AGREEMENT

BETWEEN

THE REPUBLIC OF ZIMBABWE

AND

THE REPUBLIC OF MOZAMBIQUE

ON

CO-OPERATION ON THE DEVELOPMENT, MANAGEMENT AND SUSTAINABLE UTILIZATION OF THE WATER RESOURCES OF THE SAVE WATERCOURSE

PREAMBLE

WHEREAS the Republic of Zimbabwe and the Republic of Mozambique (hereinafter referred to jointly as "the Parties" and individually referred to as "the Party");

BEARING IN MIND the principles advocated in the Declaration by the Heads of State or Government of Southern African States "Towards the Southern African Development Community" and the Treaty of the Southern African Development Community signed on 17 August 1992;

CONSCIOUS of the mutual advantages of co-operation with regard to the utilisation and development of shared transboundary water resources and the significant contribution which such co-operation could make towards the peace and prosperity of the Parties;

CONSCIOUS of the paucity, value of water resources and the need to provide the Parties with access to sufficient and safe water supplies;

AKNOWLEDGING the effects of Climate Change on water resources management and development and the environment;

COMMITTED to the realization of the principles of equitable and reasonable utilization as well as the efficient management and sustainable development of the Save Watercourse;

DETERMINED to co-operate, seek mutually satisfactory solutions for the needs of the Parties towards water protection and to ensure the sustainable, equitable and participatory management of the water resources of the Save Watercourse, and increase the derived social and economic benefits for the people living in the basin, and other stakeholders;

EXPRESSING the common desire to proceed with sustainable development on the basis of Chapter 18 of Agenda 21, adopted by the United Nations Conference on Environment and Development on 14 June, 1992;

DESIROUS of extending and consolidating the existing relations of good neighborliness and co-operation with regard to the management and development of the water resources of the Save Watercourse on the basis of the Convention on the Law of the Non-navigational Uses of International Watercourses, adopted by the General Assembly of the United Nations on 21 May 1997, the Revised Protocol on Shared Watercourses in the Southern African Development Community, adopted in August, 2000 as well as the Joint Water Commission

Agreement between the Parties signed on 2 December 2002,the Pungwe Water Sharing Agreement signed on 11 July, 2016; as well as the Buzi Water Sharing Agreement signed on 29 July, 2019;

RECOGNISING that the Parties need effective and coordinated planning to agree on water use in the shared watercourse to enable sustainable development;

NOW THEREFORE, the Parties hereby agree as follows:

ARTICLE 1

Definitions

In this Agreement the following terms shall have the meanings ascribed to them hereunder unless the context otherwise indicates:

"Basin or Catchment" means an area through which any rainfall will drain into the watercourse through surface flow to a common point;

"Biomonitoring" means the evaluation of the water quality condition of a water body using biological surveys and other direct measurements of the resident biota in surface waters.

"Climate Change" means significant changes in global temperature, precipitation, wind patterns and other climate elements that occur over several decades or longer;

"Diversions" includes abstractions, impounding and appropriations of water that reduce the flow of a river;

"Emergency situation" means a situation that causes or poses an imminent threat of causing serious harm to the Parties and which results suddenly from natural causes, such as torrential rains, floods, landslides or earthquakes, or from human conduct;

"Environmental Flows" means the water provided within a river, wetland or estuary to maintain ecosystems and their benefits where there are competing water uses and where flows are regulated;

"Environmental Impact Assessment" means a procedure for evaluating the likely impact of a planned measure on the environment;

"Equitable and Reasonable Utilization" means equitable and reasonable utilization as provided for under Article 3 (7) (a) and (b), and Article 3 (8) (a) and (b) of the Revised Protocol on Shared Watercourses in the Southern African Development Community;

"Flow Regime" means changes of river level or flows with time and the volume of water in rivers, lakes, reservoirs and marshes;

"**Groundwater**" means water that exists underground in saturated zones beneath the land surface;

"Impact" means any effect on the environment caused by an activity, that affects the environment including effects on human health and safety, flora, fauna, soil, air, water, climate, landscape, socio-economic environment or the interaction among these factors and cultural heritage or socio-economic conditions resulting from alterations to these factors;

"Intra-basin transfer" means the artificial conveyance of water from one sub-catchment to another within the same basin;

"Inter-basin transfer" means a withdrawal of water from one river catchment, followed by use and/or return of some or all of that water to a second river basin. The river basin from which the withdrawal or diversion occurs is termed the 'donor' basin, and the river basin to which all or a portion of the water is diverted and returned is termed the 'receiving' basin;

