



Economic Briefing To the Penang State Government

The India - ASEAN Partnership¹

Much has been said about China emerging as the world's factory floor and growth centre. All this hype about China and its economic prowess has eclipsed another formidable but silent economic powerhouse in the making - India - at least from rightful attention.

The "Hindu" Rate of Growth

India, like China shares cultural and commercial ties with the South East Asian region which predates the Malaccan Sultanate. Historically, both India and China were powerful trading nations whose vessels plied the Straits of Malacca and contributed to the growth of Penang, Malacca and Singapore as ports of call.

Post independence in 1947 however, India retracted into a protective shell. India's dismal economic performance was christened the "hindu" rate of growth where its people were philosophically happy with a 2% rate of growth in line with its religious teachings which emphasized spiritual riches versus material riches. India soon became one of the most over-regulated and closed economies in the world in the presence of a strong socialist government with an all-consuming role.

The Change

What enabled India to emerge from being a highly regulated economy to one which today is experiencing a productivity surge and encouraging foreign direct investment (FDI) was the shift to a *pro-business orientation*² in the early 1980's. When Indira Gandhi returned to power in 1980, she realigned herself politically with the organised private sector and the national government's attitude toward business went from being outright hostile to supportive. Indira Gandhi's switch was further reinforced by Rajiv Gandhi's rise to power in early 1984 when he focused on raising the profitability of established industrial and commercial establishments with the easing of restrictions on capacity expansion, removal of price controls, and reduction of corporate taxes. This relatively small shift elicited a large productivity response because India was far away from its income-possibility frontier.³

In 1991, a balance of payments crisis sparked the process of liberalization. Indian policy makers began to dismantle the "license-permit-quota-raj" and welcomed foreign investments; trade barriers were slashed and privatization began. The economy began to boom with the easing of access to foreign technology, capital goods and direct investment. Software exports and call centres led the way.

¹ This article is drawn from views presented at the India-ASEAN Partnership Session of the 2nd Asia Economic Summit, "Securing Asia's Future in an Uncertain World", organized by the Asian Strategy and Leadership Institute (ASLI) in Kuala Lumpur, 9-11 August 2004.

² Pro-market orientation focuses on removing impediments to markets and aims to achieve economic liberalization by favouring new entrants and consumers while pro-business orientation tends to favour incumbents and producers.

³ Rodrik D., Subramanian A., "From Hindu Growth to Productivity Surge: The Mystery of the Indian Growth Transition", IMF Working Paper, May 2004

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1991 was also the year when India's Look East Policy was enunciated in response to the rapid growth of East and Southeast Asian economies which had assumed leading positions in a number of sunrise industries; and the formation of regional trade blocs around the world.

However, it must be noted that it was the shift towards a pro-business orientation that triggered the boom of India in the 1980's. Genuine liberalization after 1991 added very little to aggregate economic performance apart from demonstrating India's genuine intentions to become an international trade partner to the global trading community.

Drawing the Investors

The structural make-up of FDI flows into India differs from China. Apart from natural resource exploitation, FDI inflows into India are targeted at domestic markets. The high levels of tariff protection in India make re-exporting a costly business strategy. Here, India offers its vast market of 1 billion in population and 400 million consumers. Interestingly, most FDI inflows into China are targeted at the manufacturing sector where the completed goods are re-exported to the world market at much higher profit margins. India missed the boat by not becoming part of the global value chain and participating in international supplier chain arrangements. To reap the socio-economic benefits of globalisation, India must now find a way to be part of this chain.

The link is easily found. The competitive advantage of India lies in its demographics. In 2020, India will have the benefit of being the nation with the youngest population in the world. At present, 52% of the nation is under 25 years compared to the aging population of the other economies of the world.

The roles of India and China are complementary. Both countries are undertaking policies to pursue dynamic comparative advantage. With China spearheading the manufacturing sector and emerging as the 'factory of the world', India with its wealth of educated, English speaking young people is capable of spearheading growth of the services sector, with the potential to emerge as the 'services centre of the world'. The United States of America has always looked to India in providing a cheaper alternative in the areas of Information Technology, value-based healthcare and education.

The India-ASEAN Partnership

Empirical literature establishes that regional cooperation opens up new opportunities for faster and more balanced economic growth in each participating country. The benefits of regional cooperation can directly reach the weaker sections of people through the concerted efforts of the countries involved by strengthening the ability to address issues such as poverty eradication, promoting peace and security and achieving sustainable development.

Indian ties with ASEAN countries have grown considerably over the last decade, but a vast potential remains untapped. At present, India is merely at the novel stage of its expansion. The increased partnership between India and ASEAN will enhance the size of the regional economy, which in turn will create better conditions for competitive market structure and a larger market size.

India-ASEAN cooperation covers the economic, political and security, and development cooperation dimensions with a number of mechanisms established to promote dialogue and cooperation in these areas. India has close collaboration with ASEAN countries in various fields such as trade and investment, science and technology, tourism, human resource development and transport and infrastructure.

