

# Key considerations: Responding to floods in South Sudan through the Humanitarian-Peace-Development nexus

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In common with many other African countries, the Republic of South Sudan is increasingly experiencing devastating floods linked to climate change.<sup>1,2</sup> The Indian Ocean Dipole (IOD) and El Niño regulate the climate of Equatorial Eastern Africa. In 2019, a dipole warming in the western Indian Ocean, worsened by climate change, created higher than average evaporation off the African coastline. This water vapour fell inland as rainfall over Ethiopia, Somalia, Kenya, Sudan and South Sudan, causing massive floods.<sup>3</sup> Since then, in the Sudd wetlands of central and north-eastern South Sudan, seasonal rains have been falling on already saturated land and adding to the floodwater. Large areas of the country have been submerged year-round and there have been sudden floods in new areas unaccustomed to them.

At the same time, South Sudan has been struggling to move towards peace in the wake of its 2013-18 civil war, with many armed groups still fighting, and historical conflicts with Sudan dating back decades. The impact of flooding on the security environment and overall fragility of South Sudan has received high-profile attention.<sup>4,5</sup> The severe floods – together with recurrent outbreaks of violence, weak governance, persistent underlying poverty and a lack of basic infrastructure and services – have created a complex humanitarian crisis and prevent the young nation (which gained independence in 2011) from achieving sustainable and equitable peace, resilience and development. The interconnectedness of these dynamics, and the need to approach these problems holistically, is increasingly acknowledged by high-level actors through discussion around the Humanitarian-Development-Peace (HDP) nexus, sometimes called the ‘triple nexus’.<sup>4</sup>

This brief describes the interconnected problems of the HDP nexus in the context of South Sudan through a focus on flooding. It also has wider relevance to other countries in the region, such as the Democratic Republic of the Congo and Sudan, that are experiencing similar self-reinforcing cycles of humanitarian, peace and developmental crises, exacerbated by floods.<sup>6</sup> In particular, the brief describes the multidimensional impacts of flooding on peace, health, livelihoods and governance. The brief also provides an overview of flood response efforts and innovations, and public attitudes towards them. The brief emphasises the need to link short-term humanitarian efforts with longer-term peacebuilding and development efforts through meaningful collaboration between actors working in these often-siloed spaces.

## Key considerations

### Sustainable investment

- **Provide urgent short-, medium- and long-term investment for sustainable infrastructure to meet crisis-affected people’s acute needs for food, basic services and protection from encroaching flood waters.** Large-scale dykes and dyke roads built in recent years are eroding and need continuous maintenance. Large populations are still displaced and extremely food insecure. Further flooding is inevitable in the face of climate change. Therefore, investment is also needed to prevent and mitigate the humanitarian, development and peace impacts of future catastrophic flooding.
- **Make river infrastructure investment decisions with open acknowledgement and discussion of broader political, cultural, economic, legal and environmental concerns.** For instance, resistance to dredging and cutting new canals was part of the grievances which led to the 1983 civil war in Southern (now South) Sudan due to perceptions that these interventions would unfairly benefit Sudan and Egypt. This was in a context of South

Sudanese marginalisation and concern about potential damage to the environment and to socio-cultural practices. Political debate around more recent South Sudan government-led dredging interventions highlights that mistrust in elites to protect territory associated with non-dominant ethnic groups remains a relevant issue.

- **Recognise affected populations' preferences and long-term and multi-dimensional needs for water management infrastructure.** Dykes and dams are particularly popular flood mitigation options among South Sudanese people because they do not take water away but contain it for use during droughts. Droughts are seen by many as an equally important (and likely) climate disaster in the short- and long-term, even at the same time as multi-year flooding.
- **Support smaller scale and/or locally led infrastructure projects, such as the construction and rehabilitation of dykes and raised roads.** These projects can support flood resilience, local (e.g., boma-level) organising and learning, and offer livelihood opportunities. Recent larger-scale dyke construction projects in Unity and Jonglei States have built on the existing popular practice of building earth-mound dykes to protect villages, towns and agricultural land. These projects have successfully used participatory approaches to engage groups affected by diverse crises. Support could include resources such as cash, training and the provision of materials.

## Building resilience

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- **Support customary climate-resilient practices, such as the circular movement of people and animals into different territories.** In parallel, recognise that intensified and increased flooding patterns in addition to ongoing political conflicts may strain customary arrangements and relations between mobile and host communities. There is a need for government and development actors to further support negotiation between these communities in times of extraordinary flood- or drought-induced displacement and movement. Early warning systems may support these approaches.
- **Work with youth in flood- and conflict-prone areas to promote peace dialogues and support their livelihood opportunities.** Young people are often mobilised to engage in violence, such as intercommunal cattle raiding in nearby communities. The violence often increases during flooding. Flood-affected youth seeking a better life by migrating longer distances (e.g., into the Equatoria states) may also be drawn into national conflicts. Livelihood opportunities could include flood mitigation activities.
- **Ensure flood response and mitigation activities do not exacerbate existing – or create new – political, ethnic or other conflicts.** Conflicts may be due to perceptions of politicised aid and support, especially in areas where displaced people may be in tension with host communities. Ideally, proactive peacebuilding elements should be embedded into activities at all levels.
- **Balance a focus on building local-level resilience with building high-level institutions.** There is a need to support more effective and trustworthy government action on flood and conflict prevention and response.

## Coordination, collaboration and learning

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- **Develop new platforms and mechanisms or use existing ones to bring together humanitarian, development and peace actors at international, national and local levels.** Together, they can design and deliver not only acute flood relief, but medium- and long-term resilience building.
- **Share flood-related innovations across sectors and across humanitarian, development and peace actors.** The last several years of complex humanitarian responses in South Sudan have led to an accumulation of innovations. These innovations include new

ways of building dykes and involving flood-affected populations; anticipating new water, sanitation and hygiene (WASH) scenarios and response possibilities; novel ways of conducting inter-agency needs assessments; and using environmental data to map and predict service and population vulnerabilities. All these innovations have responded to intersecting peace, humanitarian and development challenges. To date, most of these innovations have been developed within small groups of actors or single sectors, but they could inform crisis-wide ways of working.

- **Adapt humanitarian assessment methodologies, such as Inter-Agency Rapid Needs Assessments (IRNAs).** IRNAs should integrate learning about the medium- to long-term impacts of floods and conflict. With participation of affected communities, the assessments should be used to develop and deliver recommendations for sustainable action.
- **Integrate research on community perspectives of flood responses** into project evaluations and reflections on new sector strategies and innovations. Opportunities to engage in aid work and access to aid itself may be perceived as unfair by people in communities where aid responses are rolled out.
- **Build on and learn from local logics of trusted civil society and faith communities** in South Sudan. These groups may already embed holistic understandings of, and approaches to, peace, humanitarian and development challenges, including flooding. There is a significant opportunity for international actors to learn from these communities about how to operationalise the nexus as well as to provide communities with the resources to lead on nexus working. Beware of overriding local organising and action when bringing local actors into higher level humanitarian, development and peace processes.

## The Humanitarian-Development-Peace nexus

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The Humanitarian-Peace-Development (HDP) nexus – or the ‘triple nexus’ – refers to the interdependencies between conflict and peace, humanitarian crises and relief, and long-term issues and solutions. The ‘triple nexus’ is the latest terminology for an established concept<sup>7</sup> revived in the context of increasing global humanitarian needs and protracted conflicts.<sup>8</sup> This concept recognises that people’s real humanitarian and development needs are layered and mutually reinforcing, not sequential or compartmentalised. This recognition implies a need to provide short-term humanitarian relief while also addressing the underlying drivers of conflict and vulnerability, such as poverty, inequality and inadequate infrastructure and services. Action in each of these areas should not undermine efforts in other areas, and ideally actions should build upon each other. For instance, disaster relief and development initiatives should not inflame or create conflicts, and they should avoid creating perceptions of bias or exclusion that undermine efforts to build peace.<sup>9</sup> The implications for policy are greater collaboration, coordination and communication between different actors working in the often-siloed spaces of humanitarian assistance, development work and peacebuilding.

