

Hydropower and irrigation development in the Omo Valley: development for whom?

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Abstract. The Gibe III Dam and its associated irrigation development in Ethiopia's Omo Valley constitute a textbook example of how *not* to do river basin development. Having ignored years of research findings on the impacts of development-forced displacement and resettlement, the politicians and planners are in danger of presiding over a social and environmental disaster of historic proportions. Hundreds of thousands of people, mainly agro-pastoralists living in the Lower Omo and around Lake Turkana in Kenya, stand to lose vital resources that make up the basis of their current livelihood system without consultation and without compensation. The result is bound to be long term impoverishment and increased morbidity and mortality amongst those affected. Meanwhile, the extent of irrigation development planned for the Lower Omo will drastically reduce the volume of Lake Turkana, the world's largest desert lake. But it is not too late to take some basic steps that would at least reduce the worst extent of these impacts and thereby help to reconcile economic development with social justice. Most important of all would be a well targeted and well funded programme of compensation and long-term benefit sharing.

Keywords: Gibe III; Omo Valley; hydroelectric development; displacement; impact assessment.

Introduction

The late Lucy Mair, Professor of Development Anthropology at the London School of Economics when I was a student there in the 1960s, used to say that the job of the anthropologist in development is to help those who are trying to make things better to avoid making them worse. Since 2010, and with this apparently modest ambition in mind, I have been trying to help the Ethiopian government and its Western donors to avoid turning hydropower and irrigation development in the Omo Valley into a development disaster for thousands of downstream people.

Hydroelectric development is a component of Ethiopia's 2010-2015 and 2015-2020 Growth and Transformation Plans (GTP I and GTP II), which aim to promote fast Economic growth and bring Ethiopia to the level of a middle income country by 2025 (FDRE 2016: ix). High rainfall in the Ethiopian plateau feeds several big rivers flowing to the west, south and east to the dry lowlands of neighbouring countries. This high potential for hydropower started to be exploited in the early 20th century (Carr 2017: 23-29). From the late 1980s the African Development Bank supported the *Preliminary Water Resources Development Master Plan for Ethiopia* (1990), that identified «the hydrodam and irrigation agricultural development potential for all major Ethiopian river basins» (Carr 2017: 29). This study and more specific follow-up surveys (Carr 2017: 29-31) shaped the current Ethiopian plan to increase electricity output from the 2,000 MW produced at the beginning of GTP I to the target of 17,347 MW at the end of GTP II (FDRE 2016: 38, 96). This plan included the internationally controversial Grand Ethiopian Renaissance Dam on the Blue Nile, which is currently under construction, and the now completed Gibe III dam on the Omo, which flows southwards into Lake Turkana in Kenya (see map).

Officially inaugurated in December 2016, the Gibe III dam has eliminated the annual flood on which around 100,000 agro-pastoralists living in the Lower Omo depend for their livelihoods¹. By regulating the flow of the Omo, the dam has made possible large-scale commercial irrigation schemes, hundreds of km downstream. The most ambitious of these, the Ethiopian Sugar Corporation's Kuraz Sugar Development Project, has been under construction since 2011 and will make the Lower Omo the largest irrigation complex in Ethiopia. According to government plans, thousands of people will be evicted from their agricultural and grazing land and resettled, or "villagized", along irrigation canals, becoming wage labourers and "outgrowers" for the Sugar Corporation.

In December 2010, thanks to the good offices of the Ethiopian Embassy in London, I had meetings with the Minister of Water and Energy, the CEO of the Ethiopian Electric Power Corporation (EEPC), the project Manager of the Gibe III hydro-electric dam and the Director General of the Environmental Protection Agency. All were hospitable and generous with their time, but I soon realised that we had opposite understandings of what the meetings were about. For me, the purpose was to explain my fears about the potentially negative impacts of the dam on the livelihoods of the downstream population and to suggest ways in which these impacts could be avoided or reduced. For my hosts, the meetings appeared to be a public relations opportunity, designed to give me an upbeat briefing on the dam and its potential benefits, both for the nation at large and for local people. The meetings at the Ministry of Water and Energy and at the EEPC were video-recorded, for what future use I was not told.