On the political front, India and ASEAN are intensifying the political-security cooperation. On the economic front, there is mutual recognition of the complementarities as well as the competitiveness between emerging ASEAN and Indian economies. India's assets for ASEAN includes its large diversified and liberalized economy, reservoir of manpower and of scientific talent, natural resources, industrial base and one of the largest rapidly growing markets. ASEAN on the other hand, offers for India its rich natural resources, know-how, infrastructure, social sector development, investment capital, elaborate regional and global linkages in trade and industry and large market. It emerges as an indispensable partner for India in its new quest for global opportunities and a 7-8% growth rate over the next decade. ASEAN today has a combined population of 550 million people, total GDP of USD 632.5 billion and a trade turnover of nearly USD 500 billion together with its natural and energy resources.

India brings to ASEAN a growing economy of over US \$500 billion and capabilities in manufacturing such as paper, transport equipment, rubber, man-made fibers, glassware, dyes, software and other services that complement ASEAN capabilities in hardware, microchips and key manufacturing sectors like consumer electronics and business machines.

Thus, vigorous and sustained interaction between ASEAN and India would help both parties in maintaining a high growth path and meet their development objectives.

Between 1993 and 2001, two-way trade between ASEAN and India has more than doubled from USD 2.9 billion to USD 9.9 billion, which is equivalent to a compounded annual growth rate of 16.5%. Although trends in economic interaction are positive, the volume of trade and investment remains low compared with the other dialogue partners of ASEAN. India accounts for less than 2% of ASEAN's total trade and 0.2% of FDI in the region.

In recognizing the economic potentials for close linkages, both sides have signed the ASEAN-India Framework Agreement on Comprehensive Economic Cooperation at the Bali Summit in 2003. The Agreement provides for the establishment of a Free Trade Agreement (FTA) in goods, services and investment. The FTA in goods is to be realized by 2011 between India and Brunei, Indonesia, Malaysia, Singapore and Thailand; and 2016, between India and the Philippines, Cambodia, Laos, Myanmar and Viet Nam.

Businesses in ASEAN are increasingly undertaking FDI in India, in crucial infrastructure sectors such as telecommunications, fuels, hotel and tourism services, heavy industry chemicals, fertilizers as also in trading, textiles, paper and pulp and food processing. ASEAN especially Malaysia, Singapore and Thailand has become a major source of FDI into India.

Future Direction

No growth story is without its challenges. For India, the challenges are:

- **High dependency on agriculture**
India is predominantly an agro-based economy with approximately 60-75% of the Indian growth driven by agriculture, thus making Indian growth rates highly volatile and susceptible to the monsoon and weather.
- **Demographics**
Despite having the youngest population in the world come 2020, skills and education remain nagging issues. At present, Indian literacy rates stand at 64%. The biggest challenge lies in skill matching and skills upgrading programmes to make the large numbers of people employable. Increasing stress on education, reservation of seats in government jobs and the increasing empowerment of women and the economically weaker sections of society are expected to contribute to alleviation of poverty which stems from illiteracy.
- **Infrastructure**
The changing Indian landscape should support the growth in FDI. There should be efficient port facilities, improvement and upgrading of communication and transport infrastructure to increase factor mobility.
- **Risk of future war with neighbours**
At present, the world may be silent on the India-Pakistan Nuclear Crisis; however, regional tensions remain. Until there is complete disarmament of India's nuclear arsenal, the risk of war makes India a less stable investment landscape.
- **Growth and benefits are less broad-based**
India has the world's largest number of poor people in a single country. Of its 1 billion inhabitants, an estimated 350-400 million live below the poverty line with 75 per cent of them in the rural areas.⁴ While the growth of the middle class (which was virtually non-existent when India became a free nation in August 1947) indicates that economic prosperity has indeed been very impressive in India, the distribution of

⁴ "Poverty in India", <http://www.indiaonestop.com/povertyindia.htm>

wealth is uneven. Poverty alleviation is expected to make better progress in the next 50 years than in the past, as a trickle-down effect of the growing middle class. Eradication of poverty can only be a very long-term goal in India.

- **Leftist forces may stall reforms, liberalisation and integration**

The powerful leftist parties of India, which refuse to join the new Congress-led government but pledge to support it from the outside, raise issues regarding the stability of the new government and its level of commitment to the promised economic reforms.

Conclusion

Given the dynamics of India-ASEAN cooperation, further integration and interdependence is important. The forging of this relationship should not stop at the dialogue level of policy makers, but also through exchange programmes of youth, media personnel, academics, business people, government officials and artists. These relationships have the potential to build an enduring partnership based on mutual respect, interest and goodwill.

India has strong political and economic institutions for a country at its income level. It is a democracy where the rule of law generally prevails and property rights are adequately protected. By cross-country norms, it ought to have a level of income that is several times higher. The implication is that relatively minor changes in the policy environment can produce a large growth impact. India is expected to catch up with China's growth rates and these two countries are seen to be the future economic powerhouses of Asia. With a fairly developed social and economic infrastructure and continuing significant structural transformation across Asia, Asia should be a beneficiary of Western investment.