The UN adopted a triple nexus approach through its New Way of Working reform in 2016, with the aim of encouraging joint action between UN agencies. Similar collaboration was also a key commitment in the Grand Bargain agreement among donors, non-governmental organisations (NGOs) and other humanitarian actors at the 2016 World Humanitarian Summit.<sup>7</sup>

Despite widespread recognition and commitment, implementation of triple nexus work appears limited and patchy. A key critique is that it remains abstract and divorced from realities on the ground even despite emerging as an important policy discussion.<sup>10</sup> Other challenges to implementing the triple nexus approach include inflexible funding; limited shared understanding of what the triple nexus is and implies; lack of coordinating structures to bring peace, humanitarian and development actors together; and tensions between holistic and mission-driven approaches.<sup>11</sup> As an example, humanitarian actors are concerned about undermining the

humanitarian principle of impartiality if their work becomes politicised through greater collaboration with peace and security actors as well as with governments.<sup>12</sup>

## The triple nexus in South Sudan

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South Sudan stands as a poignant illustration of the challenges associated with the dynamics of the triple nexus. The country is politically fragile due to violent conflicts and associated economic and social woes. To reverse this trend, since 2018, the South Sudan government has been implementing the Revitalised Agreement on the Resolution of the Conflict (otherwise known as the R-ARCSS or the peace agreement).<sup>13</sup> Although this has reduced fighting between the national army and some rebel forces, several holdout groups refused to sign the deal and continue to engage in conflict, often alongside various communal militias. Thus, subnational violence remains persistent for this reason, but it is also due to forms of intercommunal and interethnic conflict.<sup>14</sup> The wider conflict has displaced millions of people, both internally and as refugees in neighbouring countries. Humanitarian workers also face security risks delivering aid to conflict-affected populations.<sup>15</sup> This indicates that the peace agreement alone has been unable to address the persistent violence and the underlying conditions, dynamics and drivers propelling the violence.

Most discussions about the triple nexus in South Sudan begin with the protracted nature of conflict in the country. Starting instead from flood disasters offers an opportunity to recognise how such disasters worsen conflict and hold back social and economic development. The impacts of flooding are made worse by the political and social tensions underlying the violence, and by limited physical and social infrastructure and services as well as livelihood opportunities. This shows that flood relief efforts must be sensitive to, and avoid creating or inflaming conflicts. At the same time, stakeholders should enhance the resources and attention given to medium- to long-term efforts for meaningful peace and sustainable development and resilience.

Security, development and humanitarian actors increasingly recognise the need to work across the triple nexus in South Sudan. The outbreak of civil war in Sudan in 2023 has seen South Sudanese returnees crossing back into the northern areas of the South Sudan. These are the areas most affected by flooding and conflict, and the situation has increased the urgency for an integrative response. In addressing the UN Security Council in September 2023, Nicholas Haysom, the UN Special Representative for South Sudan and Head of the United Nations Mission in South Sudan (UNMISS) stated:

*'We are increasingly emphasising coordinated approaches across the peace, humanitarian, and development nexus focusing on enhancing community resilience to conflict-, climate- and food-related shocks, finding durable solutions to displacement, and strengthening community violence reduction, including through the project platforms, such as the Reconciliation, Stabilization and Resilience Trust Fund, and building institutions, and also in alignment with the UN Sustainable Development Cooperation Framework.'*<sup>14</sup>

Other actors, such as the UN World Food Programme (WFP)<sup>16</sup> and the International Committee of the Red Cross (ICRC),<sup>17</sup> have also begun to invoke and strategise around more holistic approaches, combining humanitarian responses with peace and developmental goals. Other initiatives, such as a UN Refugee Agency (UNHCR) livelihood programme among refugees from 2016-18, have also documented promising results at a small scale.<sup>18</sup> The World Health Organization (WHO) has initiated research to explore the impacts of conflict and flooding on humanitarian- and development-supported health services and communities' access to health to inform the development of more resilient and holistic health systems.



# Worsening flooding in South Sudan

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## Seasonal flooding and socio-cultural adaptation

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While flooding in South Sudan has worsened in recent years, and especially since the IOD warming of 2019, seasonal flooding is typical in the country due to its position in the Nile River basin. The White Nile River flows north through the country towards Sudan and Egypt from its source in Lake Victoria, which borders Uganda, Kenya and Tanzania. North of the South Sudan capital, Juba, the river dissipates across a shallow depression of clay soils, producing a network of channels, lagoons, permanent swamps and floodplains. More water joins it from the Sobat River that drains the Ethiopian highlands. This area is the Sudd wetland, which swells each year with the rains.<sup>19</sup> Although annual precipitation usually peaks in August, water levels rise gradually, with flooding most extensive in October.<sup>20</sup>

The Nuer, Dinka and Shilluk are the main ethnic groups that live in the Sudd wetland, while the Anyuak and Murle live on the Pibor and Akobo Rivers, which feed the Sobat River. Over time, these groups have adapted to this seasonal flooding pattern with flexible livelihood strategies. These strategies include nomadic agropastoralism, non-timber forest product collection, fishing and constructing seasonal settlements, such as on small islands. The United Nations Educational, Scientific and Cultural Organization (UNESCO) recognises these resilient practices as enabling communities to inhabit the Sudd wetland for centuries.<sup>19</sup>

## 'Development', mistrust and hydrological disruption

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From the late 1970s, the government of Sudan (which was based in the north of what was then the single country of Sudan, encompassing the modern Sudan and South Sudan) started large-scale infrastructure projects in the southern region under the banner of 'development'. The Jonglei Canal Project began in 1978 with the aim of increasing water flow to northern Sudan and Egypt. It entailed cutting a large channel from Bor in Jonglei State to Malakal in Upper Nile State. The project prompted demonstrations in Southern Sudan (now South Sudan), reflecting longstanding mistrust in the intentions of northern actors by people in the historically marginalised south, and concerns the canal would disrupt livelihoods and damage the environment by taking water from the Sudd wetland. In 1984, rebels attacked the canal project, halting its construction and leaving a partially inundated channel.

Around the same time, Chevron, the US oil giant, discovered oil near Bentiu. The Sudanese government, dominated by northern Sudanese, helped Chevron. This cooperation further angered southern populations who resented perceived efforts to control and exploit their resources. Rebel attacks led Chevron to sell off its investment to Asian firms, which would go on to start Sudan's first oil exports in 1999. While the Sudanese government celebrated the oil production and sales, communities in oil-producing areas experienced the industry's development as a catastrophe. The infrastructure 'occupied large tracts of land, destroyed property, worsened land and border disputes, despoiled the environment, and failed to provide local jobs'.<sup>21</sup> Critically, the extensive infrastructure also severely disrupted natural drainage, with some areas becoming drier and others wetter, worsening floods.

With the independence of South Sudan in 2011, citizens expected fairer and less environmentally damaging oil production, but this is yet to happen.<sup>22</sup> Instead, environmental challenges associated with the industry have worsened in the context of persistent violence and more severe flooding.