"Integrated Water Resource Management" means a process which promotes the coordinated development and management of water, land and related resources in order to maximise economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems;

"Joint Institution" means the institution established through an agreement between the Parties to jointly manage the Buzi, Pungwe and Save Watercourses;

"Long-Term" means a period exceeding thirty (30) years;

"Medium-Term" means a period of ten (10) to thirty (30) years;

"Ministers" means Ministers responsible for the water affairs of the Parties;

"Ongoing activity" means any activity that would have been subjected to a decision of a competent authority in accordance with an applicable national procedure if it had been a planned measure;

"Planned measure" means any activity or a major change to an ongoing activity subject to a decision of a competent authority in accordance with applicable national procedures;

"Pollution" means any detrimental alteration in the composition or quality of the waters of a shared watercourse, which results directly or indirectly from human conduct;

"SADC Protocol" means the Revised Protocol on Shared Watercourses in the Southern African Development Community signed on the 7th of August 2000 in Windhoek - Namibia;

"Save Watercourse" means the system of surface and ground waters of the Save constituting, by virtue of their physical relationship a unitary whole flowing normally into a common terminus, the Indian Ocean;

"Short-Term" means a period of up to ten (10) years;

"Strategic Plan" means a master development plan comprising a general planning tool and process for the identification, categorization and prioritization of projects and programmes for the efficient management and sustainable development of the Save Watercourse;

"Significant harm" means non-trivial harm capable of being established by objective evidence without necessarily rising to the level of being substantial;

"Stakeholder" means an individual, living organism, group or organisation that has interest or concern, which can affect or be affected by activities implemented in the Save Watercourse;

Sub-catchment" means a division of a catchment allowing runoff management as near to the source as is reasonable;

"Surface water" means water on the surface of continents such as in a river, lake, or wetland;

"Sustainable Development" is development which meets the needs of present generations without compromising future generations to meet their own needs;

"Sustainable Utilisation" means the ability to use water in sufficient quantities and quality from the local to the global scale to meet the needs of humans and ecosystems for the present and the future; and

"Transboundary Impact" means any adverse effect, brought about by natural causes or human conduct, within an area under the jurisdiction of a Party caused by a proposed activity, the physical origin of which is situated wholly or in part within the area under the jurisdiction of the other Party.

ARTICLE 2
Scope

This Agreement applies to the management and protection measures related to the planning, development, management and sustainable use of the Save Watercourse shared by the Parties.

ARTICLE 3
Objective

The objective of this Agreement is to promote coordinatedco-operation between the Parties to ensure the planning, development, management and sustainable utilization of the water resources of the Save Watercourse.

ARTICLE 4
General Principles

1. In the implementation of this Agreement, the Parties commit themselves to the general principles of the SADC Protocol which include, but not limited to the following:
   a) sustainable utilisation;
   b) equitable and reasonable utilisation;
   c) protection, preservation and conservation of the environment; and
   d) prevention and mitigation of significant harm.

2. These principles shall be interpreted according to the provisions of Article 3 of the SADC Protocol and developed in accordance with best international practices.

3. In the implementation of this Agreement, the Parties commit themselves to the provisions of the SADC Protocol on Gender and Development of 2008.

ARTICLE 5
Responsibilities of the Parties

1. The Parties shall, individually and, where appropriate, jointly, develop and adopt technical, legal, administrative and other reasonable measures in order to:

   a) prevent, reduce and control pollution of surface and ground waters, and protect and enhance the quality status of the waters and associated ecosystems for the benefit of present and future generations;

   b) prevent, eliminate, mitigate and control Trans-boundary Impact;

   c) co-ordinate management plans and planned measures, in accordance with Article 4 (1) of the SADC Protocol;

   d) promote partnership and stakeholder involvement for effective and efficient water use and management;

   e) promote the security of relevant water related infrastructure and prevent accidents;

   f) monitor and mitigate the effects of floods and droughts;

   g) provide warning of possible floods and implement agreed upon urgent measures during flood situations;

   h) establish comparable monitoring systems, methods and procedures;

   i) exchange information on water resources quality, quantity and use;

   j) promote the implementation of this Agreement according to its objectives and defined principles; and

   k) promote and implement institutional capacity building programmes.

2. The Parties shall co-operate with SADC organs and other shared watercourse institutions.

3. The Parties shall give their full co-operation and support to the decisions of the Joint Water Commission (JWC), and shall take the necessary legislative, administrative, technical and other measures to give effect to this Agreement or such decisions.

4. The Parties shall develop and implement a Strategic Plan which will guide the planning, development and management, of projects and programmes relating to the water resources of the Save Watercourse.