Mr Fatheyab Ali Khan, Chairman of the Pakistan Institute of International Affairs quoted economist Jeffery D. Sachs in his presentation, citing that the US economy at \$10.7 trillion is less than twice the Chinese economy at \$6.3 trillion and three times larger than the Indian economy at \$3.6 trillion. The annual growth rate for China has been around 10% (aggregate GNP) since the 1970's and India's growth rate has grown by around 6% since 1991 compared with US annual growth rate of 3.5%. Based on these measurements in comparable units of purchasing power, Sachs predicts that China is likely to overtake and India to equal the US economy in size by mid-Century. § Poh Heem Heem

The Economic Potential of the Penang Fisheries Sector

Introduction

With increasing emphasis being placed on development and industrialization, the fisheries sector is not getting due attention and hence its productivity potential and economic value not fully tapped. Further development of the fisheries sector in Penang is of utmost importance as it is a way in which the income base of the state can be diversified, thus reducing our dependence on industry is ideal for fishery harvest. To ignore this is to forsake a potentially profitable sector. Hence, this article will examine the economic value-added of this sector and the threats and opportunities surrounding this traditional income sector.

The Policies

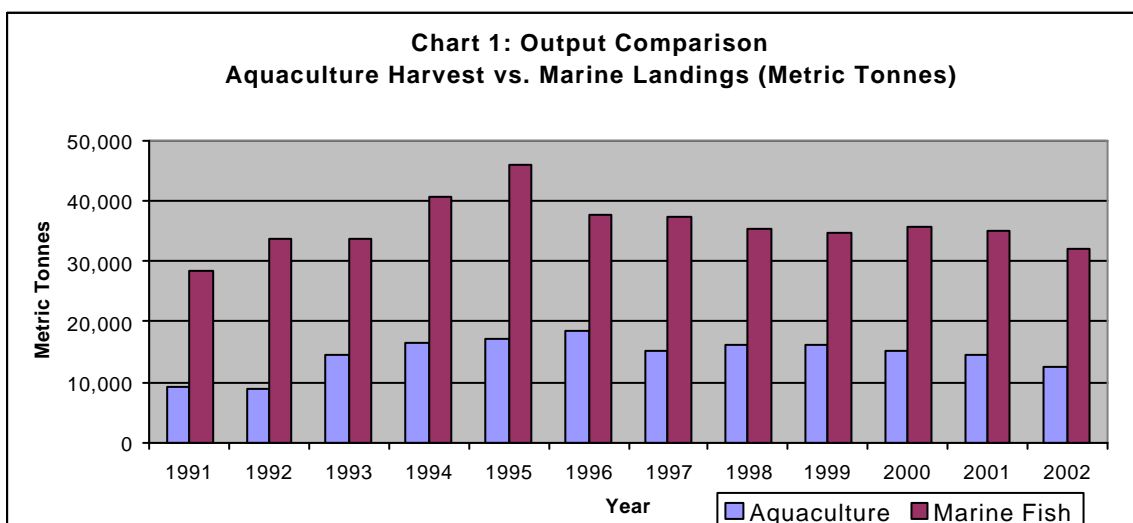
Fisheries in Malaysia today is a dichotomous sector with subsistence fishing coinciding with a modern commercial scale fishing industry as a result of a dual pronged policy regimen aimed at "uplifting the socio-economic status of fisheries" and "expanding and developing the fisheries sector."¹ The national leadership under Prime Minister Abdullah Badawi recognizes the pivotal role of the agricultural sector and hence has made accommodative policy changes to benefit this sector. The 8th Malaysia Plan aims to intensify inland and open sea aquaculture development in line with it plans to transform the agriculture sector into a modern, dynamic and competitive sector. It realizes the need to develop activities and crops with commercial potential including ornamental fish. It is also part of the 8th Malaysia Plan to provide supporting infrastructure such as modern landing and processing facilities.

At the national level, fisheries production is expected to increase from 1.5 million tonnes in 2000 to 1.9 million tonnes in 2005, registering a growth of 4.2% per annum.² The Federal government aims to harness the potential of medium and large-scale aquaculture, both inland and in the open sea, by establishing more production areas and encouraging greater participation of the private sector.

Fisheries policy and planning at the State level is carried out in accordance to the Federal Government's financial allocation and under its supervision, with minimal financial assistance provided by the State government. Large projects to be carried out at State level often require Federal level approval and funding.

