# **Human Rights and associated obligations related to water pollution, water scarcity and floods**

 **1.0 Question 1 & 2: Please provide examples of ways in which water pollution, water scarcity and floods are having adverse impacts on human rights. Adversely affected rights could include, among others, the right to life, health, water and sanitation, food, culture, livelihoods, non-discrimination, a safe, clean, healthy and sustainable environment, and indigenous peoples’ rights. How has climate change exacerbated water-related problems?**

* 1. Water crisis is a phenomenon affecting countries worldwide, be it as water pollution, water scarcity or floods. Water-related problems have worsened with the effects of climate change. Mauritius, being a Small Island Developing State (SIDs) has distinct characteristics. Although 99 % of the population has access to water, the island is highly vulnerable to natural disasters and other calamities including flash floods, droughts cyclones and tidal surges caused by irregular rainfall pattern. Moreover, Mauritius has a rich biodiversity which remains at risk with the changing environmental conditions. In addition, the situation is exacerbated with above normal temperature fluctuations.

**Water Scarcity**

* 1. According to the Meteological Services of Mauritius, temperature analyses of temperature recorded at all stations is rising at the rate of 0.15 oC per decade and has risen by 0.74-1.2 oC when compared to the 1961-90 long term mean. Warming of the atmosphere has impacted the hydrological cycle over the Southwest Indian Ocean. As a result, long term time series of rainfall amount show a decreasing trend in the amount of rainfall received by Mauritius annually. Compared to last year for the same period, the amount of water available in our domestic reservoirs and boreholes is significantly lower due to a lack of rainfall. Consequently, the Central Water Authority (CWA) remediates to same by decreasing the water supply in several regions of the country.
	2. Moreover, it is foreseen that water requirements in Mauritius will outpace the supply by 2030 and that there would be a drastic drop in agricultural production by as much as 20 – 30 % due to erratic rainfall pattern. The ecosystem and natural habitat of fish and other marine species are being rapidly eroded, and beaches may slowly disappear leading to the fall of the tourism industry which is one of the pillars of the economy.

**Water Pollution**

* 1. There have been several cases of environmental nuisances in Mauritius caused by discharge and seepage of wastewater into the natural environment over the years. The waste water originates from households, commercial buildings and industries, and occur in both sewered and non-sewered regions.
	2. Complaints are made to the Pollution Prevention Control Division of the Ministry of Environment, Solid Waste Management and Climate Change or with the Police de l’Environnement which are mandated to enforce environmental laws. The various types of complaints pertain to:
* Overflow of manholes;
* Overflow of septic tanks and absorption pits;
* Accumulations and stagnation of contaminated storm water in drains due to improper drainage;
* Leakage in WMA sewerage system; and
* Illegal connection and discharge of wastewater/ effluents onto road, into drains and canals or into waterbodies.
* Filthy water coming from a premises flowing on the public road;
* Filthy water coming from the yard of a person flowing into another person’s yard;
* Washing vehicles on the road; and
* Allowing filthy water to flow onto land under cultivation.

**Flooding**

* 1. Inadequate planning in construction, alteration of the natural courses of water in order to make way for infrastructure, loss of wetland, blocking of drains with debris has made Mauritius prone to flooding. The National Disaster Risk Reduction and Management Centre has identified 65 regions as flood prone areas throughout the island.
	2. Additionally, for the past few years, Mauritius has been experiencing an increase in the frequency of occurrence of high intensity rainfall events which resulted in flash floods on several occasions. Flash floods that occurred on 26 March 2008, 30 March 2013 and 10 February 2016 affected different localities, including Port Louis, Canal Dayot, Piton, Fond du Sac, Flacq, Curepipe, Quatre Bornes, St Aubin and Mahebourg. The flash flood of 30 March 2013 in Port-Louis caused one of the highest fatalities in recent times.

