TILAPIA 2025 wrapped up by issuing an urgent call to action for Innovation, Integration and Profitability in Tilapia Aquaculture: Modernisation for a New Era

The 5th INFOFISH World Tilapia Trade and Technical Conference & Exhibition 2025 (TILAPIA 2025) was successfully held in Bangkok from 3–5 November 2025 at the Jubilee Prestige Hotel, Ratchadapisek, Bangkok reaffirming its position as a premier global platform for the tilapia industry. Themed ***"Innovation, Integration and Profitability in Tilapia Aquaculture: Modernisation for a New Era",*** TILAPIA 2025 was organised in collaboration with the 13th International Symposium on Tilapia in Aquaculture (ISTA13). This prestigious event was jointly convened by INFOFISH, the University of Arizona, and the U.S. Soybean Export Council (USSEC).

TILAPIA 2025 was graciously hosted by the Department of Fisheries, Thailand, along with technical support from FAO GLOBEFISH. Additional support was provided by the Tilapia International Foundation (TIF), Asian Institute of Technology (AIT), Network of Aquaculture Centres in Asia-Pacific (NACA), China Aquatic Products Processing and Marketing Alliance (CAPPMA), Institute of Aquaculture at the University of Stirling, Australian Centre for International Agricultural Research (ACIAR), Vietnam Association of Seafood Exporters and Producers (VASEP), and the United Nations Industrial Development Organization (UNIDO).

Photo 1 : *Dr Pholphisin Suvanachai (Guest of Honour) officiated the event, together with Prof Dr Kevin Fitzsimmons (TILAPIA 2025 Chairperson); Mr Lukas Manomaitis (USSEC East Asia Aquaculture Lead); and Ms Gemma Meermans Matainaho (INFOFISH Acting Director).*

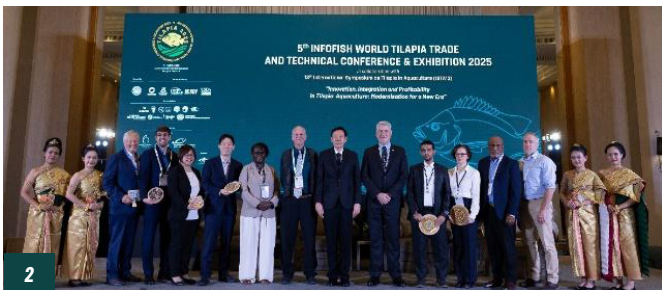

Photo 2 : *Group photo of the VIPs and sponsors of TILAPIA 2025: Platinum Sponsors GenoMar Genetics AS, the Saudi Aquaculture Society and National Fisheries Authority, PNG; and Bronze Sponsors JBT Marel, The Center for Aquaculture Technologies(CAT), USA, FAI Farms; Support Sponsor: ODS Seafood Trading LLC and Coorganiser: the U.S. Soybean Export Council (USSEC).*

Opening Day (Plenary Session): Global and Regional Overview of Major Tilapia Producing Regions and Markets

Over **266 participants from more than 40 countries** including **63 international speakers, panellists and moderators** attended TILAPIA 2025, reflecting the event's strong global engagement and continued reputation as the key platform for the international tilapia industry. Starting off the Opening Ceremony, a one-minute period of silence was observed in remembrance of Her Majesty Queen Sirikit, the Queen Mother of Thailand. TILAPIA 2025 was then officiated by **Dr Pholphisin Suvanachai**, Guest of Honour and Executive Adviser on Fisheries Management, Department of Fisheries, Thailand (Photo 3) . **Ms Gemma Meermans Matainaho**, Acting Director of INFOFISH, delivered the opening remarks (Photo 4) , followed by special remarks from **Mr Lukas Manomaitis**, East Asia Aquaculture Lead, USSEC Singapore (Photo 5) . In his capacity as Chair of TILAPIA 2025, **Professor Dr Kevin M Fitzsimmons** from the University of Arizona, USA (Photo 6) , presented the keynote speech titled ***"Innovation, Integration and Profitability in Tilapia Aquaculture: Modernisation for a New Era"*** emphasising innovations, international collaboration and strengthening investment in the tilapia industry.




Photo 3-6: *Dr Pholphisin Suvanachai, Ms Gemma Meermans Matainaho, Mr Lukas Manomaitis and Professor Dr Kevin M Fitzsimmons.*

In his special address, **Mr Rudolf Hoeffelman,** President Director of Regal Springs Indonesia (Photo 7) inspired participants with a powerful message: Tilapia can become the next strategic whitefish, even rivaling wild-caught species. He added that with the right investment and storytelling, tilapia can be positioned as a premium, globally trusted product just as Norwegian salmon rose to global prominence.

Photo 7: *Mr Rudolf Hoeffelman, President Director of Regal Springs Indonesia, delivering his special address during plenary session.*

The plenary session focused on the tilapia trade and markets at both global and regional levels. Participants gained region-specific insights into trade and market dynamics across continents, augmented by country overviews which revealed information on current tilapia production and export, the key challenges and opportunities in the industry, as well as the outlook and expansion plans for commercial tilapia farming by the top tilapia producing nations.




