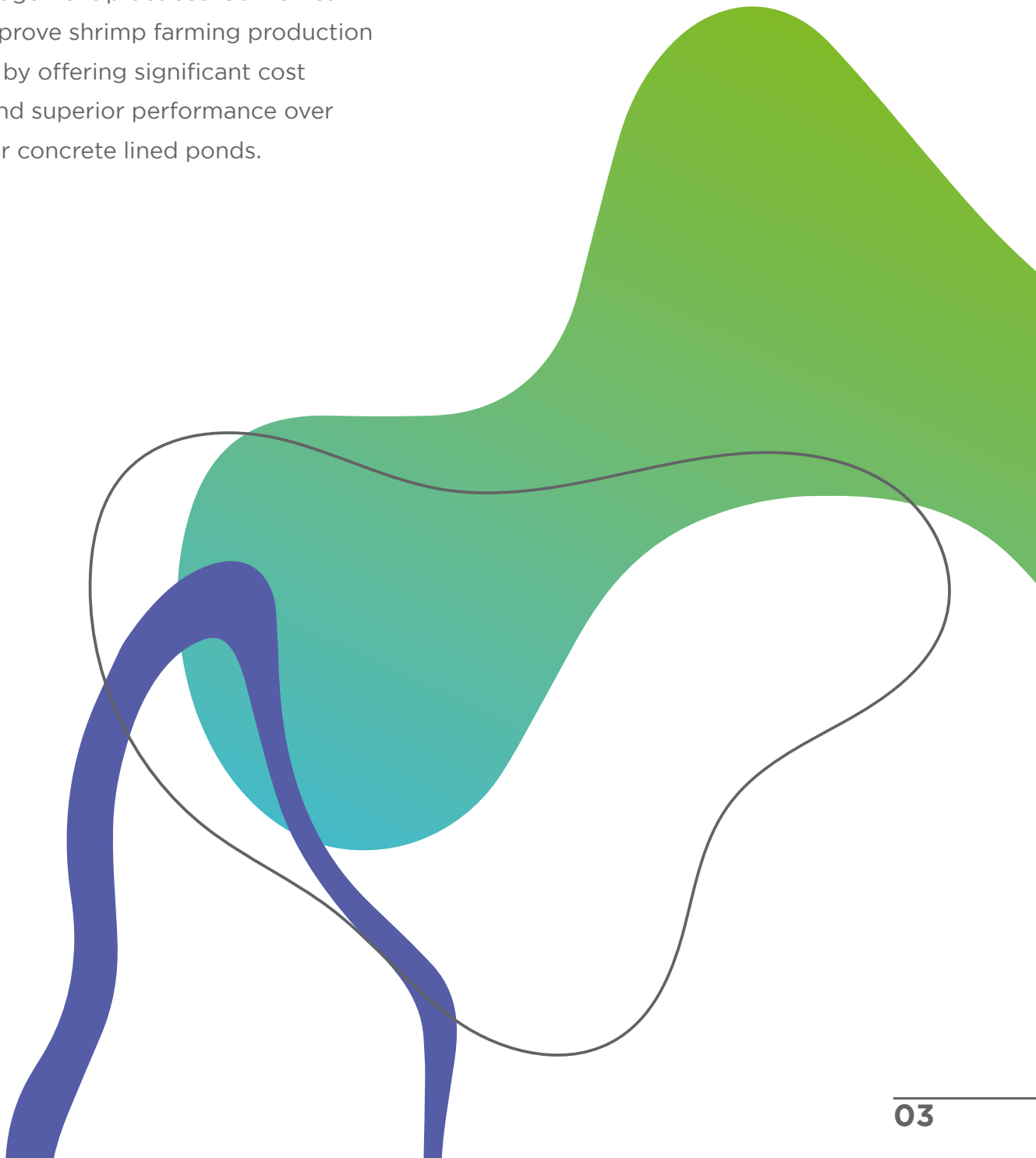
SOLMAX

AQUACULTURE SOLUTIONS

SELANGOR,
MALAYSIA

RAYONG,
THAILAND

The business of shrimp farming has grown from small, brackish coastal ponds to large industrial operations that help sustain the local economies of many countries. In order to maintain profitability and shrimp survival rate, and ensure the uniform size and quality of the shrimp brought to market, businesses must adopt good pond management practices. Solmax can greatly improve shrimp farming production processes by offering significant cost benefits and superior performance over soil, clay or concrete lined ponds.