I had no reason to doubt that the officials I met believed that their plans for the Lower Omo would make things better for the people who lived there. They seemed to have only two ways of responding to the suggestion that they were actually making things worse: the critic must be either a misguided friend (which is roughly how they appeared to see me) or a self-interested enemy, intent on holding back the economic progress of Ethiopia. I am not sure into which category I would be placed today.

¹ It must also be noted, as explained later, that the dam and its associated irrigation development threaten the livelihoods of a further 300,000 pastoralists who live around Lake Turkana in northern Kenya.

Six months after these meetings, when the Kuraz project was getting under way, I sent the officials I had met a five-page paper, entitled “Concerns about the Gibe III dam”, in which I suggested ways to reduce the likely negative impacts of the project on local people. I received no replies. Since then I have concentrated on trying to raise awareness of the issue more widely,² partly in the hope that the message will get through to those who know and care about Ethiopia and partly as an act of solidarity with the affected people.

What disaster?

Despite having been first announced in 2011, the Kuraz project is still a long way from completion. By February 2016 only about 10,000 ha. of sugar had been planted and no cane processing plants were in operation (Kamski 2016: 574). Since the resettlement part of the project is also way behind schedule, it might seem premature to be predicting a development disaster in the Lower Omo. Should we not rather wait and see?

This might be good advice if we had to base our predictions entirely on an “internal view” of the project (Ansar *et al.* 2014), ignoring the outcomes of similar earlier, projects. In fact, we have over 50 years of research findings on the social consequences of “development-forced displacement and resettlement” (DFDR) in Africa, going back at least as far as Elizabeth Colson’s work on the Kariba Dam on the Zambesi River, beginning in the 1950s (Colson 1971). Thanks to the accumulated evidence provided by such projects, we can make evidence based predictions about the likely outcomes of new ones, using a “reference class” of completed projects (Ansar *et al.* 2014). In other words, and more bluntly, we can learn from experience.

Three general conclusions, all highly relevant to the Omo case, arise from the research evidence. First, most displaced people today are victims not of war but of development – large-scale infrastructural projects, such as dams, irrigation schemes, urban clearances and, the largest cause of displacement of all, roads. Putting all these categories together, it has been estimated that about 15 million people are forcibly displaced by development projects every year (Cernea 2008: 20). If you add to this people who are not physically displaced but who lose access to land and resources — and that includes millions of people living downstream of big dams — the number increases astronomically (Richter *et al.* 2010: 16).

Second, development-displaced people generally come from an already disadvantaged section of a country’s population and are disproportionately members of ethnic minorities. Thus, fifty per cent of those displaced by the Namada Dam, in Gujarat Province of north-western India, for example, belonged to “tribal” populations which account for only eight per cent of the Indian population. Commenting on this, the novelist Arundhati Roy, who has been a vigorous campaigner on behalf of those displaced by the Namada Dam, writes: «The ethnic otherness of their victims takes some pressure off the Nation Builders. It’s like having an expense account. Someone else pays the bills. People from another country. Another world» (1999: 18-19). In other words, and to express this in

² The present paper originated as a talk to the Anglo-Ethiopian Society in London in September 2014. In September 2015 I presented a version of it, *in absentia*, as part of a panel organised by Dr Christina Gabbert and Dr Dereje Feyesse at the 19th International Conference on Ethiopian Studies, held that year in Warsaw.

the jargon of the dam industry, a large part of the real costs of the project (those born by “project affected people”) are “externalised” outside the project and not included in the cost-benefit analysis which is used to justify it.

And third, those displaced by large infrastructural projects in the name of national development tend to become worse off as a result, notwithstanding the good intentions of the planners.