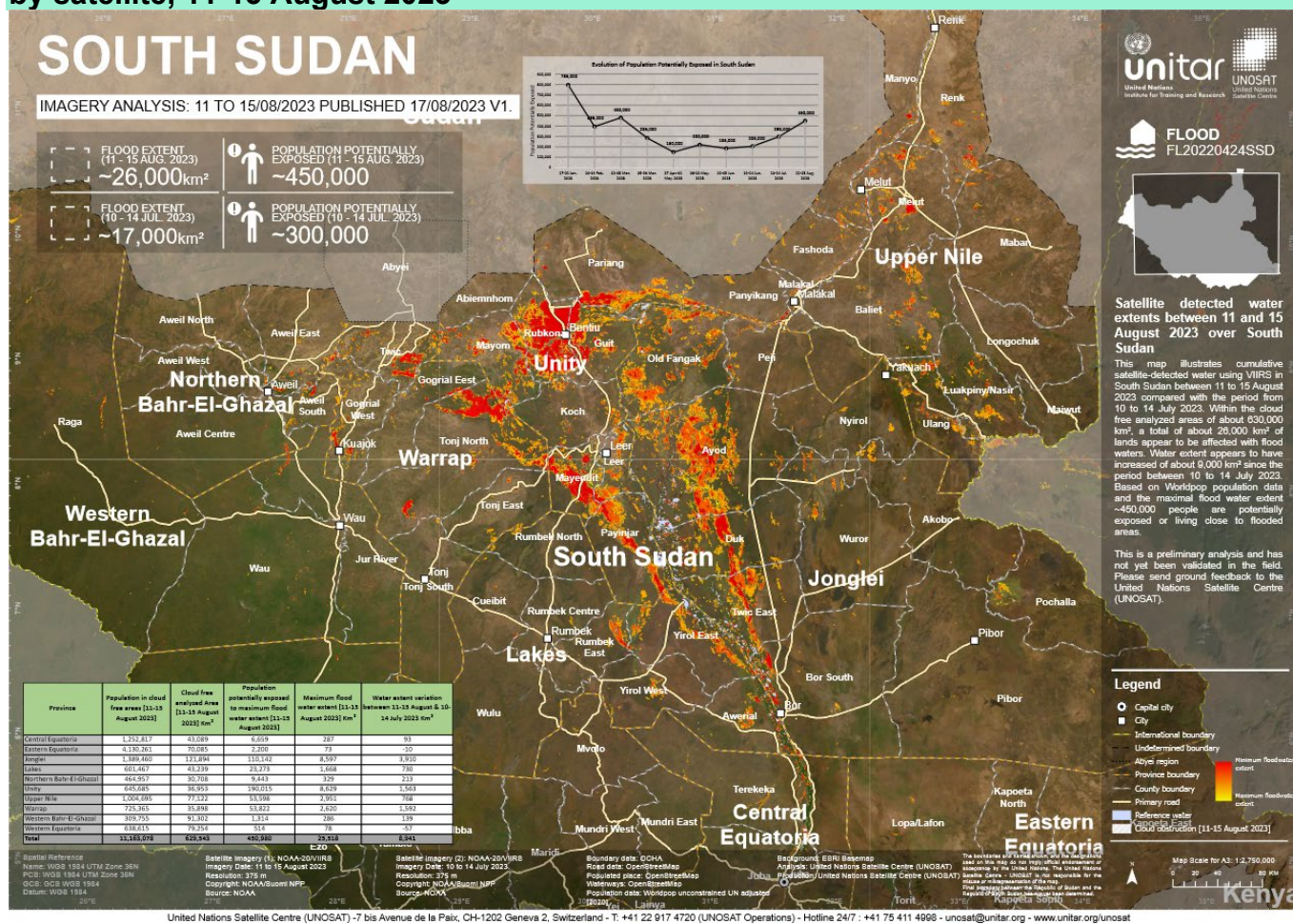
## Climate change

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Climate change has also contributed to more intense floods. Although the frequency of floods has increased over the last 60 years,<sup>23</sup> unprecedented rains in 2019 caused by IOD warming and climate change overwhelmed regional waterways and are causing long-lasting effects. The

Ugandan government, which controls a large hydroelectric dam upriver on the Nile River, has been releasing water to prevent backflow from destroying villages on Lake Victoria, and thus sending more water downstream.<sup>24</sup> Floods in South Sudan in 2020 were so severe that waters did not fully recede in the intervening dry seasons. The waterlogged soil meant that subsequent rain led to even more rapid and severe floods in 2021, particularly in Jonglei, Upper Nile and Unity States. By October 2022, many areas relatively spared in 2021, including in Northern Bahr el Ghazal, Warrap and Western Equatoria States, had also been inundated with flood water. Some estimates suggest approximately 2.6 million people had been affected by December 2022.<sup>25</sup> A similar pattern emerged in 2023, the country's fifth consecutive year of historic flooding, although fewer people appear to have been affected (see Figure 1).<sup>26</sup> Floodwaters covering the worst affected areas, such as around Bentiu in Unity State, are not predicted to drain fully until 2028.<sup>27</sup>

**Figure 1. Water extents (maximum in yellow, minimum in red) in South Sudan detected by satellite, 11-15 August 2023**



Source: United Nations Satellite Centre (UNOSAT). (2023, August 17). *Satellite detected water extents between 11 and 15 August 2023 over South Sudan*. <https://unosat.org/products/3659>.

## Impacts of flooding in South Sudan

Flooding has direct, immediate and mutually reinforcing negative impacts. It can damage security and peace, livelihoods, health, food security, education and more. South Sudan already struggles to provide basic services, infrastructure, security and an enabling environment for livelihoods. The disruptions from flooding events worsen social and economic vulnerability in the medium- to long-term.



## Impacts on peace and conflict

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A key tenet of South Sudan's revitalised peace agreement (R-ARCSS) is for displaced individuals to be able to return home 'in safety and with dignity'.<sup>28</sup> Following the adoption of R-ARCSS in 2018, improved security enabled nearly 2 million South Sudanese refugees and internally displaced persons (IDPs) to return home by mid-2021.<sup>28</sup> Flooding, however, has slowed this process, while driving additional displacement and conflict. As emphasised on Friday, 18 November 2022 by Rt. Hon. Mary Ayen Mijok, the First Deputy Speaker of the Council of State in South Sudan

*'Climate change has impacted us, like the impact of floods in some areas right now is being felt across the country, as a result not only do we have IDPs [internally displaced persons] because of conflict but we do have IDPs due to environmental crisis or climate change, and not only that, right now some communities are experiencing conflicts among the host community and those who came as IDPs.'*<sup>29</sup>

Historically, migration has enabled flood and climate resilience in South Sudan through customary communal land tenure laws. These laws allowed elders from different communities to negotiate seasonal and as-needed access to land for farming, grazing, fishing, hunting, firewood collection, housing and other needs, including during flooding.<sup>23</sup> However, more frequent and extreme flooding strains this customary reciprocity, particularly against the background of protracted (albeit sometimes intermittent) armed conflict, while at the same time having complex effects on subnational conflicts.

### Intercommunal violence in flood-affected areas

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The compounding and inter-related pressures from climate change, food insecurity, livelihood disruptions and inflation can drive intercommunal violence, looting and cattle-raiding.<sup>30</sup> Such raiding can be seen as a way of recouping losses and/or securing food sources in anticipation of uncertainty,<sup>30</sup> such as flooding. Young men are often those mobilised to conduct raids in the face of such uncertainty, sometimes encouraged by influential leaders offering spiritual justification.<sup>31</sup> Examples of floods contributing to conflict through displacement in Sudan go back to the 19<sup>th</sup> century.<sup>23</sup> A more recent and notable example occurred during the second Sudanese Civil War when a catastrophic flood impacting most parts of Upper Nile State contributed to the devastating Dinka-Nuer conflict of 1991. This split the southern liberation movement, prolonging the civil war, as well as seeding the 2013 political conflict, the effects of which are still being felt today.<sup>23</sup>

Humanitarian workers based in Unity State who were consulted for this brief suggested that recent floods were so extensive in Unity State that cattle-raiding decreased because vast stretches of standing water cut off routes between villages. Experts consulted for this brief indicated it is likely that such violence will resume when the ground dries.

