



“UNLIVEABLE FOR HUMANS”

A VISUAL DOCUMENTATION
OF JACOBABAD, ONE OF THE
WORLD’S HOTTEST CITIES

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Cover Photo: Abdul Malik, brick kiln worker and Jacobabad resident.

**All photos by Shakil Adil for
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INTRODUCTION

Climate change has been manifesting itself through soaring temperatures and heat waves that have, in recent years, gripped the city of Jacobabad in Pakistan. In June 2021, the combined heat and humidity levels crossed into a threshold where the human body's mechanisms to cool itself becomes defunct. In the same vein, the city and its people do not have the coping capacity, thus impeding their rights to health, life, a safe and healthy environment, sanitation, work, housing and an adequate standard of living.

Jacobabad's residents and their way of life is entirely dominated by attempts to escape the heat. Those living in poverty are among the most vulnerable to the impacts of climate change, who are deprived of respite from the heat because of their lack of access electricity, clean water, and adequate housing. Skin and heat-related illnesses are rampant in Jacobabad, exacerbated by heat, brackish water, and exposure to the sun.

Daily wage earners who work outdoors are the most exposed to the heat, yet the least equipped to deal with it. Women and girls are doubly impacted by their lack of access to cooling mechanisms that are available to men and children, such as taking quick baths, jumping into nearby water bodies or even sleeping outdoors. In the absence of a public transport system, students must walk to school in the blazing heat. The schools, in question, are not sufficiently equipped, resulting in many children dropping out to work as field hands.

Pakistan is one of the most climate-vulnerable countries in the world, underscoring the urgency with which high-emitting countries, with a historical responsibility for climate change, must decarbonize their own economies and extend technical and financial support to developing countries for their adaptation and mitigation strategies.



A man makes a makeshift shelter from a discarded trampoline. Shade has become increasingly difficult to find with unchecked deforestation and residents make do with whatever they can find.



At the current level of 1.1°C of global warming above pre-industrial levels, the impact of climate change is becoming increasingly apparent. Devastating heatwaves have been recorded around the world, obstructing the ability to enjoy the rights to life, water, food, housing, sanitation, adequate standards of living, work, development and a healthy environment. One such place already paying the price of the climate crisis is Jacobabad.

The city of Jacobabad, located in the province of Sindh in Pakistan, has been facing sweltering heat in the summer months consistently for the last four years. Its population of nearly 0.2 million people has been suffering heatwaves with rising temperatures each year. In 2017, by June, temperatures had hit 49°C. By 2018, it was up to 50°C. The next year, the highest temperature recorded was 51.1°C. In 2020, this had increased to 51.2°C. In June 2021, the hottest day hit 52°C. On at least four occasions since 1987, temperatures and humidity levels have reached a threshold described by experts as “hotter than a human body can handle,”¹ one of only two cities in the world to hold that status.

1 See The Telegraph, “[Hotter than the human body can handle: Pakistan city broils in world’s highest temperatures](https://www.telegraph.co.uk/global-health/climate-and-people/hotter-human-body-can-handle-pakistan-city-broils-worlds-highest/)”, 28 June 2021, telegraph.co.uk/global-health/climate-and-people/hotter-human-body-can-handle-pakistan-city-broils-worlds-highest/



A man passes out from a heatstroke in the middle of the road, a commonplace occurrence in the hottest months where temperatures have exceeded 50 degrees Celsius for the last four years.

Pakistan is projected to be among the countries worst affected by rising temperatures over the coming decades, with [recent joint findings by the Asian Development Bank and World Bank](#) highlighting its increased risk of extreme climate events and food insecurity.² Owing to its geographical location, increased variability of monsoon, reduced capacity of water reservoirs, receding glaciers and degradation of ecosystems, Pakistan's vulnerability is compounded by its low coping capacity. Given the implications this would have for the country's agriculture sector, Pakistan could face major food insecurity as well.

For the residents of Sindh and many other parts of Pakistan, the climate crisis is not a distant threat but a lived reality. In the past, other cities in Pakistan have also seen similar rises in temperatures (both Risalpur and Turbat hit 49°C in June 2021) and Jacobabad offers a glimpse into what life could soon look like in many other parts of the world.

