Fisheries and Aquaculture Case study Synopsis Series

1. South Africa

Beating the water shortage

South Africa is a difficult mix of an advanced services economy with very serious structural and inequality issues, the second arguably a consequence of the first and of the apartheid era policies. Aquaculture makes almost no contribution to the economy yet its potential for improving food security and providing work is good. Murdoch Mactaggart reports.

South Africa became a democracy some seventeen years ago with the first multi-racial elections in 1994 and the election of Nelson Mandela as President of the republic. Much has changed since then but the country still has major problems. A great deal of the infrastructure remains outdated, a reason for the major electricity disruptions in 2007, for instance, which affected not only great swathes of residential areas but also had a direct impact on industry and which consequently economic growth.

Despite the ending of apartheid with its favouring of white South Africans at the expense of black citizens and despite the economic growth the country's financial inequality has actually got worse – the Gini coefficient (a standard statistical measure, frequently used to consider a country's or region's wealth dispersion) stood at 59.3 in 1994 but had increased to 65 (US CIA figures) by 2005 making the country the second highest in the world after the Central African Republic.

These Gini coefficient figures may well be somewhat distorted on account of the influx of very poor migrants, for instance from Zimbabwe, but they nevertheless indicate serious issues. Over 25% of the country's 49 million population receives social security payments, the unemployment rate is almost as high and exactly half the population is considered below the World Bank's line defining poverty.

Despite this disturbing state of social and economic affairs, at least substantially a residue of apartheid era policies, South Africa has good resources and huge potential in various directions although there are also major constraints particularly around water availability.

Egypt is slightly smaller than South Africa and with its arid climate and deserts and a population of over 82 million would seem at first sight to be far worse placed than South Africa, despite the benefit of the Nile. Yet South Africa's renewable water resources are only 50 cubic km compared with Egypt's 86.8 cubic km. South Africa draws 264 cubic metres of fresh water annually per head while Egypt draws 923.

Some 12% of South Africa's land is arable compared to just under 3% of Egypt's yet Egypt has over 34,000km^2 of irrigated land while South Africa has less than half that amount at just under 15,000km^2. Partly in consequence agriculture in South Africa contributes 3% to GDP and employs 9% of the population while in Egypt the figures are 13.5% and 32% respectively. Water is a critically important resource.

Hard knocks

Fishing, part of the agriculture sector, is almost entirely sea-based, over 80% in the Western Cape Region and with a further 12% in the Eastern Cape. The annual catch fluctuates but 2008 figures were around 675,000 tonnes, much of that of hake, squid and tuna.

Anchovy and sardines are also caught and there's a reasonable amount of commercial crustacean fishing. South Africans eat an average of 7.6kg of fish a year, under the sub-Saharan average of 8.3kg, according to FAO figures. However, the country is a nett exporter of fish and fish products, the export trade bringing around $530 million in 2008.

Two factors in particular have hit South Africa's fish trade hard – the world recession and the significant effective devaluation of the Rand against the Euro. The major overseas markets for South African squid and tuna were Italy and Spain and although Italy may have been less affected by the recession there's still been a major cut back in personal consumption, directly impacting on imports of higher value fish and fish products. In Spain, of course, the situation is even more serious.

This reduction in demand on account of straitened personal financial circumstances arising from government policies to meet the costs of earlier financial sector mayhem was bad enough but between 2006 and 2009 the Rand nearly halved in value from R7.4/€ to R13.93/€. This might have mitigated some of the other effects on overseas sales, € prices now being lower, but it necessarily meant that returns priced in Rand would be lower. The Rand has strengthened somewhat and now stands at about R9.5/€. There's been pressure on the government to weaken the Rand's value, effectively devalue it somewhat, in order to help exports but it's resisting this policy approach.

In addition to the commercial marine fishing sector there's some very small scale subsistence fishing, mainly in Transkei and the northern coast of Kwazulu Natal. It's very difficult to get reliable information on this sector.