**Impacts of water crisis on Human Rights**

1.8 Water, being vital for our living, has serious implications on our basic human needs, including health, safe and clean environment, adequate housing and access to food. Consequently, flooding and factors inhibiting access to safe and clean water adversely affect the rights of citizens of Mauritius in the following ways:

**Right to an adequate standard of living**

* Flash floods as well as droughts cause crop losses which result in shortage of fresh vegetables on the market leading to soaring of their prices.
* Reduction in rainfall coupled with increasing water demand from different sectors is a threat to our food security.
* Floods cause serious impacts to the agricultural sector, leading to death of animals and destructions of plantations.
* Excessive nutrients, such as phosphate and nitrates in different forms (including ammonia), may cause eutrophication/algal bloom, or over-fertilization of receiving waters, which can be toxic to health.
* Pollution also affects marine life, leading to lower supply of seafood.

**Right to work**

* Water crisis affects the livelihood of workers operating in different sectors, notably agriculture, tourism and fisheries, amongst others. For instance, water scarcity affects the livelihood of planters in the dry regions of Mauritius through yield reduction and hence lower revenues from reduced yields. Similarly, water pollution threatens the existence of many species and the sustainability of ecosystems, affecting the livelihood of farmers and fishermen.

**Right to a safe and clean environment**

* Water pollution leads to the degradation of the quality of the receiving waters due to an excessive deposition of chemical nutrients and increase in biological oxygen demand, which can also be toxic to animals.
* Stagnant wastewater pollutes the soil and gives rise to foul odour.

**Right to housing**

* Due to flooding, houses are destroyed and cause heavy damage to property and loss of goods. For example, during torrential rain which hit the country on 09 and 10th April 2019, 54 houses in two northern villages (Fond du Sac and Cottage) were flooded, prompting the evacuation of families.

**2.0 Question 3: To protect a wide range of human rights, what are the specific obligations of States and responsibilities of businesses in terms of addressing water pollution, water scarcity and floods? Please provide specific examples of constitutional provisions, legislation, institutions, regulations, standards, policies and programmes that apply a rights-based approach to preventing, reducing, or eliminating water pollution, water scarcity and floods. Please include, inter alia, any instruments that refer directly to the right to a healthy environment and/or the rights to clean water and adequate sanitation.**

* 1. Although the Constitution of Mauritius does not specifically provide for the right to clean water and adequate sanitation, these rights are contained in various pieces of legislation, namely:
* Central Water Authority (CWA) Act;
* Groundwater Act;
* Rivers and Canals Act;
* Environmental Protection Act;
* Public Health Act;
* Environment Protection (Drinking Water Standards) Regulations;
* Central Water Authority (Water Supply for Domestic Purposes) Regulations;
* Central Water Authority (Water Supply for Non-Domestic Purposes) Regulations; and
* Fisheries and Marine Resources Act;

Extracts of the legislations are at ***Annex A***.

* 1. Furthermore, the State of Mauritius has promulgated the Environment Protection Act (EPA) in 2002. The EPA requires promoters for certain types of polluting undertakings, which may cause harm to biodiversity and ecosystems, to submit an Environment Impact Assessment (EIA). These include conversion of forest land to any other land use, lagoon dredging and reprofiling of sea beds, land clearing and development in environmentally sensitive areas, amongst others. The EIA process also allows for public consultations, where people objecting to the development can submit their comments. People who feel their rights have been violated can also have recourse to the Environment and Land Use Appeal Tribunal.

**3.0 Question 4 & 5: If your state is one of the 156 United Nations Member States that recognizes the right to a safe, clean, healthy and sustainable environment, has this right contributed to preventing, reducing or eliminating water pollution, water scarcity and floods? If so, how? If not, why not?**

 **Please provide specific examples of good practices in preventing, reducing, or eliminating water pollution, water scarcity and floods. These examples may occur at the international, national, sub-national, or local level. Examples may involve water quality and quantity monitoring; guaranteeing procedural rights (e.g. public access to water quality information, public participation in decision-making about proposed uses of water, access to remedies); water use and water quality legislation, regulations, standards, and policies; and initiatives to reduce water consumption and/or water pollution from specific sectors (e.g. agriculture, electricity generation, industry, transportation, domestic use). Where possible, please provide evidence related to the implementation, enforcement, and effectiveness of the good practices.**

* 1. Recognising the right to a safe, clean, healthy and sustainable environment, the State of Mauritius has embarked onto various initiatives with a view to preventing, reducing or eliminating water pollution, water scarcity and floods. A few examples are as follows:

