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Just Atonement Inc. is a legal non-profit that trains new human rights defenders to address threats to human rights, a livable planet, and the international rule of law.

JAI was founded in the United States of America in 2017.

JAI was founded to address the challenges arising from the intersection of climate change, global peace, and threats to the rule of law and the habitability of the planet.

JAI submits this written submission with respect to the Universal Periodic Review of Bangladesh.

### **Summary of Conclusions**

- 1. By 2050, Bangladesh is expected to experience an increase in temperature of about 1.5°C. Between 2040 and 2059, annual rainfall is also expected to increase by 74 millimeters. These projected changes will escalate the spread of infectious diseases as well as mental health issues.
- 2. Bangladesh, although not a large contributor to global emissions, is one of the countries most affected. The unique geographical position of Bangladesh puts it at a unique risk of sea level rise and extreme weather. This will have profound economic and social effects.
- 3. Extreme weather, like monsoons and cyclones, will get worse. Rainfall has increased and the monsoon period is longer. This has a huge economic cost for Bangladesh.
- 4. Rising humidity and temperatures, as well as changes in weather, will have a huge toll on physical and mental health. Respiratory illnesses, waterborne diseases, and dengue fever will increase as the effects of climate change grow. Additionally, rates of anxiety and depression will increase commensurately with the increase in extreme weather.

**Climate Change** 



- 5. Bangladesh has been getting warmer over the last few decades, experiencing an average rise in temperature of 0.5°C between 1976 and 2019.
- 6. Bangladesh is highly vulnerable to climate change given its low elevation, high population density, and weak infrastructure. Over the last two decades, the Global Climate Risk Index rates Bangladesh as the seventh most affected country in the world from extreme weather events.<sup>2</sup>
- 7. Bangladesh accounts for 0.56 percent of global emissions. The government has taken important steps to improve capacity to respond to the crisis. Sheikh Hasina has received the UN's environmental award, the Champions of the Earth in recognition of Bangladesh's far-reaching initiatives to address climate change. Bangladesh was the first developing country to draw up a coordinated action plan in 2009 called the Climate Change Strategy and Action Plan. She also set up a Climate Change Trust Fund for \$300 million through domestic resources from 2009-2012. Every year six to seven percent of the country's annual budget is earmarked for climate change adaptation.<sup>3</sup>
- 8. Bangladesh's geography puts it at unique risk of climate disaster. Bangladesh's geographical location, its flat low-lying topography, higher rainfall in the Brahmaputra-Meghna-Ganges River basins, the melting of the Himalayan glaciers leading to rush of water in the monsoons impact this. Additionally, the constantly rising sea levels are making life impossible for coastal communities. This not only results in land loss, but leads to saltwater infiltrating agricultural land, hindering farming as well as contaminating drinking water.<sup>4</sup>
- 9. The impacts of climate change have a huge economic and social toll. Studies indicate that globally, costs related to loss and damage from climate change impacts will rise to between \$290 billion and \$580 billion a year by 2030.<sup>5</sup>

#### **Extreme Weather**

- 10. Monsoons are becoming unpredictable and erratic. During peak monsoon, from June to August, the average monthly mean rainfall has declined by 60 millimeters. On the other hand, mean monthly rainfall for September and October has increased by 43 millimeters, which indicates that the monsoon period is gradually becoming longer, extending now from March to October. Rising temperature during the winter months coupled with erratic rainfall patterns have eroded the distinct seasonality in Bangladesh.<sup>6</sup>
- 11. Monsoons and other extreme weather events have cost Bangladesh a combined loss of \$3.72 billion. The Global Climate Risk Index (CRI) for 2021, places Bangladesh seventh among ten countries that bore the cumulative impact of climate change between 2000 and 2019.<sup>7</sup>