² See Asian Development Bank and World Bank, Climate Risk: Country Profile – Pakistan, 2021, climateknowledgeportal.worldbank.org/sites/default/files/2021-05/15078-WB_Pakistan%20Country%20Profile-WEB.pdf

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Deforestation and industrial emissions have changed the climate of the region around Jacobabad to a large extent over the last three decades.”

Dr Ghulam Rasul, former Chief Meteorologist, Pakistan Meteorology Department



People huddle under a tree, one of the few remaining, that offers them shade.

The climate crisis is a manifestation of deep-rooted injustices. Although climate change is a global problem affecting everybody, it disproportionately affects individuals and groups who are already subjected to multiple and intersecting forms of discrimination. They are also marginalized as a result of structural inequalities, ingrained agricultural practices or unfair distribution of resources, power and privilege. Jacobabad's population remains mired in poverty and beholden to exploitative labour practices; these are made worse by the searing heat from which they have no respite.

Under international human rights law, states have legal and enforceable obligations to tackle the climate crisis. All states must reduce emissions, achieve zero-carbon emissions as soon as possible and help people adapt to climate change to the full extent of their abilities. When states fail to take sufficient measures to prevent human rights harms caused by climate change, including foreseeable long-term harms, they violate their obligations under human rights law.

Pakistan's government under Prime Minister Imran Khan has announced a spate of new climate change response measures since its election in July 2018, including the continuation of a mass tree plantation drive (popularly known as the "Billion Tree Tsunami"), protection of wetlands, expanding mangrove forest cover, an electronic vehicular policy and a "green Eurobond" to finance the construction of two dams.



A child cools off with a hand-operated pump, his only respite in searing temperatures.

Still, Jacobabad residents seem to have been unable to reap the benefit of any of these measures. Reforestation programmes have not taken root in the city at the time of writing. Renewable and reliable sources of energy have not been provided to Jacobabad's residents. Assistance to cope with heatwaves also remains elusive. More needs to be done to put in place adequate climate adaptation measures to effectively protect their rights in the context of rising temperatures and more frequent days of unbearable heat.

However, even if Pakistan was fully meeting its human rights obligations in relation to climate change, that would not be enough to protect people from the worst impacts of climate change. States that have contributed the most to the climate crisis and those with most available resources have heightened obligations, particularly to decarbonize their economies more quickly than other countries and to provide support to developing countries for human rights-consistent climate mitigation and adaptation measures, including to Pakistan. They must also provide financial means, technical support and access to remedy, including compensation, to people whose rights have been violated as a result of loss and damage caused by the climate crisis. This includes ensuring that new and additional finance is mobilized specifically to address loss and damage.

“

**How can a poor person
save themselves from this
scorching heat?”**

Shahnawaz Rind, factory owner



An emaciated child seeks relief under a solar-powered fan, charged by a small battery in his home, which is only functional during the daytime.

Many governments, particularly in major emitting countries and nations with historical responsibility for the climate crisis, still lack the political will to take the bold and unprecedented measures that scientists have told us are necessary to avoid an impending catastrophe. Wealthy states are also failing to provide adequate technical and financial resources to less wealthy countries to allow them to meet their climate mitigation targets and implement effective climate change adaptation measures.

The current situation in Jacobabad serves as an important illustration to the participants of COP26 that the wealth of industrialized countries, built on fossil fuels and unsustainable practices, has endangered the survival of millions around the world, and particularly in developing countries. It also comes as a reminder that there is no more time for hesitation, delaying tactics and half-baked solutions when peoples' human rights are already under an unprecedented threat

Amnesty International conducted a five-day field visit to Jacobabad in August 2021, and conducted 26 interviews with residents, doctors, a climate change expert, labour union representatives and community health workers. This document includes photos and preliminary findings from the visit. All the interviews were conducted in Urdu or Sindhi and were subsequently translated to English.

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Climate change will exacerbate existing poverty and inequality. It will have the most severe impact in poor countries and regions, and the places where poor people live and work. Developing countries will bear an estimated 75-80% of the cost of climate change.”

UN OHCHR, Special Rapporteur for extreme poverty, June 2019



A truck driver takes a nap under stacked tables in the blazing heat. Most labourers take a break during the afternoon, when the sun is at its hottest, but this can lead to reduced wages.

