

# Ports and shipping in Mozambique: current concerns and policy options

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This paper explores the current state of ports and shipping in Mozambique, and reviews it in the context of a past history of civil war followed by radical macro-economic adjustment, and more recent concerns and debates around the deregulation and privatization of the transport industry. More specifically, it addresses the key issue of the relationship between shipping and both broader and local economic development, taking account of the needs of major industry and the need to sustain local livelihoods. It reveals that the situation in Mozambique is a product of both local and global pressures, moulded by economic and political forces. It further indicates that, while there are now positive opportunities for coastal shipping, the capacity for developing inland shipping appears to be very limited. Future growth consequently depends on local participation, training and skills development and the broader social, economic, and transport infrastructure.

## 1. Introduction

Shipping in Mozambique has long been an important life source, both for the overall economy and for local concerns. However, the civil war that stretched from the late 1970s to the early 1990s, and radical economic reform in the latter decade have had cumulative effects on the Mozambican transport infrastructure as a whole, and not least for the shipping industry. On the one hand, the future for coastal shipping, ports and associated transport corridors is now more positive due to the cessation in hostilities in 1992 and the aid windfall that followed. Nevertheless, it has proved far easier to attract overseas financial support for infrastructural rehabilitation than maintenance and supportive skills development. Against this background, this paper addresses the key issue of the relationship between shipping and both broader and local economic development, taking account of the needs of major industry and the need to sustain local livelihoods.

## 2. The East African context: deregulation and privatization

The current situation in Mozambique should be considered against the background of political and economic transformation in East Africa as a whole. The rise of neo-liberalism in the 1980s challenged the previous consensus that geographic inequality led to economic inefficiency [1, p. 355]. Moreover, neo-liberal policies also led to the widescale neglect of social concerns, particularly in respect of the poor [2]. Neo-liberalism was not only the common discourse at the national level but also

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reinforced at the international level, demonstrated by both World Bank and International Monetary Fund (IMF) prescriptions for tight fiscal and monetary policy [2]. Thus, in order to secure funding, national governments often agreed with imposed policies, irrespective of whether they were deemed to be politically feasible [3]. Not surprisingly, this had severe implications for 'uncompetitive' industries and regions and for national training capabilities. Within the developing world, the practical result was the privatization, or at least marketization of state-owned industries and infrastructural facilities, such as ports and harbours. Together with calls to reduce protectionism, this resulted in increased inequalities both within and between nations and regions.

Neo-liberal policies had several key implications for regional shipping within southern Africa. One of these was related to the funding by, and involvement of, national governments in transport. Capital expenditure on parastatal shipping companies was heavily reduced and, indeed, in Mozambique there was full privatization of shipping companies. At the same time, competition between national railways companies was intensified, and this affected the direction in which goods were routed, and the choice of ports for transshipment (see [4]). Thus, the inter-linkage between modes of transport necessarily had cumulative effects on the industry as a whole. Coupled with this, the cuts in expenditure also extended to areas such as education [5, p. 201]. This exacerbated existing skills shortfalls, and hence the capacity and sustainability of the transport industry.

A further contributing factor to the demise of the shipping industry was related to the reduction in protectionism. Again, this impacted most severely on developing countries. Indigenous manufacturing firms faced intensified international competition, but lacked the capital and skills available to transnational firms [6]. Rising imports were not matched by the export industry. This tendency is reflected in the recent trade statistics for Mozambique which show a balance of trade deficit of US \$271.3 m [7]. This is at least partly due to the heavy reliance on a few agriculture and fishery products [8].

Challenges for developing Africa also arose from a more general crisis of competitiveness. This was related to an over-supply of ships, depressed freight rates and increased pressure on labour costs [9–11]. A dramatic increase in the size of container ships accompanied these changes. Thus, while the first container ships were approximately 200 TEU, by the early 2000s they were typically 8000 TEU, and the preferred method for transporting semi-processed and finished goods [12, 13]. These developments forced a consolidation of the industry, and also a reduced interest in servicing marginal routes [14]. This would logically have adverse consequences for ports such as those in Mozambique that traditionally had reputations for long handling times and inefficiency, since this represented greater direct costs for shipping companies servicing the port (see [4,15]).

### **3. The Mozambican context**

Map 1 depicts Mozambique, together with the borders that it shares with neighbouring countries and its major ports.

In the colonial period, much of the Mozambican economy centred on the transport network and related services, with Maputo serving as a major outlet for South Africa's former Transvaal province, and Beira as the outlet for the then Rhodesia [17]. The winning of independence, the hostility of white minority regimes in both South Africa and then Rhodesia, and the subsequent civil war which was itself a



**Map 1. Mozambique [16].**

product of destabilization by these states, brought Mozambique's transport network to its knees. The resultant economic problems were exacerbated by: the flight of many of the white colonists who had dominated many of the skilled occupations in the colonial era; poorly conceived attempts at centralized planning; and the apartheid regime's decision to limit the recruitment of Mozambican migrant labour [18].

The cessation of hostilities in 1992 between the ruling party, Frelimo and the rebel movement, Renamo, and the subsequent democratic elections opened the way for Mozambique's economic reconstruction. Frelimo became, and still is, the ruling Party, obtaining an overwhelming majority in the November 2003 elections [19].