Initiatives addressing flooding and peace remain largely unconnected. In areas worst affected by floods, UNMISS, the International Organization for Migration (IOM) and the United Nations Development Programme (UNDP) have managed to sustain some peacebuilding and youth engagement activities to promote social cohesion. Responding to and mitigating the immediate effects of flooding has, however, been the overwhelming focus of state government departments and other humanitarian actors. Elsewhere, UNMISS has developed integrated pilot projects for peace, resilience and recovery; these are taking place in Eastern Equatoria State, Western Equatoria State, Northern Bahr El Ghazel State and Western Bahr El Ghazal State.<sup>15</sup>

### Farmer-pastoralist conflicts

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Long-term climatological uncertainty in the region has led pastoralists to develop adaptive livelihood strategies involving seasonal migration. Traditional and political authorities routinely broker agreements with farming communities for permission and safe passage of pastoralist groups.<sup>32</sup> These agreements are also affected by larger conflict events. The 1991 Bor

Massacre, a significant tragic event that occurred during the second Sudanese Civil War, prompted hundreds of thousands of Dinka people to flee to the Equatoria region in the south. Residents feared this was an occupation and it prompted onwards displacement of Equatorian people to neighbouring countries until the 2005 Comprehensive Peace Agreement.

In recent years, there has been extensive and long-lasting flooding in the home areas of the Dinka people and other pastoralists, such as the Nuer. This flooding has increased their need for earlier and longer migrations to farming areas in the south that do not suffer from flooding; this change has amplified tensions.<sup>20</sup> In the wake of the most recent civil war in which some powerful politicians and armed actors came from cattle-keeping groups, tensions around pastoralists' flood-induced migrations into farming areas of the Equatoria states have become deadlier and overtly politicised. Crop-growing communities in Juba (including Mongalla, Lokiliri and Lobonok), Magwi, Kajo Keji, Yei, Maridi and Mundri Counties have suffered killings, crop destruction and other crimes perpetrated by armed cattle-keepers from flood-affected Jonglei State, and prompted new displacement.<sup>33–35</sup> Despite condemnation from UNMISS, the Troika (USA, UK and Norway),<sup>36</sup> the Revitalized Joint Monitoring and Evaluation Commission<sup>37</sup> and the Catholic Church<sup>38</sup> (the attack had taken place a day before the Pope's visit to Juba), and state orders for cattle-keepers to leave the area, state and local governments have struggled to contain pastoralist-farmer violence. In Central Equatoria State, the government is planning to introduce a bill to control the movement of cattle.<sup>39</sup> These efforts appeared to have partially worked. According to the Commissioner of Juba County, the return of cattle to Jonglei State had accelerated in 2023.<sup>40</sup> However, there are suggestions that the persistence of flood water and insecurity in eastern Jonglei again drove some groups back to areas in Western and Central Equatoria states, pointing to the need for more sustainable approaches.

### **Mounting pressure from returnees and IDPs**

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The outbreak of civil war in Sudan since April 2023 has prompted the return migration of many South Sudanese to South Sudan, to the states most affected by flooding. Their return journeys have been perilous, with returnees reporting robbery, sexual assault and killings.<sup>41</sup> Their accommodation has also added strain for host communities and already displaced people living in receiving areas, who have been suffering from flooding, violence and displacement. In June 2023, officials in Unity State lamented the mounting pressure on limited resources. This pressure was felt particularly around Bentiu, as the population of displaced people in the area swelled to nearly 200,000 amid flood conditions persisting for three years, with many returnees in dire need of humanitarian assistance.<sup>42</sup> The Unity State government announced that they would allocate land to returnees for permanent settlement,<sup>43</sup> but with so many people still unable to move outside dyke-protected towns, and the scarcity of high land in Unity State, land allocation remains an urgent and contentious issue. In Warrap State, also bordering Sudan, the WFP has expressed similar concerns about its ability to cope with the high influx of returnees, and conflict- and flood-related displacement.<sup>44</sup> In the state's most flood-affected county, Gogrial East, communities have faced a decade of declining livestock and crop production, and now 'scramble for food' in competition with IDPs and returnee populations. This scramble includes searching for depleting wild food resources, the collection of which has become an important means of survival.<sup>45</sup>

### **Displacement to urban areas**

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As the entwined effects of conflict, flooding and other slow- and fast-onset crises continue to make rural life more tenuous, urbanisation is also a concern. A humanitarian worker consulted for this brief described the unsupported movement of young people to urban areas as a worrying long-term impact of flooding. Homelessness and crime are seen as potentially grave consequences as town and city resources become overburdened, while rural cultural heritage is lost as people are displaced from their livelihoods and homelands.



## Impacts of flooding on health and well-being

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### Accidents and illness

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According to a rapid assessment conducted in 2022, which made use of questionnaires as well as interviews and discussions with local people in flood-affected areas, flooding had reportedly caused deaths due to drowning, shelter collapses and snake bites in their areas.<sup>28</sup>

During a flood, access to clean water and sanitation infrastructure is compromised because boreholes and pit latrines no longer function. Water also becomes polluted by people forced to practice open defecation.<sup>28</sup> This source of pollution is a major risk in crowded camp conditions, especially considering recent epidemics of cholera and hepatitis E in the country.<sup>46</sup> Animals, which need to share scarce dry land with people, are also a source of water pollution.

Wading through water and mud causes skin rashes, cuts to feet and injuries, such as when elderly people and pregnant women fall.<sup>47</sup> Living in the open can make people feel cold and vulnerable to coughs and respiratory infections.<sup>48</sup>

There is also a risk of disease from the standing water that serves as a breeding ground for mosquitoes. Medical facilities have recorded higher than normal malaria positivity rates, with up to 70% of consultations due to malaria in Renk, Upper Nile State.<sup>49</sup>

People in oil-producing areas have previously attributed skin problems, diarrhoea and birth deformities in children and cattle to petroleum entering the water supply,<sup>50</sup> which flooding has only magnified. Recent flooding in Unity State, a major oil drilling hub, has prompted fears of such environmental pollution.<sup>51</sup>

### Hunger and malnutrition

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In areas hardest hit by floods, people may miss several planting and harvesting seasons and lose their livestock, leading to hunger, disease and suffering. Loss of livestock investments also reduces wealth and resilience. This drives many people to turn to survival practices. While men fish, women collect, process and cook labour-intensive water lily bulbs into a harsh-tasting low-calorie porridge.<sup>47</sup> Subsisting on this restrictive flood-time diet for extended periods, along with other flood-time stresses, takes a toll on people's physical and mental health. As of November 2023, almost half of the population of South Sudan (46%) was facing crisis-level food insecurity or worse, with the severely flood-affected areas of Rubkona (including Bentiu) in Unity State, and Duk and Nyirol in Jonglei State being worst affected.<sup>52</sup> According to the government's Relief and Rehabilitation Commission staff, local administrators, chiefs and NGO workers interviewed in a flood assessment across the country, humanitarian assistance has widely been considered insufficient.<sup>28</sup> A humanitarian worker consulted for this brief stated:

*'This is a very serious period of waiting, suffering, diseases, no food, it is a terrible period for this community. [...] And sorry to say up to now the government is not doing anything. Instead people are thinking of migrating to other places like Juba where they have all the services – but this brings problems itself.'*

### Decreased access to healthcare

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The impacts of flooding on health increases the need for accessible health services, yet floods decrease people's access to healthcare in a context where services are extremely stretched. As of June 2023, 76% of healthcare facilities and mobile clinics across the country were at least 'minimally functional' (defined as being open or present and offering at least one of South Sudan's Basic Package of Health and Nutrition Services, such as outpatient curative care), with some flood-affected places particularly affected.<sup>53</sup> In Rumbek East County in Lakes State, only six of 21 health facilities remained fully operational in November 2022 due to flooding and funding-related challenges.<sup>54</sup>

Access to healthcare for IDPs, who are more vulnerable, may be particularly limited. Across the country in 2022, around a third of IDPs and a quarter of returnees lived in settlements located

more than 5 km from a 'functional' health facility.<sup>55</sup> An estimated 225,000 displaced people lived more than 15 km from a functional health facility.<sup>56</sup> People in Warrap, Jonglei, Upper Nile and Lakes States were worst affected.<sup>55</sup> Healthcare needs tend to be higher for IDPs living in smaller camps and for populations having settled in remote areas perceived as safer, but these locations are also beyond the reach of the existing healthcare system. Flood waters cutting off transport routes from some areas may also limit people's ability to reach any facilities that may still be operating at all.

