



CHATHAM HOUSE

Chatham House, 10 St James's Square, London SW1Y 4LE

T: +44 (0)20 7957 5700 E: contact@chathamhouse.org

F: +44 (0)20 7957 5710 www.chathamhouse.org

Charity Registration Number: 208223

Meeting Summary

Treasure Mapped: Using Satellite Imagery to Track the Developmental Effects of Somali Piracy

Dr Anja Shortland

Senior Lecturer, Brunel University

Chair: David Stephen

Former Representative of the UN Secretary-General for Somalia

12 January 2012

The views expressed in this document are the sole responsibility of the author(s) and do not necessarily reflect the view of Chatham House, its staff, associates or Council. Chatham House is independent and owes no allegiance to any government or to any political body. It does not take institutional positions on policy issues. This document is issued on the understanding that if any extract is used, the author(s)/ speaker(s) and Chatham House should be credited, preferably with the date of the publication or details of the event. Where this document refers to or reports statements made by speakers at an event every effort has been made to provide a fair representation of their views and opinions, but the ultimate responsibility for accuracy lies with this document's author(s). The published text of speeches and presentations may differ from delivery.

Introduction

This research seeks to understand the on-land impacts of piracy in order to suggest approaches to a land-based solution to Somali piracy. Two key questions arose in approaching this research. Firstly, how big is the pro-pirate interest group? Answers to this question range from 'pro-piracy' claims that it creates employment and investment (influenced by the Somali culture of sharing wealth along family and clan lines) to the 'anti-piracy' views that it causes inflation in the local economy, brings little benefit to coastal towns, and disrupts shipping internationally. The second key question was where are the beneficiaries located?

Due to the absence of a central government, reliable data for Somalia are hard to come by and figures are often conflicting, so it is difficult to say exactly what the economic significance of piracy is in Somalia. However, some basic figures illustrate the potential importance of piracy: circa US\$70 million in ransom payments were made in 2009; that year Somalia's cattle exports were US\$43 million; meanwhile the 2009 budget for the government of Puntland was US\$17.6 million.

There are a number of potential beneficiaries from piracy; such activities can create direct employment locally and increase demand for local services; financiers and investors can make profitable returns on investment in piracy activities; and secondary spending and distribution through clan networks can have wider economic benefits.

Three data sources were used in the research: firstly international NGO data on commodity prices and food security (such as local prices of rice and cattle, wages, and Somali Shilling to US\$ exchange rates); secondly changes in night-time light emissions (this was used as a proxy for local variation in consumption and income), and thirdly high resolution satellite imagery (to monitor construction activity, infrastructure improvements, levels of traffic and car ownership).

Commodity data

Whilst nominal wages have increased between 2007 and 2010, the data show that real wages collapsed in 2007/08 due to the food price crisis. However, there was a partial recovery in Puntland which was linked to piracy. Consequently Puntlanders were relatively better off compared to other Somalis, but were not absolutely better off because of the overall deterioration in economic conditions. Rice price inflation is largely driven by

world markets, but local factors such as exchange rates and local monopolies also play a role. Contrary to common perception, the data showed that piracy is associated with lower rice prices. This might be explained by pirates bringing more stable local governance, in turn creating better trading conditions. Piracy also had a positive impact on the price of locally traded cattle. Local cattle are good proxy for wealth because Somalis traditionally purchase them as investment goods rather than for consumption. These observations show piracy money having positive impacts on the local economy.

The Somali Shilling exchange rate has generally remained stable despite the fact that Somalia has no central bank or government, suggesting that people want to use the currency and trust it over US\$. The exchange rate has stabilised particularly since 2008 when piracy increased. This is because successful hijacks raised the demand for Somali Shillings. A single hijack can be worth the equivalent of 1650 cattle or US\$ 454,000 to the local economy. In 2009 there were 44 successful hijackings, channeling US\$ 20.9m into the local economy. This Somali Shilling effect suggests a trickle-down to the poor; whereas US\$ are generally used for the purchase of luxury goods such as cars, property, or *khat*, Shillings are used by the poor for their every day consumption.