#### **Physical and Mental Health**



- 12. Respiratory illnesses are likely to increase with rising temperature and humidity. A 1°C increase in temperature rises the likelihood of contracting a respiratory infection by 5.7 percentage points, whereas a 1 percent increase in humidity rises the chances of catching a respiratory infection by 1.5 percentage points.<sup>8</sup>
- 13. Waterborne diseases like cholera are likely to decrease with rising humidity and temperature. A 1 percent increase in relative humidity reduces the probability on contracting waterborne illnesses by 1.6 percentage points, whereas a 1°C increase in mean temperature reduces the likelihood of respiratory infections by 4.2 percentage points.<sup>9</sup>
- 14. Dengue is likely to increase for Dhaka as the climatic conditions for it become more suitable. Humidity in the range of 60 to 80 percent, maximum temperature between 25°C and 35°C, and rainfall between 200-800 mm create ideal conditions for mosquitoes. Weather data between 1976 and 2019 indicate Dhaka is experiencing falling humidity levels, rising temperatures, and heavier summer rainfall. These together with factors like urbanization are increasing the risk of the spread of dengue in Dhaka city.<sup>10</sup>
- 15. Extreme weather can cause increases in anxiety and depression. Changes in weather can cause mood swings. The level of anxiety disorders increases with temperature and humidity. Increase in mean humidity and mean temperature increases the probability of having anxiety by 0.3 percent and 0.8 percent, respectively. More people suffer from depression during winter. Increase in temperature lowers the probability of depression by 1.6 percent. Further, women are at higher risk than men for depression, while men are more susceptible to anxiety.<sup>11</sup>
- 16. The anticipated spread of disease as well as the increased stress on mental health will impact the right to health in Bangladesh.

### **Migration and Climate Refugees**

- 17. As of today, seven million people in Bangladesh have been forced to leave their homes. Their towns and homes have been destroyed either by super cyclones and flooding or because sea water has made the soil in many of the coastal low-lying areas.<sup>12</sup>
- 18. Sea level rise will impact communities near the coast, forcing them to seek refuge elsewhere. The World Bank estimates that Bangladesh may have almost 20 million internal climate migrants by 2050, amounting to almost 12 % of the population. By that date there will be a 50 cm rise in sea level according to experts. A 2018 U.S. government report noted that 90 million Bangladeshis (56 percent of the population) live in "high climate exposure areas," with 53 million subject to "very high" exposure. A seek refuge elsewhere.
- 19. Climate change in Bangladesh has started what may become the largest mass migration in human history. Some scientists project a five-to-six-foot sea-level rise by 2100, which would displace perhaps 50 million people.<sup>15</sup>
- 20. Migration on this scale will have profound impacts for the human rights of Bangladeshi citizens. The right to housing and adequate shelter and the right to dignified work will be immediately implicated because of disasters requiring migration (either internally or



externally). Displacement will also destroy communities and the cultural fabric related to traditional ways of life, thus affecting the right to culture. Vulnerable communities are particularly at risk from displacement, which could lead to increasing violence or exploitation of such communities, particularly women and girls. Widescale migration will also have profound impacts on the right to self-determination of peoples in Bangladesh, a fundamental principle of international law and an *erga omnes* obligation of States.

# **Biodiversity**

21. The Sundarbans are at risk with rising sea levels. The mangrove forests sustain biodiversity and help to protect the coastal villagers from cyclones. Without them, communities will be at even more risk from sea level rise and more intense monsoons and cyclones. <sup>16</sup> Destruction of biodiversity will have significant consequences on the right to a clean, healthy, and sustainable environment.