Jacobabad residents consistently remarked that the city's temperatures seem to be rising with each passing year. From older residents to younger students, there is an unequivocal acknowledgement that summer months (May to August) are getting worse. There are a variety of everyday indicators for this claim. Farmers indicate that mangoes and dates, grown in the area, ripen faster now – long before they are due – because of the heat. An NGO worker with a disability explained that he must replace the wheels on his tricycle wheelchair more frequently now, because the rubber wears out more quickly due to how hot the ground gets. Ice factories have cropped up as a lucrative business. Community health workers, locally known as Lady Health Workers, told Amnesty International that they have to request shelter in houses they visit during their vaccination drives when the sun is at its peak to avoid suffering heat-related illnesses.

“

If we compare the temperature and number of heat stroke patients in Jacobabad to the last decade, the number has without doubt, risen for both.”

Dr Asmat Ali, Jacobabad Institute of Medical Services.



Community health workers making their rounds that they must complete by 4:00 pm to submit their daily progress reports on time at their offices.

While Dr Ghulam Muhammad, a doctor at the Civil Hospital, Jacobabad stated that the government does send notifications of heatwaves, all the residents Amnesty International spoke with said that they had not received any sort of advance warnings. They said that they do not have access to any guidance provided by the government on how to protect themselves from the sweltering heatwaves. The Director General of the Pakistan Meteorological Department told Amnesty International that there are too many districts in the country so they only issue weather warnings for the region. He added, “Whenever there is a possibility of a heatwave in Jacobabad, we issue a warning for Northern Sindh.”³

The standard operating procedure is to notify the press with the warning, with the understanding that they will broadcast it through television and radio.

³ Amnesty International interview with Mr Sardar Safraz, Director General, Pakistan Meteorological Department, on 6 October 2021.

“

As temperatures rise, our tasks also increase, because more and more people start getting sicker.”

Lal Jan Birhoi, community health worker



Firewood remains the primary energy source for many, significantly reducing the city's tree cover.

The city's inhabitants and their way of life is dominated by attempts to escape the heat. Unfortunately, their options remain restricted, and shade is difficult to find. There has been significant deforestation in previous years. While official data is not available on Jacobabad specifically, the World Wide Fund for Nature estimates only 5.7% of Pakistan's land to be under forest cover.⁴ Mohammad Murad, a farmer, told Amnesty International that when he was a child, the walk to the market used to be completely under shade from trees. "Now," he added, "only three or four [trees] remain."

The city's energy supply through the grid still relies largely on natural gas, which remains unreliable, forcing residents to turn to firewood to cook their meals. This leads to a rise in demand for wood, causing more and more trees to be felled, engendering a vicious cycle. Wood is also sold from Jacobabad to the rest of the country and even exported to Afghanistan, making it an important source of livelihood.

⁴ World Wide Fund for Nature, "As the world's population grows, forests are under more pressure than ever", wwfpak.org/our_work_/forests/, 15 August 2020

“

In my childhood, I sat under the trees I sell for firewood now.”

Niaz Mohammad, shopkeeper



A man takes shelter – he remains one of the more fortunate, with solar panels and shade.

The climate crisis manifesting as rising temperatures, coupled with Pakistan's energy crisis, causes disproportionate suffering to the poorest in the country. The poorest do not have access to alternative supplies of energy (such as generators and air conditioning) to cool them down. They normally work outside, subjecting them to the worst of the heat with barely any effective means to shelter themselves.

Solar power panels have cropped up in markets in the city. However, their cost of PKR 14,000 (USD 82) remains prohibitively expensive for daily wage earners or labourers. The average monthly income in Jacobabad is less than PKR 15,000 (USD 86). Abdul Malik, a brick kiln worker who makes less than USD 5 a day, stated, "Should I buy a solar power battery or food for my children?"

“

**A few years ago, you
could survive with a fan in
your home. Not anymore.
Nowadays, we are lucky if
we have electricity for long
enough just to start a fan.”**

Muhammad Usman, Jacobabad
resident



Despite an abundance of sunlight, solar power is still prohibitively expensive for the majority of Jacobabad's residents.

The Government of Sindh announced a solar home system subsidy in May 2021 for 10 districts including Jacobabad, which would cover half the cost of installing solar panels for 20,000 households.⁵ However, Amnesty International was not able to confirm if any households in Jacobabad have benefited from these subsidies.

