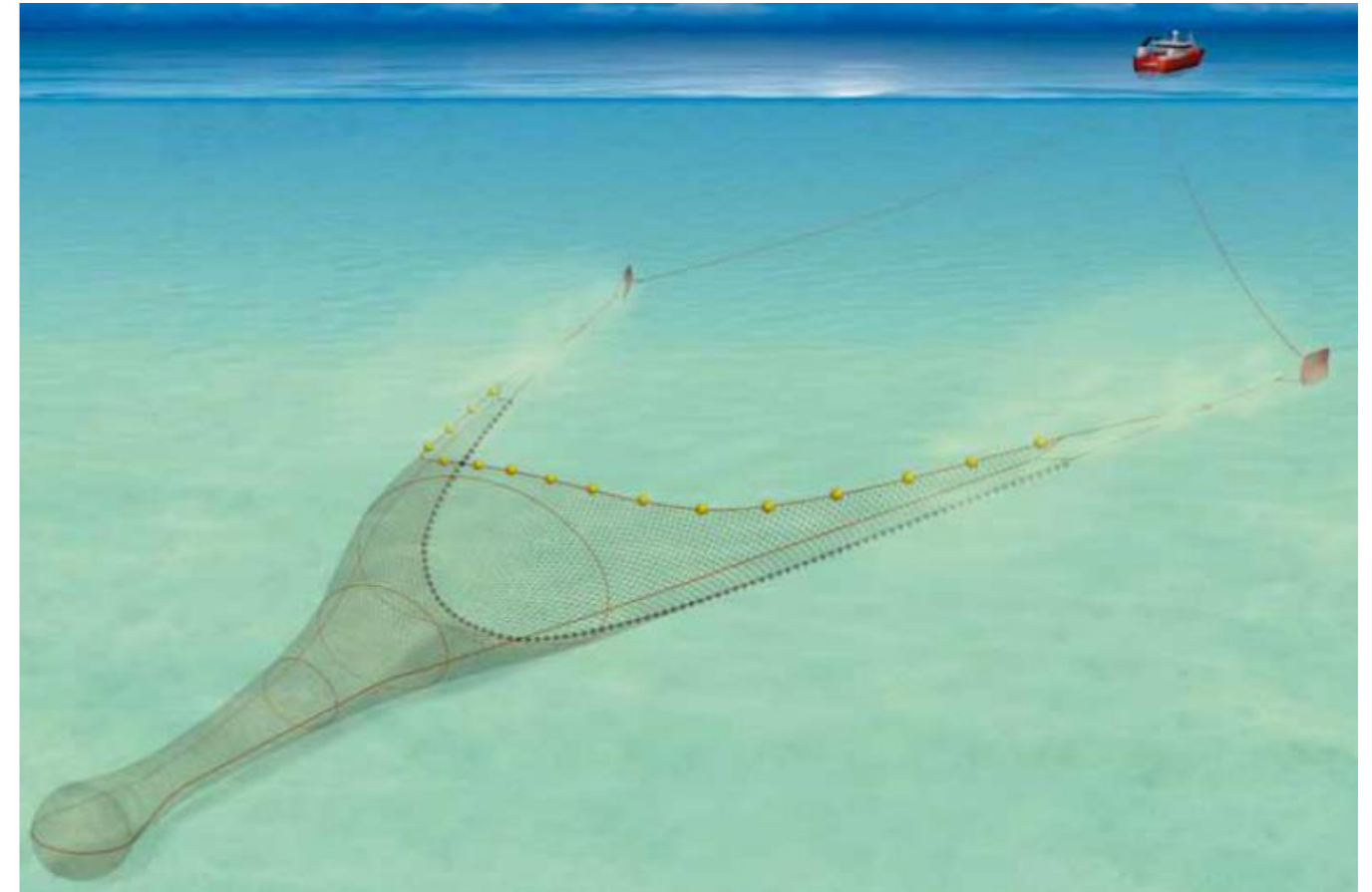


Up to 18,000 HP

Domestic Fisheries

- Market leader with an impressive market share of 60% + in mechanised fisheries sector.
- Innovative Value added product positioning after understanding the voice of customer.
- Scientific Lab & sea trials before launching new products by the experienced R&D wing.
- Constant customer interaction by the frontline sales force with the actual users to explain the value proposition.
- Strong distribution network across the coastline – Regional, Branch offices, depots, exclusive dealers, sub dealers, fishermen societies
- Regular sales promotion & Brand building initiatives for strengthening customer connect.
- Consistently working towards improving the value of our customers.

Fisheries – Our trawl nets are sometimes 2km in length



Fisheries

- In India, fisheries provides employment to 1.4 million people
- Our nets are customized for various applications.
- Our nets enhances scope for increased fish catch and reduces fuel consumption.