During the closing stages of the civil war, the end of Soviet financial aid forced Frelimo to abandon its socialist experiment, and turn to the IMF and the World Bank for financial support. Indeed, in recent years, 50% of government spending and 75% of public investment has been financed by external aid [20]. This funding, however, was for infrastructural projects, most notably the reconstruction of port facilities and rail linkages to the interior, and not for maintenance and human resource development. In addition, it expectedly came with stringent conditions attached, centring on a reduction in state expenditure, the phasing out of protective tariffs and increased privatization [21,22].

Privatization in Mozambique has, arguably, been both hasty and careless [23]. Thus, in 2003 the Mozambican government was moving toward the privatization of essential services such as water [24], albeit that growing evidence from other African countries has highlighted the detrimental impacts of the privatization of utilities (see, for example, [25]). The tightening restrictions have continued in recent years, so that in 2003 recommendations in an IMF public information notice included those for a reduction in the wage bill of public sector workers, reduced redundancy payouts, and reduced 'labour market rigidities', implying that Mozambican workers have too many rights. This is irrespective of the need to maintain or improve the numbers of teachers, nurses and police in order to reduce poverty and maintain security [26], clearly necessary since Mozambique's Human Development Index is still well below the sub-Saharan average, ranking it at 157th out of 162 countries [8]. However, it soon became apparent that the World Bank projections of development were faulty [27], and, moreover, that Mozambique's health and educational systems have been severely damaged in the process [28]. In 2002, life expectancy in Mozambique was estimated at only 35.46 years, compared, for example, to Canada having 79.69 years. Similarly, the literacy rate in 2000 was 48% compared to Canada at 97% [29]. In addition, adjustment has had severe negative implications for Mozambican industry, resulting in an increased dependence on imported goods, and severe regional imbalances in economic growth [30]. This imbalance has become a source of strong discontent in the centre and the northern regions [20].

#### **4. The collapse and revival of coastal shipping**

As was the case with road transport within the country, coastal shipping had virtually collapsed by the early 1990s, as a result of both the war and chronic mismanagement. This led to the further decay of secondary and tertiary coastal ports and contributed toward the reversion of large areas of the hinterland to subsistence production. Reflecting this collapse, the state shipping company, Navique ceased the bulk of its operations.

The 1992 peace settlement paved the way for the revival of coastal shipping. In 1996, deregulation allowed several private foreign-owned shipping firms to enter the market, providing container shipping between Nacala, Pemba, Quelimane, Beira, Maputo and Durban (South Africa). In addition, there has been a resumption of limited commercial traffic to the ports of Mocimboa da Praia and Chinde. In 1997, Navique was partially privatized, so that in 1997 Focus bought 31% of the line, Transportes Maritimos Insulares SA (Transinsular) bought 49%, and the remaining 20% remained in State hands [31]. However, initial opinions as to its performance following 'marketization' were very mixed, at least partly due to the alleged corruption during the initial phase of private management (Cardoso, in [32]). For example, Cardoso has alleged that handing the company over to private management while

retaining an initial monopoly allowed a small number of insiders to reap lucrative returns in the mid-1990s, despite mediocre performance. Whilst Navique's fortunes have somewhat revived, it currently only has a fleet of two operational vessels, the modern coasters—and sister ships—*MV Songo* and the *MV Pemba*, built in 1985 [33]. This is not, however, the whole picture, since today, Transinsular is the principle shareholder, and hence it falls under the ETE Group [34]. Navique's provision thus forms part of a pool with Mozline/Unicorn, providing traffic between Mozambique, Tanzania and Kenya (as detailed further under the section on national flag and liner services below). This has resulted in the resumption of regular liner services to the ports of Quelimane, Pemba, Nacala, Beira and Maputo, and, in addition, it can be noted that a third ship for the transportation of bulk cargo is also envisaged [35].

At the same time, coastal shipping has faced greatly increased competition from road transport, which, in many areas, had ceased during the civil war. This is reflected in the emphasis of World Bank funding. In 1993, a \$966 million project was co-funded by the World Bank and other donors. The project was part of the World Bank's 1992–1996 Roads and Coastal Shipping (ROCS) initiative, and was aimed at the rehabilitation of ports, the restructuring of Navique and the rebuilding of roads. However, while significant donor money was channelled into redeveloping the facilities of the country's main ports, most of the ROCS funds were spent on rebuilding a limited number of key arterial roads. Money earmarked by ROCS I and II for the rebuilding of secondary and tertiary ports was diverted to cover cost overruns for the roads component [35].

On the one hand, the rehabilitation of key roads has had a positive impact in that it has reopened internal trade within large areas of the country. On the other hand, much of the expenditure has been devoted to rebuilding much of the north–south main road, duplicating coastal shipping provisions. Moreover, heavy truck users do not pay for the use of roads (other than nominal indirect amounts via taxes), resulting in an effective cross-subsidy by the authority responsible for maintenance, the Ministry of Transport and Communications (c.f. [36, p. 202]), a subsidy that is, of course, not available to shipping firms. Meanwhile, the former World Bank representative in Mozambique, Roberto Chavez, has charged that the use of expensive asphalt-based technologies has saddled Mozambique with roads it cannot afford to maintain [37]. This has had seriously adverse effects for coastal shipping, especially as it makes it less economic to service secondary ports that retain poor road links.

The ROCS programmes have been followed by the \$ 1.7 billion, 10 year long, Roads III initiative with, again, a large proportion being funding by World Bank loans. Although it is somewhat more decentralized, with a stronger emphasis being placed on maintenance, Roads III makes no direct provision for promoting coastal shipping. Moreover, Roads III's main priority remains the completion of the rehabilitation of the main north–south highway [38–40].