A Snapshot of the Current Fisheries Environment

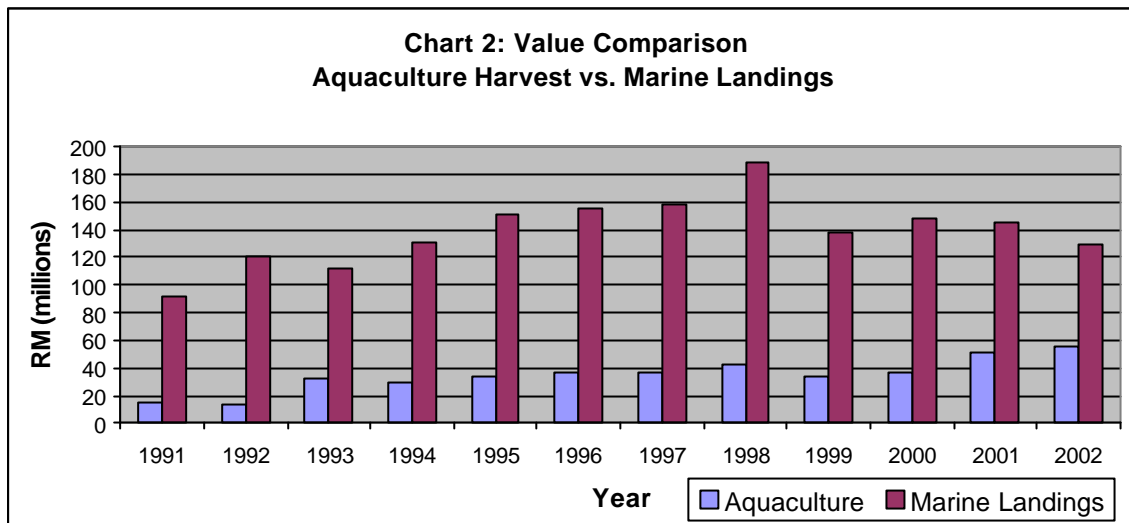
Two main income earners of the Penang fisheries sector are marine fish landings (i.e. captured fish products) and aquaculture. Aquaculture refers to the farming and stocking of aquatic organisms including fish, molluscs, crustaceans and aquatic plants. Recent trends point towards aquaculture's soaring worldwide production rates. However more so-



Source: Department of Fisheries Penang

¹ The main objectives for the enactment of the Fisheries Development Authority of Malaysia (Majuikan) as cited in Mohamad Nooraini, "Development of the Fishing Industry in Malaysia" Second ASEAN Cooperative Organisation Council Meeting, Kuala Lumpur, 1978.

² The Eighth Malaysia Plan



Source: Department of Fisheries Penang

bering statistics reveal that global marine fish stocks are in jeopardy, increasingly pressured by overfishing and environmental degradation. This is also true for Penang as shown in Charts 1 and 2 depicting a fall in metric tonnage of captured fisheries while metric tonnage of aquaculture products continue to climb over the years.

Marine Fish Landings

Coastal fishing, i.e., within the 5 nautical mile limit, remains a means of livelihood for traditional fishermen in Penang. Various factors contribute to the declining harvest rate of marine fish in Penang; some of which are:

- *Excessive fish harvest or Over-fishing*
Fisheries are a renewal resource and hence to remain sustainable must be harvested at a rate that does not exceed the biological yield. This simply means that too many fishermen or too many boats using inappropriate fishing gear threaten marine ecosystems and ultimately their jobs and income. To overcome this problem, the government has come up with "exit plans" for in-shore fishermen who are willing to leave the trade. These "exit plans" comprise some form of training and financial assistance to equip them with the ability to work in other fields; especially deep-sea fishing which is currently facing labour shortage.
- *Biology of Fish vs. Coastal Development*
The fragile balance of the ecosystem determines the size of fish population. Destruction of mangrove swamps in Penang for Coastal Zone Development have and will further affect the survival of fish fries and hence, fish stocks and other marine resources.
- *Environmental Degradation*
Over the years, Penang seawaters have become increasingly polluted. Without proper Environmental Impact Assessments (EIAs) and establishment of buffer zones amongst many other measures, sludge and waste will further contaminate the surrounding seawaters and mangrove swamps.
- *Encroachment Issues*
A common problem faced is the constant occurrence of illegal encroachment into Malaysian shores by fishermen from neighbouring countries.

It is no wonder then that remaining opportunities for marine fisheries lie within deep sea and international waters. Even then, we are latecomers into that field. The Taiwanese and Japanese have established their foothold in the Indian Ocean for tuna fishing a long time ago. Moreover, locals today are unwilling to sacrifice countless days out at sea. Many prefer to supplement their fishing income by engaging in part-time work such as hawking and trading. Thus deep-sea fishing today is the business of the bigger corporate players who employ foreign labourers to substitute our local fishermen. However, few Malaysian corporations have ventured into deep-sea, much less Penang-based companies.

Aquaculture

Presently, aquaculture in Penang produces higher-grade fish for overseas consumption while marine landings of coastal fishermen fulfill local demand. Thai and Indonesian imports fulfill unmet local demand. As the supply of marine fishes come under threat, more emphasis is being placed on the aquaculture industry to reduce import reliance in meeting local demand and to increase the export capacity of the fisheries sector.

Over the last 10 years, aquaculture production has grown six fold. The Fisheries Department currently targets an output level of 600,000 metric tonnes by 2010. To meet this target, suitable locations have been designated as aquaculture industrial zones (AIZs). Some AIZs in Penang are Pulau Aman, Pulau Rimau and Bukit Tambun.

