



JUST ATONEMENT INC.

justice  
hope peace unity  
progress sustainability democracy freedom  
human rights harmony civilization  
equal opportunity  
golden age

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Just Atonement Inc. (JAI) is a legal non-profit that trains new advocates 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 invites and organizes legal professionals globally into a single order and aligns a vision of a peaceful, sustainable world, governed by the democratic rule of law; litigates in courts all over the world on cutting edge human rights cases to build peace and sustainability, and to defend democracy; and advocates for a vision of a true Golden Age for humanity: a world where countries settle their disputes peacefully, manage social and economic systems that are in harmony with the planet, and govern themselves through the principles of democracy, the rule of law, and human rights.

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

### SUMMARY OF CONCLUSIONS

1. **Burundi faces a range of interconnected and serious climate risks.** As of now, the country is not resilient to climate change. The country's high population density further exacerbates these risks. These risks include flooding, drought, landslides, deforestation, soil erosion, displacement of persons, reduced agricultural production, and extreme weather events. These risks will impact an array of human rights. For example, the right to health, right to life, right to self-determination, and the right to development are undermined when floods wash away villages, droughts undermine crop yields, and natural disasters displace entire communities. Climate related risks underscore human rights and must be addressed to ensure these human rights are respected.
2. **JAI commends Burundi for implementing national and community-level projects independently and in collaboration with local and global NGOs.** These include projects focused on reducing deforestation, improving agricultural practices, and reducing disaster risks.

### CLIMATE CHANGE



## *Impact of Climate Change*

3. **Burundi is extremely vulnerable to climate change.** The ND-GAIN index, which summarizes a country's vulnerability to climate change and other global challenges and assesses its readiness to improve its resilience, ranks Burundi 169th out of 181 countries.
4. **By 2050, global surface temperatures could increase anywhere from 1.6°C to 2.4°C, depending on the emissions scenario in question.**<sup>1</sup> Temperature increases of this size will increase the prevalence of drought, flooding, land degradation, reduction in soil fertility, reduction of water resources, deforestation, landslides, water pollution, displacement of people, loss of biodiversity, and the frequency and intensity of extreme weather events in Burundi. These issues are interconnected. For example, deforestation and land degradation reduce biodiversity, which destabilizes the local ecosystem, aggravates water and air pollution, and is a threat to livelihoods.

### Reduced Agricultural Production

5. **Climate change poses a direct threat to livelihoods in Burundi.** Rain-fed agriculture employs around 94% of the population, constitutes 95% of the country's food supply, and generates 50% of the country's GDP.<sup>2</sup> However, reduced water availability threatens the agricultural industry by continuing to decrease crop yields. Additionally, prolonged droughts and floods continue disrupting livestock productivity. These challenges will become more pronounced as climate change intensifies. Furthermore, changes in precipitation patterns will harm the forestry and hydropower industries.

### Land Degradation and Reduction in Soil Fertility

6. **Severe erosion and declining soil fertility are destroying land in Burundi.** Burundi has one of the highest population densities in the world, leaving only about a half a hectare of land available to each household with an average of seven persons. As a result, many inhabitants cultivate unsuitable areas and steep gradients, exacerbating these problems.

### Deforestation

7. **Community projects are critical to prevent deforestation.** JAI commends Emmanuel Niyoyabikoze, the founder of "Greening Burundi", for his grassroots efforts to fight against the impacts of climate change. The 3-year Greening Burundi project resulted in one million trees planted around Burundi in different locations such as mountains, roadsides, and riverbanks. Greening Burundi has also planted 18,000 trees in five schools and surrounding areas. Greening Burundi continues its efforts, and JAI encourages Burundi to continue supporting similar projects.

### Landslides

<sup>1</sup> IPCC (AR6) Working Group I (Physical Sciences) August 2021, Summary for Policy Makers Table SPM.1 (p 14).

<sup>2</sup> Burundi National Adaptation Plan of Action to climate change, <https://unfccc.int/resource/docs/napa/bdi01e.pdf>



8. **As soil erosion and deforestation increase, landslides will become more common.** Landslides are common in areas with mountainous terrain where there is high rainfall and high vulnerability due to soil erosion and deforestation. In December 2019, a series of landslides triggered by heavy rainfall and deforestation devastated parts of northern Burundi. Mud toppled more than 350 homes in the mountain village of Gisheke, and 37 people died. Ten of whose bodies were never found. Thomas Misego, former village chief, said, “when it starts raining now, we are so scared.”<sup>3</sup>