Funding for health worker salaries and drug supplies have reduced over the last decade, both because of negligible government health spending and major reductions in foreign aid. As a result, user fees are now widespread at all levels of the public health system. The need to pay for health services creates financial barriers to access healthcare. An inter-agency assessment of flood effects was conducted in Panyijiar, Unity State in January 2023. Of the 333 households surveyed, 186 (56%) reported that they or a member of their family had been unable to access necessary medical care because public facilities nearby were not operating or because of the high cost to access care.<sup>57</sup>

The direct health repercussions of flooding highlight the need for both short-term relief efforts and long-term initiatives. These initiatives, which will require coordinated and sustained action, include strengthening health systems, developing infrastructure and strategies to ensure food security. With the health sector facing major reductions in spending, however, health system planners consulted for this brief predict that over the next five years only around 75% of facilities can be supported. The planners also predicted that health funding will not be used to rebuild facilities destroyed by flooding and conflict, or to build new ones. Long-term planning is constrained by what humanitarian actors can deliver. Planners need to match humanitarian and development partners to facilities according to their capacities for crisis response. The planners need to assign the areas most prone to floods and violence to the bigger and international humanitarian NGOs. Large humanitarian organisations are also aware that healthcare access influences migration decisions, with villages or even small towns developing around new hospitals and clinics. This creates a dilemma about whether to invest in areas that are affected by severe floods, if this pulls populations to settle on land that is geographically unsuitable in the long-term.

## **Impacts on livelihoods and education**

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Recurrent flooding takes a heavy toll on livelihoods. In South Sudan, most livelihoods are based on climate-sensitive activities such as agriculture, livestock rearing, fishing and forestry. In 2021 alone, floods killed nearly a million livestock animals, destroyed more than 37 tonnes of crops and damaged 65,000 hectares of cultivated land.<sup>58</sup> Roads, bridges and markets have also been severely damaged in some areas. Shops that have stayed open have had difficulty in obtaining stock, while prices have been overly high.<sup>28</sup>

The floods destroyed schools and educational materials. In some areas, flood waters submerged buildings and stopped schools operating under trees. As a result, the school feeding programmes have been suspended. While many families and teachers left their areas, many families who stayed had kept younger children out of school fearing they could drown or be bitten by snakes on their way to school.<sup>28</sup> Overall, recurrent flooding has been a major setback for children's access to education and for household livelihoods. Recovery will require integrated humanitarian assistance and development investment to support resilient infrastructure, services and social protection.

## **Impacts on state capacity and governance**

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Flooding also has broader impacts on the South Sudanese state's ability to govern and provide critical infrastructure and services in a sustainable manner. As already noted, persistent floods interact with conflict – domestic and cross-border – and other acute crises. With limited

resources, the state must constantly react to provide immediate relief and focus on preventing the worst impacts of disasters. There are few resources left to support more strategic, long-term and joined-up working, despite policy aspirations to support an integrated approach. Displacement has also been reported to affect leadership dynamics in South Sudan. Displacement has implications for people's participation in humanitarian and development projects and gender equity in access to support services, which could be relevant to flood response. For example, displacement from customary tribal and clan areas can cause some people to lose lineage-based leadership rights, while movement into camps for IDPs and refugees tends to promote leadership by youth and women.<sup>59</sup> While potentially seen as disruptive to traditional governance arrangements, this may also present opportunities to expand voice and agency for traditionally marginalised groups.

The oil industry is also experiencing severe disruption due to flooding. The oilfields are being submerged under flood waters and this stops their production.<sup>60</sup> This adversely affects a main source of revenue for South Sudan. Despite the controversies and tensions surrounding the oil industry, including its exacerbation of inequality, corruption, conflict and environmental hazards, economic activity from this sector provides over 90% of domestic revenue collected by the government.<sup>61</sup>

## **Flood prevention and response strategies**

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Actors at various levels have taken measures to prevent and respond to the impacts of flooding. These actors include the national South Sudanese government, often in collaboration with foreign and national partners as well as those at the local level. Integrating efforts through a HDP nexus might lead to greater resilience among populations. In practice, this means linking flood prevention and relief efforts to long-term developmental strategies, and ensuring the efforts are conflict-sensitive – and even contribute to peacebuilding where possible.

This section outlines the current strategies to prevent and respond to floods, and considers how these strategies might be more effective through a nexus approach.

## **Policy and legal landscape**

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The Ministry of Humanitarian and Disaster Management (MHADM) has led the development of the National Disaster Risk Management Policy, endorsed in February 2022. The policy created an institutional framework for humanitarian assistance and disaster risk management, including 'promotion of a culture of disaster risk reduction for community resilience and building the capacity for disaster risk management at all levels'.<sup>62</sup> The MHADM also developed a five-year National Disaster Risk Strategy for 2017-2021, and a National Disaster Management Strategic Plan 2018-2020, which indicated as a priority action to 'make community-based conflict resolution and peacebuilding an integral part of disaster management'.<sup>63</sup> A National Disaster Risk Management Bill is currently under development, and this will create a legal basis to strengthen the country's emergent disaster risk management framework.<sup>64</sup>

While the policy landscape continues to develop, challenges relating to limited institutional capacity and resources remain. These have led to government responses to flooding under these frameworks being described as 'highly reactive',<sup>65</sup> despite aspirations for more strategic planning. Challenges also remain around operationalising disaster risk management approaches that are designed around local needs, knowledge and materials.<sup>66</sup>