⁵ The News, “CM approves Rs 4bn scheme to provide solar power to people of 10 districts”, 30 May 2021, thenews.com.pk/print/841969-cm-approves-rs4bn-scheme-to-provide-solar-power-to-people-of-10-districts

“

If as many people who needed solar panels were able to buy them, there would be 100 shops selling them – but people are just too poor here.”

Farmanullah, solar panel shopkeeper



“

We sell at least 4500 blocks of ice every day, but we still can't meet the demand.”

Ghulam Yasin, an ice factory manager

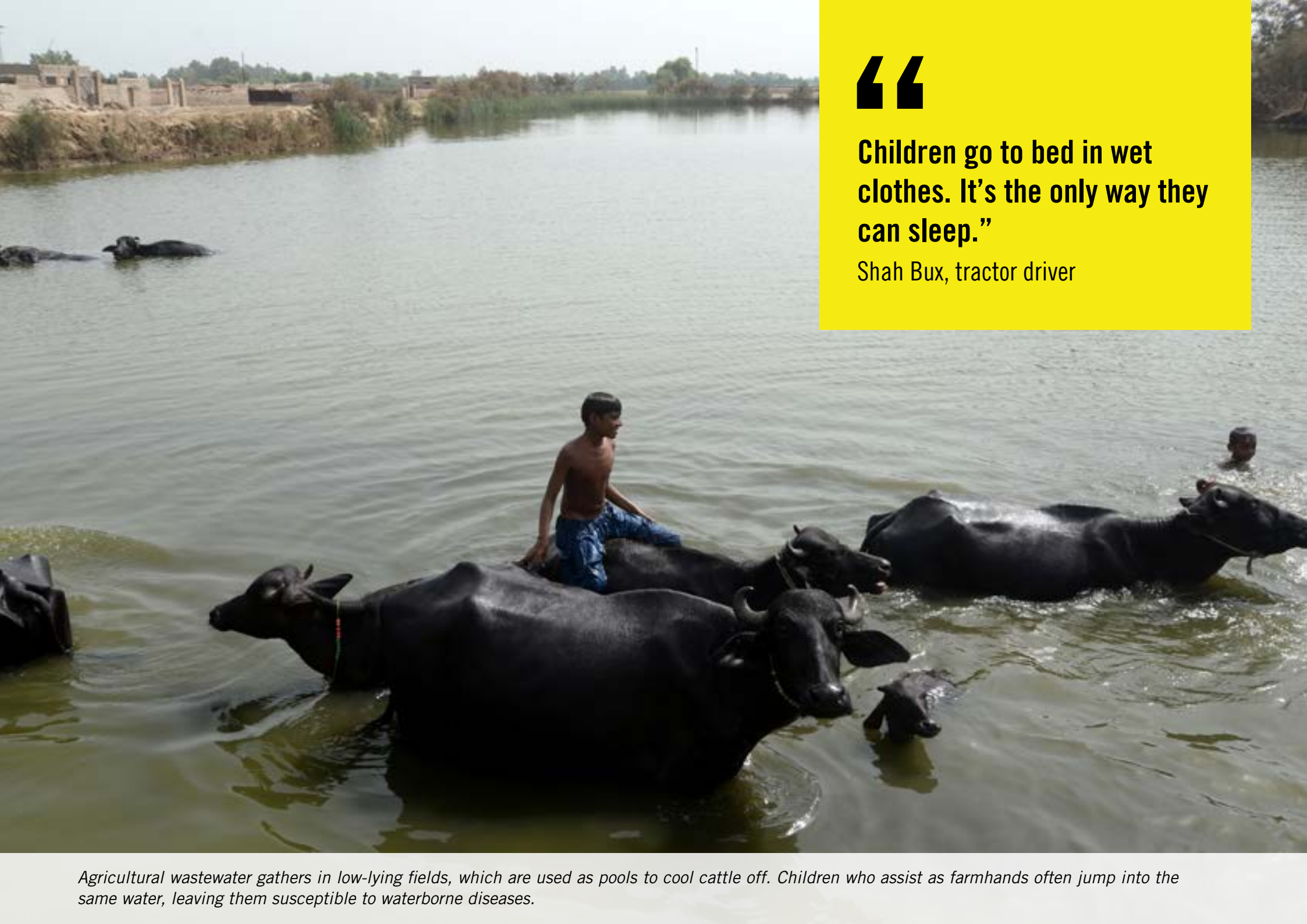
Refrigerators are an inaccessible commodity for most, and for those that do have them, the unreliable supply of electricity remains an issue. As a result, buying ice is a necessary expense for many in Jacobabad, where many use it to cool concrete floors.