International Fisheries



SNG
bottom
Trawl



SNG
made
Trawl

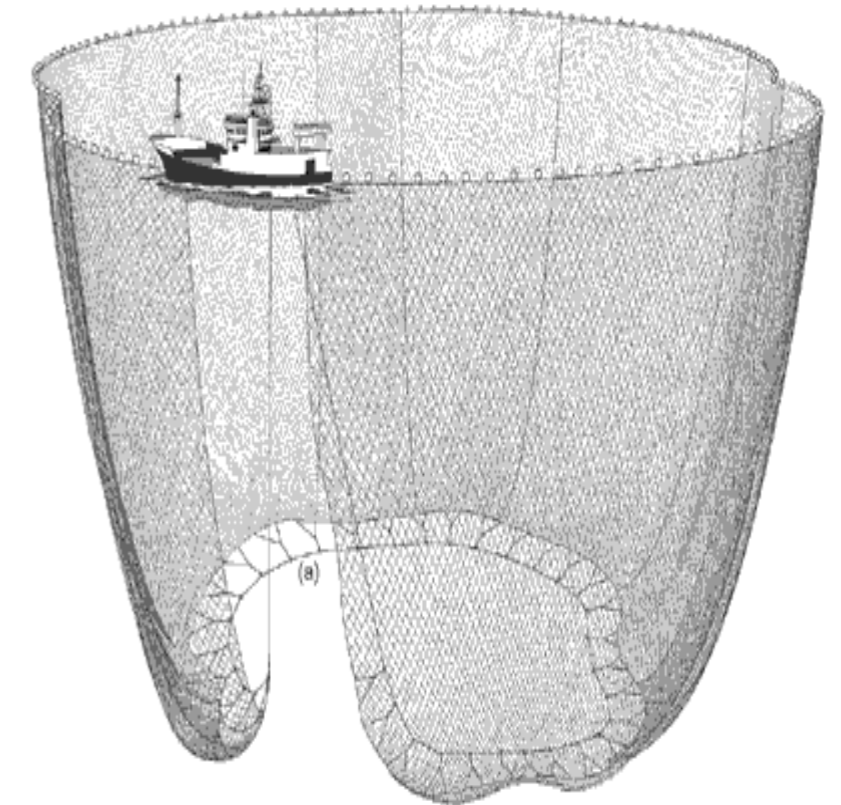


Pelagic
Trawl



Pelagic
Trawl

Fisheries – Our Purse Seine Net has caught 2500 MT fishes in one catch!



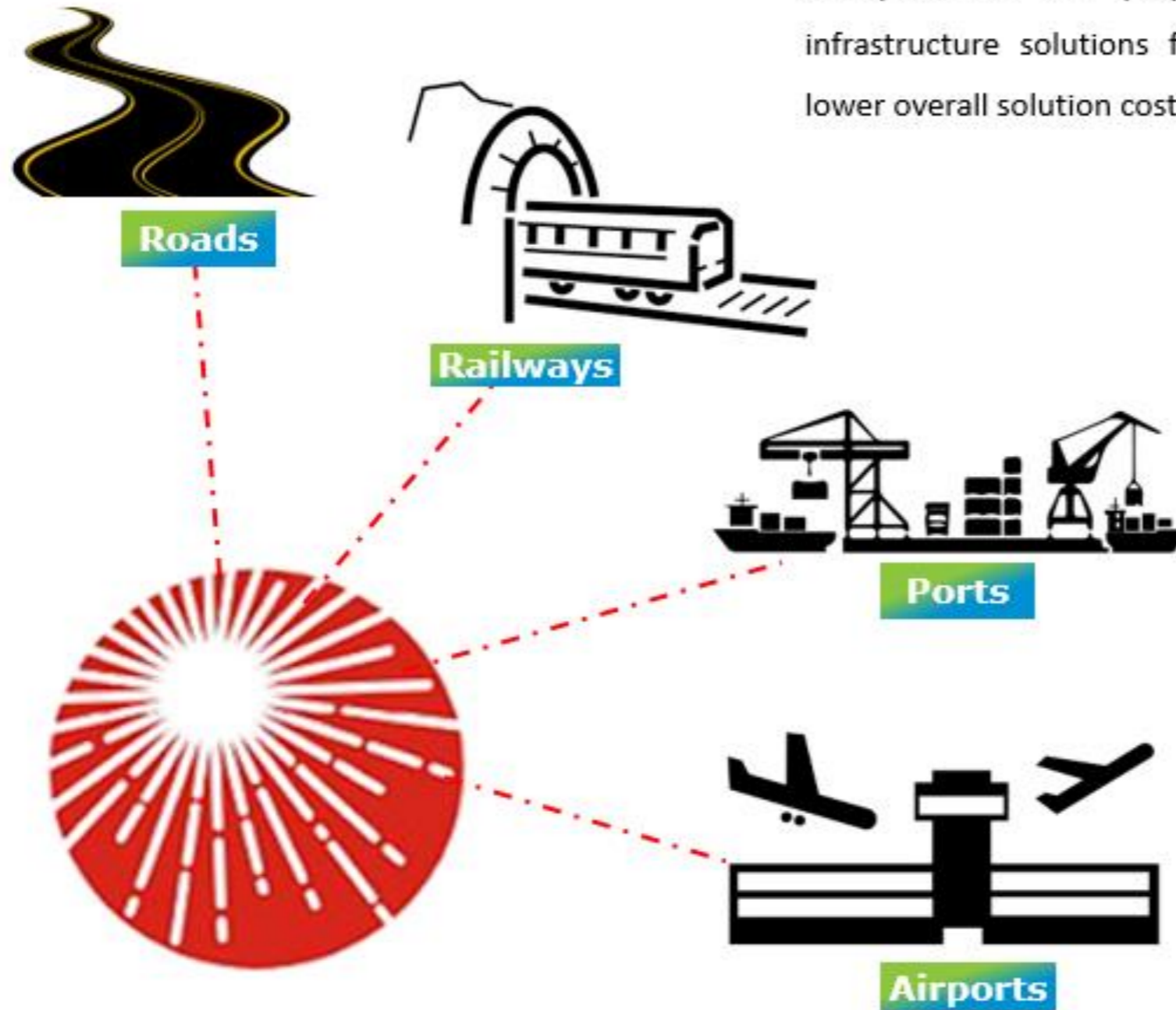
- The net weighs 50+ Metric Tons
- In a single catch....2000+ MT of fish