### Additional Human Rights Concerns

- **22.** Children will be one of the most affected groups in a climate crisis in Bangladesh. The United Nations Children's Fund's 2021 Children's Climate Risk Index rates the climate risk facing children in Bangladesh "extremely high"—the index's most severe rating.<sup>17</sup>
- 23. Climate migration has caused people to move towards urban areas, causing internal strife. Bangladeshis in coastal communities have already begun migrating inland, mostly to urban areas. With weak local governance, poor urban management and existing ethnoreligious tension driving underlying domestic fragility, climate-driven migration and poverty will drive or amplify conflict and human rights challenges.<sup>18</sup>
- 24. Dhaka lacks the infrastructure to handle the growth from climate migration. Dhaka's population is estimated at over 20 million and projected to keep rising. Recent studies suggest that extreme poverty is rising in urban Bangladesh. The United Nations estimates that around four million people inhabit the city's over 5,000 slums, which are continually fed by an influx of migrants, who are often forced to depart good-quality housing for abject conditions due to climate-related displacement. These slums have poor water and air quality and unsafe infrastructure that endanger their residents.<sup>19</sup>
- 25. With climate migration, there may be an increase of anti-minority violence. Rural areas have a history of conflict between minority groups and Muslims, but inter-religious tension has increased in recent years due to the rising social influence of the Islamist group Hefazat-e-Islam. A Bangladeshi human rights organization has documented over 4,000 attacks on minorities since 2007. Bangladesh's coastal divisions have large Hindu populations. As displaced persons from these communities move into Muslim majority areas in Bangladesh, increased interaction and competition for jobs and land are likely to exacerbate tension and conflict.<sup>20</sup>



- 26. Stresses to the existing system from climate-related events can cause public trust in governance to erode, giving way for extremist groups to fill in the gaps. In the early 2000s, a changing climate exacerbated drought and food insecurity in Rajshahi Division and the surrounding region, which contributed to the rise of the terrorist group Jamaatul Mujahedeen Bangladesh (JMB) and the country's most notorious terrorist leader "Bangla Bhai." As migrants inundate urban centers, governance challenges will expand: migrants will compete among themselves and with existing residents for scarce jobs, goods and services, leaving many in terrible poverty. In other countries, such as Kenya, terrorist recruiters have effectively targeted slum dwellers, which should be a serious concern in Bangladesh.<sup>21</sup>
- 27. Climate disasters affect Bangladesh's Rohingya refugee population. There are approximately one million refugees concentrated in Bangladesh's Cox's Bazar district. In 2021, flooding and mudslides displaced more than 21,000 refugees and destroyed over 6,000 shelters. The Bangladesh government is also slowly shifting thousands of refugees to the island of Bhasan Char off the coast of Bangladesh, but experts argue this island is highly vulnerable to disastrous flooding due to cyclones.<sup>22</sup>

#### Recommendations

- 28. Continue investment and development of Bangladesh's cyclone warning and evacuation system. Bangladesh has improved cyclone-tracking by satellite, as well as early warning by radio, mobile phones and even volunteers going out with megaphones. Even high school students are trained in cyclone preparedness, and every household in vulnerable areas is visited in person to inform residents of the nearest cyclone shelter, all located within walking distance. In May 2020, a super cyclone hit and more than three million people on land received the warnings and were able to take shelter.<sup>23</sup>
- 29. Increase internal data collection and health systems, specifically in regard to climate-sensitive diseases. Improved data collection systems will help the country better track the evolution of climate-sensitive diseases and predict potential disease outbreaks. By strengthening health systems, Bangladesh will be able to preempt and mitigate outbreaks of infectious and other emerging or reemerging climate-sensitive diseases. Alongside this, there should be a strengthened response to mental health issues through awareness building, improving assessment mechanisms and facilitating means to address shortcomings such as self-help groups.<sup>24</sup>
- 30. Continue pushing for financial assistance in international forums and advocate for countries to uphold their commitments. Despite countries discussing 100 billion dollars of funding at both the UN climate summit in Copenhagen in 2009 and in Paris in 2015, most countries have not contributed financially. Bangladesh's advocacy for this assistance created some traction in Glasgow's COP 26. Continued advocacy can increase this funding at future summits and help countries similarly situated as Bangladesh.<sup>25</sup>
- 31. Promote conflict resolution and dialogue in order to encourage pluralism and challenge the emergence of extremism. In many places, climate migration will lead to integration of previously separated religious, ethnic, and racial groups, which can exacerbate



tensions and lead to violence. Programs designed to foster mutual understanding, dialogue, tolerance, and conflict resolution can mitigate the problem. While international actors can directly support such activities, they should also build the capacity of domestic NGOs and local governments to design and implement conflict mitigation programs. In addition, counternarrative programs that emphasize nonviolence and pluralism can reduce the appeal of extremist ideologies.<sup>26</sup>