However, it should be noted that as part of post-war reconstruction in the early to mid 1990s, the World Bank/NORAD/Government of France has funded a separate \$23bn project to rehabilitate coastal shipping facilities. This has greatly enhanced the capacity for coastal trade. Moreover, as noted above, the physical infrastructure of Mozambique's major ports has significantly improved over the past decade. This has been achieved through public–private partnerships such as the MPDC (Maputo Port Development Company). MPDC is a consortium consisting of the British Mersey Docks and Harbour Company, the Swedish company Skanska BOT and a

Portuguese company, Loscont Operadores de Contentores, and owns 51%, while the government and the public company Caminhos de Ferro Mocambique (CFM) own the remaining 49%. The contract was awarded to MPDC in April 2003 for 15 years. The MPDC will invest US 70 million over a 3 year period in new tugs, the construction of a new port entrance linking to the N4 highway that runs from Maputo to Johannesburg, the purchase of new equipment and the upgrade of roads [41]. While traditionally coastal shipping in Mozambique has been northbound (with manufactured goods and processed foodstuffs), with ships returning southwards empty, southbound traffic has now improved [22], with cargoes of primary agricultural goods helping to offset the imbalance.

### **5. National flag and liner services**

There are three cargo ships (1000 GRT or over) flying the Mozambican flag (total 4125 GRT). Navique provides liner services between the South African port of Durban, and Maputo, Beira and Nacala. In addition to Navique, there is a second Mozambican-registered shipping company, Mozline. This is a private firm, and has approximately 60% of the domestic shipping market. Navique has around 40%, although there are 'one or two small players' servicing small ports (McKenzie, quoted in [42]) on a tramp basis. Mozline operates closely with the South African line, Unicorn, providing international feed links under the umbrella of Unicorn's Uni-Feeder operation, and shares vessels with them to service secondary Mozambican ports. Uni-Feeder's weekly liner service, the East Coast service between Durban and Mombassa, operates named-day sailings calling at all major ports in Mozambique. Unicorn holds 40% of Mozline's shares and, as such, is the firm's largest shareholder. Mozline co-operates with Navique to jointly offer liner services to the secondary ports of Quelimane and Pemba, although the market is quite small.

While Navique's two vessels are locally crewed, Mozline employs a fleet of chartered vessels that are registered around the world (McKenzie, quoted in [42]); Mozambican cabotage legislation forces firms servicing the country's coastline to be locally registered, but not necessarily the vessels they employ. While Mozline do employ a few Mozambicans for port operations, the number is relatively small. Given the policy of using foreign chartered vessels, Mozline do not appear to be in favour of legislation compelling coastal shipping to be nationally flagged, since this would have cost implications, and they seek to maintain flexibility (McKenzie, quoted in [42]).

### **6. Ports**

Mozambique's principal ports are Nacala (which serves as a natural outlet for Malawi), Beira (Zimbabwe) and Maputo (southern Zimbabwe, and parts of South Africa). In addition, there are a number of important secondary ports, including Pemba and Quelimane. A comparison of the traffic between these ports during the years 1995 to 1998 is shown in table 1. More detailed and updated figures are discussed in later sections, in respect of the three main ports.

The main ports were developed to serve regional trade: Nacala as an outlet for Malawi, Beira for Zimbabwe, and Maputo, for South Africa's Gauteng region and for southern Zimbabwe. There has been some growth in traffic in recent years, which has been attributed to the gradual increase in the use of Mozambican ports and railways by neighbouring countries. For example, in the first half of 2002, each of the ports handled 2.4 per cent more cargo than in the same period of 2001. However, the

**Table 1. Mozambican port traffic 1995–1998 [43].**

	1995	1996	1997	1998
Maputo	2625	3180	3417	3469
Beira	4160	4591	4709	3216
Nacala	492	423	482	503
Quelimane	160	158	257	300
Pemba	71	53	103	119
<b>Total</b>	<b>7508</b>	<b>8405</b>	<b>8966</b>	<b>7606</b>

(All figures in '000 port tons).

northern rail system is still a problem [44] since donor funding covered the costs of rebuilding the entire railway between Malawi and Nacala port, with the exception of a crucial 30 km close to the Malawian border [44]. It has not been possible to secure funds for this last section and it has remained in very poor condition, with frequent derailments, excessively low speeds notwithstanding. Hence, there are frequent delays in the transport of freight from Malawi to Nacala port, with knock-on effects for shipping servicing that port. In addition, Beira's traffic declined in the years following a peak in 1997, reflecting the malaise of the Zimbabwean economy. However, it is likely to increase again, with large-scale food imports being necessary following the collapse of agriculture in that country. Nonetheless, it is likely that Maputo will continue to overtake Beira as the country's major port. Nacala's traffic has continued to increase since 1998, following the near-completion of the rehabilitation of the above mentioned railway.

Beira is the second largest port in Mozambique with 12 quays. It has separate ro-ro, container, coal/ore, oil, and multipurpose and general cargo terminals. The port can now handle up to 100 000 TEUs per annum using two ship-to-shore gantry cranes, each with 40-ton container handling capacity and 50-ton hook lifting capacity. It also has electric cranes, mobile cranes and caterpillar forklifts [42]). In addition, there are large cold storage facilities for the export of Zimbabwean citrus, and good warehouse facilities: there is a 15 000 square metre covered warehouse, 10 000 square metre transit sheds and a 60 000 square metre agents warehouse [33]. The port is accessed by a 200 m wide channel. By 2001, it was handling 947 000 tons of dry general cargo, 227 000 tons of dry bulk and 1 182 000 tons of liquid bulk, amounting to nearly two and a half million tons in total [45].