#### Reduction of Water Resources

9. **Water is a vulnerable resource in Burundi.** This is despite Burundi belonging to two major African watersheds, having the largest freshwater reservoir in Africa, and being rich in natural lakes.
10. **Uneven precipitations will hinder the recharge or aquifers, leading to difficulties in accessing water at certain times of the year.** The rainfall pattern is projected to leave only two seasons and uneven distribution of precipitations. For example, the North-East gets too little rainwater and other areas get too much rainwater. Furthermore, there is an unequal space-time distribution of rainwater.
11. **Heavy rains have significantly increased in Burundi, and precipitation is expected to increase by 10% by 2015.** Annual rainfall is projected to continue increasing. However, increased evaporation due to increasing air temperatures and water quality threats following more extreme rainfall event may negatively affect access to safe water sources and hydropower production. This will also spread waterborne and diarrheal diseases.
12. **Most of the population has limited capacity to adapt to rising temperatures and more extreme rainfall.** A large proportion of the population is living below the poverty line. Although the population is still largely rural, high urbanization rates combined with these high poverty levels means growing urban settlements could be a concern in terms of the impacts of disasters and the provision of safe water, sanitation, and health services.

#### Drought

13. **Climate change will intensify the severity and frequency of droughts in Burundi and cause dry periods during which water scarcity and malnutrition threats will increase.** Already, during the period 1996-2016 around 3,062,500 people in Burundi were affected by drought.<sup>4</sup>

#### Flooding

14. **Climate change will intensify floods in Burundi.** Floods usually affect the larger river basins, such as the Congo and Lake Tanganyika areas, but flash floods affect every

<sup>3</sup> <https://www.unicef.org/burundi/stories/dire-straits>

<sup>4</sup> [https://www.afdb.org/sites/default/files/documents/publications/afdb\\_burundi\\_final\\_2018\\_english.pdf](https://www.afdb.org/sites/default/files/documents/publications/afdb_burundi_final_2018_english.pdf)



region of Burundi. During the period 1996-2016, around 94,800 people in Burundi were affected by floods.<sup>5</sup>

### Extreme Weather Events

15. **Since 2018, 445 disasters in Burundi have affected nearly 270,000 people.** The International Organization for Migration (IOM) has recorded 168 natural hazard situations since 2020 alone. These include torrential rains, floods, landslides, hailstorms, and strong winds. Recurrent natural disasters in Burundi are exacerbated by deforestation and land degradation, physical damage to the environment, infrastructure, and livelihoods.

### Displacement of People

16. **The effects of climate change are already causing people in Burundi to become displaced.** Natural hazards account for 85% of internal displacement in Burundi.<sup>6</sup> Since 1998, water stress and crop failures from drought in the north-east of Burundi has pushed the population there to migrate to neighboring countries.
17. **Heavy rains and floods continue causing displacement.** Due to rising temperatures in the Indian Ocean, there has been a significant increase in heavy rains in the region. Per the Displacement Tracking Matrix, this affected 268,659 people from 2018 to May 2021. 36% of these people have become internally displaced.<sup>7</sup>
18. **In the Gatumba region alone there are an estimated 50,000 people currently displaced from floods that have become more frequent and intense due to climate change.** Some 10,000 homes in Gatumba were swept away by heavy rains in the spring of 2020, and all but three of the district's fourteen schools were so damaged they had to shut down. Large sections of Gatumba remain underwater and former agricultural fields have become fisheries with waterborne disease.<sup>8</sup>
19. **JAI commends efforts to reduce disaster risks.** IOM Burundi and Oxfam are jointly implementing the most comprehensive disaster risk reduction (DRR) project, funded by the EU. The DRR and protection teams at IOM Burundi are working together to ensure their activities overlap and complement one another.

### Energy

20. **Environmental problems, exacerbated by climate change, are reducing Burundi's energy capacity.** In the case of hydropower plants, rainfall and erosion are silting up dams and reducing the capacity to produce energy. The government in Burundi is committed to increasing hydropower through the construction of hydropower plants.

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<sup>5</sup> *ibid.*

<sup>6</sup> <https://storyteller.iom.int/stories/world-discusses-climate-change-burundis-displaced-cannot-afford-wait>

<sup>7</sup> <https://migration.iom.int/reports/burundi-%E2%80%93-natural-disasters-overview-january-2018-may-2021>

<sup>8</sup> <https://www.unicef.org/burundi/stories/gatumba-floods-burundi>



21. **JAI commends Burundi's efforts to develop its solar energy sector.** The solar energy sector is in its early stages but projects already underway will supply 87,000 homes and businesses in the capital area, Gitega.

Right to Health and Climate Change

22. **The effects of climate change highlighted above exacerbate and create health risks, such as those related to water sources, food availability, and displacement.**
23. **When children are uprooted, such as through climate change-related disasters, their risks of falling ill or becoming victims of violence and abuse climb.**
24. **Unimproved sanitation and agricultural practices contaminate water sources.** Only 41 percent of the urban and 46 percent of the rural populations have access to basic sanitation. Furthermore, 13 areas in Burundi do not have access to basic safe drinking water. Nine percent of these areas are urban and 42 percent are rural. Of those who do have access to basic safe drinking water, there is no data available to show the quality of the consumed water. 95 water sources were affected between 2018 and 2021, leaving large numbers of people without access to water. This leaves them to rely on unprotected water sources or surface water.
25. **According to the Humanitarian Response Plan 2021, around 2 million people are estimated to need life-saving food assistance in 2021, which is 15% more than in 2020.** This increase is mainly due to natural disasters that have destroyed crops, but also to delayed planting due to erratic rainfall.