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GTFL
Geo-synthetics
Business

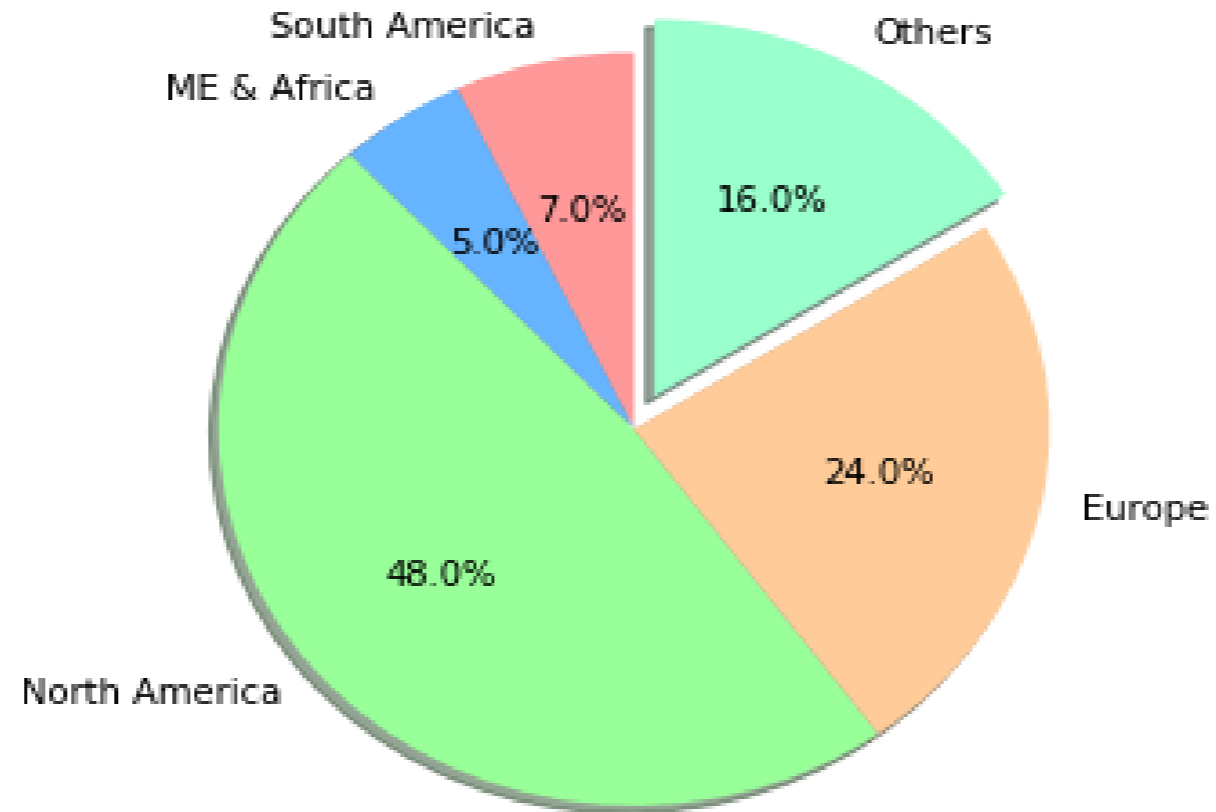
Geo-Synthetics : A Brief Overview

Geosynthetics are polymer based materials used in infrastructure solutions for environmental friendliness and lower overall solution cost