**Adequate water supply**

* implementation of water mobilization projects such as construction of reservoirs, dams and water treatment, drilling of boreholes and upgrading of existing infrastructures to increase the supply of water across the island. Current projects include the Construction of the Rivière des Des Anguilles Dam, Rehabilitation of the La Ferme Reservoir and Drilling of New Boreholes;
* reduction of non-revenue water (water losses) through pipe replacement programmes across the island. It is expected to reduce non-revenue water from 55% to 50% in 2020 and 37% by 2030;
* adequate distribution of water through implementation of 24/7 supply of water scheme. This is being achieved though the Water Tank Grant Scheme whereby low income families are provided grants for the purchase of water tank of capacity 400 to 1000 litres and a domestic water pump as well. Adequate distribution is also achieved by providing 6 cubic metre of potable water free of charge to the population for domestic consumption; and
* implementation of measures to mitigate adverse effects of water scarcity during dry season throughout Mauritius.
* provision of irrigation services by the Irrigation Authority to the small planters’ community so as to enable them cope with shortage water during periods of dry spell. The initiative contributes to social protection by increasing yield of food crops and also by boosting up food crop cultivation in dry regions with possibility of off-season production. Large areas of abandoned land have been brought under cultivation with the coming in of irrigation facilities. It stimulates production and provides greater income stability in the longer-term, thus reducing food insecurity and poverty.
* development of Climate Smart Agricultural practices, conservation agriculture and Integrated Plant Nutrition Systems to prevent nutrient losses during runoff and floods;
* development of water saving irrigation technologies to optimise water use in agriculture;
* use of proper drainage system in waterlogged prone areas to minimise loss of topsoil and nutrient to waterways and waterbodies; and
* implementation of rainwater harvesting structures at all levels as a means to alleviate water shortages.
* Water distribution network is being enhanced with old pipes being replaced with new ones.

**Reduction of water pollution**

* + connection of around 29 % of the population to the public sewer network. The remaining 71 % uses on-site waste water disposal systems. The Government intends to invest massively in infrastructure to connect 50 % of the population to public sewer network by 2030.

**Preventing Floods**

* + massive investment in infrastructural projects especially drains, including the implementation of projects at the level of local government and the construction and rehabilitation of drains. Furthermore, the State of Mauritius has prepared a Land Drainage Master Plan for topographical surveys and drain construction which is currently being implemented.

**Wastewater Management**

* + setting up of the Wastewater Management Authority (WMA) which is *inter alia* responsible for the wastewater sector in Mauritius*,* to carry out, monitor, supervise, maintain, manage and control waste water works; and to control and monitor pollution, private sewers and the use of equipment in relation to wastewater systems.
	+ exemption from payments of wastewater charges for households consuming up to 6 m3 per month and who are connected to the wastewater network. As at August 2019, 11,838 consumers benefited from this measure.
	+ rehabilitation of sewerage infrastructure in low cost housing estates have been initiated and are ongoing. Some 1000 poor families have already been connected to the sewerage system.
	+ construction of 80 km of street sewer for Grand Baie Phase 1B Sewerage Project ,12 km rising mains, 22 nos. pumping stations, upgrading works of the existing wastewater treatment plant, 4000 house connections and replacement of 6 km of CWA pipes in the regions of Pereybere and Cap Malheureux to the tune of USD 60 Million. The project is expected to be completed by 2023.
	+ investment of USD 54 Million for Pailles Guibies Sewerage Project Phase 2 for the construction of approximately 4,050m of trunk sewer, construction of approximately 43.9 km of sewer reticulation network, construction of 3,099 house connections, replacement of 16.2 km of existing water pipes and road reinstatement and other auxiliary works.