5. The Parties shall agree on financing modalities for projects and programmes relating to the water resources of the Save Watercourse.

6. The Parties shall in their respective countries adopt a stakeholder participatory approach in the planning, management, development and utilization of the water resources of the Save Watercourse.

7. The Parties shall establish mechanisms forwater allocation in their territories, in accordance with their laws and regulations, and the general principles set out in Article 4 of this Agreement.

ARTICLE 6
Shared Watercourse Institutions

1. The joint body for co-operation between the Parties shall be the JWC.

2. The JWC shall exercise the powers established in the JWC Agreement as well as those conferred by the Parties, in order to pursue the objectives and provisions established herein.

3. The Parties shall establish a Joint Institution, through an agreement, to carry out daily activities related to the management of the Save Watercourse.

4. The Joint Institution referred to in Article 6 (3) above shall provide regular reports to the JWC.

ARTICLE 7
Sustainable Utilisation

1. The Parties are entitled, in their respective territories, to optimal and sustainable utilization

of and benefits from the water resources of the SaveWatercourse, taking into consideration the interests of the other Party, consistent with adequate protection of the Watercourse for the benefit of present and future generations.

2. The Parties shall co-ordinate their management activities through:
   a) the exchange of information on their respective experiences and perspectives; and
   b) the sharing of management plans, programmes and measures, as provided in this Agreement.

3. In pursuing the objective of this Article, the Parties shall follow the Water Allocation principles to be defined in a commissioned detailed study that will be reviewedafter a period of ten (10) years.

4. The Terms of Reference of the commissioned detailed study referred to in Article 7(3) of this Agreementshall be agreed upon by the Parties.

5. In further pursuance of the objective of this Article the Parties shall disclose, in terms of, Annex 2on Planned Measures their intentions of developing new projects that fall outside the scope of Annex 2 during the period of validity of this Agreement.

6. The Parties are committed to develop measures towards improvement of efficiency and rational use of water and its conservation and to promote more efficient water use through adopting better available technology.

ARTICLE 8

Equitable and Reasonable Utilisation

1. The Save Watercourse shall be managed and utilized in an equitable and reasonable manner.

2. In the application of Equitable and Reasonable Utilization, the Parties shall take into account all the relevant factors and circumstances including the following:
   a) geographic, hydrographic, hydrological, climatic, ecological and other factors of a natural character;

b) the social, economic, and environmental needs of the Parties;

c) the population dependent on the Save Watercourse in the territory of the Parties;

d) the effects of the use(s) of the Save Watercourse in the territory of either Party;

e) existing and potential uses of the waters of the Save Watercourse;

f) existing and planned measures which has the capacity to regulate streamflow of the Save Watercourse;

g) conservation, protection, development and economic use of the water resources of the Save Watercourse and the costs of measures taken to that effect;

h) the availability of alternatives of comparable value, to a planned or existing use of the waters of the Save Watercourse; and

i) agreements in force between the Parties.

3. The weight to be given to each factor is to be determined by its importance in comparison with that of other relevant factors. In determining what is an equitable and reasonable use, all relevant factors are to be considered together and a conclusion reached on the basis of the whole.

4. The basis for water allocation in the Save Watercourse shall be contained in the commissioned detailed study referred to in Article 7 (3) of this Agreement.

ARTICLE 9

Protection, Preservation and Conservation of the Environment

1. The Parties shall, individually and where appropriate, jointly, protect, preserve and conserve the ecosystem and the aquatic environment of the SaveWatercourse, taking into account generally accepted international rules and standards.

2. Either Party shall take all measures necessary to prevent the introduction of alien or new species, into the SaveWatercourse, which may have effects detrimental to the ecosystem of the Watercourse resulting in significant harm to the other Party.

3. In ensuring the protection and the preservation of the environment the Parties shall comply with the provisions of Article 4(2) of the SADC Protocol.

ARTICLE 10

Prevention and Mitigation of Significant Harm

1. The Parties shall, in utilizingthe SaveWatercourse in their territories, take all appropriate measures to prevent the causing of significant harm to the other Party.

2. Where significant harm is nevertheless caused to the other Party, the Party whose use causes such harm shall, take appropriate and corrective measures, having due regard for the provisions of paragraph (1) above in consultation with the affected Party, to eliminate or mitigate such harm and where appropriate discuss the question of remedial action.