## **Dyke construction, repair and support**

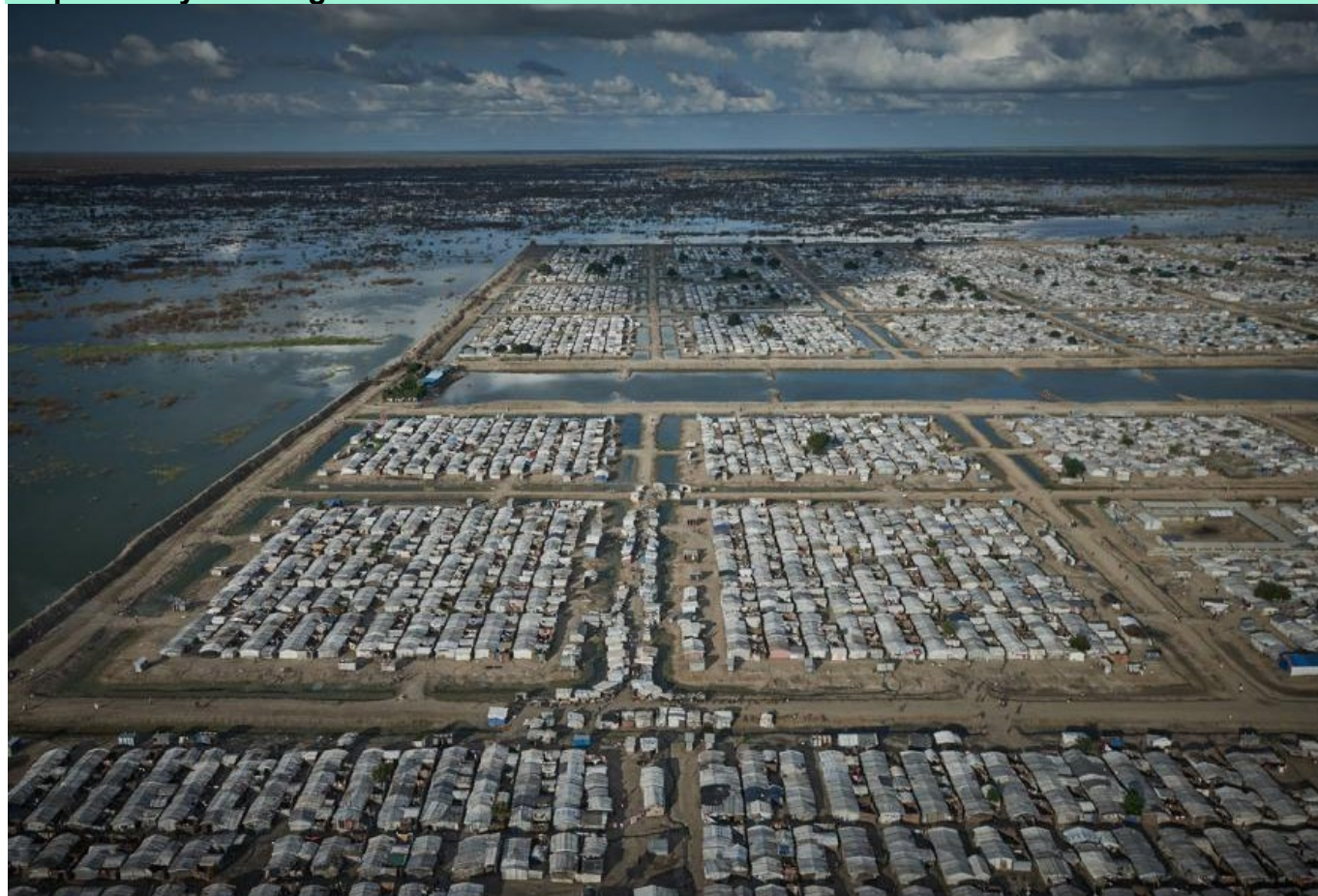
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Dykes have been a key focus of local government, international and national organisations, and communities to mitigate the impacts of floods and promote resilience. Earth-mound dykes are commonly used across South Sudan.<sup>23</sup> The largest projects have focused on constructing dykes to protect Bentiu, Rubkona and Leer towns in Unity State and are discussed below.<sup>67</sup> UN



actors have prioritised these areas of Unity State (particularly Bentiu) because flooding is so severe and dyke-building on this scale is particularly challenging (see Figure 2 for an example). Bentiu suffers from fighting and urban destruction, and the city also hosts a large camp for IDPs populated mainly by ethnic Nuer people who face few settlement alternatives within the state and are highly vulnerable to attacks.

**Figure 2. Dykes surrounding the IDP camp at Beniu protect over 100,000 people displaced by flooding or conflict**



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In Jonglei State, the Dyke Rehabilitation Project has focused on building up and fixing breaches in the 93 km-long dyke wall, which extends from the remaining Jonglei Canal from Adwar in Bor South County to Apiir in Twic East County.<sup>68</sup> This dyke protects 190,000 people living along it.<sup>69</sup> Work on this dyke has been a long-running but intermittent project since the digging of the Jonglei canal. For example, the United States Agency for International Development (USAID) supported construction work here after the Comprehensive Peace Agreement was signed in 2005 as part of an effort to create a conducive environment for displaced persons to return. Following a decade without maintenance, the 2019-20 floods overwhelmed it. Work in 2023 allowed 13,000 people displaced by floods to return home.<sup>69</sup> In March 2024, however, an interlocutor consulted for this brief reported that the dyke is becoming overwhelmed again and floodwater has radically transformed the area. The person described that in an area which was once forest and grassland that could support cattle, now '*flood water goes as far as your eyes can see. One would think you are on Lake Victoria... and sea[-like] waves are eating away the dykes*'. Development partners are now reportedly planning to move parts of this wall 10 kilometres east.

Other small projects have focused on dyke roads to keep villages connected, including in Gogrial West County, Warrap State.<sup>70</sup> Some populations have been supported to repair dykes themselves, particularly in towns seen as 'hubs of stability', such as Bor in Jonglei State.<sup>71</sup>

Funding constraints mean that people in most other areas of the country, including the submerged village of Fangak in Jonglei State, have gone unsupported and been forced to construct small dykes and bail water themselves, mostly unsuccessfully.<sup>72</sup>

### **‘Anticipatory’ action: A starting point for integrated response**

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In Bentiu, in 2022, humanitarian actors led by the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) piloted an approach based on ‘anticipatory action’ principles used in climate disasters globally.<sup>27</sup> Anticipating another year of catastrophic flooding, the pilot mobilised a robust dyke-building programme and multi-sectoral services targeting 100,000 camp-based IDPs and 19,000 other flood-displaced people in nearby informal settlements. Innovative elements of the approach involved:

- **Combining allocations** from the Central Emergency Response Fund and South Sudan Humanitarian Funds and releasing them six months earlier in the year to ‘pull the response forward’.
- **Creating a high-level special task force** to operate in Bentiu to speed decision-making between agencies and levels of government, and to influence the mindset of actors more used to reactive crisis intervention.
- **Adopting a public ‘results tracker’ to increase transparency** and multi-agency oversight.

According to observers, the pilot was an overwhelming success.<sup>27,73</sup> The camp for IDPs in Bentiu only experienced limited flooding even though it was below water level at some points, preventing the need for evacuation and resettlement. Constructing a dyke road between Bentiu and Mayom junction increased the volume of supplies to the camp and was estimated to be four times cheaper than using air transport.<sup>73</sup> Nevertheless, the defences are perilous – UN engineers estimate even one failure in the dyke encircling Bentiu could inundate the camp in three hours.<sup>47</sup>

The pilot has stimulated interest in greater infrastructural investment, such as the construction of elevated houses and paved roads to address the long-standing humanitarian-development gap. In an evaluation of the pilot, a high-level UN-OCHA employee described the need for sustained action:

*‘... if we don’t have a real climate adaptation programme, where we really look at infrastructure, roads, dykes, and longer-term areas to protect, like water systems reinforced, we will continue to have massive humanitarian consequences... Our action is meant to be limited in time, but here [in South Sudan] it is the only action taken.’<sup>27</sup>*

Observers were more sceptical about the pilot’s impact on the humanitarian-peace dimension of the nexus, given decision-making was far from localised.<sup>27</sup> Furthermore, a regionally scaled response of this kind would be challenging, given state and county-level leadership had been weakened by years of conflict, and the limited power and capacity of government institutions for humanitarian interventions.

### **Rebuilding trust through flood response initiatives**

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Other large dyke projects have provided opportunities for development partners in governance and accountability to address flooding as a long-term initiative to build communities and the nation.

One example is a project funded by the World Bank. In April 2022, the World Bank repurposed funds intended for local governance initiatives in Unity State to support dyke rehabilitation in Leer and Rubkona towns.<sup>74</sup> It had been recognised that trust in flood response initiatives needed to be rebuilt after several implementing agencies failed to follow through on smaller projects. The project used good governance practices and aimed to address long-term environmental concerns, drawing on environmental framings contained in the 2011 Transitional Constitution and domestic laws. The project’s environmental and social risks were analysed and

mitigated at each stage through a 'build back better' approach. This approach involved engaging with local technical capacity and political will to budget for county-level disaster risk management infrastructure. The project also considered good labour, non-discriminatory practices and a mechanism to redress local grievances, including for potential gender-based violence associated with an influx of workers. The World Bank policy states that projects it funds should not adversely affect inter-state relations. As the dykes are located within the catchment area of the White Nile River basin, which is an international waterway, neighbouring countries were notified.