Maputo is the largest port in Mozambique and is the closest port to the industrial heartland of South Africa. The port of Maputo normally works 24 hours a day, seven days a week [33]. It has separate citrus, coal, sugar, container, steel, coastal and liquid bulk terminals, and five general cargo berths, with 35 multipurpose cranes (5t capacity), two container cranes (35t capacity) and nine forklifts (20t capacity). It also has good warehouse facilities, with 23 warehouses available totalling 53 000M<sup>2</sup> [46]. By 2001, 2 851 tons of dry general cargo, 779 000 tons of dry bulk and 371 000 tons of liquid bulk were handled, amounting to over four million tons in total [45]. Maputo port has a depth of 8–12 m alongside the quays. The south channel has a depth of 8.2 m for vessels with local knowledge only, while deeper draught vessels use the northern channel with depths of 11.3 m at ST and 10.55 m NT. Maximum depth in the Polana channel is 8.5 m [46]. This has tended to preclude many modern ships from calling. In addition, the port needs ongoing

maintenance in the form of dredging [47]. Maputo has various road and rail connections with South Africa and Zimbabwe, but although the latter railway has been rehabilitated it has subsequently experienced flood damage. Nevertheless, it remains open. The main line to Komatipoort, in South Africa, was concessioned in December 2002 to a consortium headed by Spoornet and is being upgraded [48].

Nacala, the deepest port in southern Africa (albeit smaller than Saldhana), again has an assortment of recently rehabilitated cranes (of up to 20-ton capacity), plus a 30-ton floating crane and lighters, while warehouses have been rehabilitated following hurricane damage in the late 1990s. Vessels of virtually unlimited depth can call at this port, and Nacala currently handles approximately 200 ships annually [48]. While impressive progress has been made in terms of rehabilitating harbour facilities, it should be noted that volumes of traffic have only begun to reach the levels obtained in 1976 (prior to the civil war). By 2001, it was handling 487 000 tons of dry general, 157 000 tons of dry bulk, and 99 000 of liquid bulk, a total of 743 000 tons over the year [45]. Pemba, again, is a superb natural deep-water port, but with poor transport links to the interior. Meanwhile, Quelimane has a single wharf that is only 200 m long with a depth of only 4.5 m [49].

Following an October 1999 agreement with the World Bank, the Beira, Maputo and Nacala ports and rail corridors were 'concessioned' to allow for greater private sector participation, as were the smaller ports of Angoche, Macuse, Mocimboa da Praia and Pembané [50]. In turn, the private investors have been told to upgrade existing services, including the dredging of the port of Maputo by MPDC, as mentioned above. In the case of Nacala, a consortium is responsible for both its railway and port, which is expected to lead to commercial and operational integration [51]. However, although levels of cargo handled in Mozambique ports have increased over the years, they are still relatively low compared to the total traffic handled by those in South Africa, so that while Maputo handled a total of four million tons in 2001, the figures were over 90 million, and 50 million tons for the South African ports of Richards Bay and Durban, respectively [52].

With the notable exceptions of Pemba and Nacala, Mozambique's major harbours are river ports, requiring constant dredging, and some 1.5 million cubic m of sand and mud have to be dredged annually from Maputo harbour alone [53]. The purchase of new dredging vessels, and much-needed tugs and towboats, could help to create job opportunities for indigenous Mozambicans. Yet, the job prospects of the latter in these areas are greatly hampered by limitations in qualifications; expatriates continue to be widely used, even for routine maintenance tasks.

## **7. The transport corridors**

In common with other southern African countries, the cornerstone of development strategies in recent years has been transport corridors. These corridors include the following: the Maputo corridor linking South Africa's Gauteng Province with Maputo, the Limpopo corridor linking southern Zimbabwe with Maputo, the Beira corridor linking central Zimbabwe with Beira, and the Nacala corridor linking Malawi with the northern port of Nacala. Rehabilitation of the Beira corridor began during the civil war, with security provided by Zimbabwean troops. This infrastructure-led approach to economic development has been complemented at a more local level with specific industrial development initiatives, including spatial concentrations of industrial activity and tax free zones.



The relatively short Maputo [53] and adjoining Limpopo corridors were rehabilitated in the post-war period, with related development initiatives, such as the Boane Industrial Free Zone [54], which was relatively successful [55]. The South African conglomerate, JCI, has rights to develop an export processing zone north of Beira. Here, water is somewhat deeper and it may be possible to construct a new port that is less prone to silting. The northern Nacala corridor has also been rehabilitated, with most of the railway line being completely replaced [56]. As a landlocked country, it is important for Malawi to have a variety of well maintained, competitive international routes for the transportation of export and import traffic, and it is for this reason that Malawi supports the development and maintenance of international corridors such as the Nacala corridor [57]. In February 1997, an additional \$30 million was earmarked to restore Nacala Port and to rehabilitate sections of the railway line to the Moatize coalfields in the Tete district [58].