Socioeconomic Development and Climate Change

26. **The climate change impacts highlighted above will offset Burundi's socioeconomic development.** Extreme flooding and other natural disasters increase the likelihood that children will drop out of school.
27. **The lack of livelihood diversification and the level of poverty do not allow most households to cope with recurrent shocks due to climate effects, and they do not have the capacity to implement an adaptation strategy.**

*Burundi's Climate Change Policies*

28. **We commend Burundi for ratifying the Paris Agreement in 2015.**
29. **We commend Burundi for proposing an ambitious National Adaptation Plan.** Burundi's national government identified several priority adaptation projects under this plan. These projects are: (1) rehabilitation of degraded areas; (2) improvement of



seasonal early warning climate forecasts; (3) safeguarding the most vulnerable natural environments; (4) rainwater valorization; (5) erosion control in the area of Mumirwa; (6) protection of the buffer zones in Lake Tanganyika floodplain & around the lakes of Bugesera; (7) popularization of short cycle and/or drought resistant food crops; (8) zero-grazing cattle breeding; (9) capacity building to promote energy/wood-saving techniques; (10) stabilization of river dynamics of river courses in Mumirwa & Imbo; (11) education on climate change adaptation; and (12) promotion of hydro-power micro-stations.

30. **In the Intended Nationally Determined Contribution (INDC) of 2015, Burundi's national government noted its goal to convert all stoves to improved stoves to reduce emissions and to reduce the use of wood and coal to improve yet.** This goal has not yet been achieved. However, there are some small-scale initiatives for the construction of clean ovens and the production of green charcoal from organic waste.
31. **The government of Burundi has a National Climate Change Policy from 2013 as well as a strategy and an implementation plan.**
32. **As for national projects, JAI commends the Office Burundais de Protection de l'Environnement (OBPE) for executing a project, from 2017-2021, commissioned by the German Federal Ministry for Economic Cooperation and Development.** The project implemented environmentally friendly water and land management project in at-risk regions to increase water storage capacity and water infiltration while reducing soil erosion. New cultivation methods and partially closed nutrient cycles improved soil fertility. Energy-saving ovens provided by the project reduced the need for firewood, protecting trees. These measures improved climate change adaptation capabilities. The project also further involved women in household decision-making, agricultural cultivation, and the use of income. JAI commends Burundi for executing the project and creating positive results. JAI also encourages Burundi to continue investing in these initiatives and calls on international stakeholders to provide funding.

## RECOMMENDATIONS

33. **Invest in community and national level measures to reduce deforestation and soil erosion.** These include helping the population prioritize new cultivation methods and partially closed nutrient cycles to improve soil fertility and investing in energy saving ovens to reduce the need for firewood. This is especially important in terms of maintaining agricultural production and because decreasing deforestation and soil erosions will help reduce the risk of landslides.
34. **Ensure water pumps are functional so that persons, including those displaced, have access to safe drinking water.**
35. **Flooding will likely recur in Burundi in the coming rainy seasons so Burundi must prioritize establishing early warning mechanisms and preparedness activities.** This includes replenishing emergency stockpiles to provide immediate response in the event of



a large-scale natural disaster.

36. **Identify plots to build semi-permanent shelters outside of extreme weather risk areas, such as flood risk areas.**
37. **Prioritize a multisectoral approach to assisting displaced persons.** JAI commends Burundi's National Platform for Risk Reduction and Disaster Management for creating a plan to address these needs. Continuing to focus on this plan (which focuses on food, shelter, as well as hygiene and sanitation) is important as more people are likely to become displaced in coming years.
38. **Improve access to renewable energy.** Improving access to renewable energy will help decarbonize the energy sector, increase sustainable energy access, reduce deforestation, and improve the economic development of Burundi. There is a need to increase the production and distribution of electricity. This includes researching and developing renewable energies and increasing energy efficiency and electrification.
39. **Invest in improved sanitation and agricultural practices to increase access to safe water sources.**
40. **Invest in more climate change projects.** JAI acknowledges that Burundi's recent period of conflict encouraged other priorities. However, climate change projects are critical to ensure Burundi is not undermining its socioeconomic development.
41. **Update Burundi's National Adaptation Plan with its current progress on its priority adaptation projects.** Identifying progress and challenges is critical in identifying a long-term plan.

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### **Acknowledgement**

This submission was prepared by Dave Inder Comar (Stanford 2001, Stanford 2002, NYU School of Law 2005) and Katie Crawford (University of Utah 2017, UC Davis School of Law 2024).

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