- *Brackishwater pond culture and Marine Cage Culture*

This culture of saltwater and freshwater produces fishes such as the Barramundi (Siakap), Grouper (Kerapu), Tiger Grouper (Kerapu Harimau), Mangrove Snapper (Jenahak), Red Tilapia, Tiger Prawns and Mud Crabs. Brackishwater ponds and cages have the highest number of culturist and form the majority of Penang aquaculture. The estimated retail value of fish production from brackishwater ponds and marine cages for 2002 was RM 55.5 million.

- *Freshwater pond culture*

This culture produces the popular River Catfish, Red Tilapia, Javanese Carp and the Giant Freshwater Prawn. The estimated retail value of fish production from freshwater ponds for 2002 was RM 1 million.

- *Ornamental Fish*

Avid fish hobbyist will identify with the Malaysian Golden Arowana, the most expensive ornamental fish, the Spanner Barb, the Red Fighting Fish and the Croaking Gurami. These are some of the ornamental fish species recently bred by the Freshwater Fisheries Research Center based in Malaysia. The aquarium fish that are reared in Penang include the more popular species: Arowana, Discus, Flower Horn, Black Mollies, Guppies, Swordfish and Angelfish. The estimated retail value of ornamental fish for 2002 was RM 2.3 million.

- *Cockles & Oysters*

Penang is the 3rd largest producer of cockles in the country after Perak and Selangor. Cockle culture is the fourth largest income earner for the fisheries industry in Penang. Cockle spats are obtained from Selangor, Perak, Melaka and Johor where they occur naturally. The estimated retail value of cockles production for 2002 was RM 7.3 million.

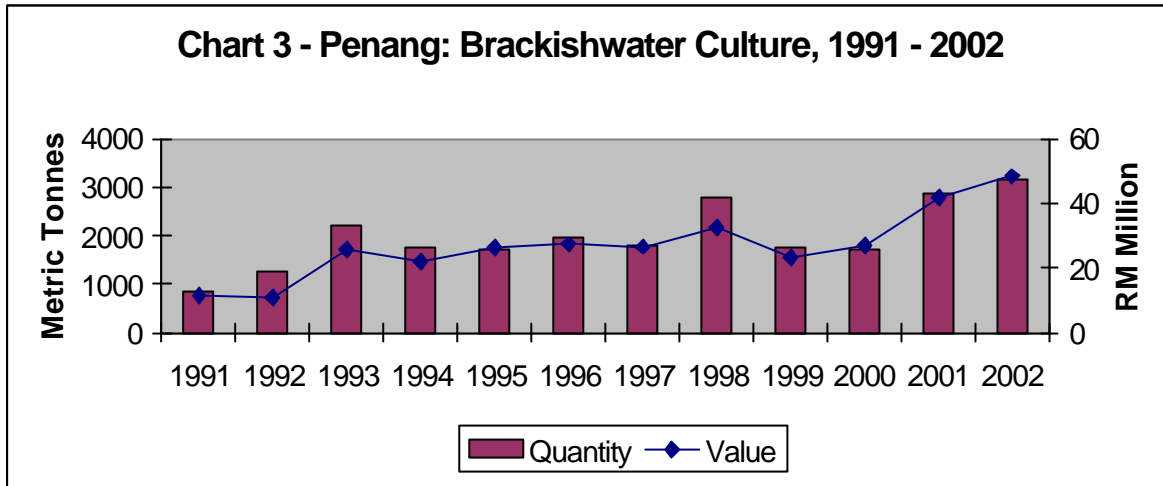
The oyster market in Penang is a rapidly growing one. At this stage, oysters are being imported from New Zealand and Australia to fulfill local demand. According to a local oyster cultivator, oyster spats are sourced from the East Coast for further cultivation at the Pulau Betong coastal waters. It takes between 8 months to a year for the oysters to mature to a marketable size. Industry sources identify 2 oyster cultivators in Penang at the moment. Though there is much potential in this industry the lack of technological know-how deter the entry of new cultivators while financial constraints prevent current cultivators from expanding their existing operations.

In 2002, there was only one oyster cultivator in the Barat-Daya district of Penang and the retail value of oyster production at 15.94 metric tonnes, was RM 637,000. Statistics for January to April 2004 highlight a retail value of RM 170,000. Simple interpolation of this figure reveals an estimated annual figure for 2004 at around RM 510,000 not accounting for surges in demand during festive seasons. This is expected due to the inability of existing cultivators to expand their operations.

