

# Thinking upstream: a critical examination of a cholera outbreak in Ethiopia

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**A case-study from the Lower Omo Valley explores some of the challenges to water security for people who have been displaced within their own homelands.**

According to one of the foundation stories of public health, in 1854 John Snow removed the handle from a pump in London – the water source used by local residents who were dying of a mysterious disease. At the time, the mode of transmission of this disease was contested, and there was no known cure. Since then, cholera has gained the status of a preventable and curable disease of bacterial origin that is known to be transmitted through networks of water supply. People who have fallen ill with cholera can be treated with rehydration and antibiotics. There are three oral vaccines available for mass administration. And knowledge of the means of transmission makes it possible to prevent outbreaks by protecting water supplies from contamination.

Despite advances in medical science and public health, however, cholera has not gone away; it continues to flourish in settings where people lack access to protected water supplies and basic sanitation.<sup>1</sup> Outbreaks of cholera in recent years have been particularly common in the wake of war and disaster, for example in Yemen in the context of armed conflict (2016–18), and in post-earthquake Haiti (2011). In such cases, emergency responses must focus on providing clinical treatment and vaccinating affected communities. After the crisis has passed, however, it is important to consider the conditions that make people vulnerable to the disease to begin with. The most immediate causes are inadequate water and sanitation services but more fundamentally these conditions are caused by social inequities. In the case we analyse here, an outbreak occurred not in the context of war or natural disaster but in connection with development projects – such as roads, hydro-electric dams, and plantations – that have displaced people within their own homelands.

## Cholera and development in the Lower Omo

Cholera was reported in the Ethiopian highlands in April 2019, and in January 2020 it arrived in the Lower Omo Valley, where for several years we have carried out research. The focus of our research, and the backdrop to the outbreak, was the expansion of sugar plantations and road infrastructure in an ethnically diverse region that until recently was of little importance to the Ethiopian economy. In conjunction with the construction of the Gibe III dam upstream, development projects in the ten years to 2020 have brought large numbers of migrant workers and an increased military presence to the region.

The first cholera cases in the Lower Omo occurred in a village inhabited by the Kwegu, riverine fishers and farmers, who obtained their water from a tributary of the River Omo. Upstream, a camp of workers and a military detachment had, according to local reports, been releasing raw sewage directly into this tributary. In the following weeks at least 200 fell ill and 23 people died in the district where our contacts live. Eight of these deaths were among the Kwegu; a further seven people died among the Bodi and six among the Mursi.<sup>2</sup> These latter groups are agro-pastoralists; like the majority of the indigenous population of the Lower Omo, they make a living through a combination of herding and farming.

Why, in the context of development schemes in the region, were members of these groups newly vulnerable to cholera? In the previous ten years, the Kwegu, Bodi and Mursi had benefitted little from local development programmes. They had lost vital land to the State-run sugar plantations; and the Gibe III dam, by ending the annual

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flood of the Omo, had eliminated a major component of their livelihood systems. Flood recession farming – a system that uses the water and silt provided by the annual rise of the river – was a mainstay of the local economy and a key source of the staple grain, sorghum. By 2020 they had gone four years without a harvest from the riverbanks. As a consequence, they were hungry, and when cholera arrived their immune systems were already weakened.

For a fuller explanation of the vulnerability of these people to cholera, however, we need to answer some more fundamental questions: Why did people in the Lower Omo not have access to protected water supplies? Why did basic water and sanitation services not feature as priorities in development plans for the region?

### **The villagisation model of development**

The main focus of development planning for the Lower Omo's indigenous population was a villagisation programme. In 2012 the local government had declared that within the following year the majority of the population of South Omo Zone (some 45,000 people) should abandon their semi-nomadic lifestyles and settle permanently in newly established villages. In these new communities, residents would be provided with safe water, plus other basic services such as schooling and medical care. It was assumed that the population would comply, and that improvements in health and well-being would follow.