**Water and Sanitation**

* + monitoring of the river water quality of twenty-seven rivers throughout the island on a quarterly basis yearly in view to assessing the impacts of the National Sewerage Programme on water sanitation in Mauritius by the National Environmental Laboratory (NEL) of the Ministry of Environment, Solid Waste Management and Climate Change.
	+ provision of safe drinking water to all Mauritians. Water for irrigation purposes is regulated by the Irrigation Authority and 99.4 percent of the population has access to safe drinking water, with per capita consumption reaching up to 190 liters of water per day. The Ministry of Environment, Solid Waste Management and Climate Change has promulgated standards on the quality of drinking water. These standards have been developed based on WHO guidelines.
	+ improvement in basic sanitation in Mauritius and better water management strategies have been implemented. More efficient water treatment plants have been constructed thus providing the population with adequate safe potable water. Moreover, sanitary latrines have been replaced by better on-site wastewater disposal systems such as septic tanks and absorption pits and more houses are also being connected to sewerage systems with adequate wastewater treatment facilities with a view to prevent contamination of aquifers. Only few cases (Maximum of 5 cases) of waterborne diseases have been reported at the Ministry of Health and Quality of Life for the year 2000 to 2019 which is a good indication of an improvement in environmental sanitation in Mauritius.
	+ massive investment has been made to ensure water security through rain water harvesting schemes to capture water at household level thereby reducing dependence on water supplied by Authorities. Several sensitisation campaigns are held at national level through the use of mass media to promote efficient use of water. Public Sector irrigation has been upgraded to include water efficient systems such as sprinkler, centre pivot and drip.
	+ construction of a solar desalination plant in Rodrigues in 2018. The plant is producing 80 m3 of fresh drinking water for 2,400 inhabitants every day. At night, it uses a hybrid solar-grid powered source to produce 300 m3 of drinking water.

3.2 Some other measures are listed below:

* development and application of Integrated Plant Nutrient System to optimise fertiliser use in agriculture as well as minimise leaching of nutrient to waterbodies;
* development and promotion of water saving irrigation and fertigation technologies to optimizing water and fertiliser use;
* implementation of an irrigation water quality standard which is strictly followed by institutions involved in the water sector;
* implementation of sheltered farming systems as a means to increase the resilience of farmers during periods of excessive rainfall. Moreover, the system allows for rainwater harvesting and improved water and fertiliser use efficiencies via drip fertigation;
* development of organic production systems and Smart Agriculture to minimise the use of chemical fertilisers while sustaining foodcrop production;
* development and promotion of soil conservation practices in high risk areas so as to improve the livelihoods of small farmers; and
* provision of the water tank grant scheme is in place to enable consumers to increase their water storage capacity and ultimately to benefit from 24-hours water supply;

**4.0 Question 6: Please identify specific challenges that your government, business, or organization has faced in attempting to employ a rights-based approach to address water pollution, water scarcity and floods and the impacts of these problems on human rights.**

* 1. There are periods of the year where shortage of water occurs, requiring concerted effort by all stakeholders to ensure availability of water for priority sectors. During such times, the agricultural sector, being given the lowest priority, suffers substantially such that the income from production drops. Though rationing of water is done with an aim of providing support to agriculture, this sector is the one which is mostly affected during times of drought. Ultimately, the farmers are the ones who have to bear the burden associated with scarcity of water during these dry periods.
	2. In Mauritius, almost 99% of the population receives water in a decent quantity during ‘normal season’, that is, winter season. The challenge that the CWA faces in attempting to employ a rights-based approach mostly arises during the summer season which we call ‘dry season’ as there is a reduced number of hours of water supply to better manage water available for distribution.
	3. The water distribution network in Mauritius is relatively old with an estimated 39%, about 1600 km, requiring replacement. The Government has embarked on a massive pipe replacement programme around the island to address this problem. Some 443.25 km pipes in most entail regions have been replaced to date.

**5.0 Question 7: Please specify ways in which additional protection is provided (or should be provided) for populations who may be particularly vulnerable to water pollution, water scarcity and floods (e.g. women, children, persons living in poverty, members of Indigenous peoples and traditional communities, older persons, persons with disabilities, ethnic, racial or other minorities and displaced persons). How can these populations be empowered to protect and improve water quality and availability?**

* 1. The small farmers’ community which is a vulnerable group to the effect of climate change and water scarcity, benefits from irrigation service at subsidised rates within irrigation areas operated by the Irrigation Authority (IA). Presently, seventeen irrigation schemes are managed by the IA, which has technical expertise in the field of irrigation. Water efficient systems such as drip, centre pivot and sprinklers, are constantly under operation to meet the water demands of crops under these schemes.