Global Geo-synthetics Market

Global Geotextile Market share 2019 (in %)

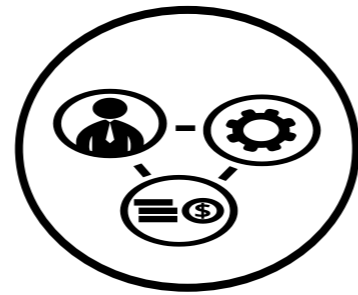


- 8 billion USD
- Global market growing @ 9% y-o-y
- Indian market less than 3% of Global Market. Low Penetration
- Indian market growing @ 22% y-o-y

Benefits of Geo-synthetics



Save project costs



High consistent quality



Save natural resources

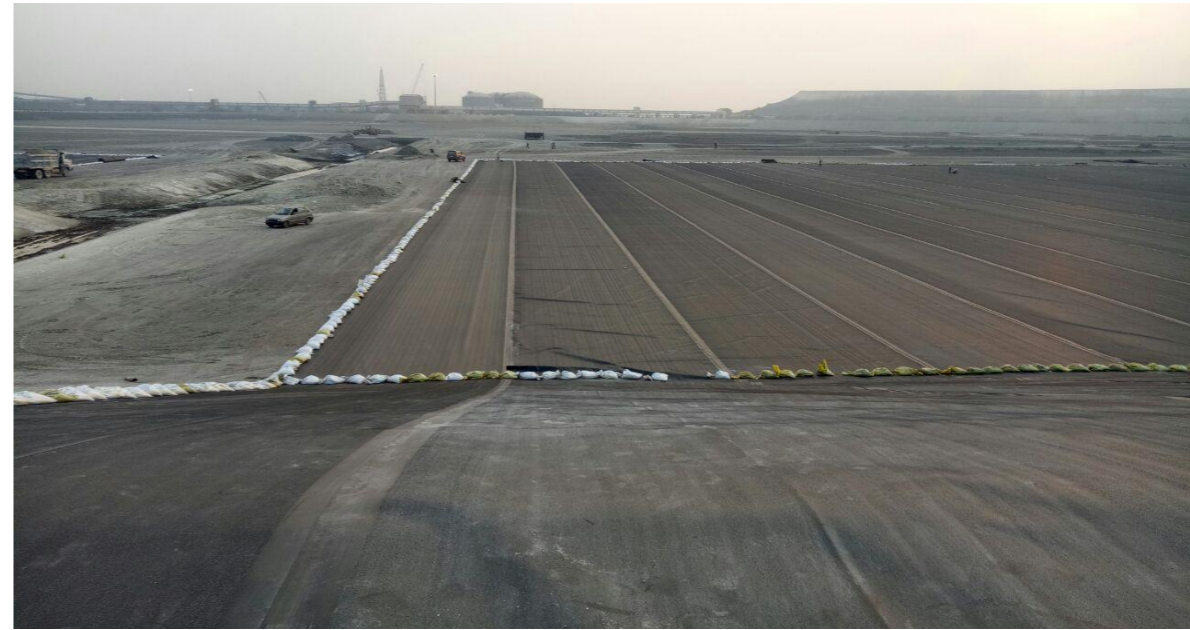


Fast Construction

Rock fall Protection



Lining & Landfill



Erosion Control



Mr. Tiru Kulkarni on Use of Geo-Synthetics – E-ITM/Textile Innovation

E-ITM
International Textile Market
Trade, Trends & Technology

APPAREL | AUTOMATION | KNITTING | NONWOVENS | PROCESSING | SPINNING
TECHNOLOGY | WEAVING

Technical Textiles
Use Of Geosynthetics During Monsoon

Rockfall protection works using Netting and Rockfall barrier

Exotic road using Geosynthetics- Exotic road with

The other advantages of the use of Geosynthetics is in transportation engineering to prevent the intermixing of subgrade soils and sub-base materials, lateral restraint effect to act as reinforcement, to achieve greater density of provided materials, reducing pore pressure that results in consolidation of subgrade and thereby increases the life of pavement. Using geotextile fabric as a stabilization technique allows suitable subgrade areas to strengthen their bearing capacity, limit any deformation, and decrease any structure settlements.

Geotextiles are typically used for Embankments, Dams and Flood Defences, Retention Walls etc. It can also be used on soft soil to enhance the bearing capacity. Subsurface drainage composite or geotextiles are widely used as road edge drains, Slope Retardation geotextiles and retaining walls, sports field drainage filter, drainage of golf course greens and sand bunkers, architectural and landscape drainage, and agricultural drains.