The Economic Contribution

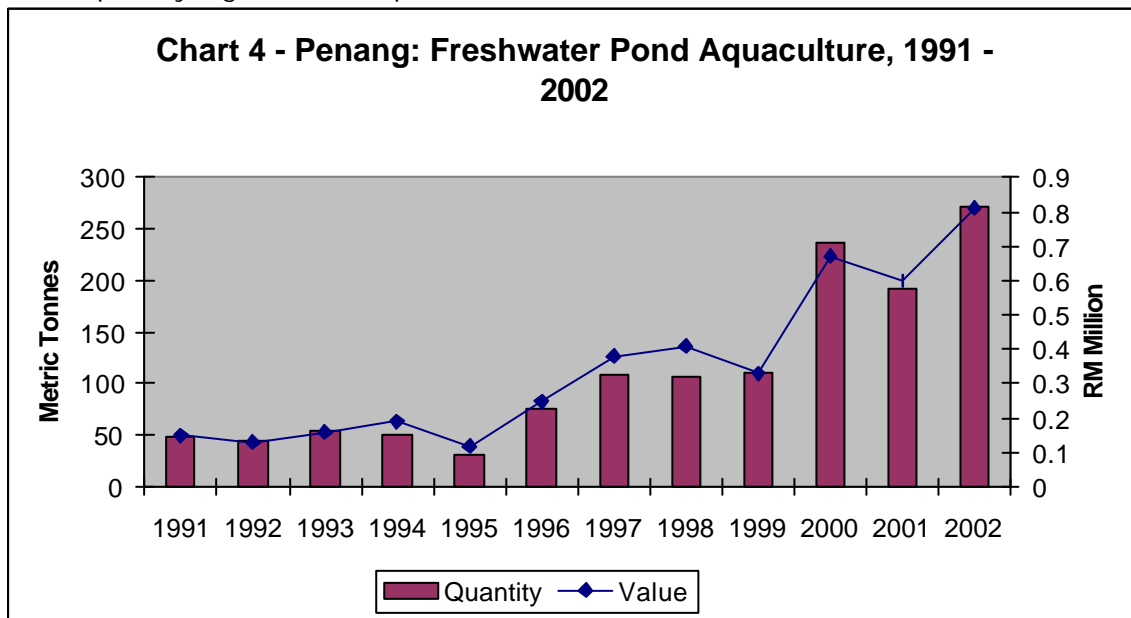
Brackishwater culture is the highest income earner of the aquaculture sector. Having consistently shown strong performance in terms of both production and value as seen in Chart 3, its healthy growth brings much promise to the overall fisheries sector. In 2001, the production value of brackishwater culture broke the RM40 million barrier for the first time, reaching 2,881.9 metric tonnes in production. By 2002, production and value for that year reached 3,163.0

metric tonnes and RM48.5 million respectively, the highest yet in the past 12 years, denoting a near 3-fold increase in production since 1991.



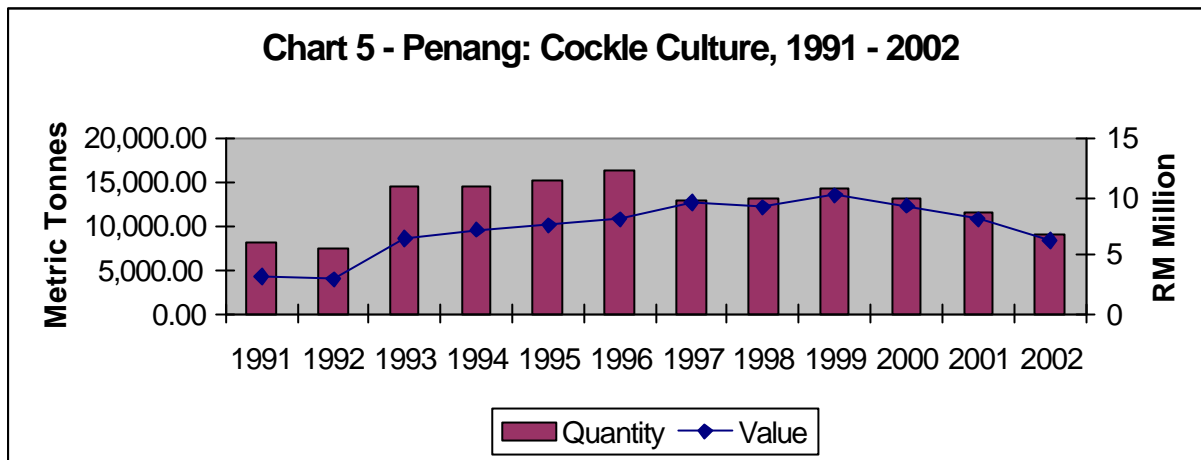
Source: Department of Fisheries, Penang

Freshwater pond aquaculture has on average grown at a rate of 26.5% per year since 1991 to 2002. In the space of 10 years, production yield has increased from 45.06 metric tonnes in 1992 to 270.42 metric tonnes in 2002, marking a whopping 450% increase over the years. Although its production value might seem insignificant compared to other forms of aquaculture, the consistent strong showing of performance by the freshwater pond aquaculture signals its potential, especially if given more emphasis.



Source: Department of Fisheries, Penang

Cockles, the fourth largest income earner in the Penang fisheries sector is experiencing a decline in production rates and value. In 2001, cockle yields were 11,599.46 metric tonnes (valued at RM 8.12 million) compared to 2002 cockle yields at 9,049.12 metric tonnes (valued at RM 6.33 million). The fall in yield is largely attributable to pollution.



Source: Department of Fisheries, Penang

The ornamental fish industry is currently nearing a worth of approximately RM100 million a year for an output of about half a billion fish and has a 95% export potential.