5.2 In order to mitigate any adverse effect of water scarcity during dry season throughout Mauritius, the following measures are undertaken by the CWA:

* abstraction of water from irrigation pipeline networks and installation of pressure filters for treating thereof;
* abstraction of water from river sources;
* commissioning of standby/additional boreholes;
* mobilisation of all CWA water tankers and private water tankers to distribute water to those affected by the limited hours of supply; and
* decrease in water production and reduction in hours of water supply.

**6.0 Question 8: How do you ensure that the rights of environmentalists working on water issues (environmental human rights defenders) are protected? What efforts has your Government or business made to create a safe and enabling environment for them to freely exercise their rights without fear of violence, intimidation, or reprisal?**

* 1. Mauritius is a democratic state and the rights of its citizens are guaranteed by the Constitution (Section 3 to 16). Those provisions are safeguarded and applied to all citizens including environmental human rights defenders. Moreover, Section 13 of the Constitution guarantees the people’s right to peacefully assemble without fear of harassment or intrusion.
	2. The Constitution also makes provision under section 17 for redress to be afforded to any individual whose rights under chapter II have been, are being or are likely to be contravened. There is also the possibility of challenging acts of public bodies in Court by way of applications for judicial review on grounds of illegality, "Wednesbury unreasonableness", abuse of powers and procedural impropriety. Additionally, there is the possibility of addressing minor petitions to the Attorney General.
	3. A plethora of legal provisions is also available in the Criminal Code and specific laws like Equal Opportunity Act, Workers Right Act, Labour Act that the rights of environmental human rights defenders are not contravened. In addition, Section 78 of the Criminal Code provides for the offence of torture by public official.
	4. The Public Gathering Act provides the legislative framework for public gathering in Mauritius. According to Section 2 of the Public Gathering Act 1991, a meeting means an assembly of 12 or more persons, wherever convened or organized for any purpose.
	5. Human rights defenders have the rights to hold peaceful demonstrations subject to notification to the Commissioner of Police who depending on the level of threat/risk may impose conditions for the smooth unfolding of such gatherings. For ensuring public order and public security, necessary policing arrangements are made for protecting their rights of expression.
	6. Pertaining employment, the Employees Relations Act 2008 allows workers including environmental human rights defenders to associate or join in trade unions via which they can express their views and concern and collectively bargain over matters relating to their work or conditions of work.
	7. There are also a number of human rights institutions which an aggrieved individual can resort to, notably the National Human Rights Commission, Ombudsperson for Children’s Office, the Equal Opportunities Commission, the Independent Police Complaints Commission and the Ombudsperson for Financial Services and the Office of the Ombudsman.
	8. Futhermore, major projects require an Environmental Impact Assessment (EIA)Licence under the EPA 2002. EIA is a multi-disciplinary and inter-ministerial process. The processing of an EIA application requires consultation with several Ministries and Authorities. All the concerned authorities submit their views/recommendations based on relevant guidelines/standards/legislations. Following submission of an EIA, it is opened for public inspection to submit their comments. The Public is also informed of any decision on the EIA application by way of a Notice given in the Gazette and two daily newspapers including the website of the Ministry. The Public is also informed of any decision on the EIA application by way of a Notice given in the Gazette and two daily newspapers including the website of the Ministry. The EIA process also requires promoters to hold consultative meetings with local communities, Force Vives, Association des Pecheurs, NGOs as applicable.
	9. Moreover, with respect to decision of the Minister of Environment Solid Waste Management and Climate Change to issue an EIA licence, the EPA 2002 makes provision that any person who is aggreived and is able to show that the decision is likely to cause him undue prejudice may appeal against the decision to the Environment and Land Use Appeal Tribunal.