3. Unless the Parties have agreed otherwise, for the protection of the interests of persons, natural or juridical, who have suffered or are under a serious threat of suffering significant transboundary harm as a result of activities related to the shared Watercourse, the Parties shall not discriminate on the basis of nationality or residence or place where the injury occurred, in granting to such persons, in accordance with its legal system, access to judicial or other procedures, or a right to claim compensation or other relief in respect of significant harm caused by such activities carried on in its territory.

ARTICLE 11
Gender Mainstreaming

The Parties shall adopt the necessary measures, policies, strategies, programmes and projects to eliminate discrimination and to achieve gender equality and equity.

ARTICLE 12
Water Quality and Prevention of Pollution

1. In order to protect and conserve the water resources of the Save Watercourse, the Parties shall, through resolutions adopted by the JWC, and, when appropriate, through the co-ordination of management plans, programmes and measures, proceed to:

    a) develop an evolving classification system for the water resources of the Save Watercourse;

    b) classify and state the objectives and criteria in respect of water quality variables to be achieved through the agreed classification system for the water resources;

    c) adopt a list of substances the introduction of which, is to be prohibited or limited, investigated or monitored in the water resources of the Save Watercourse;

    d) adopt techniques and practices to prevent, reduce and control the pollution and environmental degradation of the Save Watercourse that may cause significant harm to the other Party or to their environment, including human health and safety or the use of the waters for any beneficial purpose, or to the living resources of the Watercourse;

    e) implement a regular monitoring programme including biological, physical and chemical aspects for the Save Watercourse and report at the intervals established by the JWC on the status and trends of the associated aquatic, marine and riparian ecosystems in relation to the water quality of the Watercourse; and

    f) Implement a regular sediment monitoring programme.

2. Until such time that water quality objectives and criteria are determined, the Parties shall comply with the provisions of Annex 3.

ARTICLE 13
Measurement of Surface Water Quantity and Quality

1. The Parties shall establish, maintain and operate an effective and uniform system for:
   a) making and recording continuous measurements of:

      i. the flow of the SaveWatercourseand its tributaries within the boundary of each Party; and
      ii. the volume of stored water, at such locations as the Parties deem necessary to determine:
         A. the volume of the abstractions from several portions of the catchment area of the Save Watercourse;
         B. the flow at selected locations along the SaveWatercourse;
         C. the losses from selected reaches of the Save Watercourse, with their positions and modes of occurrence;
         D. the yield of the reservoirs; and
         E. the water level and the volume in the reservoirs in the Save Watercourse.

   b) making and recording continuous measurements of all diversions, whether natural or artificial, or partly natural and partly artificial, from the SaveWatercourse and its tributaries; and

   c) measuring and monitoring the quality of:
      i. SaveWatercourse water;
      ii. water in tributaries of the Save Watercourse; and
      iii. stored water at such locations at or near the confluence of each of those tributaries with the Save Watercourse.

2. The Parties agree to put in place joint integrated surface quantity and quality monitoring network.

ARTICLE 14
Measurement of Groundwater Quantity and Quality

1. The Parties shall establish, maintain and operate an effective and uniform system for making and recording continuous measurement of:
    i. Save Watercoursegroundwater levels;
    ii. the yield of theaquifers;
    iii. abstractions from the aquifers within the basin; and
    iv. Groundwaterquality.

2. The Parties agree to put in place joint integratedgroundwater quantity and quality monitoring network.

ARTICLE 15
Exchange of Data and Information

1. The Parties, when sharing data and information shall:

    a) on a regular basis exchange available data and information on the condition of the Save Watercourse, in particular that of hydrological, hydrogeological, meteorological, environmental conditions, water quality as well as related forecasts, as provided in Annex 4;

    b) exchange data, information and study reports on the activities that are likely to cause significant trans-boundary impacts;

    c) exchange at intervals agreed by the JWC, information on the use, quantity and quality of the water resource and the ecological state of the Save Watercourse necessary for the implementation of this Agreement;

    d) exchange information and consult each other and if necessary, negotiate the possible effects of planned measures on the condition of the Save Watercourse; and

e) develop the appropriate measures to ensure that the information is homogenous, compatible and comparable as agreed by the JWC.

2. If a Party is requested by the other Party to provide data or any information referred to in Article 13 (1) of this Agreement, the Party shall be obliged to comply with the request in accordance with Annex 4of this Agreement.

ARTICLE 16

Droughts and Floods

1. The Parties undertake to develop and implement a strategy on flood and drought warning and mitigation and any other strategies adopted by the Parties on the Save Watercourse.

2. The allocation of water during drought periods shall be adjusted in accordance with the findings of the commissioned detailed study referred to in Article 7 (3).