SMEs are recognised as an engine for growth and aquaculture is potentially very important for meeting food security needs and providing employment

Molluscs and seaweed

Aquaculture in South Africa is very undeveloped and amounts to around 2% of the total African production or 0.01% of world output. In part this is due to South Africa's water difficulties but even the mariculture sector is small. According to FAO figures the 2008 mariculture output amounted to just over 2,000 tonnes, around half of that being farmed abalone. Fin fish amounted to a mere three tonnes although there was a further somewhat unusual crop in that over 1,800 tonnes of seaweed was produced.

Unlike the situation in many other countries large commercial aquaculture companies dominate the market, 15% of total output coming from one company, Oceana, and a further 30% from another five. The remainder, 55%, is shared among small companies in the sector.

There's some fresh water fish farming but the shortage of water is a major constraint as far as the growth of this sector is concerned. Over the industry as a whole there's a lack of both technical skill and understanding and of relevant extension services. Legislation as it relates to aquaculture appears to be complex and somewhat limiting and, as almost invariably appears to be the case in other countries, financial services support is poor – finance suppliers don't properly understand the industry and consider it unduly risky and fish farmers are generally not very good at keeping records and developing compelling business proposals, the six dominant commercial firms perhaps excepted.

There's said also to be problems in terms of good quality seed stock and species choice, with related technical issues like veterinary support and to perhaps cap the sector's limitations, marketing services are poor leading in turn to poor marketing and selling structure and poor market penetration.

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The government has recognised aquaculture as a potentially important sector but doesn't necessarily appear to be doing very much about supporting or promoting it, a few innovative initiatives perhaps excepted. Fresh water production has increased, however, and now stands at around 1,400 tonnes annually, having peaked in 2003 at 2,200 tonnes.

No easy finance routes

Buying, or building, and fitting a marine fishing boat is expensive in part on account of the investment needed in licences. In the squid fishing sector, for instance, prices for vessels and permits would range from about $43,000 for a seven metre boat through to perhaps $1.5 million for one of 20 metres in length and with a crew of 26. In the latter case the permit cost, at about $18,000 per head, would amount to a third of the total cost.

The South African banking sector is well established and is dominated by four large commercial banks which between them account for almost 84% of the total assets employed. These are Amalgamated Bank of South Africa (ABSA), FirstRand Bank, Nedbank, and Standard Bank. Standard Bank has spread over Africa and well beyond but is now retrenching in order to focus purely on Africa.

There are also several state-owned development and other finance institutions intended to support SMEs or to focus on particular sectors. A couple of recent government Acts are designed to have banks increase their branch network and to develop accessible credit markets to meet the needs of remote communities and the low-income population.

The needs of SMEs can be very different from those of larger companies in an industry

Until around the end of 2008 the banking sector was in reasonably good shape but it's now contending with increased proportions of non-performing loans and problem issues like increased credit card account defaults arising out of reduced income and increased interest rates. At the same time between 1994 and 2008 the access to banking services has jumped from 25% to 63%.

As in most localities SMEs in the fisheries sector, and here perhaps particularly in the smaller aquaculture sector, have a hard time getting finance. The reasons given by the banks are much the same as elsewhere, lack of collateral heading the list at 45% of the cases where finance was declined. The sector is also considered high risk, 32.7% of refusals being attributed to that view on the banks' part. However, although lack of adequate record keeping also featured at 11.7% it was lower than in many other localities.

Specialist approaches

One of the institutions in the SME finance market is a specialist investment group called Business Partners Limited. This was established in 1981 as a 50:50 public private partnership specifically to provide financial support and mentoring services to small and medium enterprises in South Africa. Over time the structure has changed and the public proportion has reduced to 20%. The company has also expanded with 21 branches across South Africa and a presence in Kenya, Madagascar and Mozambique.

Since Business Partners began thirty years ago it's invested around $1.5 billion in financing some 68,145 SMEs and helping to provide over half a million jobs in the process. The company typically lends upwards of about $35,000 to a maximum of perhaps $700,000 with an average value of around a third of that higher figure. The company considers various criteria in deciding if and how much it will lend with, it says, the most important criterion being the capability and profile of the entrepreneur involved.