Night-time light emissions data

Light emissions are a good proxy for economic activity, poverty and urban development, and the emissions contract and expand along with the poor's access to electricity – i.e. when food prices are higher, the poor have less disposable income to buy electricity. The expected result from these images was to see 'string of pearls' pattern of strong light emissions along the coast due to increased piracy. The data revealed that this was not the case; there were no light emissions from the coastal villages. A general decrease is visible across Somalia after 2007, along with the increase in food prices (occasional, low-intensity lights have been censored, to reduce background noise). The data show that only two cities have clearly gained economically during this period; the inland cities of Bosasso and Garowe – both closely associated with Somali piracy.

High resolution satellite imagery

These images are expensive to access, so this was a limiting factor to the research. A comparison was made between two coastal pirate towns – Eyl and Hobyo – and the provincial capital Garowe. This involved looking for signs of increased economic activity such changes in settlement size, construction of new buildings, improvements to existing buildings and new or improved local infrastructure.

The analysis of the satellite images for Eyl showed few significant changes to the settlement. There were some new fortified buildings and new walls around some existing buildings, suggesting an increase in community tensions. Since Somalia had already been at war for 16 years at the time of the first images analysed (2005) it is reasonable to assume that this fairly sudden new development is related to piracy.

The coastal town of Hobyo is considered to be the pirate capital. Local people here complain of a lack of infrastructure, hospitals, schools, farms or fishing commerce. The analysis of the images showed no new investment in infrastructure, and only a few new buildings. There were some signs of increased private affluence, with more cars being seen in the town. The major development was the construction of a new, heavily secured radio tower. The question here is why Hobyo, an impoverished provincial backwater, has an expensive communications installation. The most likely explanation is piracy. The tower would allow pirates to communicate with the outside world and demand ransoms. For example there are reports explaining that ‘when a pirated vessel arrives within VHF radio range of Hobyo, pirates in small boats provide re-supply for food, weapons, and personnel reinforcements.’¹

Garowe, the capital of Puntland, was the third town studied. It has seen massive development and has doubled in size between 2002 and 2009. However, several of the large scale developments occurred in 2009 and 10 at a time when remittances were falling from the diaspora due to the impact of the financial crisis. This was also a time when piracy ransoms surged. There is a visible ‘sea change’ in wealth with new houses being built, expansion of existing buildings, increased security and an increased prevalence of cars. The new cars are associated with residential buildings, suggesting that pirates use their money to buy a house and a car but there are limits to any conspicuous consumption beyond this (most of the new houses are smaller

¹ <http://bbs.keyhole.com/ubb/ubbthreads.php?ubb=showflat&Number=1160408>

than the villas typically marketed to the diaspora, for example). This is in keeping with cultural norms of restricting conspicuous consumption and sharing wealth along family and clan lines.

Interpretation and conclusions

Pirates typically tend to be inland 'militia men' rather than people from the coast. Somalia is not a seafaring culture (cattle has traditionally been the symbol of status) and consequently wealth tends to be invested inland. Eyl, a coastal town which showed few signs of developmental benefits from piracy, is known to be an 'unhappy community' with several grassroots anti-piracy initiatives.

The research shows that pirates do contribute to urban development, but there are limits to this. Contrary to arguments that most pirate money is laundered abroad, the research shows that this is not the case – much of it stays inland in Somalia. These results are in keeping with views in the wider literature on Somalia remittances and the strong culture of sharing (the attitude that no one individual should get rich, but everyone should get a share). Piracy money does reach the less well off. However, real wages have not increased due to the counterweight of rising food prices. While the poor are no better off in absolute terms, the rich have got richer over this period, strengthening the divide between the rich and the poor.

Returning to the initial question driving the study, the research shows that engagement with coastal communities – who are clearly are not benefiting greatly from piracy – could be an effective approach to a land-based solution to Somali piracy. There is evidently a more cost effective solution to be found; the costs of piracy in the Horn are estimated to be US\$7-12 billion, whilst total gains from ransoms amount to US\$250 million. On the other hand, the research shows that a purely military solution to ending piracy would cut off an important source of income for some of the poorest people in the world.

Questions from the audience:

Q – What has the West done in terms of creating alternative livelihoods in Puntland, and could they do more?

A – More needs to be done here. This research shows that a good starting point would be a strategy for improving livelihoods for coastal communities.