GEOMEMBRANES FOR AQUACULTURE

WATER CONTAINMENT

The shrimps harvested from a farm are only as good as the quality and quantity of the water found in the ponds. As clean water becomes more expensive to pump or transport, the need for secure water containment grows. Installing a low permeability geomembrane will help keep water volumes consistent, keep waste products contained, and prevent the intrusion of groundwater-borne pollutants from entering aquaculture ponds.

WATER QUALITY CONTROL

HDPE geomembranes are certified for drinking water containments, i.e. ANSI/NSF61 and AS/NZS 4020, contain no additives or chemicals that can leach out and impact water quality or harm animal life. Geomembranes can be repeatedly cleaned and disinfected without causing any decrease in the liner's performance. Improved water quality results in higher crop yields, healthier crops due to greater dissolved oxygen levels, and better tasting crops, all of which increase profit potential.

DISEASE CONTROL

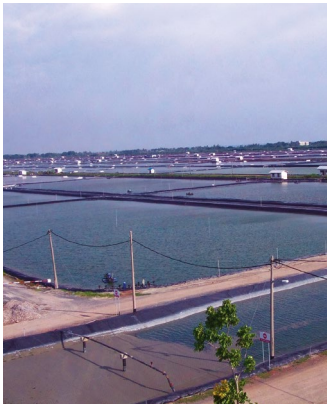
While diseases cannot be eliminated, a properly lined pond can reduce their occurrence and impact. Geomembranes are resistant to microbiological attack and growth, and the surface can be cleaned, disinfected, and returned to service within days.

SOIL EROSION CONTROL

A liner eliminates slope deterioration caused by surface rains, wave action, and winds. The liner prevents eroded materials from filling the pond and reducing the volume. In addition, costly erosion repairs are eliminated.

SCIENTIFIC SUPPORT FOR HDPE LINERS

Traditionally, earthen ponds were used for fish and shrimp farms. Only when the available earth was not suitable, such as with sandy or toxic soil, were liners installed. However, the advent of catastrophic diseases and the increase of large-scale farms have paved the way to greater use of HDPE liners in shrimp ponds. Below are scientific references to support the use of HDPE liners in this application.



MALAYSIA

AN INTENSIVE HDPE LINED SHRIMP FARM IN PENINSULAR MALAYSIA

INDIA

HDPE LINED SHRIMP FARMS IN GUJARAT, INDIA

INDONESIA

HDPE GEOMEMBRANE LINED PONDS IN SOUTH SULAWESI, INDONESIA

THAILAND

HDPE LINED SHRIMP PONDS IN CHANTABURI, THAILAND

Aquaculture farms in Belize: Robins P. McIntosh, 2000, reported how using an HDPE liner reduced erosion of pond banks, increased the speed of the turn-around time between crops, sustained water levels, and improved pond efficiency.

Agromarina de Panama Farm, Panama: Bray et al., 2001, issued a report describing how the destructive White Spot Syndrome Virus (WSSV) was bringing production to a halt in earthen ponds. The report found that survival rates increased from 9% in earthen ponds to 80% in ponds lined with a 30 mil (0.75 mm) HDPE geomembrane.

East Java, Indonesia: N. Taw et al., 2002, reported that productivity improved from 3,634 kg/ha in an earthen pond to 10,094 kg/ha in ponds lined with HDPE geomembrane.

You can request more information on these scientific research reports from your local Solmax representative.

QUALITY ASSURANCE

Extensive manufacturing quality assurance (MQA) testing is performed on our products at our labs. Our MQA program starts with testing and verification of specially formulated quality resins and other raw materials and extends through delivery to the project site.

Our standards are high. All Solmax geomembranes, GCLs, and drainage solutions are tested for strength and durability, and against key criteria. Geomembranes, for example, are 100% spark tested for pinholes during the manufacturing process to ensure every delivered roll is leak free.

LAYERS OF PROVEN RELIABILITY

HDPE geomembranes are the most widely used geosynthetic liners for environmental containment applications. For over 40 years, Solmax geomembranes have been widely used as the primary barrier and leakage prevention in various engineering structures such as water reservoirs, canals, lagoons, decorative ponds, and agriculture/aquaculture ponds. Solmax geomembrane provides flexibility, very low permeability and thermal stability, and its outstanding performance and ease of installation is what makes it the proven choice among design engineers, year after year.

SOLMAX
HAS YOU COVERED

Solmax products are being used at aquaculture facilities around the world, and extensively across Asia-Pacific, to help increase revenue, reduce risks, and control operating costs. Over the last 15 years, Solmax has supplied over 60 million square meters of geomembranes to aquaculture farms in the Asia-Pacific region. No other manufacturer is more experienced with this application.

OUR **LOCATIONS**

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VARENNES, QC | CANADA

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