**7.0 Question 9: There is substantial evidence that the actions of high-income States (from high levels of material consumption to high levels of greenhouse gas emissions) are linked to adverse effects on water availability and water quality in low and middle-income States. What are ways in which high-income States should assist low-income States in responding to and preventing water pollution, water scarcity and floods?**

* 1. High income States could provide facilities for capacity building and financial resources for improving water quality, mitigating the impacts of water scarcity and preventing water pollution and flooding.
	2. The international community could also extend cooperation with Mauritius as a small island developing state and provide further assistance through sponsorship programmes for studies in water-related fields.
	3. It is to be noted that Mauritius has developed comprehensive action plans to adapt to the adverse effects of climate change. However, the costs of such adaptation measures are so exorbitant that Mauritius can only achieve its targets if financial support in terms of grant and technical support from partners is made available to enable it to implement the plans to protect life and property.
	4. Capacity building is another sphere of activity which is required on continuous basis to keep abreast of innovative ideas which could enhance operational activities and empower stakeholders with adequate knowledge to face scarcity of water.
* Provision of adequate funding facilities through bilateral or multilateral agreements, and resources to empower institutions involved in the agricultural sector so as to sustain the livelihood of resource poor farmers.
* Setting up a knowledge hub for improved capacity building and hands-on training to address issues related to water pollution, water scarcity and floods.
* Facilitating the transfer of proven technologies to low-income states.

**8.0 Question 10:For businesses, what policies or practices are in place to ensure that activities, products and services across the entire supply chain (extraction/sourcing, manufacturing, distribution, sale, and end of life management) minimize water use and water pollution and meet human rights standards, especially those articulated in the Guiding Principles on Business and Human Rights?**

* 1. Although there is no specific legislation which explicitly regulates the business respect for human rights, all laws are drafted in compliance with human rights norms. There are several legal provisions pertaining to fundamental rights in the context in various pieces of legislation, including the Workers’ Rights Act, Occupational Health and Safety Act and the Environment Protection Act.
	2. The ***Workers’ Rights Act*** sets out employees’ entitlements at work notably normal hours of work, equal remuneration, sick leave, maternity leave and benefits or paternity leave.
	3. The ***Employment Relations Act*** provides for the right of workers to *inter alia* freedom of association, the protection of trade union of workers against acts of interference and the protection against discrimination and victimisation.
	4. The **Occupational and Health Safety Act** and the regulations made thereunder provide for a number of safety and health norms notably for workers’ accommodation and provision of protective equipment and clothing.
	5. The **Environment Protection Act** provides for the submission of a preliminary Environmental Report or an Environmental Impact Assessment Report before the commencement of a number of undertakings.
	6. The **Business Mauritius** has also been established to ensure that business interests are represented thoroughly at all levels and to engage with government officials and local authorities on a daily basis. It actively contributes to policy formulation in the interest of Mauritian employers by way of various submissions to Government. Through its advocacy role, it ensures that the position of employers on key economic, labour and social matters is brought at the forefront and reflected in the formulation of policies.
	7. The Business Mauritius will be made to undertake a more prominent role in the aspect of business and human rights. They will be called upon to ensure that the Guiding Principles on Business and Human Rights are fully considered in their policies and actions.
	8. National Human Rights Institutions (NHRIs) such as the National Human Rights Commission, Office of the Ombudsman, Equal Opportunities Commission, the Ombudsperson for Children’s Office and Ombudsperson for Financial Services also provide a platform for the protection and promotion of human rights at the national level.
	9. One of the ways of reducing water in agriculture is through the use of efficient systems of irrigation. There has been a shift from least efficient systems such as surface methods of irrigation to more efficient ones such as drip, centre pivot and sprinkler. In addition, proper irrigation scheduling is done to reap the benefits from rainfall that occur.
	10. For the agricultural sector, the pricing of irrigation water is carried out so as to promote efficiency in water use. The prices should, however, be within the farmers’capacity to pay. For the industrial sector, water is priced at its economic value.

9.0 **Conclusion**

9.1 The world is currently facing an unprecedented pandemic, the Covid 19, which is far more than a health emergency. It has turned to be an economic, social and human crisis. There is a need to reflect on the way the obligations of the State are being altered with the Covid 19 and its possible impacts on the fundamental rights of people including the right to clean water, right to a clean environment and the right to an adequate standard of living.