Q – Isn't piracy undertaken largely out of desperation, due to a lack of any other livelihood opportunities?

A – Perhaps initially when the problem first arose several years ago, but not anymore. Piracy requires big investments such as fast boats with powerful motors (costing around \$10,000). It is an organised crime business.

Q – Would it be possible to calculate how much piracy money is going outside of Somalia, based on the calculations from this research of how much of it is being spent within the country?

A – The calculation hasn't been done for this paper. Whilst the research shows that there is a clear economic impact from piracy, it is very difficult to disentangle the precise value of this from the various other income sources such as aid, diaspora remittances etc.

Q – Can you tell how much money is going into these areas, and have these funds been laundered internationally before going into Somalia?

A – International money laundering is addressed in the remittances literature but wasn't investigated in this study. It would be difficult to quantify such activities though. To give an example with regard to piracy money being taken into Kenya, some estimates give figures which far exceed the total amount generated from all piracy activities in Somalia, underlining the difficulty of finding reliable data.

Q – The conflict is not about piracy, but about the failure of the international community and the creation of ungoverned territorial spaces. For example, illegal fishing by foreign actors in Somali territorial waters has damaged local incomes. Real piracy happens on the high seas, whereas in Somalia most incidents happen in territorial waters. The term 'piracy' is used to shift the blame onto Somalia.

A – Viewing of Somali piracy solely through the international security lens, rather than as an organised crime issue, has been problematic. Ungoverned maritime spaces invite piracy, so there is clearly a governance problem which needs to be addressed here.

Q – Who has shown interest in the research so far; the MOD, law enforcement agencies? This research has strong relevance for their work.

A – This research is very new and is still a work in progress. From a development economics perspective, it offers an alternative to the idea of a purely force based solution to Somali piracy. This research is important for showing how people not directly involved in piracy make a living and that stopping piracy puts the poorest in a worse position. For example, it costs up to \$12 billion to (barely) contain piracy, whereas only \$120 million dollars benefits Somalia. The paper doesn't give an answer to the problem, but this research hints at an approach to a solution.

Q – Have you looked at Somaliland in the research? From the perspective of a security consultant for the region, there have been observations of 'bright emissions' from this region. It is known that a number of key piracy players come from this area. Does piracy money get back to Somaliland?

A – Somaliland cities are in the dataset, but if there has been any effect it has been offset by the economic downturn. The research looked at the two cities which clearly stood out, though this doesn't mean that piracy money doesn't go elsewhere. There is another research paper in progress that looks at the whole of Somalia.

Q – Did the research consider the influence of other outside funds such as aid in fuelling developments attributed to piracy?

A – Observations were cross checked with the FCO, who have not documented any aid inflows to these areas.

Q – The dataset only goes to 2009, whereas piracy has continued and indeed has increased since then. There may well be further changes so can the research be updated? And how have other possible explanations been excluded, such as NGOs building secure compounds for their staff?

A – The research used NGO data until 2010 to cross check findings. Night-time light emissions data for 2010 is not yet available. The most recently commercially available high resolution imagery was also used.

Q – Anti-piracy and military-based solutions don't seem to be cost effective. Are there better uses for these funds?

A – Simplistic military solutions such as 'blowing up peoples fishing boats' are ineffective and, worse, counter productive. As argued previously, engaging coastal communities to deny pirates a land base would be a more effective approach.

Q – The crash in the US\$ - Shilling exchange rate isn't the only factor causing declining living standards in the region, what others have you looked at.

A – Part of the research involved getting an indicator for the strength of the business community. The data showed a pattern of massive market segmentation (for example, the difference in the exchange rate can be as much as 40% between two towns). Unexploited arbitrage gains are a good proxy for the overall health of the economy.

ABOUT THE AUTHOR

Dr Anja Shortland is a Senior Lecturer at Brunel University. Her research interest is primarily in political economy - especially the economics of security.

She has published on piracy, terrorism and effective security policy, and government ownership of banks in several journals, including the Journal of Development Economics, *Economica*, the Journal of Peace Research, the European Journal of Political Economy and Oxford Economic Papers.

Dr Shortland has a Masters of Engineering in Engineering and Economics from Oxford University, as well as an MSc in the Political Economy of Transition and a PhD in International Relations from the London School of Economics.