Two other key elements in upgrading national transport infrastructure are planned. The first, the so-called Zambezi corridor, hinges on the restarting of large-scale river transport on the Zambezi, and, possibly on the Shire River, linking the Zambezi with Malawi [59]. In addition, a proposed Mtwara corridor represents a new initiative to open up trade between northern Mozambique and southern Tanzania [60]. Success depends on the construction of the proposed 'Unity bridge' between Mozambique and Tanzania, a project that has been mooted since the colonial era. However, everything depends on funding and, as yet, this has not been forthcoming [61]. Currently, the only transport across Rovuma River is via dugout canoes, although in the colonial era a seasonal drift was operational.

Given problems with silting at Maputo harbour, another initiative aims to establish a new port at Dobela, south of Maputo, and linked to the Maputo corridor. The port development would include a tax-free Special Economic Zone, incorporating industrial, financial and commercial activities. On the one hand, potential investors have expressed considerable interest in the project; on the other hand, the project has the potential to devastate the sensitive ecology of the region. Although a July 1999 agreement between the Mozambican government, the country's publicly owned ports and rail company, CFM, and with Porto Dobela Developments Ltd (a company registered in the Isle of Man) envisaged raising funds within 18 months, there has, as yet been little sign of movement [62].

More broadly speaking, it is unlikely that any of these projects are likely to succeed other than the most southerly ones. Although Mozambique could count on considerable donor assistance during the democratic transition [63], donor fatigue, exacerbated by the outright theft of a large proportion of initial assistance, has resulted in support tailing off. Although initial assistance was forthcoming to rebuild the principal rail links, Mozambique has battled for many years to raise the money necessary to rehabilitate the final 30 km of the Nacala corridor. However, the southern initiatives would help to cement South Africa's regional hegemony.

## **8. Crewing and training**

Another key issue in relation to sustainable development is the growth of skills and training among the local population. Historically-speaking, Navique has employed Mozambican nationals. Since its fleet has diminished to two vessels, however, employment prospects have dropped, and there are few job prospects for Mozambicans on Mozline's chartered fleet of internationally flagged ships. The reduced demand has been reflected in problems in the training infrastructure.

There is a nautical school in Maputo, but it does not produce seafarers up to Standards of Training, Certification and Watchkeeping (STCW) 95 level, and essentially seems to produce uncertified seafarers, many of whom become unemployed due to international maritime requirements [42]. The MPDC is reportedly instituting training for its 400 Mozambican employees, taken over in the transfer from government to private hands [41]. However, it is not clear, as yet, as to the exact nature of this training.

### **9. Coastal artisanal shipping [64]**

In addition to the development of major industry, another key contributor toward the future prosperity of Mozambique, and the sustainability of local livelihoods, is the large artisan coastal transport industry, centring on the use of dhows. For at least 2 000 years, traditional vessels have plied the coasts of East Africa. At least three dhows still regularly ply the route from Mozambique to the Persian Gulf and on to India on an annual basis. In contrast to the traditional dhow, current dhows—other than those servicing the most short-haul of routes—are generally motorized. The bulk of traffic is over short and medium distances. The slowness and labour-intensive nature of this means of transport may result in it being gradually eclipsed by road transport. However, there is still no road running the length of the coastline, and transport links between many coastal communities and the interior remain poor. Moreover, dhows represent the only viable means of transport within the Ibo and Angoche archipelagos. On the one hand, this sector plays a vital role, given its capacity to create relatively large numbers of jobs, due to the high degree of involvement by local communities, and the role it plays in providing communications in the most isolated areas of the country. On the other hand, most of the goods transported are of extremely low value; indeed many cargoes are not transported to and from markets, but to support pre-capitalist exchange and support networks. Principal cargoes include tropical fruits, vegetables, charcoal, fish and very small amounts of manufactured goods. In addition, many dhows are involved in smuggling and other quasi-legal and illegal activities. The latter have, in the past, included clandestine shipments of small consignments of gold, tortoiseshell, ivory and slaves. There is little doubt that more efficient policing would negatively affect the dhow trade. Moreover, transport is highly weather dependent, and patterns of trade remain shaped by the monsoons. These factors preclude a major expansion of this industry.

### **10. Inland shipping**

Mozambique has two major inland waterways, the Shire–Zambezi River system and Lake Niassa (Lake Malawi). Even in the pre-colonial period, slave shipments took place up the Zambezi valley. In the early colonial period, vast areas of the valley were granted to individual settlers, who established large latifundias, complete with private armies; only in the late nineteenth century was effective central government control established. River trade was greatly hampered by the lack of a clear entrance to the sea, owing to sandbars, up until the discovery of the Chinde mouth in the nineteenth century. Moreover, water levels in the river proved prone to vast fluctuations, to changes in the riverbed, and to periodic floods, which, on at least one occasion, virtually destroyed early efforts at establishing a port at Chinde. Nonetheless, the river still served as the principal trading link into the interior well into the late nineteenth century, with some of the problems being overcome by the use of paddle steamers with as little as one foot draft.

The establishment of British colonial rule in what is now Malawi, and the development of commercial agriculture in that country led to an expansion of river traffic up the Shire River, which links the Zambezi with Malawi. By the early 1970s, 200-ton barges regularly carried molasses from Nsanje in Malawi down the Shire and Zambezi rivers to Chinde port at its mouth, for transshipment and export. It seems that commercial Zambezi River navigation finally collapsed in the mid-1980s. In September 1996, a Malawian firm, Glens Waterways, began an investigation into the possibilities of reviving navigation on the Zambezi and Shire rivers, as the means of exporting Malawian agricultural products [65], and it was suggested that the proposed water corridor could readily be integrated with the Malawian road and rail systems [66]. Preliminary findings revealed that 600km of the Zambezi was still fully navigable by barges.