The RM 135 million Tuna fishing port presently being built by LKIM on a 8 hectare site at Batu Maung in Penang for tuna boats to call, will potentially earn RM160million a year directly and a further RM260 million from related activities such as packaging repairs and services. It is believed that 700 to 1,000 employment opportunities could be generated through this tuna fishing port and it is also expected to create various spin-off industries and help support other downstream industries.

Table 1 below highlights the performance in terms of value and growth of the fisheries sub-sectors from year 2001 to 2002.

Table 1: Sub-sectoral performance of the Penang fisheries sector

Activity	Value (RM million) 2001	Value (RM million) 2002	% Growth
Marine Fish	145.27	129.89	-12.59
Brackishwater Cage Culture	28.28	38.38	+35.71
Brackishwater Pond Culture	12.74	17.21	+35.09
Cockle Culture	8.12	7.24	-10.84
Ornamental Fish	7.66	2.28	-70.23
Freshwater Pond Culture	0.60	1.0	+66.67
Total	202.67	196.00	

The Prospects

With the global phenomenon of overfishing threatening the supply of marine fish, aquaculture fish farming will play an ever-increasing role. Countries such as China, Taiwan and Hong Kong are popular export markets for Penang aquaculture products. For ornamental fishes, strong demands continue to come out of Europe, United States, Japan and Australia.

There is potential to further develop oyster and cockle farming. Penang seawaters are unsuitable for breeding oyster spats and cockle spats. However, our waters are suitable for meat growth. For oysters, the spats are cultivated in the East Coast where the waters are good for shell growth. Upon reaching 3 inches, growth is stunted. This is when oysters

are then reared off Penang waters to achieve desired meat content. Technological and financial assistance is needed for the development of spat breeding in Penang.

The future growth of the fisheries industry lies in deep-sea fishing and aquaculture. Penang may suffer from land shortage but is bounded by waters suitable for fish culture. As aptly put by the Deputy Agriculture Minister of Malaysia, Datuk Seri Mohd Syariff Omar, Penang does have the environment that is conducive for the breeding and development of aquaculture especially with the presence of WorldFish Center, the Fisheries Research Institute and the Center for Marine & Coastal Studies (CEMACS) University Sains Malaysia (USM). It is these resources and expertise that will give Penang the competitive advantage in the fisheries sector.

There is also prospect for growth in the food-processing industries as locally sourced raw materials become more available.

The Importance of the Fisheries Sector for Penang

The need for diversification of Penang's economy to reduce dependency on industry is an urgent one. Many experts and economists have suggested diversification and moving up the value chain as our only methods of maintaining our economic competitiveness as more low-cost manufacturing centres begin to spring up around the world.

With the manufacturing and E&E sectors, there is heavy reliance on the MNCs for technology transfer and economic benefits. The fisheries sector however, is ecologically specific. Growth of the fisheries sector will decouple the State from its over-reliance on the industrial sectors and the MNCs. Furthermore, with research, development and the application of biotechnology – all of which are available in Penang – technology transfer is locally available and the state has the potential of producing high value-added fish and fish-based products.

The earlier sections of this article have highlighted the economic contributions of the fisheries sector to the overall GRP of Penang. These contributions, though significantly less than the manufacturing sector, are noteworthy because of its positive trends. It is evident that Penang has the potential to develop the fisheries industry given its competitive advantage in the form of readily available Research and Development institutions.

The fisheries sector is also the key to balancing trade flows. The increase in export capacity and quality of fish products will increase export yields and value. Moreover, fish is food and food is a basic need. It is therefore a means in which Penang can buffer its economy from the volatile global business cycles.

Although the fisheries sector only plays contributes 1.5% to the Penang GRP on its own, it plays an important role in supporting the growth of other industries and sectors. The fisheries sector is an important contributor to the processed-food industry - one of the top 10 most important export industries in Malaysia. Frozen prawns, canned fish, roasted eel and *surimi* are among the main marine products exported to other foreign countries. The availability of fishes that can be sourced locally will enable the producers to cut down on the cost of importing the raw materials from other foreign countries, thus lowering the cost of production. Fishes can be sent immediately to the factories to maintain its freshness and that will enhance the overall quality of the canned or processed food.

The traditional form of fishing is considered an art, and hence proves to be a valuable tourism resource. Fishing boat operators diversify their trade by venturing into the tourism industry when they are not out fishing. The fishing boat operators earn extra income by providing boat services to both local and foreign tourists for sightseeing purposes and to visit nearby isles and beaches such as the famed Monkey Beach. With a certain amount of payment, the operators will prepare picnic lunches or barbeque dinners at the beach. Not only does this add value to the fishing trade, it helps protect the fishermen from being over-dependent and reliant on fishing alone, and is a good way to maximize tourism potential.

Developed by the LKIM, Homestay is another tourism-related project carried out by local fishermen associations. Several locations have been identified for this agro-tourism activity and for Penang, 2 locations were selected, namely Pulau Aman and Seri Idaman Teluk Tempoyak.

The restaurant industry is an important contributor to state GRP. The need for a continuous supply of marine products creates a high level of interdependency between the restaurant industry and the fisheries industry.