Photo 8-11: *Some of the delegates at the Conference, which also attracted more than 63 international speakers, panellists and moderators.*

Regional overview: Asia

Mr Lukas Manomaitis (USSEC East Asia Aquaculture Lead) moderated this session, which gathered regional leaders to discuss Asia's pivotal role in global tilapia production and trade. He also delivered a keynote presentation featuring data from Rabobank, FAO and GSA 2025 *(Figures 1 & 2).* He predicted that global tilapia and other cichlid production will exceed 7 million tonnes by 2026 *(Figures 3 &4);* the top producers in Asia will be China (2 million tonnes), Indonesia (0.75 million tonnes), Bangladesh (0.45 million tonnes), Vietnam (0.44 million tonnes), Philippines (0.30 million tonnes), Thailand (0.29 million tonnes) and Malaysia (0.04 million tonnes). However, India (0.01 million tonnes), Myanmar (data not assessed) and Cambodia (data not assessed) are coming up as the leading emerging producers in the region.

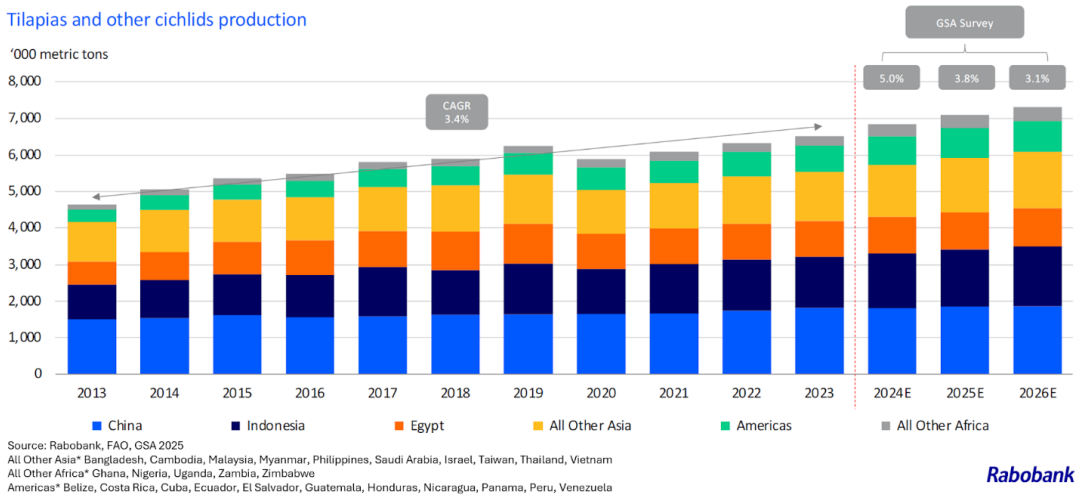

Figure 1: *Global tilapia production. Source: Global Seafood Alliance's Responsible Seafood Summit, Colombia, October 2025: Gorjan Nikolik (Rabobank)*

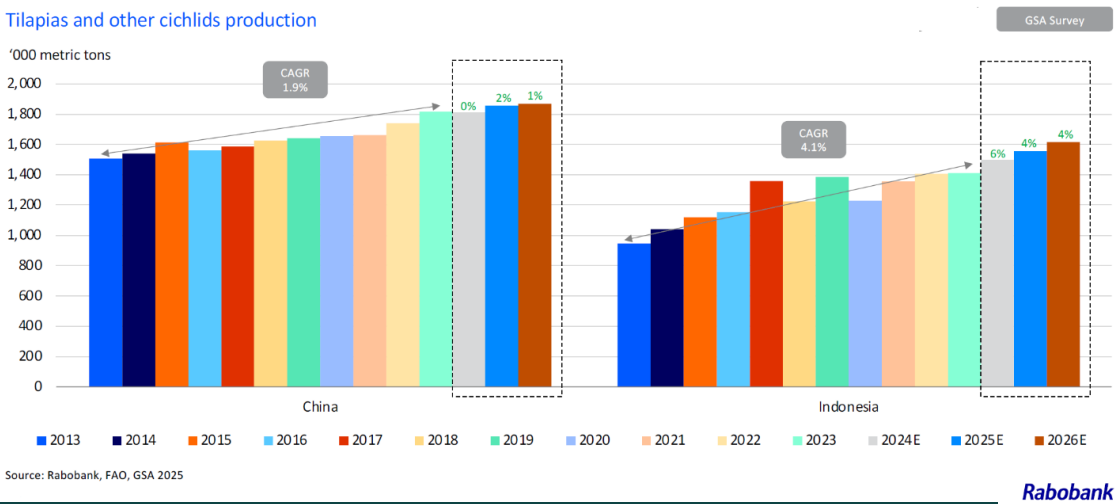

Figure 2: *Largest tilapia producers in Asia. Source: Global Seafood Alliance's Responsible Seafood Summit, Colombia, October 2025: Gorjan Nikolik (Rabobank)*