However, Chinde port has virtually no facilities. Indeed, it was severely damaged by the 2000 and 2001 floods, and there is a very real danger that the port will gradually collapse into its estuary (as did an earlier British effort to build a port on that site). There are no reliable overland links to the better-equipped port of Quelimane, just north of the Zambezi delta; the only road is largely sand and is broken by two major ferry crossings. The ferries are themselves somewhat unreliable on account of shifting mud banks. In addition, Quelimane's own facilities are rather limited, and are primarily geared to servicing local trawlers. As an alternative, an investigation by Glens Waterways explored the possibility of transshipping goods directly to Beira by water, without transshipment at Chinde, as is currently the case with Morrromeu sugar (see below). Despite these problems, it seems that given that large sections of the Beira corridor are under effective Zimbabwean control, sections of the Mozambican government are keen to develop an alternative 'more Mozambican' corridor, the centrepiece of which could be revived river navigation on the Zambezi.

Indeed, several 1,500-ton ocean-going barges have been constructed. These allow for sugar to be transported from the vast, and recently rehabilitated, Morrromeu sugar estate, down 80 km of the Zambezi River to the sea, and then on a further 210 km by sea to Beira [67]. The barges are unpowered, and towed in a convoy of three by a tugboat. Each barge can carry between 50 and 60 containers of refined sugar. Currently, the containers are transported from the refinery to the wharf by an ageing Linkbelt crawler crane, with a precarious ro-ro facility also available as a backup [70]. However, a new concrete wharf is being constructed, with an 84m long gantry crane.

The revival of some commercial navigation in the lower Zambezi has led some writers to suggest that the Morrromeu project could represent the start of a broader revival of river navigation [67]. However, in addition to the problems at Chinde, which can be overcome by the use of ocean-going barges, development of upstream Zambezi and Shire navigation is greatly hampered by the variable nature of the river system itself. Recourse to historical records has revealed that lakes within the Chinde valley have, at various stages, been dry land. These irregularities have been worsened by the construction of dams. Indeed, it was dam construction that greatly exacerbated the effects of the 2000 and 2001 floods. Without a substantial investment in dredgers, reliable mapping, and physical infrastructure, the Zambezi River system cannot serve as a reliable transport route. At least six years have passed since the start of attempts to revive Zambezi navigation, with few tangible results, other than in the lower reaches. Moreover, plans to construct a new dam on the Zambezi, at

Mepanda Uncua (below Cahora Bassa) may make any future initiatives impossible. Furthermore, plans to rehabilitate the Moatize/Sena railway line could provide an alternative outlet from the Zambezi valley to the sea [68], undercutting river transport.

Mozambique abuts Lake Niassa (Lake Malawi). There is considerable short-haul shipping, but mostly in the artisanal sector. Again, this is very small scale, with the bulk of cargoes being of very low value. Given the mountainous nature of the terrain on the Mozambican side, and the existence of a close rail link in good condition between Mozambique and Malawi at Entre Lagos, there is very little potential for the further development of commercial shipping between Mozambique and Malawi on the lake.

## **11. Summary of current concerns**

### *11.1. Limits of the existing policy agenda in relation to sustainable development*

One area identified as key to economic development is that of human resource and skills development. After an initially difficult start, the privatization of Navique can be seen to have been relatively successful: the firm is now on a sustainable commercial footing, and is favourably positioned vis-à-vis other players in the industry. However, there is little pressure on firms engaging in cabotage to employ locals, even if such firms must be locally registered. Thus, little progress appears to be currently occurring in this area of human resource development. Moreover, the World Bank/IMF commitment to neo-liberal policies has resulted in constraints on state expenditure; while it has been possible to attract lavish loans and donations for the reconstruction of roads, the state has little capacity—both financial, and in terms existing human capital and the national training infrastructure—for maintenance on a sustainable basis.

A further key issue is the development of local livelihoods, through local economic development. The above discussion has indicated that the primary emphasis has been on high-profile projects, with very much less attention accorded to the needs of secondary and tertiary centres and the rural hinterland. Limited—and ineffective—regulation of road transport allows heavily overloaded trucks to make use of the national transport infrastructure at little cost, undermining the competitiveness of coastal shipping. Ports and coastal shipping received little direct ROCS funding, initial commitments notwithstanding. While other donor initiatives have played an essential role in the rehabilitation of key ports and rail links, again there remain persistent problems regarding maintenance and sustainability. Unfortunately, many donor interventions remain ideologically driven, focused on a limited number of capital-intensive projects, and often exhibit a lack of commitment to involving significant numbers of locals during their implementation (c.f. [32]). This is contrary to most recent thinking on the way in which transport should contribute toward sustainable local livelihoods (see, for example, [69,70]).

### *11.2. Practical concerns regarding the development of ports and shipping in Mozambique*

The first concern relates to the lack of an appropriate road/rail infrastructure to support the shipping industry. However, developments have occurred in recent years, evidenced, for example, by the concession for Nacala railway and port, expected to lead to integrated transportation services from the Port of Nacala to Northern Mozambique, Malawi and eastern Zambia [71]. Under this agreement, the

US Overseas Private Investments Corporation will provide nearly US 30 million in finance to rehabilitate the port and rail facilities of the corridor [72]. Nevertheless, there is still a lack of adequate road and rail infrastructure running north/south, and it remains to be seen if, more generally, the current funding of the road network is sustainable.