Hence the two questions that dominate the literature on development-forced displacement: how to explain these outcomes and how to design future projects so that they become genuine development opportunities for the people who have to get out of the way to make them possible. Perhaps the most influential contributor to this discussion has been Michael Cernea, formerly Senior Policy Adviser at the World Bank and the chief architect of its “involuntary resettlement” guidelines. Based on «a vast body of empirical data», Cernea has identified a number of risks which, «more often than not», lead to the impoverishment of displaced populations (1997: 1569). The risks most relevant to the Omo case are loss of common property resources, economic and social marginalisation, increased morbidity and mortality and loss of the social support mechanisms people had previously relied on during times of hardship.

The crux of Cernea’s argument is that «general and vague’ predictions» (1997: 1571) and well meaning aspirations to improve the human condition will not protect displaced populations from the risk of impoverishment. The *specific* risks must be identified in advance and *specific* strategies, detailed, targeted and adequately funded, must be put in place to pre-empt or reduce them. And this applies whatever the benefits of the project to the national economy and however well-meaning the intentions of the planners. There is by now a widespread consensus that in order to pre-empt the risks of impoverishment identified by Cernea at least the following three conditions must be satisfied. We might call them the “big three”.

First, there must be open and transparent *communication*, especially with those who will be most affected by the project and especially about its potentially negative impacts and the measures proposed to mitigate these.

Second, there must be meaningful *consultation*, so that the knowledge, needs and interests of the affected people are reflected in key decisions concerning them.

And third, there must be adequately funded *compensation* arrangements, including livelihood reconstruction programmes and strategies to ensure that those who have been displaced by the project receive a share of the income and/or other benefits generated by it over the long term.

Some projects will obviously do better than others when judged against these conditions. But the Gibe III Dam and its associated commercial irrigation development in the Lower Omo come nowhere near satisfying any of them. In fact, they provide a text-book illustration of precisely how *not* to do river-basin development, if the aim is to avoid disastrous consequences for people and the environment.

Breaking every rule in the book

Communication

It is difficult to imagine a more blatant failure of transparency than the environmental and social impact assessments produced for the Gibe III Dam. The first of these, completed in the year construction began (CESI 2006), confined itself to what the authors described as the “project area”, in the middle basin of the Omo. They thus avoided any mention of the potentially devastating impacts of the dam on people living hundreds of km downstream (Turton 2010). Instead, they considered only the relatively insignificant displacement from the reservoir area and from road construction and other building work in the immediate vicinity of the dam. Nor was there any discussion of the likelihood of large-scale irrigation development in the lower basin, despite the fact that the World Bank funded *Omo-Gibe Master Plan* (Woodroffe *et al.* 1996) had estimated that around 80,000 ha would become suitable for commercial irrigation schemes once the river flow had been regulated by hydropower dams. And finally, no account was taken of the potential impact on Omo flow and hydrology of two further hydropower dams, Gibe IV and V, which are due to be built downstream of Gibe III. All this may seem extraordinary but it is not unusual. One of the lessons learnt from the history of big dam projects is that the further from the dam site the downstream effects are felt, the more likely they are to be ignored by impact assessments (Adams 2000).



Map: The Omo-Gibe Hydropower Cascade
From Gibe III Hydroelectric Project: Environmental and Social Impact Assessment, CESI – Mid-day International Consulting Engineers, 2009, p. 46

Two years later, following an international outcry, an *Additional study of downstream impacts* (Agriconsulting S.p.a and Mid-Day International, 2008) was completed. This acknowledged that the dam would destroy the livelihoods of around 100,000 people in the lower basin and proposed substituting for the natural flood a ten-day artificial or “controlled” flood. This, it was claimed, would “fully compensate” the downstream

population for the loss of the natural flood, enabling them to continue practicing flood-retreat cultivation along the banks of the Omo and in flooded “flats” in the delta area.

The likely effectiveness of this proposal, however, was quickly and comprehensively demolished by the French consultancy firm SOGREAH in its review of the Gibe III project for the European Investment Bank (2010). According to this review, the authors of the *Additional Study* had «planned a solution without adequately studying the problem» (2010: 122). They had also failed to estimate the cost of a controlled flood in lost electricity production³. This was put at around 10 million USD annually by the SOGREAH consultants, a cost which they suspected, rightly, would not be sustained indefinitely, “merely” to maintain the flood-retreat agriculture of local residents.