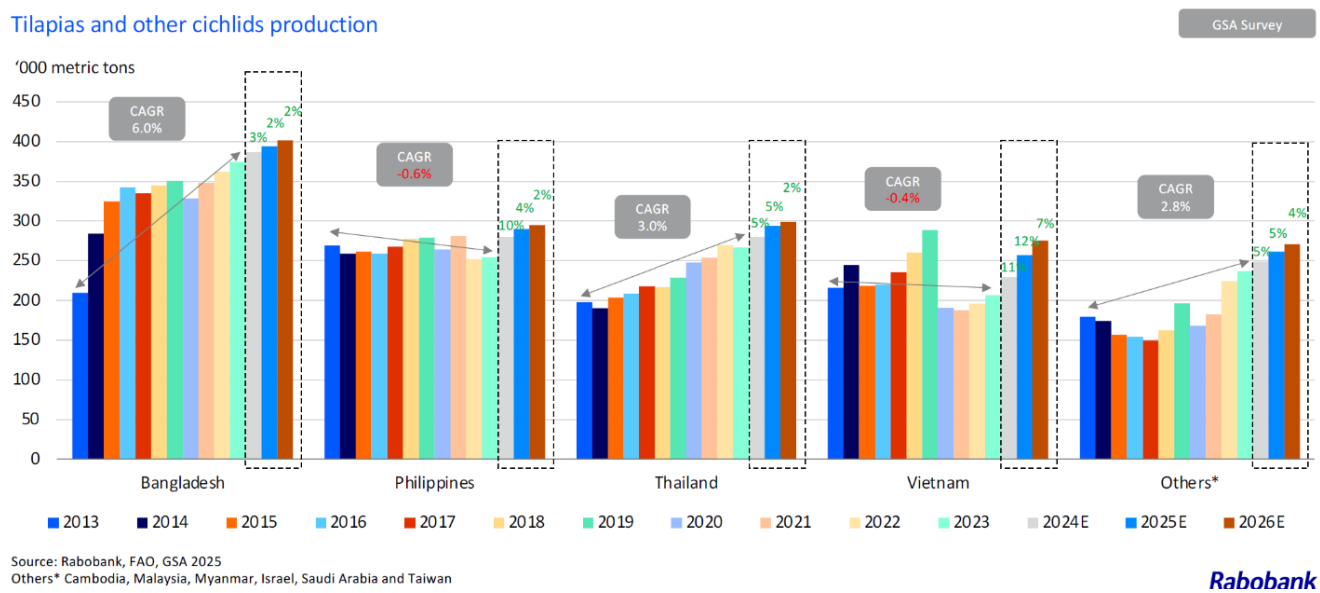

Figure 3: *Other tilapia producers in Asia; Source: Global Seafood Alliance's Responsible Seafood Summit, Colombia, October 2025: Gorjan Nikolik (Rabobank)*

Producing country	Production in tonnes 2022	Production in tonnes 2023	Production in tonnes 2024	Production in tonnes 2025e	Production in tonnes 2026e
China	1 738 947	1 816 828	1 899 000	1 985 000	2 075 000
Bangladesh	390 000	420 000	450 000	450 000	450 000
India	150 000	100 000	100 000	100 000	100 000
Indonesia	600 000	600 000	650 000	700 000	750 000
Malaysia	30 250	31 076	35 020	31 990	40 690
Philippines	271 973	264 418	287 687	296 318	302 244
Thailand	269 394	266 480	258 160	281 000	289 000
Vietnam	268 800	270 000	310 500	372 600	447 120
Total	3 719 364	3 768 802	3 990 367	4 216 908	4 454 054

Figure 4: *USSEC aquaculture tilapia assessments for 2026, Source: Mr Lukas Manomaitis, East Asia Aquaculture Lead, USSEC, Singapore.*

The panellists for Asia sub-session were: **Dr M Gulam Hussain,** Eon Aquaculture Ltd., Bangladesh, **Mr Wang Xueguang**, Vice-President and Secretary-General, CAPPMA, China, **Mr Pamudi,** Technical Consultant – Aquaculture, USSEC, Indonesia, **Mr Mohamed Razali Mohamed**, Aquagrow International Sdn Bhd., Malaysia, **Mr Florendo Jon Juico Jr.**, President, PHILTILAPIA, the Philippines, **Dr Malasri Khumsri**, Aquaculture Technology Expert, Department of Fisheries, Thailand and **Mr Nguyen Hoai Nam**, General Secretary, VASEP, Vietnam (Photo 12).

Photo 12: *Regional sub-session Asia.*

Key Takeaways:

- Asia leads the world in tilapia production, but success now depends on stronger branding, certification, and innovation.
- The GIFT strain remains a key driver of growth and resilience.
- Key priorities include improving seed and feed access, biosecurity, and disease management, while leveraging global demand, FTAs, and value-added products.
- Greater investment, policy support, and adoption of technologies are essential to elevate Asia's Tilapia industry to new heights.

Regional overviews: Latin America and the Caribbean, the Middle East, Europe and North America

These three sub-sessions were moderated by **Mr William Griffin** (Economist, FAO GLOBEFISH). **Mr Rodrigo Misa** (Communication Advisor, INFOPESCA) mentioned in his keynote address that Latin American countries now contribute a significant and expanding share of global output due to favourable climate and abundant freshwater resources. The region has become the next global epicentre for sustainable tilapia fillet production and export, with a clear focus on sustainable farming and certified production. Brazil (0.44 million tonnes) and Colombia (0.11 million tonnes) are in the lead, followed by Mexico (0.06 million tonnes), Honduras (0.05 million tonnes), and Costa Rica (0.012 million tonnes) in tilapia production, according to FAO 2025 (Figure 5). The panellists for the Latin America and the Caribbean sub-session were **Mr Sergio Zimmermann** (Zimmermann Aqua Solutions), **Mr Andres Piedrahita** (Wood & Cia SAS) and **Mr Francisco Murillo** (Tropo Farms Ltd.), representing Brazil, Colombia and Mexico (Photo 13) respectively.

Photo 13, 14 & 15: *Sub-sessions discussing Latin America, the Middle East, Europe, and North America.*

Country	2023	2022	2021	2020	2019	2018
Brazil	442 174	408 350	361 286	343 596	323 714	312 856
Colombia	114 828	115 987	109 422	100 959	95 957	77 933
Mexico	57 883	50 164	45 025	96 949	92 258	52 748
Honduras	49 197	37 900	29 700	38 700	36 000	33 500
Costa Rica	12 88	13 949	12 929	12 654	17 900	17 700
LAC	737 791	688 258	613 303	639 868	613 322	544 680
Global	6 747 066	6 527 548	6 264 352	6 050 225	6 399 426	6 039 774
Share	11%	11%	10%	11%	10%	9%

Source: FAO. 2025. FishStat: Global aquaculture production. [At: FishStatJ. Available at: www.fao.org/fishery/es/statistics/software/fishstatj. Licencia: CC-BY-4.0.

