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The future of fish farms - sustainable sea food. Get ready for big shifts in public opinion - for example over the pigmentation they want to see in fish farmed salmon. The fact is that fish are a healthy, low fat food, and we cannot go on expecting to eat mainly wild sea fish, around the world. Just as farmers rear animals, most fishermen in future will need to rear fish. The issue is finding ways to feed fish in fish farms without using scarce stocks of other fish in their feed.

(Article from Aquavision Magazine 2002)

As Europe's leading futurist, Dr. Patrick Dixon has plenty to tell on the pitfalls and opportunities that will face the aquaculture sector over the coming decade. At this summer's AquaVision 2002 Conference (Nutreco sponsor) Dr. Dixon will be setting the scene for delegates at the conference and in his opening key note speech be aiming to provide them with a framework to think about for the future, not just for today's issues but a framework that will work for them for the next 10-20 years.

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Dr Dixon told Aquavision: "Without a doubt the aquaculture industry is going to be effected by many different complex trends over the coming years, all operating together, sometimes in very unexpected ways and producing changes in the industry that may be very rapid indeed.

The ability of the aquaculture industry to foresee and react to these trends and changes is of vital importance to the future development and success of the sector." he explained.

"The aquaculture industry is at a crucial point. On the one hand wild fish stocks are vulnerable already to overfishing. On the other hand, research papers show quite clearly that red meat eaters can be risking their own health while fish eaters are helping to ensure themselves a long life. The aquaculture sector has grown substantially over recent years and holds the potential to satisfy the growing demand for fish from both developed and developing markets. The aquaculture industry also protects wild fish stocks from pressures of overfishing.

"This is all good news for the industry," points out Dr. Dixon, "However, there is a requirement for ever increasing transparency in all aspects of aquaculture production. We have all seen the effects that a single camera with 5 minutes of footage from the sea bed beneath ½ million caged fish can have when shown on one program, on one TV network. Power to produce significant changes in share prices and to with long lasting effects on consumer behavior.

"An increasingly fussy consumer population is one of the realities the industry will have to face in future.

"We are entering a world where, in the past, food was a necessity but also something of a luxury. Food like salmon is a good example of this: 20-30 years ago it was a luxury food but new technology and increasing affluence in the western world means that more people can afford to go up market in their quest for ever better food.

"The starving man is not worried about pigments or fish feed dyes and additives used to colour farmed salmon - he will just eat it. But to a 75 year old pensioner with no money worries and for whom food is a real pleasure it can become very, very important. It may well be that he decides not to eat salmon at all because he has heard that there are pigments and other additives used in production. (Note: since this was written, new laws have been approved in Europe to reduce and stop EU fish feed dyes used to make farmed salmon look pink.)

Dr. Dixon sees a market that is going to experience increased segmentation in coming years. "In developed countries," he explained, "we are going to see increasing food fads that will be exaggerated by every health scare. Health scares will be hyped up by neuroticism. Wealthy people have an emotional connection people with food that you do not see in a poor country in the same way."

"Yet emerging markets are tremendous growth opportunities. Emotional sensitivities are less but people aspire to western life styles. For example, consumption of red meat per person is falling in the wealthiest countries, particularly in higher income brackets. Whereas in China and India consumption of red meat is rising significantly because, in these countries, those who eat red meat see it as a sign of being 'middle class'. The same applies for fish and so very significant differences exist between these markets. Nevertheless, the challenge is that in a globalised world the same products can find themselves in just about any market worldwide

"A company who is producing low cost fish for the Indian market in sub-optimal conditions could well find that their whole product image is damaged in western markets where separate fish farms are producing fish in optimal conditions. The whole process could be questioned as a result of doubtful practices in poorer nations.

"Many companies and organisations are facing this problem right now and some are pulling out of emerging markets altogether because they can't see how they can sell competitively in a market where standards are much lower without jeopardizing the quality for which their brand is known in the rest of the world."

Patrick Dixon's comments are drawn from a vast experience in advising some of the world's largest corporations as well as finding himself one of the world's most sought after conference speakers.

To assist with a framework for companies to assess the challenges facing them over the coming decade Dr. Dixon has in his most recent book, 'Futurewise', described a complex range of urgent issues under six headings, or faces of a cube, spelling the word FUTURE.

Fast: Speed of change , economic, social, technology or political. As we saw on 11 Sept 2001 with the attacks on the WTC in New York, how people feel about the world can change profoundly in 15 minutes. Market research can't predict the future in a rapidly changing world - it just tells you what consumers think now. We need big vision to see further. The digital society, networking, e-commerce, [virtual reality](#) , and speech recognition - the impact of these things is also continuing to change consumer behavior despite market hype and gloom. The death of traditional markets, national [stock exchanges](#) and financial services. Future revolutions in production, distribution and every aspect of management. How will people survive this accelerating change?