GARWARE
TECHNICAL FIBRES

Use of Geosynthetics During Monsoon

Dr. Tiru Kulkarni,
President & Head, Geosynthetics Division,
Garware Technical Fibres Ltd.

Monsoon is one of the most awaited seasons for most of us that rejuvenates the life after an arid season. However, the onset of monsoon brings disruptions in our normal life. It causes rising and falling in governments, failures in road bed for railways, rock fall incidents, failures of embankments, shear strength failure in soft soils, landslides etc. All these problems can be addressed with an appropriate geosynthetic material. Geosynthetics primarily act as a separation, filter, reinforcement, drainage and erosion control. Some of these applications are mentioned below.

During monsoon, when precipitation hits the ground it infiltrates, until the soil becomes saturated and out flows as surface runoff. However, in urban areas when precipitation hits the city streets, surfaces and open make the hard surfaces that convert rainwater directly to runoff. As a result, the infiltration rate is considerably lower leading to negligible water recharge. Various water harvesting methods incorporating Geosynthetics can be used to store water. Geo-textile can be easily incorporated into conventional drainage systems to improve the water table. Water harvesting using Geosynthetics is a cost effective way for ground water recharge and it also helps in reducing water logging during heavy rains.

The infiltrated water in hilly terrain approaches and escapes from the cut slope face which thereby generates pore pressure and causes triggering factor for landslides and rockfall. Various geosynthetic products covering from geogrids for soil protection / stabilization to high strength, knitted such as erogrid rock fall are available. It is major breakthrough in highway protection, road state governments in order to avoid accidents on their highways have started the use of Geosynthetics to prevent rockfalls caused due to heavy rains. The rockfall protection system is one of the major uses of Geosynthetics during the monsoon season.

on the Mumbai - Pune Expressway, Konkan Railway and other highways and railways routes where rockfalls are anticipated. Weathering is another important concern which causes erosion in case of roads, embankments etc. The erosion related problems can be addressed through a variety of Geosynthetic products.

The other advantage of the use of Geosynthetics is in transportation engineering to prevent the intermixing of subgrade soils and sub-base materials, lateral restraint effect to act as reinforcement, to achieve greater density of provided materials, reducing pore pressure that results in consolidation of subgrade and thereby increases the life of pavement. Using geotextile fabric as a stabilization technique allows suitable subgrade areas to strengthen their bearing capacity, limit any deformation, and decrease any structure settlements.

Geotextiles are typically used for Embankments, Dams and Flood Defences, Retention Walls etc. It can also be used on soft soil to enhance the bearing capacity. Subsurface drainage composite or geotextiles are widely used as road edge drains, Slope Retardation geotextiles and retaining walls, sports field drainage filter, drainage of golf course greens and sand bunkers, architectural and landscape drainage, and agricultural drains.

Soil drains are a temporary form of geotextile fabric used to retain water of all soil and other materials from polluting nearby streams, rivers, drains, and sensitive environments. Subdrains such as sand, silt, and clay are considered especially in river water runoff systems. Soils drains act as a vertical permeable membrane for water to pass to subsoil-water table.

It is important to distinguish that soil drains are not meant to be used as erosion control devices, but are used for sediment control. They are commonly installed with silt traps, valves, catch pits, or a combination thereof. Drains are artificially created for flood storage systems that are designed commonly using geosynthetic materials.

National roadways use of the low geosynthetic applications in which a geosynthetic is used for multiple functions, namely, reinforcement, separation, filtration and drainage while preventing water clogging and helps the drainage function across the channel in most circumstances.

The above are some of the key applications in which geosynthetics play an important role during the monsoon period.

<https://e-itm.net/use-of-geosynthetics-during-monsoon/> AND

https://issuu.com/prakashkinny2012/docs/technical_textiles_innovation_april-june_2020 (Page No- 32)

A large, solid red curved shape that starts from the left edge and curves towards the top right, defining a white space on the right side of the page.