### **Dyke rehabilitation at a local level**

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Dyke rehabilitation involves several activities, including identifying and fixing breaks or gaps, enlarging a dyke's base and height to withstand higher water levels, and constructing secondary dykes in case primary dykes are breached. While the construction of new dykes typically requires heavy machinery, most other work involves manual labour by small groups of people. Water pumps may also be used to remove surrounding floodwater after dykes are in place, and drainage systems can help with this.<sup>71</sup>

To organise local-level work, partners may support community consultations and the formation of Boma Disaster Management Committees, which include 12 to 15 women, youth and older people in affected neighbourhoods.<sup>66,67</sup> Additional community members may be trained in disaster risk management and dyke rehabilitation, with people involved in construction paid in cash or food.<sup>70</sup> The Committees may also manage access over the dykes for fishermen and women with kitchen gardens on the river banks, while discouraging herders from cutting into dykes to access water for livestock.<sup>74</sup> Such activities build on existing popular dyke-building practices in South Sudan and respond to community calls for greater support for dyke building in the lead-up to the recent flooding disaster.<sup>23</sup>

### **River management**

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Other approaches to flood prevention involve direct interventions to river flow, such as through damming or dredging. In general, among South Sudanese people, dykes and dams are more popular than canals or dredging because dykes and dams contain water, which might be needed in times of drought. Excess water could theoretically be diverted to water-scarce areas of the country for irrigation and other purposes.

### **Dams: A technically challenging option in South Sudan**

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In the 1950s, the British proposed four dams to hold excess water in Uganda and Southern (now South) Sudan as part of the Equatorial Nile Project.<sup>75</sup> Only one dam at Lake Victoria was completed, and civil war prevented the projects from moving forwards in South Sudan. Renewed interest from the Sudanese Ministry of Irrigation and Hydroelectric Power and development partners in the inter-war period (1972-1984) later examined several sites in the Equatoria states.<sup>76</sup> During the second civil war (1984-2005), the leader of the Sudan People's Liberation Army (SPLA), John Garang, again began discussing dams after he took control of one of the proposed sites at Nimule. He set up important barracks and encouraged Dinka migration to this area of Eastern Equatoria to prevent the town falling into government hands. A long-term plan was for the SPLA to control future hydroelectric development here. According to an interlocuter consulted for this brief, collaboration with Uganda to build a dam at Lake Albert is also a popular option in South Sudan. Nevertheless, the White Nile River basin in South Sudan has always been viewed as the most technically difficult territory in which to build dams, and South Sudan remains the only country along the river without a dam. All such river management solutions require feasibility studies and assessments of the environmental and social impacts.



## Dredging: Politically controversial

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The construction of new canals and the dredging of existing canals and rivers are still controversial. In 2022, the Unity State government and some national government public servants supported a proposal, backed by the Egyptian government, to dredge the River Naam to increase its navigability and relieve flooding.<sup>77</sup> Opponents included Dinka populations in the Bahr El Ghazal region who were worried the intervention would dry out the river basin and deprive people, cattle and wildlife of water. Also, environmentalists were unconvinced that dredging would control a flood of this magnitude. When the President of South Sudan suspended the proposal pending an environmental audit in 2022, hundreds of people in Bentiu descended on the riverbank in protest and used hand tools to start removing vegetation.<sup>78</sup> The dredging eventually went ahead without an audit in 2023, leading to heated, ethnically aligned debate between public figures of Nuer and Dinka backgrounds.<sup>a</sup> This controversy speaks to the political sensitivity of flooding and flood responses, reflecting local, national and even international politics.

Dyke rehabilitation projects have carefully avoided using the term 'dredging'. While earth is technically dredged from riversides to source soil with high clay content needed for dyke construction, these are called 'borrow pits'. Implementers are guided to 'restore' these sites by planting trees and grass to allow ecological regeneration.<sup>74</sup> This more modest and less controversial approach has many advantages: it is less disruptive in terms of its political acceptability, it has a positive impact on biodiversity, it supports peoples' access to natural resources and it supports people to engage in cultural practices. This approach also avoids the need for lengthy impact assessments, particularly during humanitarian crisis time frames.

## Humanitarian preparedness, assessment and response

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While the flooding season can bring opportunities for fishing and collecting wild foods, unexpected flash flooding can take a heavy toll on farming and herding. As 85% of South Sudanese rely on farming and herding, this often leads to short- and medium-term food crises.<sup>23</sup> For this reason, the South Sudan government has focused particularly on providing immediate humanitarian food aid,<sup>79</sup> often through partnership between the WFP and the government's Relief and Rehabilitation Commission, among others.

There is increasing recognition that floods are now reasonably predictable. Actors within the UN-organised humanitarian cluster system (designed to organise humanitarian actors into core sectors, such as water, health and food security) have increasingly emphasised flood preparedness. These measures include identifying past hotspots to anticipate future needs and using climatological, satellite data and maps to forecast flood extents;<sup>26,80</sup> for example:

- **The WASH cluster** uses forecasts to pre-position appropriate supplies and expertise, depending on the contexts and anticipated scenarios.<sup>81,82</sup> Scenarios are broadly categorised into IDPs or conflict-affected settings, situations of displacement, sites with limited access to WASH facilities, and/or disease-prone sites. Conflict-sensitivity analysis also informs activities to minimise potential negative impacts on peace.
- **The health cluster** uses flood maps and partner reports about the status of health facilities in flood-affected areas to mobilise resources through partners. This could include mobile clinic activities and/or pre-positioning drugs. Poor transportation infrastructure, which radically worsens during the rainy season, nevertheless limits capacity. Anticipatory actions include teams moving by boats, pre-positioning boats and training local first aiders, including traditional birth attendants to support pregnant women.<sup>83</sup> In the camp for IDPs in Bentiu, early investment in WASH infrastructure and a cholera vaccination campaign was thought to have averted a public health emergency.<sup>73</sup>

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<sup>a</sup> The verbal confrontation happened shortly after one of the authors had made a presentation during the South Sudan National Economic Conference 2023, during the question and answer session.

After flooding, humanitarian actors may conduct Inter-Agency Rapid Needs Assessments (IRNAs) to examine the short- and medium-term humanitarian needs. IRNAs are coordinated through the state-level cluster system with support from local Relief and Rehabilitation Commission offices. The IRNAs typically assemble 10 to 20 local implementing partners to assess people's needs and make recommendations for food, livelihoods, protection, shelter, health, nutrition, education and other cluster areas.

IRNAs do not typically examine environmental vulnerability or long-term flood preparedness, but assessors appear increasingly aware of the need for development-style planning. For example, in September 2023, 3,200 households along riverbanks in Mundri West County in Western Equatoria State saw their houses destroyed, crops submerged and food stores washed away. Humanitarian actors collectively recommended their permanent relocation.<sup>48</sup> That same month, humanitarian actors called for people fleeing Sudan to not stop at a major reception point in flood-affected Renk Town in Upper Nile State, but to continue on to camps or villages for IDPs where they could be better supported with humanitarian services or integrated into rural life.<sup>49,84,85</sup>

The IRNA methodology is rapid and flexible. As the methodology can include engaging with community leaders and members, it enables discussion of the multi-faceted impacts of flooding and its interaction with overlapping crises. For example, an IRNA assessing food insecurity was conducted in January 2023 in Panyijiar County, Unity State.<sup>57</sup> This IRNA characterised the acute food insecurity affecting 36,000 people in terms of crop and livestock destruction following four years of flooding. The assessment also reported on inflation, cattle raiding and food distribution delays.