***08/12/2020***

***Annex A***

1. **The Central Water Authority Act** provides for the establishment of a body corporate responsible for the control, development and conservation of water resources. The Authority has, amongst others, the duty to supervise the enforcement of any water legislation;
2. **The Public Health Act** seeks to primarily ensure there is no threat to public health. The PHA is a major piece of legislation in Mauritius which is focussed on the following issues, all of which are of relevance to the present subject matter;

(v) Leprosy;

(vi) Protection of food;

(vii) Food and water supply;

(viii) Hospitals and dispensaries;

(ix) Cemeteries; and

(x) Cremation

Broadly, despite the fact that the Public Health Act does not provide for the right to water, it does make it a punishable offence for:

1. an owner/keeper of a common lodging house*i* to provide proper supply of water for the use of lodgers*ii*; and
2. a person suffering from an infectious or communicable disease, knowing he is a patient, to handle, convey, or otherwise come into contact with any aerated water intended for consumption by man*iii*;

Also, the Public Health Act provides for the following water-related offences, which it treats as ‘nuisance’:

1. a well, tank, pond, reservoir, canal or conduit –
2. the water of which is so tainted with impurities;
3. which is otherwise so unwholesome as to be injurious or dangerous to the health of persons living near or using that water; or
4. which is calculated to promote or aggravate epidemic diseases.
5. a vegetable growth and other impediment -

 (i) along the banks of a lake, pond or river course;

 (ii) in a lake, pond or river course; or

 (iii) along a dyke and dam in any river when so situated as to be injurious or dangerous to health

(c) collection of water, sewage, rubbish, refuse, ordure, or other fluid or solid substance which -

(i) permits or facilitates the breeding or multiplication of animal or vegetable parasites of man or domestic animals or of insects, or of other agents which are known to carry those parasites; or

(ii) may otherwise cause or facilitate the infection of men or domestic animals by those parasites

1. **The Waste Water Management Authority Act** provides mainly for the establishment of an authority responsible for the waste water sector in Mauritius and to carry out, monitor, supervise, maintain, manage and control waste water works as well as to promote the treatment and reuse of waste water.

In order to ensure the proper management of wastewater, the **Waste Water Management Authority Act** at *section 37(1)* provides that ‘*no person shall, without lawful authority*,

1. *cause effluent to overflow along any gutter, canal or surface;*
2. *construct or alter any house sewer, treatment plant or disposal system;*
3. *cause rainwater, surface water or sub-soil water to enter any house sewer;*
4. *construct or install any treatment plant or other assembly meant for the collection, conveyance, treatment or disposal of effluent, without the prior approval of the Authority; or*
5. *use a garbage grinder or similar appliance which is connected to a house sewer.’*

Although not a direct right to water, the provisions of the **Waste Water Management Authority Act** are aimed towards providing a safe outlet for effluents in order to avoid contamination of domestic water, which implies a right to access clean water.

1. **The Environment Protection Act (EPA)** is a national legislative framework which provides for, *inter alia,* the protection and management of environmental assets, including, but not limited to water.

The **EPA** provides for the Minister of Environment, Solid Waste Management and Climate Change to prescribe standards for water quality to protect the public health, welfare and the environment, and to provide adequate safeguard for the quality of water*iv*. This provision ensures that the quality of water is kept in check and the public has access to water which is fit for consumption.

In order to prevent water pollution, the following are made punishable under the ***EPA:***

1. *Discarding, placing, throwing, leaving behind or causing to be dropped any litter or waste generated from any trade, business, industry, office or any service provider, in any –*
2. *lake, reservoir, stream or watercourse or upon the bank of any of the same or beach or any part of the sea*
3. *canal, drain or public place*
4. *Discarding, placing, throwing, leaving behind or causing to be dropped any litter, waste or any other article generated other than from a trade, business, industry, office or any service provider, in any –*
5. *lake, reservoir, stream or watercourse or upon the bank of any of the same or beach or any part of the sea*
6. *canal, drain or public placev*

In an attempt to protect the maritime water resources, the ***EPA*** also provides for emergency powers towards conservation, protection and restoration of the maritime zone of Mauritius*vi*.

1. **The Ground Water Act** aims to protect unlawful abstraction and pollution of ground water*vii*.

The Ground Water Act makes it an offence to:

1. abstract, divert, obstruct, measure or use any ground water;
2. construct or erect any works in or over any ground water, unless one has obtained a license under this Act authorising him to do so; and
3. alter the composition or quality of ground water by any physical, chemical or biological means or process, that it is likely to cause injury to any person, animal or plant using such water.
4. The **Rivers and Canals Act** is a piece of legislation seeking to regulate the status and to protect rivers, streams and canals in Mauritius.