A second concern that also relates to the land-based transport infrastructure, is the increased competition from road/rail transport. Whereas the increase in certain routes, as outlined above, may help to service ports, the increase in others may be to the detriment of other parts of the shipping industry. A third is the traditional reputation of Mozambican ports. Although Mozambican ports arguably have a better reputation than those in the neighbouring country of Tanzania and, in addition, there has been some progress over the years, future growth might be threatened by a lack of reliability, exacerbated by changes in the environment. Fourth, irrespective of more recent investment growth, and a large influx of donor funding following the ending of the civil war, this is against the background of an historical lack of investment in transport infrastructure, related not only to cutbacks imposed by international institutions but also to the legacy of war. Mozambique has successfully attracted significant donor funding to cover the costs of rehabilitating much of the railway network and harbour facilities; it has proven rather more difficult to attract funding for infrastructural maintenance, and supportive technical skills development. Fifth, there are continuing concerns about the sustainability of the shipping industry, in the light of skills shortages and the lack of appropriate qualifications. This has implications not only for the developing capacity of the shipping industry but also has further, related implications. At a social level, these include the health and safety of staff and, at a broader level, in the post-war economy it can be postulated that high rates of unemployment might potentially contribute toward political instability.

## **12. The Mozambican situation in comparative perspective**

In common with other East African countries, such as Tanzania [73], Mozambique imports larger quantities of goods than it exports, so that imports of goods (including general merchandise, goods for processing, repairs on goods, goods produced in ports by carriers and non-monetary gold) amount to US\$ 997.3m compared to the equivalent figure for exports of US\$ 726m. As indicated above, this leaves a trade deficit of over US\$ 270m [7]. This deficit is at least partly due to the current status of the production of primary commodities and the manufacturing sector, but is also related to the reduction in protectionism as outlined above. While reduced tariffs might help those countries that are in a position to compete, it can damage emerging economies or those that have been through a period of transition [2]. For developing countries such as Mozambique, a reduction in tariffs, or indeed, deregulation, can impact on both the broader economy and on the producers of primary commodities (see, for example, [74,75]). Declining prices for primary commodities in the 1980s and 1990s were passed back to the original producers, resulting in many reverting to subsistence production or exiting from the sector. Moreover, the crisis of both manufacturing and primary commodity production can lead to lopsided regional shipping, with potentially uneconomic return journeys [76].

The geographical situation of the country should also not be ignored. Although the civil war has ended in Mozambique, there is still ongoing conflict in other parts of the African region. The current situation is of relative peace, compared to recent times. However, the country is faced with a continuing threat of insecurity, whereby

conflict in nearby regions can threaten if not political, then economic instability. Moreover, in common with neighbouring countries such as Tanzania, periodic shipments of emergency aid place a heavy strain on the shipping system [77–79].

Finally, in addition to these concerns that are in common with other countries in Eastern Africa, Mozambican ports also face competition from southern Africa since the breakdown of apartheid. Congestion at, and distance to, South Africa's main ports have led several South African companies, such as BMW, to consider using the Maputo facility. Nevertheless, South African companies will only give the option serious thought if Maputo becomes more efficient, and if facilities and infrastructure in and around the port are improved [80]. Moreover, the decline of local industry and the fact that most Mozambicans are engaged in subsistence agriculture, has limited the possibilities for internal trade; cargo volumes tend to be lop-sided, with considerably more goods transported to the northern peripheral regions than vice versa. At the same time, a large proportion (45%) of Mozambique's imports is from South Africa, influencing the prices and costs for companies in Mozambique [7].

### 12.1. *Theoretical implications*

The growth and decline of industry is impacted upon by both economic and political factors. Shipping is a highly cyclical industry, with demand being driven by both trends in the global economy and in national business cycles [12]. Moreover, in common with other developing countries, Mozambique has been exposed to similar external pressures for greater marketization, affecting both infrastructural and supportive social spending patterns and the viability of local industry. Again, a lack of investment in the national skills infrastructure and the maintenance of roads, railways and ports on a sustainable basis cast a long shadow over the future viability of regional shipping. Marketization and a lack of investment in state structures have been effectively enforced by international institutions such as the IMF, which have pursued neo-liberalist policies, irrespective of the apparently negative implications for developing societies [2]. However, seemingly homogenizing global pressures can result in very uneven outcomes, not least due to the mediating effects or weaknesses of institutions [1,81] and, due to pre-existing regional histories; sustainable coastal trade is contingent on a more even base of production. Therefore, the current situation in Mozambique shipping is a product of both local and global pressures.

Transport, more generally, faces a range of tensions in the current climate. One such tension relates to whether transport should be conceptualized as simply a commercial activity, or as a public good, and one that is essential for both economic growth and social inclusion. While the first presumes a lack of government intervention in order to allow 'perfect' competition, the latter viewpoint would necessitate investment in both infrastructure and in developing the human capacity necessary to ensure the sustainability of transport within a region. More recently, there has been increased recognition that transport has a key role to play in reducing social exclusion and in promoting local economic development (see, for example, [82,83]).