Unfortunately, this policy ignored important aspects of the economic and cultural reality. In particular, it overlooked the value of livestock as a form of wealth and – through dairy products – as an important contributor to local diets. The villagisation plan did not accommodate continued herding of cattle; the plan assumed the new residents would simply adopt the lifestyle of smallholder farmers. It also overlooked the pride they took in their roles as stewards of the land. By settling en masse in sites adjacent to the new sugar plantations, they would effectively be surrendering ownership of the bulk of their homelands.<sup>3</sup>

One advantage of the villagisation sites was the protected water supplies that were installed there, and residents of pre-existing communities nearby also enjoyed using them. But while it was possible to **live** in the new villages as long as the government was distributing food aid, those who attempted to **make a living** there found the farm plots too small and the provision of irrigation water insufficient. Conflict with other recently resettled groups led to a sense of insecurity. By 2018 the programme had unravelled. Primary health workers moved away, distribution of food aid ceased, and locals were left worse off than before.

### **An epidemic of prejudice?**

As the number of people with cholera symptoms rose in the first weeks of 2020, it was a former school-teacher with friends in the affected communities who raised the alarm. Cholera – or its telltale symptom, acute watery diarrhoea – is a reportable condition in the Ethiopian public health system, but there were few medical professionals around to do the reporting. Through the initiative of the teacher, aid was mobilised, including sterilising agents and jerry-cans for treatment of water. Medical treatment was provided by a local NGO. These efforts successfully interrupted transmission, and within weeks the epidemic had passed. But questions remained: Why was there no provision of protected water supplies outside the villagisation sites? More generally, why had development in the region been planned with so little regard to local needs?

The short answer is prejudice. The global history of cholera has made clear that a major risk factor for the disease is membership of a group with a racialised or otherwise stigmatised identity. Pastoralists and people of the Ethiopian lowlands have long been viewed by highland Ethiopians as backward and uncivilised, and this prejudice was evident in the narratives that accompanied the outbreak. Some government employees blamed locals for drinking river water; others attributed the disease to the Kwegu practice of eating buffalo meat. These explanations ignored some important

facts. No other water sources were readily available to these communities; the river water was relatively safe to drink before the development projects; and the outbreak in the Lower Omo was preceded by an epidemic in Ethiopian highlands, where cholera had been circulating for months. It was outsiders who had brought the disease into the Lower Omo.

### Looking upstream

This case-study demonstrates a narrowness in the way water security is imagined, which we suggest is representative of an unnecessarily narrow view of water, hygiene and sanitation (WASH) – and of responses to epidemics more generally. WASH is concerned primarily with individual hygiene and the provision of improved infrastructure such as taps and latrines, as opposed to environmental concerns such as the quality of water in rivers or the politics of resource distribution. This reflects a neglect in medicine and public health of the environmental and political conditions that affect human health. After John Snow removed the pump handle, where were people to get their water from?

The story of the pump handle is memorable because it draws attention to the source of the problem being the water supply. But it was not until London's water and sanitation systems were overhauled in the later 19th century that the spectre of cholera would disappear from the city.

Similarly, people in the Lower Omo and elsewhere will remain at risk until improved sanitation and protected water supplies are accessible to them. Today, however, universal access to these basic amenities depends on the achievement of fairer political and economic arrangements. To protect the health and well-being of the world's most marginalised, we must think upstream.

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1. 'Protected water supplies' are those that, by virtue of their construction, reduce risks of contamination at the point of collection, e.g. having a concrete housing around the well-head. 'Basic sanitation' refers to facilities designed to safely separate faeces from human contact, e.g. by treating or isolating them in situ or transporting them for treatment off-site. See <https://washdata.org/monitoring>
2. The most recent census in 2007 suggests the Kwegu, Bodi and Mursi together number approximately 16,000 people. This figure does not, however, reflect the recent influx of people from elsewhere in Ethiopia, who are now likely to outnumber the indigenous population.
3. Stevenson E G J and Buffavand L (2018) "Do our bodies know their ways?" Villagization, food insecurity, and ill-being in Ethiopia's Lower Omo valley', *African Studies Review* 61, 1: 109-133 <https://core.ac.uk/download/pdf/188182104.pdf>