Business Partners Limited will invest directly in SMEs, typically on a pro-rata basis with other investors if no collateral is available. However in other cases, perhaps because the business is too small or the owner is reluctant to give up some equity, the company will set up a so-called Royalty Deal whereby any loan will be made at prime rate plus an agreed royalty fee based on turnover.

The company claims that its business model is distinctive on a number of counts: it will invest in and support SMEs with limited security to offer; it takes a flexible approach, customising deals to the precise needs of the borrower; it exerts financial discipline, requiring reporting/management systems capable of properly tracking progress; it builds in exit strategies so that the business can expand independently; it supports borrowers by providing advice; and it makes rapid decisions on whether or not to agree an application.

A second financing model is a cooperative approach, typified by a cooperative partnership called Sea Freeze which was founded in 1984-85 by 16 major squid operators from Cape Town. Working together in this way brought the members economies of scale, lower taxes and larger profits as well making it easier for individual members of a successful cooperative business such as this to access finance.

In time, however, the cooperative fell apart. Members disagreed about the best time to sell communal stock, some wanting early sales in order to meet their cash flow needs, others preferring to wait until prices rose and better profits could be got. Management skills were also found wanting, conflicts of interest as between producer interests and shareholder interests arose and eventually people came to distrust what they were told in terms of prices got for squid sales.

No one size fits all

Legislators, perhaps unduly influenced by those lobbying on behalf of large commercial companies, often fail to realise that the needs of SMEs can be very different from those of larger companies in an industry and so enact inappropriate legislation. So it is in the case of small scale fishing in South Africa. For instance, fisheries policy makes provision for individual transferable quotas, rights that people have to apply for based on certain criteria. However, these particular criteria cannot be met by artisan fishermen and so members of that sector must necessarily remain outside the formal legal framework.

Artisan fishers work within a wide range of eco-systems and these eco-systems will determine their operating approaches. There may also be differences in culture, tradition and perhaps marketing or administrative processes between one small scale fishing community and another and so these communities remain unable to access finance and will typically rely on informal moneylenders charging high rates of interest.

For the future, a number of changes need to be implemented with the general aim of providing financial and other support to the SME fisheries sector, both capture and aquaculture, and also to recognise fully the potential of the aquaculture industry and to ensure that it grows both through SME activity and larger company activity.

Potential is there

South Africa has huge potential although there are also major constraints

Given the water constraints affecting South Africa mariculture would seem to be the better sector on which to focus. The country has some 2,800km of coastline and the potential for both sea and brackish water farms is considerable. At present most of the mariculture is of molluscs but there's no real reason why crustaceans such as crayfish or appropriate salt water fish should not be farmed as well. A strong, profitable aquaculture sector will also encourage the setting up of ancillary businesses such as hatcheries or shrimp nurseries.

Freshwater aquaculture is also certainly possible although it will require innovative thinking. It may be possible, for instance, to develop integrated systems whereby water is used initially for fish culture and then passed on to crop fields or for animal use, as is done in desert areas in Egypt. The South African Department of Science and Technology working with the University of Stellenbosch and other partners has developed initiatives to support trout farmers using cages placed in the irrigation waters of wine estates or public facilities. In other initiatives the Department of Environment and Tourism has been conducting research into sustainable mariculture of a larger range of species.

And as far as the artisan fishing sector is concerned there needs to be recognition of the particular circumstances and needs of small-scale fishermen: community organisations need to be recognised legally; the allocation of fishing rights need to be community-based; there needs to be capacity building in the management of collective businesses; and the special circumstances of the sector need to be recognised through the setting up of specialised financial funding for these small scale communities.

SMEs are increasingly recognised as an engine for growth and aquaculture is potentially very important for meeting food security needs and providing employment. Bringing these elements successfully together could be of considerable benefit to South Africa.

This case study synopsis has been produced by **Murdoch Mactaggart** and is based on a case study undertaken by **Ana Marr, Charles Chiwara and Elijah Munyuki.**

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