GTFL
Sports

Sports Nets



GTFL is the No.1 Sports Net manufacturer in India & also the top exporter to USA



GTFL
Other Businesses

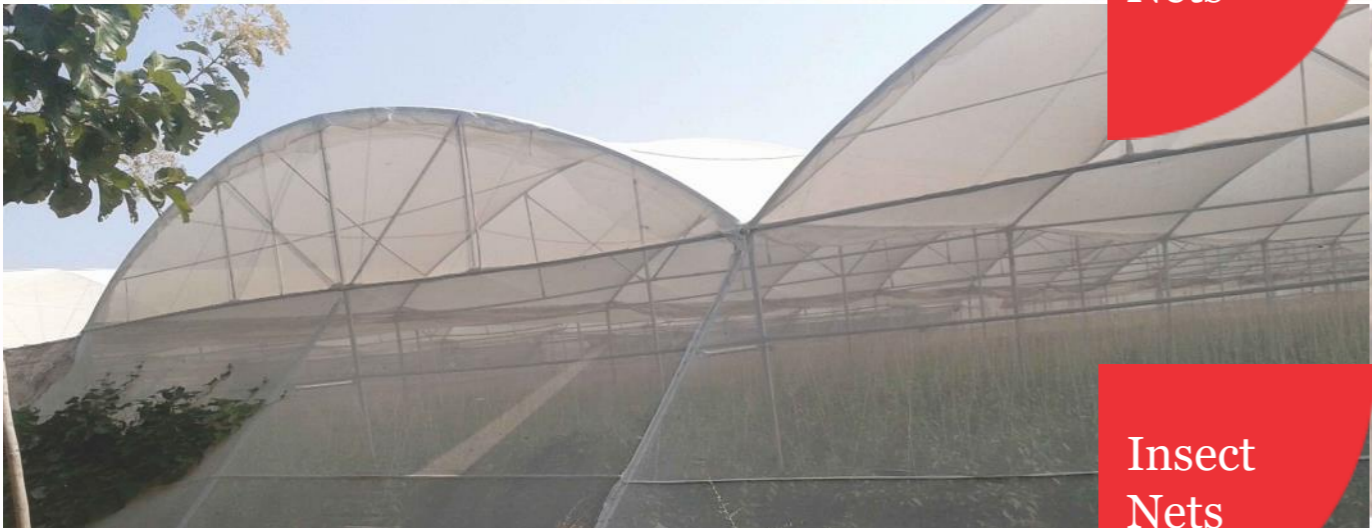
Agricultural Solutions



Shade
Nets



Anti- Bird
Nets



Insect
Nets



Anti-Hail
Nets

GTFL offers high-quality, UV-stabilized Agriculture Nets for variety of applications

Coated Fabrics Solutions



Truck
Tarps



Awnings



CSR Initiatives



Happy Schools

The company has so far identified and transformed more than 115 schools across Maharashtra under the project, touching the lives of more than 20000 students by providing an array of facilities at schools located in the rural locales which includes e-learning, water purification plants, science laboratories, computer laboratories, library and faculty rooms among others.



Tree Plantation Drives

More than 25000+ trees have been planted by entire GTFL family



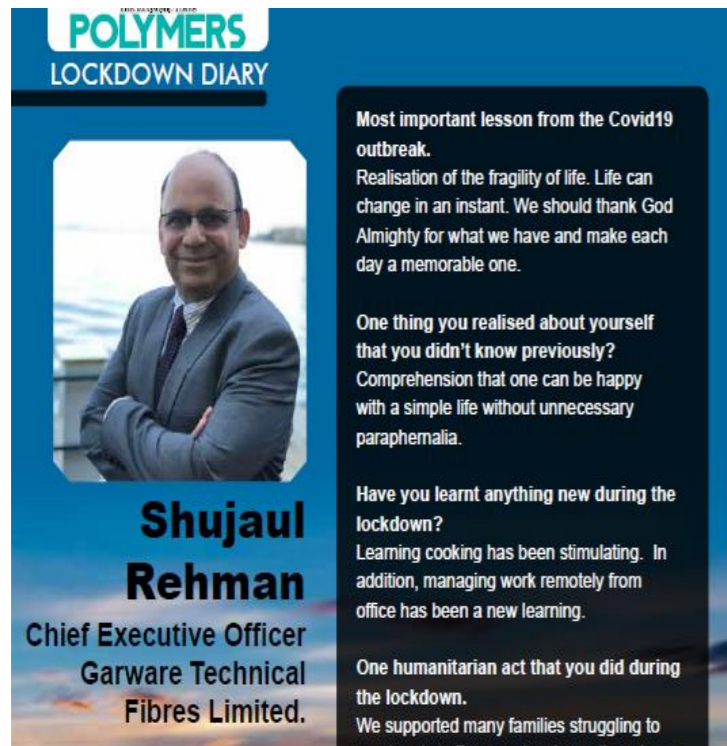
Started Ambulance Service at Wai

GTFL sets up 175 bed Covid Care Centre in PCMC



GTFL Published Articles – ET Polymers, Fibres2fashion, E-ITM, HR Katha

MR. SHUJAUL REHMAN – CEO
ET POLYMERS MAGAZINE – JUNE'20



POLYMERS
LOCKDOWN DIARY

Shujaul Rehman
Chief Executive Officer
Garware Technical Fibres Limited.

Most important lesson from the Covid19 outbreak.
Realisation of the fragility of life. Life can change in an instant. We should thank God Almighty for what we have and make each day a memorable one.

One thing you realised about yourself that you didn't know previously?
Comprehension that one can be happy with a simple life without unnecessary paraphernalia.