The authors of the *Additional study* recognised that the dam would make large-scale commercial irrigation an attractive proposition in the Lower Omo but they drastically underestimated its likely extent. They suggested, “for the sake of argument”, that it would amount to no more than 5000 hectares of cotton (not sugar because of its high infrastructural costs), and only in the Omo delta area. The prospects of commercial plantations covering anything like the area predicted in the Omo-Gibe Master Plan was also ruled out when I met the Minister for Water and Energy and his colleagues in December 2010. And yet, a month later, the then Prime Minister, Meles Zenawi, went to Jinka, the capital of the South Omo Zone, to announce that the Ethiopian Sugar Corporation was about to begin work on a huge irrigation project, covering twice the irrigable area identified by the Master Plan (Zenawi 2011).

Why this apparent reluctance to “come clean” about a project that would make the Lower Omo the largest irrigation complex in Ethiopia? At least two reasons suggest themselves. First, a project of this size, based on a vast network of gravity-fed canals, would be incompatible with an annual controlled flood, seen as a means of sustaining the flood-retreat agriculture of local residents. Not only would areas suitable for flood-retreat agriculture be taken over by the plantations, but the flood would damage the irrigation infrastructure. Second, the abstraction of irrigation water from the Omo for commercial plantations could have potentially devastating transboundary impacts on Lake Turkana, which lies wholly within Kenya but receives 90 per cent of its water from the Omo. The hydrologist, Sean Avery (2010; 2012; 2013) has estimated that the Kuraz scheme alone could cause the lake level to drop by 10-20m, its current average depth being 30m. Together with the “dampening” effect of the dam on the lake level, this could have a «devastating effect» on its fisheries (Avery 2013: 41) and therefore on the livelihoods of around 300,000 Kenyans who depend on the lake for pastoralism and fishing.

One of the reasons why big dams and other “mega projects” so frequently create unintended negative consequences for people and the environment is that their impact assessments are notoriously prone to overstate their potential benefits and to understate their potential costs (Acreman 2000; Adams 2000; Scudder 2005:18; Ansar *et al.* 2014). They consequently often appear to be more concerned with helping the project forward than with protecting the environment and the interests of those who will be negatively affected by it. It would be difficult to find a better example of this than the impact assessments done for the Gibe III dam.

³ This cost arises because water released from the dam to create a controlled flood does not pass through the turbines.

As for the Kuraz scheme, now in its seventh year, no impact assessments or other preparatory studies have been released for public discussion, although such documents must exist. A few facts and figures about the project are available on the internet, along with plenty of “general and vague” predictions about the benefits it will have for local people. But there is nothing that could be described as an impact assessment or a feasibility study. This must raise huge concerns about the likely environmental and human impacts of the scheme, given what we now know about the importance of transparent information sharing in projects of this complexity and scale.

Consultation

Consultation is meaningful when the knowledge, interests and expertise of the people consulted are reflected in decisions affecting them. This is also the best way to guard against one of the main risks attaching to any social engineering project: that it will have unintended negative consequences and end up doing more harm than good to those whom it is intended to benefit. The principal method of consultation so far employed by the Kuraz project could almost have been designed to bring about precisely this result.

According to a document entitled *Villagization Plan*, produced by the South Omo Zone Pastoralists Areas Department (South Omo Zone 2012), nearly 50,000 agro-pastoralists in the Lower Omo will be “villagized” on a voluntary basis, with the aim of transforming them from pastoralists to sedentary agriculturalists. The consent of those to be moved will be obtained by “creating awareness” of the benefits of living in permanent villages through “community conversation”. Just what this meant in practice is revealed by the attempts made by the authorities to gain the consent of Bodi agro-pastoralists to villagization in the early stages of the Kuraz project.