Figure 5: *Major tilapia producers in the Latin America and Caribbean region (2018–2023) (tonnes- live weight)*

During his keynote speech titled *Tilapia Farming in the Drought and Water-scarce Regions,* **Mr Haydar H. Alsahtout** (Founder and CEO, Blue Economy Co., Saudi Arabia) mentioned that the regional production target for tilapia is 300 000 tonnes by 2030, of which 200 000 tonnes are expected to come from Saudi Arabia. However, the region will remain a net importer rather than producer. Data shows that the countries in the Middle East imported approximately 31 000 tonnes of frozen tilapia in 2024 valued at USD 118 million. Saudi Arabia imported 5000 tonnes, and the UAE 2300 tonnes, while the other main markets are Kuwait, Bahrain and Qatar. Most of the tilapia imported into the region comes from China and Egypt. **Mr Mohamed Razali Mohamed** (General Manager, Gulf Aquaculture LLC), represented as the panelist for the UAE (Photo 14) in the Middle East sub-session.

In her keynote speech titled *Tilapia vs Other Whitefish in European Market: Competitiveness and Opportunities,* **Ms Yobana Bermúdez** (Managing Director, CONXEMAR, Spain) reported that the tilapia market in Europe is relatively modest and 100% import-dependent. In 2024, some 41 600 tonnes of tilapia were imported, compared to 39 400 tonnes in 2019. The main consuming countries are France, United Kingdom, Belgium and Spain, while the Netherlands is the main importing country. China is the dominant exporter to Europe contributing about 70 percent. In Europe, tilapia competes with pangasius. Although total pangasius imports into Europe have declined in recent years, the volume is still about double the amount of tilapia. Viet Nam is the main exporting country for pangasius, while the Netherlands, UK and Germany are the main importing countries. The unit values of pangasius and tilapia are very close in the European market. In 2024, the tilapia price was USD 3.55 per kg, while pangasius was selling at USD 3.23 per kg.

In view of the high tariffs for Chinese tilapia in the US market, the European market is becoming more interesting for exporters. It was recommended that Chinese exporters should aim to ship high quality fish, including shipments of fresh fillets, in order to compete with pangasius and Nile perch. Prices show that there is room for upward trends in pricing, at least to reach US market price levels. **Ms Helga Maria Josupeit** (Senior Advisor, INFOPESCA) and **Ms Denise Gurshin** (Senior Director of Market Development, Global Seafood Alliance, USA) joined this sub-session, representing Europe and North America (Photo 15) respectively.

Key takeaways:

- The tilapia sector in Latin America is reshaping global seafood trade, and the world should take note.
- Even in the driest conditions, resilience, innovation and adaptation can drive sustainable aquaculture forward in the Middle East.
- Tilapia is moving from being the "cheap" to the "smart" choice in Europe.
- Rebranding, certification, and storytelling is needed to position tilapia as a trusted and sustainable whitefish in Europe.
- The US market is mature and cost-pressured, calling for stronger promotion of tilapia as a premium and versatile fish; however, tariffs have become a major challenge.

Regional overview: Oceania

Dr Geoff Allan (Consultant, Australian Centre for International Agricultural Research–ACIAR, Australia) reiterated that ACIAR Report 103 identified the barriers to tilapia aquaculture in the region related to feeds and fingerlings in PNG, Solomon Islands, Timor Leste, Fiji and others. At the same time, increasing interest is observed from farmers, investors and governments. Tilapia farming in PNG (1300 tonnes in 2020), Fiji (232 tonnes in 2019) and Timor Leste (500 tonnes in 2024) utilise the GIFT strain, which Solomon Islands (4 tonnes in 2020) is planning to introduce *(Figure 6).* This sub-session was moderated by **Professor Dr Jesmond Sammut** (Deputy Dean of Science – External Engagement, at the University of New South Wales, Australia; and who is also the Leader of the UNSW Aquaculture Research Group, Australia). Panellists were **Ms Salote Waqairatu-Waqainabete** (ACIAR Agribusiness Project Co-Leader, Talanoa Consulting), **Mr Jiosese Talemaimerika Vodowaqavuka** (Kerry's Farm and Fiji Tilapia Association), **Mr Jacob Wani** and **Mr Joshua Noiney** (National Fisheries Authority), **Dr Jharendu Pant** (Senior Scientist, WorldFish, representing Timor Leste) and **Professor Dr Kevin Fitzsimmons** (University of Arizona) (Photo 16).

Photo 16: *The Oceania sub-session.*

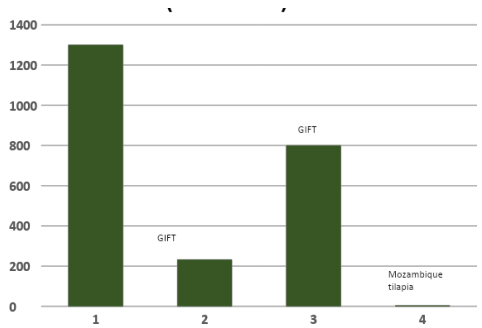

Figure 6: *Tilapia production in the Oceania region*

Key takeaways:

- PNG's "Fish for Prisons" program aims to rehabilitate inmates through aquaculture.
- Support needed to expand satellite hatcheries, small-scale feed production and investment in PNG, Fiji, Timor Leste and Solomon Islands.
- Strengthening capacity building through training, internships, scholarships, bursaries, resources (videos, publications and training modules), digital tools and school programs etc.