Have you learnt anything new during the lockdown?
Learning cooking has been stimulating. In addition, managing work remotely from office has been a new learning.

One humanitarian act that you did during the lockdown.
We supported many families struggling to...

MR. S V RAUT – PRESIDENT & HEAD
R & D
FIBRE TO FASHION – JULY'20



TechnicalTextile.net
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Home / Interviews / Interview with Sanjay Raut

Interview with Sanjay Raut
Meditech Set To Grow Faster Than Other Segments

Carware Technical Fibres Ltd (formerly Carware-Wall Ropes Ltd) is a leading manufacturer of technical textiles for the Indian and global markets. SANJAY RAUT, president (technical and new businesses) shares his ideas about the medical and hygiene market.

TT: What have you noticed about the demand for technical textiles fibres since the covid-19 was categorised as a pandemic? Could you tell us how much has been the rise in demand? How much do you see this rising over the next 6-9 months?

With the extended lockdown due to covid-19 in place over the past two months, the overall demand of technical textiles is muted in line with many other sectors. However, as things get to normalise, we should see demand uptick especially for segments like meditech, agrotech, Geotech and builttech. With the covid-19 expected to remain, we would see lot many changes in our normal lifestyle. And herein, technical textiles with innovative properties would be preferred vs plain textiles.

TT: Do you think this would be restricted to the pandemic, or do you think this is going to continue in the future as well? Please elaborate on this.

The post-covid situation will be a new normal. covid-19 has and will bring about many changes in our lifestyle, the way we work and do business. For example, the focus on safety and hygiene will be intense and this will aid in the growth of meditech, infrastructure development will take precedence leading to growth in Geotech and builttech. With need for healthy food and focus by the government on fisheries and protected cultivation, we should see growth in agrotech.

TT: TT / nonwovens have always been driven by innovation. What innovations do you foresee in the near future?

Innovation is key for technical textiles to grow. While there have been innovations, the appetite to consume these innovative products had been low. We would now see the adoption of many differentiated products. For e.g. antibacterial bedsheet. Similarly, antiolefin coatings could be developed with a wide variety of applications.

TT: What is the R&D that is being undertaken at your company at the moment? What are the driving factors for these R&D?

At Carware, our focus is and will be on delivering innovative application focused solutions. Our R&D team along with the sales teams work in conjunction with our customers to understand their business, pain areas and thereof solutions to alleviate the same. We work on both technology as well as product innovations. The technology innovations can be used across a variety of application based products. Our mission to "Provide innovative application focused products to enhance the value of our customers" has been the key driving force of everything we do at Carware. This holds true more for our R&D team and staying true to this path has led us to many innovation gains and increased acceptance of our differentiated products by our customers.

MR. RAVINDRA – PRESIDENT & HEAD HR
MANUFACTURING TODAY – JULY'20



HRKatha
HUMAN RESOURCE SIMPLIFIED

Safe Workforce Re-Entry
World Class Workforce Solutions Th
KRONOS

NEWS PEOPLE FEATURES SPECIAL TALKING GALLERIES BY INVITATION

News

Garware promises last-mile medical coverage for employees
The company's policy is all set to benefit its 1300-strong workforce.

ONE OF OUR KEY CORPORATE VALUES IS TO ENHANCE OUR FAMILY BOND WITH THE EMPLOYEES THROUGH EQUITABLE DEALINGS AND CONSTANT COMMUNICATION

Ravendra Mishra

The Company has been fortunate to have most of its contract workforce available to work immediately. It employs close to 3000 contract workers, and currently, almost 2500 are available to work in the plants. Most of them are working at the plant in Wai. Ravendra Mishra, head – human capital, Garware Technical Fibres, says that the Wai plant is spread across a large area and it sources its contract workers from the neighbouring villages.

<https://www.technicaltextile.net/interviews/garware-technical-fibres-ltd/sanjay-raut/12558-1/>

<https://www.hrkatha.com/news/garware-promises-last-mile-medical-coverage-for-employees/>

A profitable journey



Vayu Garware leading from the front

Backed by R&D and innovations, GTFL is expected to maintain its momentum going ahead

Garware Technical Fibres Ltd (GTFL; formerly Garware-Wall Ropes Ltd) is currently pursuing a strategy which is all set to take its growth trajectory to the next phase. Here the focus will be on doubling profit in the next few years. Having transformed itself into a leading player in the technical textiles business with a well-diversified portfolio of value-added products and solutions in the last decade or so, GTFL is now looking to further strengthen its position. The whole process started with the company taking a conscious decision to change its corporate brand name in August 2018 to its present name.