In a paper based on interviews with Kuraz project officials and administrators, Tewolde Woldemariam and Fana Gebresenbet state that,

From our investigations, we were not able to find any evidence that the concerned indigenous people were consulted about alienating a large area of land for the purpose of the project before [the] decision was taken at the national level. Naturally, there was resistance to the project from the indigenous ethnic groups. This resistance...[was] attributed to the “lack of awareness” and “backward culture” of the indigenous people... As a result, the direction taken to appease local communities... was an ...intensive campaign of discussions, with the objective of making them accept the decision that came... from way above. The approach was to *convince* the indigenous population that the KSDP [Kuraz Sugar Development Project] and associated villagization would first and foremost benefit local people. Of course one can imagine the uneven or lopsided nature of the interaction in these forums between the government and the indigenous people where the outcome is bound to favour the state whatever the case (Woldemariam, Gebresenbet 2013: 6, emphasis in the original).

The “lopsided nature of the interaction” can, indeed, be easily imagined, and it is verified by reports from local sources. These speak of meetings with a heavy presence of soldiers and police in which audiences were harangued by police and government officials. Amongst other things they were warned not to stand in the way of the government “bulldozer” and not to talk about the project to foreigners. It is clear that the purpose of these “discussion forums” or “community conversations” was to intimidate people into compliance with government plans, not to understand the reasons for resistance

and find acceptable solutions, based on respect for local knowledge and interests. The predictable consequence has been growing anger and resentment against what is seen as an aggressive government “land grab” of the kind which has defined the relationship between the Ethiopian state and the peoples of its lowland periphery since at least the late nineteenth century. In short, the result has been precisely the opposite of the one intended.

It was not just the affected people who were excluded from meaningful consultation by this top-down, authoritarian and state-centric mode of planning. According to the proceedings of a meeting on "reconciling conservation with development" in the Lower Omo, organised by the Ethiopian Wildlife Conservation Authority (EWCA), «during the design of the [Kuraz] project key institutions like EWCA were not consulted» (Enawgaw 2013: 1). And this despite the fact that the project had taken a total of around 100,000 ha. from the Omo and Mago National Parks and the Tama Wildlife Reserve combined (Enawgaw *et al.* 2011: 3-5) Indeed, it seems that even the South Omo Zonal administration had no input into the planning of the Kuraz project. According to Tewolde and Fana, the Zonal Council does not «formally deliberate on its pros and cons» (2013: 7, footnote 23), it being a federal project.

Compensation

Plantation development and villagization activities have so far reached only the northern part of the Kuraz project area, occupied by Bodi and Mursi agro-pastoralists. Up to now, none of those who have so far been dispossessed of their land and other resources in the process have received compensation, the justification being that the plantations are being laid out on unused and unoccupied land. This, of course, is a convenient fiction, reminiscent of the Roman law doctrine of *terra nullius*, “land occupied by no-one”, which European colonial powers used to legitimise their vast land acquisitions in Africa and elsewhere in the 19th century⁴. As Makki and Geisler (2011) remark,

Decolonization and independence have done little to prevent new assertions of emptiness and new modes of enclosures of social and physical spaces, forms of *terra nullius* narratives that are routinely expressed in statistical averages of low population densities, underutilized land and unproductive labor (2011: 7).

Thanks to such “convenient fictions”, the agro-pastoralists of the Lower Omo stand to lose vital common property resources which make up the basis of their current livelihood system. These include flood-retreat cultivation areas along both banks of the Omo and grazing land and rain-fed shifting cultivation areas further to the east. They will also lose access to the Omo for fishing and for watering cattle and to a wide range of forest products, including bush meat, honey and edible plants and fruits. The fact that no compensation has been offered for the loss of any of these resources must be the most glaring example of the failure of the Kuraz scheme to observe basic safeguards intended to protect displaced populations from impoverishment.

We know from the research literature that compensation is vital to enable people to survive the immediate shock and hardship of losing their land and livelihoods. But we also know

⁴ We must remember, of course, that Ethiopia was not so much a victim of the nineteenth century “scramble for Africa”, as a participant in it.

that compensation alone is not enough to prevent their long-term impoverishment (Cernea 1997; Cernea, Mathur 2008). For this there must also be carefully targeted and properly funded livelihood reconstruction plans as well as long term schemes to enable the affected people to share in the income and/or other benefits generated by the development they make possible. Politicians and government officials often talk as though the affected people will have their lives automatically changed for the better, simply by becoming settled in permanent villages with access to educational, medical and other services. If only it were that simple! The literature on development-forced displacement makes abundantly clear that such well-meaning predictions and aspirations, unsupported by specific, adequately funded and detailed plans for livelihood reconstruction and benefit sharing, have repeatedly paved the way for the impoverishment of millions of people.