Regional Overview: Africa

In his keynote speech, **Mr Blessing Mapfumo** (Executive Officer of the African Chapter, World Aquaculture Society, South Africa) mentioned that Egypt (0.96 million tonnes, 71% of regional share – *Figure 7)* stands out as the continent's top producer, while countries like Uganda, Ghana, Zambia, Tanzania, Nigeria, Côte d'Ivoire and Kenya face challenges such as limited access to financing, quality seed and feed, and technology alongside rising production costs and post-harvest losses. Rapid annual growth was also observed in the rest of Africa – *the* "new countries"*(Figure 8).* Moderated by **Mr Blessing Mapfumo,** this sub-session featured **Mr Mohamed Razali Mohamed** (Aquagrow Ivoire SARL), **Mr Francisco Murillo** (Tropo Farms Ltd.) and **Mr Nsogbu Wadike** (Victory Group) representing Cote d'Ivoire, Ghana and Kenya (Photo 17), respectively.

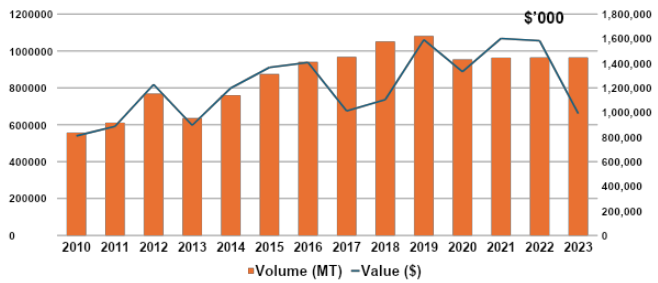

Figure 7: *Egypt is Africa's top producer of farmed tilapia.*

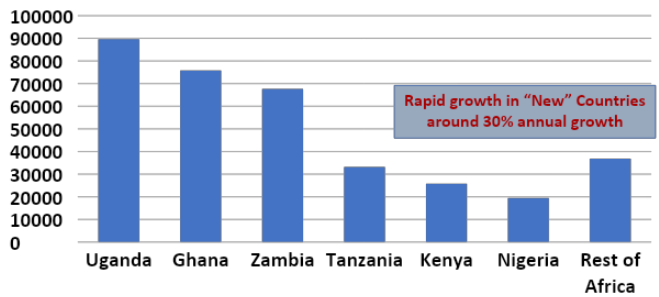

Figure 8: *Tilapia farming in Africa. Source: Mr. Blessing Mapfumo, Executive Officer, World Aquaculture Society, African Chapter.*

Photo 17: *Africa sub-session*

Key takeaway:

- Strong government support and innovation are the keys driving Africa's sustainable aquaculture growth.

Launching of SEATA

An interesting meeting was held on the sidelines of TILAPIA 2025: the launch of the Southeast Asian Regional Tilapia Association (SEATA). The need for such an Association was voiced out in dialogue with the industry in Indonesia, Philippines, Thailand and Vietnam and also following a roundtable meeting held in Singapore during 28–29 October 2025 which called for the formation of a Regional Association (SEATA). The primary objective of this Association is to build a regional platform for "advancing a profitable and sustainable future for tilapia in Southeast Asia".

TILAPIA 2025 also announced that the members of the SEATA Steering Committee comprise: Mr Dharma Saputra (Indonesia, Moderator), Mr Andhi Trapsilo (Indonesia), Mr Florendo Juico Jr. (Philippines), Mr Gabriel H. Alcantara (Philippines), Dr Jessica Kay Turner (Thailand), Ms Sasiya Silanuruk (Thailand), Dr Pham Anh Tuan (Vietnam), and Mr Tran Trung Kien (Vietnam).

Photo 18: *Invited guests during the launching of SEATA (From left to right: Mr Lukas Manomaitis, East Asia Aquaculture Lead at USSEC Singapore; Mr Rudolf Hoeffelman, President Director of Regal Springs Indonesia; Dr Jessica Kaye Turner - Assistant Managing Director Namsai Farms/ SEATA Steering Committee Member; Mr Florendo Juico Jr. - President of PhilTilapia/SEATA Steering Committee Member; and Mr Dinh Xuan Lap, Vice Director ICAFIS, SEATA Roundtable Participant).*

Day 2: Innovation, Integration, Profitability and Sustainability

Titled **Developments in Tilapia: Genetics and Reproduction, Session 2** focused on the advancements and innovative developments in tilapia genetics and reproduction, such as climate-resilient, disease-resistant, fast-growing and novel strains in future tilapia aquaculture, taking into consideration lessons from the past. This session featured presentations from **Dr Rajesh Joshi** (GenoMar, Norway), **Dr Matthew Hamilton** (WorldFish, Malaysia), **Dr Alastair Hamilton** (Nam Sai Farms, Thailand) and **Dr John Buchanan** (The Center for Aquaculture Technologies (CAT), USA). The moderator was **Dr Alejandro Tola Alvarez** from Blue Future Holding (part of EW Group GmbH), Norway (Photo 19).