The Pune-based company was founded in 1976 in collaboration with Wall Industries Inc, USA, to make synthetic ropes and twines. It pioneered

the usage of synthetic cordage in the country. But over the next decades, it diversified significantly to emerge as one of the leading players in the technical textiles sector. GTFL provides specialised products and solutions to the cordage and other fields including fisheries, aquaculture, shipping, geo-synthetics, agriculture, coated fabrics, sports and defence.

Currently, value-added products/solutions contribute almost 70 per cent to its overall business as against about 30 per cent around a decade ago. The company has recently also further added value to its supply chain as it has started offering finished products (as against sheer nets and ropes) to its international clients in fisheries and aquaculture. This has been possible in the last few years, as the company

has ramped up its workforce who can execute customised products as per the client's design and requirement. The company earns over 50 per cent of its turnover from exports and has a presence in 75 countries through six overseas offices in the US, UK, Australia, Russia, Canada and Chile. It sells its products in these markets directly or through channel partners.

GTFL is currently the largest manufacturer and supplier of salmon aquaculture cage nets in the world with over 75 per cent market share in Scotland, 90 per cent in Canada, 30 per cent in Norway and more than 30 per cent in Chile where the company entered in 2015 as part of its expansion into newer geographies. These are key countries which are into bulk production of farmed salmon in the world. In the domestic market (fisheries), the company enjoys 60 per

cent share of fish nets in trawl fishing (mechanised capture fisheries). Besides, GTFL is the No1 sports net manufacturer in the country and also the top sports net exporter to the US. Globally, the company competes with players like Marenco of Norway, Egersund Group, Norway and Badinotti Group, Italy in aquaculture, and Samson Rope of USA in ropes, while in the domestic market, names like Mumbai-based Tufropes Pvt Ltd, Kohinoor and SRF are some of its competitors.

Backed by over 6,500 employees, GTFL has two state-of-the-art manufacturing facilities in Wal and Pune, both in Maharashtra. With a strong focus on innovations and product development, the ISO 14001:2015 and ISO 9001:2015 certified company has built up a modern R&D facility, which is recognised by the Department of Science & Technology, Government of India. In its constant endeavour to come up with new products and improve its existing product basket as also to meet stringent requirements of domestic as well as overseas clients, GTFL's R&D has been continuously developing application-focused solutions and products. It has filed 53 patents and has been granted 14 patents.

"The rebranding was a part of our focused vision where we have set a goal to double our profit in a stipulated timeframe. Over the next five to six years, we want to be amongst the top two players globally in each of our major operating verticals. Over the past four decades, we have built a strong reputation for quality, value addition, application-focused innovations, and we wanted this to reflect in our name and brand as well. The new identity and name is a reflection of our commitment for creating values that



Finishing facility for nets

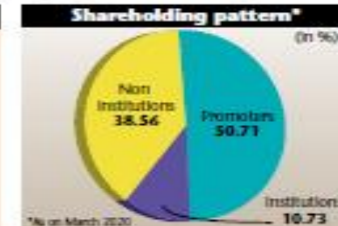
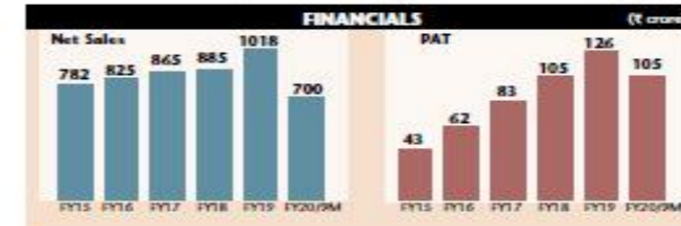
add unmatched value to our customers," says Vayu Garware, 48, chairman & managing director, GTFL.

While pursuing its journey of providing its clients with application-focused solutions and differentiated products, GTFL achieved a milestone in FY19 as it crossed a topline of ₹1,000 crore for the first time and became one of India's top 500 companies on the basis of market capitalisation. The debt-free company earned sales of ₹1,018 crore in FY19 as against ₹885 crore in the previous year. Most importantly, the company's profit saw a surge of 20 per cent to around ₹126 crore during that fiscal. In the last few years (FY15-19) net profit has increased at a CAGR of over 30 per cent, something that the company has been able to achieve, putting

up a comprehensive strategy and an action plan (Business India, December 2015, did a story on how the company was looking to transform itself into a robust entity).

For the nine-month period ended 31 December 2019, the company has been able to maintain its momentum in profitability as its net profit soared 17.7 per cent to ₹105 crore, even as its net sales decreased 3.8 per cent to around ₹700 crore on account of climatic adversities impacting the growth in the fisheries segment in the domestic front and some delays in the receipt of orders from aquaculture customers in the international market.

In the last quarter of FY20, the company faced lockdown-related headwinds in March which is crucial in terms of receipt of orders, and that may impact the overall performance



<https://businessindia.co/emagazine/the-paradox> (Page No - 43-48)

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Thank You