Conclusion

The Fisheries sector offers an alternative income stream for the Penang economy which remains heavily reliant on manufacturing and services. However, to tap the full potential of this sector, much has to be done.

The government can assist our export capacity by encouraging existing R&D institutions to collaborate with the players in this industry. Although exports are a main revenue earner, it must be understood that we currently face strong competition from Thailand and Indonesia in competing for exports to North Asian countries.

These countries have advantage over us in terms of human resources whereby fishing still attracts a large number of the workforce. The Malaysian people however, have the option of working within the more comfortable environment of factories, which pays just as much or even more, without the time and family sacrifices. As a result, this sector is beginning to show more reliance on foreign labour to meet the shortage of deep-sea fishermen. In response, the Fisheries Department has recognized the need to increase the job prospects of the fishing industry and is planning to develop and train as many as 80 skippers a year under the Ministry of Agriculture's deep-sea fishing skippers development programme aimed at providing the skilled manpower and professionals needed by the industry.

The other way to gain a larger export market share is through the better quality of goods sold. There is a need for the relevant authorities to fine tune and coordinate the efforts of local fishermen with the abundant expertise available through institution-industry linkages via public-private sector research collaboration and contract research. This will direct future research towards more market-demand oriented needs and improve the overall performance of the industry.

In its policies, the government should also aim to strike a balance between agriculture and manufacturing. Manufacturing activities and agricultural activities do not jive. The negative externalities if not properly controlled and monitored are hazardous to the environment and hence directly impact the agricultural sector – a very recent example being the decline in cockle production. There is urgent need for proper monitoring processes and transparency in approval of manufacturing projects to ensure sustainable development of the country. Transparency in the implementation of proper Environmental Impact Assessments would be a great step to begin with.

Presently, individual operators and small-scale companies operate the aquaculture sector. These small-time entrepreneurs who have limited access to funding and technology have managed to perform relatively well. Over the years, the entrepreneurship spirit has sustained them and trial and error methods of breeding and cultivating have produced world-class fish stock. With appropriate technical and financial assistance, there is much potential for these to be developed into medium to large-scale companies.

Financial constraints pose a major issue in this industry. It prevents further expansion to tap the full potential of the industry. A case in point is the plight of a local oyster cultivator who possesses the technological know-how to breed oyster spats but not the financial capability because considerable financial investment is necessary for operating the world-class aquaculture facilities that are required for such a large-scale project. Fishery experts believe that the reason for the low levels of participation from the private business sector is the lack of information dissemination on the potential profitability of this sector. The government can assist by highlighting the profit potential of this industry to the private sector, thus encouraging the injection of private funds.

In summary, there is much potential in the Penang fisheries sector. Basic and supporting infrastructure such as world-renowned research institutes, processing facilities, ports and airports are readily available in addition to the positive trends demonstrated by the respective sectors within the fisheries industry. § **Dr. Chan Huan Chiang, Poh Heem Heem, Tan Yin Hooi**

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The Star, Penang Can Be Top Exporter of Ornamental Fish, 19/04/2004

Up-coming Event

Friday, 24 September 2004

Panel Discussion

"2005 Federal Budget: What It Means For Penang"

Grand Ballroom
The Northam All Suite Penang

In conjunction with the release of the 2005 Federal Budget, the Socio-Economic & Environmental Research Institute (SERI) invites you to its inaugural Post Budget Dialogue Session entitled "*The 2005 Federal Budget: What It Means For Penang*".

Held for the very first time in Penang, this dialogue session aims to provide an in-depth analysis and multiple perspectives of the budget and its implications on the Penang economy. This session will be chaired by YB Dato' Dr Toh Kin Woon - *State Executive Councillor for Economic Planning; Education and Human Resource; Science & Technology and Innovation cum SERI Chairman* and comprises 4 prominent panelist from the Malaysian corporate and academic sectors.

PROGRAMME

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| 2.30 pm | Arrival and Registration of Guests and Participants / Informal Interaction |
| 3.00 pm | Welcoming Remarks by Dato' Dr Toh Kin Woon, State Executive Councillor for Economic Planning; Education and Human Resource; Science and Technology cum SERI Chairman |
| 3.15 pm | Budget Dialogue |
| | Speakers: |
| | § <u>Mr. Pankaj Kumar</u>
General Manager / Head of Research, OSK Research Sdn Bhd |
| | § <u>Mr. Ahmad Saifuddin Morat</u>
Economist, Mayban Securities Sdn Bhd |
| | § <u>Ms Lindy Ong</u>
Tax Partner, KPMG Tax Services Sdn Bhd |
| | § <u>Dr Chan Huan Chiang</u>
Associate Professor, Center for Policy Research, University Science Malaysia |
| | Chairperson: |
| | § Dato' Dr Toh Kin Woon |
| 5.15 pm | Closing Remarks by the Executive Director of SERI, Ms Tan Pek Leng |
| 5.30 pm | Refreshments / End of Session |

For Invitation, please contact Pn Rohana at 04-228 3306