Photo 19 : *Developments in tilapia: genetics and reproduction; Session 2*

Key takeaways:

- "One size does not fit all". Advances in genomic selection, line breeding, and breeding strategies are driving measurable gains in growth, resilience and sustainability, reinforcing GenoMar's commitment to climate-smart aquaculture.
- The success of the GIFT (Genetically Improved Farmed Tilapia) program by WorldFish has led to increased global tilapia production.
- Genomic selection is a transformative pathway for sustainable and profitable tilapia farming.
- 95% of gene editing efficiency across thousands of embryos daily opens the door to sterile fish production, enhanced disease resistance, and improved feed efficiency, paving the way for sustainable and responsible aquaculture.

Session 3: Innovative and Integrative Tilapia Production Technologies explored high-tech and integrative farming systems driving a new era of efficient, profitable, and sustainable tilapia aquaculture. **Dr Eduardo Leano** (Director General, NACA, Thailand) delivered the keynote presentation and shared insights from the White Paper on Aquaculture Transformation in Asia and the Pacific, highlighting innovations such as nanobubble technology, RAS, biofloc, renewable energy, and gene editing, all crucial for building climate-resilient aquaculture systems. **Mr Sergio Zimmermann** (Zimmermann Aqua Solutions, Norway) moderated the panel discussion while the panellists were **Dr Bui Ngoc Thanh** (Technical Manager, USSEC, Vietnam), **Dr Naga Murali Chalamalasetti** (Fish & Feeds Ltd, Ghana), **Mr Warren Andrew Turner** (Nam Sai Farms Co. Ltd., Thailand), and **Dr Kobboon Kaewpila** (King Mongkut's University of Technology Thonburi, Thailand) (Photo 20).

Photo 20 : *Innovative and integrative tilapia production technologies; Session 3*

Key takeaways:

- In-Pond Raceway Systems (IPRS) are boosting productivity and minimising environmental concerns in Vietnam.
- Biofloc in combination with RAS (Bio-RAS), is supporting biosecure, resource-efficient farming in Ghana.
- Brackishwater polyculture systems (red tilapia, Nile tilapia, shrimp, mullet, spotted scat and milkfish) might enhance biodiversity and reduce disease risks in Thailand.
- Brackishwater tilapia farming shows promise for "low-impact and high-nutrition" aquaculture in the SE Asian region.

Moderated by **Dr Eduardo Leano** (NACA), **Session 4: Biosecurity and Health Management** brought together experts, **Dr Andrew Paul Shinn** and **Dr Olivier Decamp** from INVE Aquaculture, Thailand, **Dr Cedric Komar** (ICTYODEV, France) and **Mr Pau Badia Grimalt** (FAI Farms, Thailand) (Photo 21) to discuss one of aquaculture's biggest challenges, i.e. protecting tilapia health in a changing climate. Rising temperatures are intensifying disease risks, with pathogens thriving in warmer waters while fish face higher stress. The panel called for climate-resilient solutions such as pond-shading, solar aeration, and disease-resistant strains like GIFT tilapia. Instead of antibiotics, experts promoted preventive health management through vaccination, probiotics, and real-time diagnostic tools. They also highlighted structured welfare assessment systems that help farmers make smarter, data-driven decisions for fish health and farm performance.

Photo 21 : *Biosecurity and health management, Session 4*

Key takeaways:

- Aquaculture-producing countries from SE Asia are at the most risk from the impacts of climate change.
- Strong regional biosecurity protocols, investing in predictive health monitoring systems, industry-wide data sharing platform and climate adaptive practices, are essential for a sustainable tilapia industry.

Dr Dominique Bureau (University of Guelph and Wittaya Aqua International, Canada) delivered the keynote presentation on alternative feed ingredients and nutritional supplements. He was also the moderator of a panel discussion with **Dr Kabir Chowdhury** (Maverick Innovation,

Bangladesh), **Mr Lukas Manomaitis** (USSEC Singapore), and **Dr Emilie Devic** (Neofly, New Caledonia) under **Session 5: Advancing Tilapia Nutrition and Feed Technology** (Photo 22).

Photo 22 : *Advancing tilapia nutrition & feed technology; Session 5*

Key takeaways:

- Functional feeds and additives can boost production and reduce mortality, but claims must be science-verified.
- Single-cell proteins (algae, yeast, fungi, bacteria) offer sustainable fishmeal alternatives.
- Soy-based feeds remain crucial – "nutrients > ingredients".
- Black Soldier Fly (BSF) larvae products are high in protein and convert waste to biomass, but face cost and regulatory challenges.

Closing day emphasised collaboration and partnership for strengthening investment through exploring domestic markets and considering "One Welfare" approach in the Tilapia industry

Session 6: Value-addition and Market Diversification made a deep dive into strategies to enhance the economic value of tilapia through innovative products (RTE & RTC) and expansion of markets (domestic and international). Panelists explored how value-added products and diversified market strategies can unlock new revenue streams, boost consumer awareness, enhance competitiveness and ensure sustainable growth both globally and locally. There were four presentations from **Mr Romain Bracciani** (JBT Marel, Thailand), **Dr Pitchaya Chainark** (Department of Fisheries, Thailand), **Mr Jogeir Toppe** (FAO, Italy) and **Dr Stephanie Horn** (Postdoctoral Researcher, Institute of Aquaculture, University of Stirling, UK). The session was moderated by **Mr Francisco Murillo**, Tropo Farms Ltd., Ghana (Photo 26).

Photo 25 : *Value-addition and market diversification; Session 6*

Side event: Meet the Authors and The Tilapia International Foundation's Monsignor Heine Award 2025

Four distinguished authors across the globe actively engaged with conference delegates, shared valuable insights from their recent publications and signed autographs.