Urban: There will continue to be over the coming years big demographic and social shifts affecting every aspect of consumer behavior for the increasingly ageing but wealthy populations. The war for talent, feminisation of society, megacities and a host of other factors will also have an important effect on the markets for your products. The challenge of megacities in emerging economies. These society changes are fundamental to the future shape of your business.

Tribal: Although the world is increasingly globalised, tribalism is the most powerful force on earth. More powerful than atomic bombs or the combined might of the US, Russian and Chinese military. We see it around the world in 100s of tribal conflicts and tensions. Tribalism is also a huge positive force. It affects you through niche branding and product loyalty, just think of Coca-Cola, McDonalds or Nike. Every successful product creates a tribe and every successful organisation is one. Tribalism is important in [marketing](#) and [leadership](#), it can be harnessed to build strong teams, corporate identity, people movements and product lines. The key to mergers is understanding tribal culture and tribal [leadership](#).

Universal: is the opposite of tribalism, the emergence of the global super-brand and huge pressures to manage global operations more effectively, using new technologies, emergence of virtual teams and companies. Globalisation will alter the shape of all large corporations as competitors realign through rapid mergers, acquisitions, disposals or new partnerships. This is very topical for the aquaculture industry with the emergence of companies such as Nutreco which now assists the production of a significant proportion of the world's farmed salmon production. However, reactions to globalisation in its current form need to be understood. Why powerful global structures will emerge and how they will affect your future.

Radical: Again this is of particularly importance in the food industry. With the death of normal left/right political structures and the weakening of government power, corporations are increasingly vulnerable to a growing number of single issue groups, the membership of groups like Friends of the Earth and Greenpeace, for instance, have risen dramatically. Never has it been more difficult than in the area of food manufacturing and one only has to think of the situation faced last year by the Scottish salmon farmers following the screening of aBBCC documentary criticising salmon farming.

We can expect to see logic replaced by emotion, science replaced by feeling. There has been ample recent evidence of this in relation to food scares, every consumer worry becomes a regulation and every consumer campaign becomes a new law especially in food.

Even where there are no laws these campaigns can produce a profound shift in the behavior of food manufacturers, take the case with Genetically Modified Organisms or GMOs. In the UK many supermarkets decided to put a voluntary ban on the sale of [GM foods](#) even though they were not required to do so by the government by preferred to run ahead of consumers option.

As Swiss banks found with Nazi gold, Shell found with oil rig dumping and Nestle found with baby milk products, these issues can strike hard and their impact can be hard to predict.

Ethical: Is perhaps the most important aspect of all. Ethics is to do with personal values relating to how we want to live in this world and what kind of world we want to live in. A topical example is genetically modified plants and animals such as GM modified salmon. With salmon that have been produced that contain human genes and that can grow to four times the size of non-GM salmon in a farm in 12 months, the big question is do people want to eat them?

This is an ethical issue and ethics decides what people get stirred up about and how people want to live in a fast changing world. Ethics is very, very important and we are currently seeing a very big shift in people's ethics, e.g., people feel very differently now about what work they do compared to 10 years ago, in other words people's work/life balance has become very important. People have become more sensitized to ethical issues than they were 15 years ago, issues like [motivation](#) , spirituality are all becoming key issues in large corporations.

Retaining and motivating key executives means more than money. Companies need to consider how to inspire and encourage, how to build a sense of family. What is coming next? Where do corporate values come from? A new world order. Global ethics. This, Dr. Dixon considers to be the most important Face of the cube and the one that is becoming central in board discussions on future direction. Personal [motivation](#) has changed greatly in the last five years and will continue to do so. The key is being able to show how your products and services create a better kind of world, not only for individual people and their families, but also for the community and for the whole of humanity.

Those that will be able to say that their product is more 'natural' than their competitors may well win a significant share at the top end of the market.

"When you put these six phases together and 'spin the cube' Dr. Dixon continued, "you get some quite startling results and all participants at AquaVision will find particular bells ringing for them. This is my primary aim, to scene set for the participants in the aquaculture industry and give them a framework to think about for the future, not just for today's issues but a framework that will work for them for the next 10-20 years."

As a closing message Patrick Dixon advices to "keep the image clean, to take the high morale ground, to be better than the best, to be more ethical than ethical, more natural than natural and to go one step further than the consumers are currently demanding."