## 13. Conclusion

In view of the above discussion, the greatest potential for Mozambique, in relation to the shipping industry, lies in the development of coastal shipping. The capacity for developing inland shipping should be seen as very limited. This is on account of both the specific nature of the physical environment and human interventions, including

the present and future construction of dams. Moreover, although the construction of roads and railways has traditionally followed the path of old slave-trading routes, with many east–west transport links but few north–south ones, there has been a gradual rehabilitation of the country’s main north–south road. On the one hand, the latter has intensified short-term competition between road transport and coastal shipping. On the other hand, the use of inappropriate road surfacing technologies, and a lack of resources for maintenance, may make road transport less competitive over the medium term. Whilst the ROCS I and II, and Roads III initiatives cannot strictly be termed ‘neo-liberal’, their adoption within a broader neo-liberal framework has resulted in a concentration of resources in areas of greatest commercial activity—rather than in terms of human need or future potential—while, as a result of neo-liberal policy prescriptions, the state has greatly reduced logistical and human resource capabilities for sustainable maintenance or, indeed, for developing the national skills base in areas where there are shortfalls.

In any event, shipping remains the main transport link for many secondary and tertiary coastal centres. Again, there is still no overland link between Tanzania and Mozambique, other than via dugout canoes across the Rovuma River. Moreover, the revival of largely peasant-based agricultural production has made internal trade more viable. Coastal shipping has also been greatly boosted by the expansion of the hardwood logging (however, it should be recognized that most of this logging is taking place on an unsustainable basis). These factors underscore the importance of coastal shipping for Mozambique.

Currently, a lack of effective regulation and support has led to the shipping market failing in three main areas. First, the intensified competition with road transport on the Beira–Maputo–Nacala route makes it difficult to justify servicing more marginal routes; this is despite the fact that there is insufficient reinvestment in road maintenance to make the current boom in road transport sustainable. Second, while firms engaging in cabotage have to be locally registered, they are under no obligation to employ local labour. This problem is exacerbated by a lack of investment in training and skills development. Third, there remains a lack of financial capacity and skills to consistently maintain port facilities and vital rail links; this problem is particularly severe in the case of secondary and tertiary ports.

To ensure that the revival of the Mozambican shipping industry is placed on a sustainable footing, and that there are more widespread benefits to the population, five interventions are necessary. First, the base of national participation in the shipping industry needs to be broadened. Currently, the dominant players are foreign, many of whom have little interest in creating employment and development opportunities for Mozambicans, while local participation has more often been by individuals closely linked to the state elite, irrespective of whether they have the requisite skills or interest in broadening the basis of wealth creation.

Second, it is vital to further invest in the physical infrastructure of the country’s secondary and tertiary ports, ranging from Mocimboa do Praia to Chinde; one of the major constraints on the revival of coastal shipping remains the level of physical infrastructure, ongoing rehabilitation and expansion efforts notwithstanding.

Third, there is a serious crisis of training. Most Mozambican seafarers are not STCW-95 compliant, and local technical training institutions lack capacity in this area. While, in conjunction with job creation initiatives in harbours and coastal shipping, it may be possible to make use of excellent training facilities in South Africa that have spare capacity, this may be hampered by language difficulties.

The official language of Mozambique is Portuguese and very few Mozambicans speak any English at all, albeit that recently the English language has been introduced into the national curriculum of primary schools [84]. In terms of land-based occupations, there remain serious national shortfalls in vital skill areas central to the maintenance of port facilities, and key roads.

Fourth, it is vital that any attempts to revitalize coastal shipping in Mozambique operate in close concert with related on-shore development initiatives, and with the development of historically disadvantaged areas of the country, given the ready access to raw materials (most notably agricultural commodities and minerals), particularly in the Sena (coal), Gaza (heavy mineral sands) and Nampula (agricultural produce) regions. Already the Nacala Development Corridor has been established in the latter region, between Malawi, Nampula City and the port of Nacala, with Industrial Free Zones being planned at both Nacala and Nampula. This could stimulate the further expansion of coastal shipping, and could make it more attractive for firms to set up business in more isolated areas which are rich in natural resources.

Fifth, and relatedly, it is important that policies on the development of shipping, and the transport infrastructure more generally, contribute to the social and economic growth of the country and its population. Progress is being made on the development of the poverty reduction action plan (PARPA), with funding from the World Bank, although poverty levels are still high, with an estimated 10m out of 18.3m inhabitants living in poverty [7]. In contrast to previous World Bank methods, support is now provided through the state budget, integrated into the government's planning and budgeting system, and uses the government's own monitoring and evaluation system rather than a parallel system. However, there have been concerns raised in relation to external funding. The conceptual framework promoted by the World Bank and the IMF focuses on economic issues, with an apparent neglect of human rights, human capital and social capital [19]. In addition, other programmes receiving World Bank support, such as the ROCS I and II and Roads III programmes, have been heavily criticized for their use of inappropriate technologies and for excluding Mozambican companies from most of the contracts [85].

In summary, Mozambique's long coastline, rich seafaring tradition, and limited north-south land communications create a range of opportunities for developing coastal shipping. Artisanal seaborne trade and fishing provides a vital lifeline for isolated coastal communities. Meanwhile, increased economic activity in central and northern regions has resulted in an increase in demand for coastal shipping. However, it is vital that the base of local participation in coastal shipping is broadened, and locals are given the opportunity to obtain the necessary qualifications for employment on board commercial ships, and, perhaps more importantly, technical skills in order to develop local capacity for infrastructural maintenance.

In contrast, despite the existence of a vast navigable river system, the opportunities for developing inland shipping are rather more limited. More general constraints include uneven trade relations: large areas of the country have little to trade and export other than a few low-value agricultural commodities. This could, however, be redressed if the success of southern development corridors can be replicated in more northern regions of the country, if the links between transport and development are better appreciated, and if shipping policy is, as a result, more closely integrated with broader social and industrial policies.



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