In order to prevent the pollution of rivers, streams and canals, the **Rivers and Canals Act** provides that:

1. No dwelling house, kitchen, slaughter house, or camp of labourers, and no privy, urinal, stable, cow house, cattle yard, pigsty, poultry house or poultry yard, and no distillery or sugar or other manufactory, shall be erected within 100 feet of any river or stream, unless the Permanent Secretary or the Sanitary Authority certifies in writing that the water of the river or stream is not liable to be defiled by any matter or water issuing from such erection or building*viii*;
2. Where any quantity of sugar, cane trash, bagasse, syrup, molasses, wash, manure, dung, or accumulation of matter of any kind, or any sewer, ditch, or drain, appears to the Supreme Court (after a report on the matter by one or more persons of skill, and after the parties interested have been duly called) to be so situated that any water or matter from there can defile any river or stream, the occupier of the premises shall remove the water or matter or make arrangements, to the satisfaction of the Permanent Secretary, or of some skilled person appointed by the Supreme Court, for preventing the defiling*ix*;
3. Any person who –
4. plants or causes to be planted on the bank or within 2 yards of any canal, any tree, shrub or plant, capable of tainting the water in such canal;
5. eases himself in a river, stream or canal or on the bank of a river, stream or canal;
6. places or causes to be placed in a river, stream or canal or on the bank of a river, stream or canal, any dead animal, or any dung, rubbish, manure, cane trash, bagasse or any filth, or any poisonous narcotic or noxious substance or any other substance which tends to pollute the water of the river, stream or canal;
7. throws into or places in a canal, or on the bank of a canal any soap studs or dirty water;
8. washes any part of his person or of any other individual or animal in a river, stream or canal, where he or the individual or animal suffers from a cutaneous disease;
9. washes any part of his person or of any other individual or animal in a canal;
10. washes any article in a canal;
11. places any linen, clothes, utensils, furniture, cart or implement in a canal;
12. permits any impure water from a building or manufactory, or from an accumulation of matter, to enter a canal, or to pollute or impair the quality of the water of a canal;
13. places or causes or authorises the placing of any dead animal, dung, manure, cane trash, or any filth or noxious substance in such a situation that water or matter issuing from it can enter a canal, or does or causes to be done any other thing by which the water of a canal may be polluted; or
14. causes, or being in charge of any horse, mule, ass, cattle, sheep, goat or pig or other domestic animal allows the animal to enter or drink out of a canal, shall commit an offence and shall, on conviction, be liable to a fine not exceeding 1,000 rupees *x*.
15. any person who throws, or causes to be thrown, or sends or allows to flow into a river or into a canal, pipe or other conduit discharging into a river or canal, any scum, residue, refuse, washing or other dirty waters or other liquid that may be tend to pollute the water of such river or canal shall commit an offence and shall, on conviction, be liable to a fine not exceeding 1,000 rupees.
16. The **Fisheries and Marine Resources Act** is another legislative instrument aiming to consolidate the law relating to the management, conservation, protection of fisheries and marine resources and protection of the marine ecosystems.

In order to safeguard waterbodies, section 69 of the Fisheries and Marine Resources Act makes it an offence to place, throw, discharge or cause to be placed, thrown or discharged into the maritime zones or into a river, lake, pond, canal, stream, tributary or wetland any poisonous substance.

In light of the above, it is submitted that, although there is no direct right to water, numerous laws exist to prevent, reduce, or eliminate water pollution, water scarcity and floods.

*i* “common lodging house” defined in the Public Health Act as: ‘includes all premises occupied by more than 5 lodgers in return for payment’.

*ii Section 14 of the Public Health Act*

*iii Section 49(e)(i) of the Public Health Act*

*iv Section 38 of the Environment Protection Act*

*v* Ninth Schedule of the Environment Protection Act

*vi* Part V of the Environment Protection Act

*vii* Defined as: any water under the surface of the ground, and includes underground streams, natural subsurface reservoirs and lakes and any water held underground in a zone of saturation, but does not include water flowing in or contained in artificial pipes, conduits or reservoirs, nor does it include surface water having as its immediate origin atmospheric precipitation or natural springs issuing at the ground surface, and flowing over, or retained on, the surface