Why then have the planners failed, in this case, to take seriously even the need for compensation, let alone for longer term investment and benefit sharing? Two interconnected reasons suggest themselves. First, Ethiopian pastoralists and agro-pastoralists lack secure land rights. It is true that their “right not to be displaced from their own lands” is guaranteed by Article 40 (5) of the Ethiopian Constitution. But the proclamation needed to implement this right has not yet been enacted and it is not, therefore, enforceable in law. In short, pastoralists and agro-pastoralists who are forcibly dispossessed of their land by the government have no legal redress.

Second, their lack of secure land rights is one aspect of a deeper problem facing Ethiopian pastoralists: the fundamentally racist belief, still evident amongst Ethiopian policymakers and administrators, in the civilizing mission of the state towards the “nomads” of its lowland periphery. This “civilizational discourse” (Scott 2009: x) has been a constituent part Ethiopian nation-building since the nineteenth century (Reid 2007: 29) and has left a deep imprint on the so-called “pastoral development” policies of successive Ethiopian governments (Little *et al.* 2010). In an article on the impact of commercial farms on Karrayu and Afar pastoralists in the Awash Valley, Ayalew Gebre and Getachew Kassa write about the process whereby Ethiopian herders have been pushed further and further into the periphery of the state to make way for crop-based agriculture (Gebre, Kassa 2009). An important reason for this, they claim, is the general tendency amongst policy-makers and administrators to associate pastoralism with primitivism, a point well illustrated by Meles Zenawi’s Jinka speech (2011) in which he persistently linked pastoralism with “backwardness”. For a person making this assumption it may seem that the concept of compensation simply does not apply to people who have been rescued from “backwardness” and turned into “proper citizens” by the enlightened paternalism of the state, whatever the accompanying impoverishments and indignities they are forced to suffer.

Conclusion

It has become commonplace for Ethiopian government officials to portray critics of their development policies as “anti-development” and/or as having a vested interest in the preservation of “backward” cultures. This was the line adopted by the former Prime Minister, the late Meles Zenawi, in his speech announcing plans for the Kuraz project in January 2011. Here he repeatedly railed against potential critics of the scheme, calling them “the best friends of backwardness and poverty” and accusing them of wanting to

keep pastoralists as a “tourist attraction”, or as “a case study of ancient living for scientists and researchers”.

Presenting the issue in this way has two main attractions for politicians and government officials. First, it allows them to avoid any serious engagement with the arguments and recommendations of their critics. Second, it allows them to ignore the single most important question raised by the world-wide literature on development-forced displacement, namely how to ensure that development projects which displace people genuinely benefit those who have to get out of the way to make them possible. This is not a matter of reconciling development with the preservation of traditional cultures, which in the long run is impossible, but of reconciling it with social justice. This must be possible if it is to be worthy of the name development.

It has often been argued that secure property rights are essential for successful economic development (for a recent application of this argument to Ethiopia see Ali *et al.* 2011). But, as Terra Lawson-Remer has reminded us, what matters fundamentally is «*whose property rights are secure*» (2012: 147, emphasis in the original).

... economic development has often involved the expropriation of land and resources from groups that are marginalised culturally, racially, ethnically, or socio-economically, and the reallocation of these resources into the hands of politically powerful constituencies (2012: 146-147).

... aggregate economic growth does not necessarily mean inclusive economic development. Those with the least power and voice may be left out and left behind by growth-enhancing policies that strengthen the property rights of those with access to capital and political influence by weakening the property right of marginalized groups. (2012: 184-185)⁵.