IRNAs that adopt household survey methods have enabled more fine-grained analysis of crisis impacts and can shed light on possible solutions that engage with nexus considerations. As an example, the same Panyijiar IRNA surveyed 333 households. Among the 107 (32%) households which reported that a member of their family had been a victim of violence in the previous three months, 46 (43%) said this was over a struggle for resources. Based on the survey results, humanitarian actors recommended a multi-pronged approach including engaging communities in dyke construction and rehabilitation to support livelihoods and mitigate flood impacts. Also, peacebuilding actors were asked to reinforce the conflict monitoring and mitigation efforts of local community action groups. The aim of this reinforcement was to support social cohesion activities and positive peace messaging in hotspot locations, and to share information with actors working beyond protection, such as in health, WASH, food security or livelihoods.

When limited to general qualitative evidence on health needs and service impacts, however, many of these basic IRNAs do not bring much new and actionable information. With most IRNAs lacking detail on research methods used, it is difficult to compare findings across locations. There is also little new and flexible funding available, which makes sustainable action on their recommendations challenging.

## **Local reactions to flood response and mitigation**

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There has been a lack of research in South Sudan on how top-down flood responses have played out and been received locally, or how they might connect to conflict and peace. Humanitarian workers consulted for this brief suggested that people who benefit directly from flood response support appreciate the help, although there is desire for quicker action. Conversely, those people who do not receive support may see the response as political in nature, leading to resentment and thus the risk that responses could inflame tensions. This view is reinforced by a recent study on community perceptions of the impacts of climate, conflict and aid operations in the Mangala-Bor corridor.<sup>86</sup> This area has experienced many instances of severe flooding, which have contributed to more people going to camps for IDPs. Participants observed that 'inadequate and poorly targeted response by aid actors' exacerbated tensions

between IDPs and host communities, while the offer of only limited and short-term support was inadequate to meet needs, further exacerbating tensions.<sup>86</sup>

Flood-affected people involved in dyke repair work have sometimes mobilised discourses about protecting territory that echo broader conflicts and land disputes. For example, speaking to a reporter in Bor, one young man said that *'we need to protect our territory – this is our territory and the water is beyond our control'*.<sup>87</sup>

## Enhancing flood resilience through the triple nexus in South Sudan: Challenges and opportunities

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While interest in the triple nexus in South Sudan has grown significantly in recent years, there is limited evidence of its implementation, let alone what makes for successful integrated action. This section distils some challenges and opportunities for building resilience against flooding while enhancing sustainable peace and development in South Sudan. Together, these can contribute to and promote a virtuous feedback loop for peace and improved quality of life and opportunities.

### Challenges

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- **Sufficient funding has not been available to meet flood-affected people's acute needs for food and basic services, let alone for flexible, longer-term and more holistic humanitarian programming to promote resilience.** Despite discursive promotion of the triple nexus approach, there have been reductions in donor funding since the global economic crisis in 2022. This reduced funding has hampered needed sustainable and transformational change,<sup>12</sup> including flood prevention and response strategies. In particular, limited funding for large-scale infrastructure investments is worsened by widespread perceptions of government corruption, making it difficult for South Sudan to secure investment in climate adaptation and other developmental projects.<sup>47</sup> Short-, medium- and long-term investments are needed to:
  - help people replant, restock herds and support livelihoods;
  - rebuild basic infrastructure such as roads, bridges, schools and health facilities;
  - support resettlement of conflict- and disaster-affected people; and
  - maintain dykes and manage rivers.
- **Few effective mechanisms exist to bring stakeholders from across the triple nexus together in a sustainable way in South Sudan.** Rapid needs assessments, such as IRNAs, can successfully bring together government officials, humanitarian responders and community members to discuss the impacts of floods and other crises from a multi-sectoral perspective. However, these meetings tend to take place over short, humanitarian time frames to respond to acute needs. Similar multi-sectoral mechanisms do not exist for advancing more holistic and medium- to long-term resilience.
- **Instability in neighbouring Sudan may strain resources and governance capacities for flood responses** even further as South Sudan absorbs refugees from the north. This could also contribute to localised conflict and test peace efforts.

### Opportunities

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- **Civil society at national and subnational levels in South Sudan is highly supportive of the triple nexus approach**, unlike in some other contexts where this has been met with scepticism about whose interests it serves.<sup>12</sup> Civil society actors in South Sudan are particularly enthusiastic about the peace element of the nexus and therefore may be able to play a key role in promoting flood preparedness and response as important for peace.<sup>12</sup>



- **Customary chiefs and religious leaders have broad reach and legitimacy in the eyes of the people** due to their perceived lower levels of corruption (than government), and as facilitators of open dialogue about social life on different levels.<sup>12</sup> This powerful positioning can be further leveraged to support action around flooding, with its multiple links to peacebuilding,<sup>88</sup> as well as humanitarian and development priorities.<sup>89</sup>
- **Local peace dialogues and flood mitigation programmes that target youth** – who are often mobilised into conflict – are an opportunity to enhance livelihoods and well-being for young people, and foster intercommunal peace. Enhancing basic services and long-term investments locally may also provide stability and opportunities for young people and enhance peace.
- **Holistic approaches to peacebuilding, humanitarianism and development are already embedded into local ways of working** by many NGOs, faith communities and other civil society actors in South Sudan.<sup>12,89</sup> There is a significant opportunity for donors and international actors to learn from local actors on how to operationalise the nexus as well as to provide them with the resources to lead on nexus working.
- **IRNAs represent a potential opportunity to facilitate deeper discussion with – and action by – local authorities at the county, boma and payam levels on long-term issues associated with flooding, including on changing land use patterns and peacemaking.** Organising IRNAs and implementing their recommendations will need deeper relations between humanitarian cluster and local government authority actors as the implementing partners conduct the IRNA process.
- **In July 2024, health sector financing will transition to a country-wide pooled fund scheme led by the World Bank.** This change has launched a series of prioritisation exercises for support to facilities and services. These planning processes are an opportune time to consider how flood prevention and infrastructure development work could influence service provision, migration and re-settlement strategies, if relevant actors in these areas could meet.

## Key resources

1. [United Nations Satellite Centre \(UNOSAT\) interactive map](#), updated regularly to show satellite-detected water extents over South Sudan.
2. [International Crisis Group videos and aerial maps of flooded areas of the Nile](#).
3. [ReliefWeb Response floods crisis portal](#), containing links to IRNA reports as they are completed.
4. [South Sudan national-level flood assessment](#), conducted by the Relief and Rehabilitation Commission and L.N. Moro (November 2022).
5. [Environmental impact assessment of the Bor Counties' dyke rehabilitation project, South Sudan](#), R. Hassan et al. (2006).
6. [Scoping study for the Bor Flood Control Initiative](#), Mott MacDonald (2019).
7. [Environmental and social management plan for flood control using dykes in Rubkona and Leer Counties, Unity State, South Sudan](#), M. Marabire (2022).
8. [Study of UN-OCHA's anticipatory action flood control project in Unity](#), Easton-Calabria (2023).
9. [Key findings of research from BRACED on building climate resilience in fragile contexts in South Sudan](#) (2018).

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**Authors:** This brief was written by Leben Moro (University of Juba), Jennifer Palmer (LSHTM) and Tabitha Hrynich (IDS).

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**Contact:** If you have a direct request concerning the brief, tools, additional technical expertise or remote analysis, or should you like to be considered for the network of advisers, please contact the Social Science in Humanitarian Action Platform by emailing Annie Lowden ([a.lowden@ids.ac.uk](mailto:a.lowden@ids.ac.uk)) or Juliet Bedford ([julietbedford@anthrologica.com](mailto:julietbedford@anthrologica.com)).

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