Some families have created “donkey-powered fans” where a donkey is blindfolded and tied to a pole and made to move in circles, rotating an axel with two light blankets on them.



The most indigent often resort to the footpath to sleep. Many labourers and families place their charpoys on the divider on two-way roads so that gusts of wind from passing vehicles offer them some respite, even as they are forced to breathe toxic fumes from car emissions.



“

Children go to bed in wet clothes. It's the only way they can sleep.”

Shah Bux, tractor driver

Agricultural wastewater gathers in low-lying fields, which are used as pools to cool cattle off. Children who assist as farmhands often jump into the same water, leaving them susceptible to waterborne diseases.



A toddler receives treatment at a clinic for a skin condition caused by exposure to the sun. Extreme heat, dirty water and poor hygiene practices have led to many residents of the city developing skin issues.

Cattle are normally tied and kept in water to protect them from the heat. They are often the only asset that a family may have. These makeshift pools are agricultural wastewater that gathers into low-lying rice fields. The still water is unhygienic and rife with diseases, yet children jump into it to cool themselves down.

Skin conditions as a result of poor hygiene are common, with abscesses forming on many children, alongside prickly heat and sunburn. Shadi Khan, a gardener, associates the skin diseases with the brackish groundwater that is often the only water supply available to Jacobabad's residents. Colonel Ahmad Bux, head of the People's Primary Healthcare Initiative in Jacobabad told Amnesty International that working in flooded paddy fields in the heat and humidity often leads to skin conditions for field hands. In the hottest summer months (June and July), he has noted a spike in diarrhoea in children under the age of five. Heatstroke is a common occurrence, as confirmed by Dr Asmat Ali, who works at the Jacobabad Institute of Medical Services.



A 70-year-old brick kiln worker cools off.

The treatment for heat-related illnesses is to hydrate and rest in a cool place. However, this option is not available to many labourers in the city. The majority of men are employed as field hands or as brick kiln workers. The 2010 floods, caused by heavy monsoon rains that killed more than 1,700 people in Pakistan, destroyed many homes in Jacobabad. Reconstruction efforts caused a rise in demand for bricks. There are now 70 brick kilns on the outskirts of the city. According to brick kiln owner Shahnawaz Rind, there are at least 5,000 men employed in this industry. They are given a quota of building 1,000 bricks a day for the measly daily wage of PKR 700 (less than USD 5). These need to be made by hand, then baked into an oven powered by burning rice husk. Workers have to sit next to an oven under the excruciating heat, with no shelter and often no protection from the heat.

The only protective measure available to brick kiln workers is a manually operated handpump, which they use to bathe themselves when the heat gets unbearable. These cooling breaks cut into the time they have for making the bricks, so they try to take as few of them as they can. The heat often prevents them from meeting their quotas, which means they either do not get paid or they are not paid in full. The loss in income, as Abdul Malik, a 40-year-old brick kiln worker put it, often means his children go to bed without eating.

“

It's hard to breathe when it is that hot, but if I rest, my family and I will go hungry. So how can I take a break?"

Gulab Birohi, 70-year-old farmhand and brick kiln worker



Moomal Khaton faces tremendous difficulties, saying that sleep is elusive when she has to stay awake the whole night using a hand-held fan to keep her four children cool at night.

Women and girls overall are disproportionately affected by the adverse effects of climate change, as compared with men and boys. This is the result of pre-existing gender inequalities and intersecting forms of discrimination that they face. While interviewing women in Jacobabad proved to be challenging, Amnesty International's analysis indicates they do not have the same access to cooling mechanisms. They cannot take quick water baths in public the way men can, nor jump into nearby water bodies like younger children do. They are often forced to sleep inside in stuffy homes because sleeping outdoors poses a security risk, leaving them susceptible to gender-based and sexual violence. Unlike many male agricultural workers who work in the evenings to escape the peak heat hours, women are unable to work in the evenings for safety reasons.