It is of course to be expected that large-scale infrastructural projects that displace people in the interests of national development will have potentially far-reaching consequences for the life-styles and cultural identities of those whom they displace. This we must accept, whether the projects in question are dams, irrigation schemes, conservation areas, roads, bridges or urban clearances. But projects like the Kuraz Sugar Development Project, which set out to increase aggregate economic growth without regard for social justice and individual rights are not worthy of the name development. In the words of Michael Cernea, they «leave a disgracing stain on development itself» (2008: 1). Fortunately, however, there is still time for steps to be taken that would at least reduce the likelihood of this becoming the legacy of river basin development in the Omo.

First, and bearing in mind that the construction of two further dams planned for the Omo, Gibe IV and V, has not yet begun, an attempt could now be made to fill some of the gaping holes left in the preparatory work for Gibe III. A number of additional studies were recommended by various independent reviewers of the Gibe III project (e.g. SOGREA 2010; BMT Cordah 2010; Avery 2010; 2012), which were never completed. The BMT Cordah report sets out proposed terms of reference for some of these studies, including a hydrological assessment of the cumulative effects of the planned cascade of dams along the Omo and a socio-economic and ecological survey of the Omo downstream of Gibe III, in the delta region and around Lake Turkana. It is, of course, conceivable, that these studies were included in the (unpublished) preparatory work for Gibe IV and V. If so,

⁵ See also Lawson-Remer 2014.

they should be made immediately available for public discussion, together with any other as yet unpublished impact assessments for these dams.

Second, all existing impact assessments, feasibility studies and land-capability studies that may have been carried out for the Kuraz Project and other, smaller irrigation schemes in the lower Omo should be made publicly available. An independent review of these studies should be commissioned to identify any remaining gaps and to assess the potential combined impacts of irrigation development on the environment and people of the Lower Omo and Lake Turkana basin. This should be made publicly available, along with all other studies and reviews.

Third, the public health risks likely to affect the people of the Lower Omo and Lake Turkana as a result of large-scale irrigation development should be fully investigated and plans made to combat them. These include the increased transmission potential of vector-borne diseases (especially malaria which is already endemic in the Lower Omo), the spread of disease agents (such as HIV) through the influx of large numbers of migrant workers, and the contamination of ground and surface water by factory emissions, fertilizers and crop protection chemicals.

Fourth and most important, a targeted and well funded programme of compensation, livelihood reconstruction and benefit sharing should be put in place. Amongst other things, this should focus on ways of integrating irrigated agriculture with subsistence herding. Above all, and given the knowledge, experience and expertise of the affected people, they should be the ones to take the lead in arriving at the most effective solutions and in planning specific strategies, with the government and NGOs playing a supportive and facilitating role. It should be borne in mind that pastoralists and agro-pastoralists in southwestern Ethiopia have proved perfectly capable of adapting to more sedentary ways of life, without government involvement, when they have seen this as in their own and their children's interests⁶. Indeed, they would not have survived in this region if they had not been flexible, adaptable and inventive in responding, over the centuries, to environmental and climatic changes.

The above measures should clearly have been put in place much earlier. But implementing them now, as far as practically possible, would at least increase the chances of the Omo dams and the Kuraz Sugar Development Project becoming genuine development opportunities for the affected people. One would also hope that, if a proposal of this kind were put to donors, they would give it their immediate and full support. Members of the Development Assistance Groups (DAG) in Addis, which includes representatives of USAID, DFID and the EU, have made at least six visits to the Lower Omo since January 2012. These visits presumably reflected genuine concerns about the way irrigation development and resettlement were taking place in the Lower Omo, although it must be admitted that such concerns have so far been publicly admitted only in the most guarded way⁷.

⁶ One example of this is the spontaneous, drought-induced migration of Mursi to higher land in the Mago valley in the 1980s (Turton and Turton 1984).

⁷ See for example a letter from the Addis Directors of USAID and the World Bank to the Ethiopian Government dated 18 March 2014 and posted for a time on the DAG website: <http://www.mursi.org/news-items/donor-balancing-act-on-human-rights-in-the-lower-omo-valley> (accessed 28/6/18).

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