Photo 23: *Partial view of the crowd during the "Meet the Authors" session*

Concurrently, the Tilapia International Foundation's Monsignor Heine Award 2025 was presented to **Mr Amorn Luengnaruemitchai,** Managing Director of Manit Genetics and President of the Thai Association of Tilapia (TAT). The award recognised his outstanding contributions to the genetic development of red tilapia and his leadership in promoting sustainable and profitable tilapia farming practices within Thailand and internationally.

Photo 24: *Mr Amorn Luengnaruemitchai (Managing Director of Manit Genetics), first one from left, receiving the Monsignor Heine Award 2025 from the President of the Tilapia International Foundation and Chairperson of TILAPIA 2025.*

Key takeaways:

- As global demand for healthy and convenient seafood continues to rise, advanced processing technologies are redefining how tilapia is prepared for the export markets.
- Thailand is driving innovation in tilapia-based value-added products tailored for domestic consumers through: (i) ready-to-eat items such as vacuum-fried chips, jerky floss, retort-pouched curry, frozen meals; (ii) healthy products such as protein-enriched snacks, collagen-infused wellness foods; (iii) convenience and lifestyle foods such as burgers, nuggets and flavoured dried strips; and (iv) Thai-inspired favourites such as tom yum, sweet basil and many more.
- Tilapia producers need to utilise good news stories by purposefully working towards improving nutritional and environmental performance.
- Nearly two-thirds of the tilapia (including heads, skin and scales) are often under-utilised, despite being rich in valuable nutrients. These by-products have immense potential for value-addition, such as (i) edible mince for soups, fish cakes and sausages; (ii) collagen for nutraceuticals; (iii) omega-rich oils; and (iv) feeds and fertilisers from viscera and trimmings.

Session 7: Collaboration and Partnership focused on unlocking investment and funding opportunities to transform downstream tilapia industries while tackling operational challenges.

Dr Michael Phillips (FutureFish, UK) delivered the keynote presentation and moderated this important session, with the panelists comprising **Ms Ajibola Olaniyi** (Nigeria), **Dr Krishna R Salin** (Asian Institute of Technology, Thailand), Mr Arnan Hirunratanakorn (Arnan Farm, Thailand) and **Mr Niran Warin** (AquaHub, Thailand) (Photo 26).

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Photo 26 : *Collaboration and partnership; Session 7*

Key takeaways:

- The Asian Institute of Technology (AIT)'s long-standing role in driving South–South cooperation is a perfect example of effective regional collaboration in aquaculture.
- AquaHub is an initiative bridging the gap between research and industry to align innovation with market needs and strengthen Thailand's aquaculture value chain.
- Arnan Farm, Thailand, is a good example of collaboration across sectors and generations, involving farmers, researchers, feed mills, and hatcheries. Real progress is expedited in tackling disease, improving feed efficiency, building resilience and enhancing sustainability.

Session 8: Strengthening Investment and Funding focused on unlocking investment and funding opportunities to transform downstream tilapia industries while tackling operational challenges. Presentations were delivered by **Dr Harrison Charo-Karisa** (World Bank Group, USA), **Dr Alejandro Tola Alvarez** (Blue Future Holding – part of EW Group GmbH, Norway), **Mr Amorn Luengnaruemitchai** (Manit Genetics Co. Ltd., Thailand), and **Ms Jessica Angulo De Castro** (UNIDO Colombia). The session was moderated by **Dr Krishna R Salin**, Asian Institute of Technology, Thailand (Photo 27).

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Photo 27 : *Strengthening investment and funding; Session 8*

Key takeaways:

- Financing should be matched with the provision of technology and capacities.
- Long-term commitment, people and leadership, and knowledge management are key drivers in large-scale tilapia investment.
- Thailand's success stories are based on genetic innovation, digitalisation, cooperative models, and public–private partnerships.
- UNIDO's Colombia model (private sector leadership, government facilitation and international cooperation) facilitates market access and reinforces national quality infrastructure.

Session 9: Tilapia Welfare and Certification highlighted how better welfare practices lead to healthier fish, stronger growth, lower mortality, and higher profitability through a "One Welfare" approach benefiting animals, humans, and the environment. **Dr Dave Little** (Institute of

Aquaculture, University of Stirling, UK) delivered the keynote presentation and **Dr Simao Zacarias** (Post-Doctoral Fellow, University of Stirling, UK) moderated the panel session. The list of panellists included **Dr Alastair Hamilton** (Nam Sai Farms, Thailand), **Dr Maria Filipa Castanheira** (Aquaculture Stewardship Council, Singapore), **Mr Huw Thomas** (Global Dialogue on Seafood Traceability, The Netherlands), and **Ms Denise Gurshin** (Senior Director of Market Development, Global Seafood Alliance, USA) (Photo 28).