Women who live in slums around the city are particularly exposed to the heat due to the lack of adequate housing/shelter. Sonya, who has seven children, is often turned away from a nearby religious seminary when she asks them for water, being told that her children are "impure" and would contaminate the seminary's water supply. This forces her to make her children beg for water; or when she can, she buys a gallon of water for PKR 20 (less than 10 cents).

“

For poor people, there is no rest.”

Moomal Khaton, a woman living in the slums of Jacobabad



Children fill water bottles outside a closed government school, most of which remain poorly equipped to protect students from the heat. The absence of a public transport system forces children to walk to school in the heat, or if they can afford it, a shared taxi. This leads to students dropping out.



Shadi Khan, a gardener holds up a sapling of trees he is preparing at a nursery he works.

RECOMMENDATIONS

Authorities in Pakistan have the obligation to adopt all necessary measures to assist the people of Jacobabad to adapt to the foreseeable and unavoidable effects of climate change, thus minimizing the impact of climate change on their human rights.

In particular, the provincial government of Sindh must

- Adopt and implement human rights-consistent adaptation measures that adequately protect the people of Jacobabad from extreme heat, including the provision of electricity through renewable energy sources, enforcement of labour regulations that make it incumbent upon employers to give breaks and to provide water and shade without penalizing workers.
- Collect, update and disseminate in an effective and appropriate manner information about climate change and its impacts, including early warning information regarding climate effects and climate-related disasters and events, such as heatwaves and extreme rainfall.
- Identify and support livelihoods that are resilient to disasters and climate change, as well as providing necessary technical and material support to livelihoods particularly at risk of climate change impacts
- Guarantee the right to Jacobabad's residents to take part in decision-making processes. In particular, ensure that people disproportionately impacted by heatwaves, such as informal manual labourers, women and children are meaningfully consulted and have their concerns meaningfully considered in the preparation of climate change adaptation measures.

The Federal Government of Pakistan must

- Provide timely warnings of imminent heat waves, along with advice on protective measures and ensure that it is widely and effectively disseminated among the people of Jacobabad.
- Step up climate change mitigation and adaptation efforts to avoid loss and damage to the greatest possible extent, with the aim of preventing other cities in Pakistan developing living conditions as those in Jacobabad.
- Ensure a participatory approach in all climate change plans, and make efforts to ensure that women, Indigenous peoples, people living in poverty and members of other marginalized communities are included in decision-making processes and are provided the necessary support to participate meaningfully.

In addition, wealthy industrialized states must move fastest on mitigation and adaptation efforts and

- Adopt and implement the most ambitious emission reduction targets possible that would enable them to reduce emissions by half well before 2030 and reach zero carbon emissions by 2030 or as soon as feasible after that while ensuring a just transition that enhances human rights.

- Phase out fossil fuels and shift to renewable energy produced consistently with human rights by 2030 or as soon as possible after that.
- End the production and use of most polluting fossil fuels and forms of production, such as coal, peat, fracking and tar sands, as soon as possible and no later than 2030.
- End fossil fuel subsidies immediately.
- Prohibit, in law and practice, further investments to expand fossil fuel exploration, extraction and production including the development of new infrastructure, and decommissioning existing fossil fuel production within their territory.
- Stop financing fossil fuel projects in other countries, as a rapid fossil fuel phase-out by wealthier countries must not be pursued by simply shifting sources of production to developing countries.
- Significantly increase funding for human rights-consistent climate mitigation and adaptation initiatives in less wealthy countries. This means that they should make concrete pledges reflecting their level of responsibility and capacity with a specific timeline for delivery.
- Establish adequate mechanisms funded by new and additional finances to provide support and remedy, including compensation, to people whose rights have been negatively affected as a result of the loss and damage caused by the climate crisis.

“UNLIVEABLE FOR HUMANS”

A VISUAL DOCUMENTATION OF JACOBABAD, ONE OF THE WORLD’S HOTTEST CITIES

The city of Jacobabad, located in the province of Sindh in Pakistan, has been facing sweltering heat in the summer months consistently for the last four years. For the city’s residents, the climate crisis is not a distant threat but a lived reality and Jacobabad offers a glimpse into what life could soon look in many other parts of the world.

This photo essay is the outcome of a field visit carried out by Amnesty International in August 2021.

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