## Acknowledgements

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 $<sup>{}^{1}\,\</sup>underline{\text{https://www.worldbank.org/en/news/feature/2021/10/07/climate-change-in-bangladesh-impact-on-infectious-diseases-and-mental-health}$ 

<sup>&</sup>lt;sup>2</sup> https://www.usip.org/publications/2021/09/how-climate-change-deepens-bangladeshs-fragility

<sup>&</sup>lt;sup>3</sup> https://www.outlookindia.com/international/bangladesh-s-lonely-battle-against-climate-change-news-221292

<sup>&</sup>lt;sup>4</sup> https://www.outlookindia.com/international/bangladesh-s-lonely-battle-against-climate-change-news-221292

 $<sup>^{5}\</sup> https://www.outlookindia.com/international/bangladesh-s-lonely-battle-against-climate-change-news-221292$ 

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<sup>&</sup>lt;sup>7</sup> https://www.outlookindia.com/international/bangladesh-s-lonely-battle-against-climate-change-news-221292

<sup>&</sup>lt;sup>8</sup> https://www.worldbank.org/en/news/feature/2021/10/07/climate-change-in-bangladesh-impact-on-infectious-diseases-and-mental-health

<sup>&</sup>lt;sup>9</sup> <u>https://www.worldbank.org/en/news/feature/2021/10/07/climate-change-in-bangladesh-impact-on-infectious-diseases-and-mental-health</u>

<sup>10</sup> https://www.worldbank.org/en/news/feature/2021/10/07/climate-change-in-bangladesh-impact-on-infectious-diseases-and-mental-health

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<sup>&</sup>lt;sup>13</sup> https://www.outlookindia.com/international/bangladesh-s-lonely-battle-against-climate-change-news-221292

<sup>14</sup> https://www.usip.org/publications/2021/09/how-climate-change-deepens-bangladeshs-fragility

<sup>15</sup> https://www.outlookindia.com/international/bangladesh-s-lonely-battle-against-climate-change-news-221292

<sup>&</sup>lt;sup>16</sup> https://www.outlookindia.com/international/bangladesh-s-lonely-battle-against-climate-change-news-221292

<sup>&</sup>lt;sup>17</sup> https://www.usip.org/publications/2021/09/how-climate-change-deepens-bangladeshs-fragility

<sup>18</sup> https://www.usip.org/publications/2021/09/how-climate-change-deepens-bangladeshs-fragility

<sup>&</sup>lt;sup>19</sup> https://www.usip.org/publications/2021/09/how-climate-change-deepens-bangladeshs-fragility

<sup>&</sup>lt;sup>20</sup> https://www.usip.org/publications/2021/09/how-climate-change-deepens-bangladeshs-fragility

<sup>&</sup>lt;sup>21</sup> https://www.usip.org/publications/2021/09/how-climate-change-deepens-bangladeshs-fragility

<sup>&</sup>lt;sup>22</sup> https://www.usip.org/publications/2021/09/how-climate-change-deepens-bangladeshs-fragility

<sup>&</sup>lt;sup>23</sup> https://www.scientificamerican.com/article/adapting-to-climate-change-lessons-from-bangladesh/

<sup>&</sup>lt;sup>24</sup> https://www.worldbank.org/en/news/feature/2021/10/07/climate-change-in-bangladesh-impact-on-infectious-diseases-and-mental-health

<sup>&</sup>lt;sup>25</sup> https://www.outlookindia.com/international/bangladesh-s-lonely-battle-against-climate-change-news-221292

<sup>&</sup>lt;sup>26</sup> https://www.usip.org/publications/2021/09/how-climate-change-deepens-bangladeshs-fragility