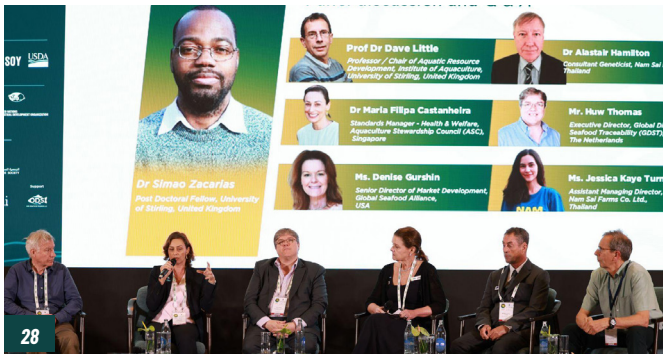

Photo 28 : *Tilapia welfare and certification; Session 9*

Key takeaways:

- Sustainable intensification requires welfare to be a key consideration and focus on managing environments along the value chain.
- eRNA gene expression can be regarded as a proactive, non-invasive early stress indicator.
- The Aquaculture Stewardship Council's new welfare principle aims to reduce stress, improve survival, and enhance product quality, placing fish welfare at the heart of responsible aquaculture.
- The importance of data traceability in fish welfare focuses on key metrics such as stocking density, water quality, and humane slaughter practices.
- The Best Aquaculture Practices' Animal Welfare Module ensures humane handling throughout production, strengthening trust and accountability across the seafood value chain.

From discussions to direction: TILAPIA 2025 wrap-up

Dr Kevin M Fitzsimmons (TILAPIA 2025 Chair and Professor at the University of Arizona) wrapped up the session by mentioning that over the past three days, participants had the rare opportunity to listen to many insightful presentations by global experts, researchers, and industry leaders: to exchange knowledge and to network and forge new collaborative exchanges. Discussions had centred on challenges, emerging innovations, market developments, and strategic pathways to strengthen sustainability and growth in the tilapia industry. The engagement and contributions reflected a shared commitment to continuous improvement, research advancement, and industry collaboration.

On behalf of USSEC Mr Lukas Manomaitis (East Asia Aquaculture Lead, Singapore) expressed satisfaction with the commercially focused event. He thanked the organisers, INFOFISH, and the Department of Fisheries (DoF) of Thailand for being the host, along with co-organisers and sponsors. He also offered several suggestions for future events, focusing on improving the efficiency and audience participation: i) Data consolidation for the speakers/panelists, ii) Application of technologies for Q & A, iii) AI Interpretation, iv) Post-panel questions can be answered using a platform like Pigeonhole and v) Branding of tilapia consumption applying social media.

Photo 29-32 (Clockwise): *Dr Kevin Fitzsimmons (TILAPIA 2025 Chair), Mr Lukas Manomaitis (USSEC East Asia Aquaculture RLead), Mr Amorn Luengnaruemitchai (President of the Thai Association of Tilapia) and Ms Gemma Meermans Matainaho (Acting Director of INFOFISH).*

In his capacity as President of the Thai Association of Tilapia (TAT), Mr Amorn Luengnaruemitchai said that "this year, 2025, is quite significant for the Thai tilapia industry as it celebrates the 60 years of introduction of the Chitralada tilapia (Pla Nil) by the late King Bhumibol Adulyadej (Rama IX), who received a gift of 50 Nile tilapia from Japan's Crown Prince Akhihito in 1965. These fishes were bred at the Chitralada Palace and thousands of fingerlings were distributed to local farmers, making it a vital and affordable protein source. Chitralada tilapia is now found in other countries ("the Chitralada keeps giving from Thailand to the world"). He ended with the call to work together for a better tilapia industry and said he hoped to see everyone at the next Tilapia Conference in 2027. He also hoped that delegates would enjoy the closing refreshments sponsored by TAT, featuring unique tilapia-based menu items.

In her closing remarks, Gemma Meermans Matainaho, Acting Director, INFOFISH said that "we have explored new ideas, forged partnerships,

and reaffirmed a collective commitment to advancing a sustainable, responsible, and profitable tilapia industry over the last three days during TILAPIA 2025". She extended sincere appreciation to the co-organisers, sponsors, exhibitors, supporters, distinguished speakers, moderators, and panellists, media partners, and the INFOFISH team for their hard work in organising the event.

Commercial farm visit

A commercial farm visit (Photo 33) was organised on **Day 4** for pre-registered delegates, providing participants with on-the-ground exposure to the latest tilapia production and feed operations in Thailand. The visit included tours of the **Manit Group** and **INTEQC Global Feed Mill** facilities, which enabled delegates to observe practical farm management practices, operational systems, and integrated feed production processes firsthand.


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Photo 33: *Farm visit at Manit Group, Khao Yoi District, Phetchaburi Province, Thailand.*

Trade Exhibition

A total of **17 exhibitors out of 20 exhibition booths** (Photo 34-38) participated in this prestigious event, showcasing a wide range of products, services, and innovations relevant to the global tilapia industry. The diversity of exhibitors reflected strong representation from academia, industry associations, technology providers, genetic companies, government agencies, and international organisations.

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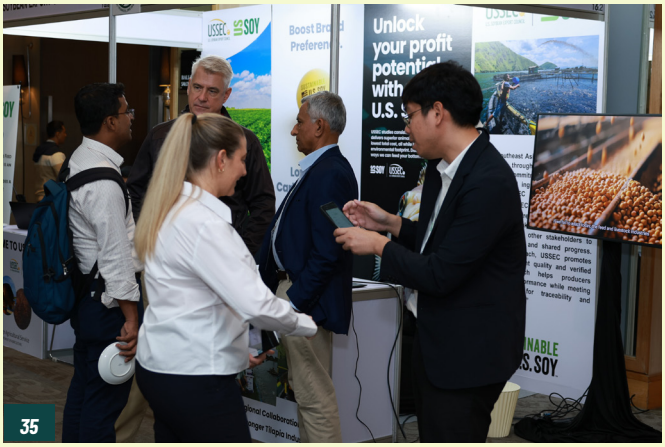

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Photo 34-39: *The Trade Exhibition was participated by all the key industry stakeholders along tilapia value chains.*