3. The Parties agree to the following order of priorities for water allocation:
   a) urban, rural and livestock consumption;
   b) industrial and Mining (IM) water use;
   c) irrigation;
   d) environmental Flows (reduced accordingly); and
   e) others.

4. The Parties shall notify each other without delay and by the most expeditious means of any flood danger.

5. The affected Party may, during flood and drought situations, require the other Party to adopt the flood and drought warning and mitigation measures contained in the strategy referred to in Article 16(1) of this Agreement.

ARTICLE 17
Climate Change

The Parties shall, individually and, where appropriate, jointly:

a) conduct studies on the impact of climate change on the water resources ofthe Save Watercourse; and

b) identify and prioritise strategies to minimize the impact of climate change on the water resources of the Save Watercourse;

ARTICLE 18
Transboundary Impact

1. The Planned Measures listed in Annex 2 regardless of their location that by themselves or by accumulation with the existing ones, which have the potential of significant Transboundary Impact on the Watercourse, shall not commence before the provisions of Article 4(1) of the SADC Protocol are complied with.

2. Whenever, a Planned Measure, not listed in Annex 2 is likely to cause significant Transboundary Impact or if either Party expresses concern that such may occur, it shall not commence before the provisions of Article 4 (1) of the SADC Protocol are complied with.

3. In case of planned measure involving a significant Transboundary Impact of substantial magnitude the proponent shall conduct an Environmental Impact Assessment, which takes Transboundary Impact into account in accordance with procedures determined by the Parties.

4. Whenever an ongoing activity causes or is likely to cause a significant Transboundary Impact, which will lead a Party to comply with an obligation, the Party concerned shall address the matter through the co-ordination of management plans, programmes or measures.

ARTICLE 19
Incidents of Accidental Pollution and Other Emergency Situations

The Parties undertake through their relevant institutions to collaborate and ensure that they:

a) immediately and by the most expeditious means available, notify the other potentially affected Party, the SADC organs or any other authorised competent international

organisations and institutions of any incidents of accidental pollution and other emergency situations originating within their respective territories;

b) promptly supply the necessary information to the other affected Party and competent organisations with a view to co-operate in the prevention, mitigation and elimination of the harmful effects of the emergency; and

c) individually and where appropriate, jointly, develop contingency plans for responding to any incidents of accidental pollution and other emergency situations in co-operation, where appropriate, with other potentially affected and/or authorized competent international organisations to take immediately, all practicable measures necessitated by the circumstances to prevent, mitigate and eliminate the harmful effects of the emergency.

ARTICLE 20
Flow Regime and Water Allocation

1. The Flow Regime and water allocation in the Save Watercourse shall be contained in the commissioned detailed study referred to in Article 7(3) of this Agreement.

2. Any abstraction of water from the SaveWatercourse, regardless of the use or geographical destination of such water, shall be in conformity with the provisions of the commissioned detailed study referred to in Article 7(3) of this Agreement.

3. The Parties shall consider the following criteria in establishing the flow regime:
   a) the geographical, hydrological, climatic and other natural characteristics of the Save Watercourse;
   b) the need to ensure water of sufficient quantity with acceptable water quality to sustain the watercourse and its associated ecosystems;
   c) any present and foreseeable future water requirements;
   d) existing and planned infrastructure which has the capacity to regulate the streamflow of watercourse; and
   e) water allocation.

ARTICLE 21
Intra and Inter-basin Water Transfers

1. The Parties agree on the possibility of inter and intra-basin water transfer in order to develop the resources of Save Watercourse and other deemed basins.
2. The Parties shall notify each other on the need of water transfer to fulfil requirements within and/or to other river basins with water shortage.
3. The decision of Intra and Inter basin water transfer shall be made by the Parties with recommendation of the JWC.

ARTICLE 22
Capacity Building

The Parties shall, individually and, where appropriate, jointly:

a) identify and priorities capacity building programmes necessary for the implementation and monitoring of this Agreement; and

b) Promote awareness and implementation of capacity building programmes for Integrated Water Resources Management institutions and stakeholders.

ARTICLE 23
Annexes

1. Annexes 1, 2, 3 and 4are an integral part of this Agreement.
2. The Parties may agree on any other annexes they consider necessary through Diplomatic channels.

ARTICLE24
Settlement of Dispute(s)

1. Any dispute(s) between the Parties concerning the interpretation or implementation of this Agreement shall be settled amicably through consultation and negotiations between the Parties.

2. Where the dispute(s) have not been settled within one (1) year, from the date upon which such negotiations were requested, it shall be submitted for mediation and the mediator shall be agreed upon by the Parties.

3. In the event that the dispute(s) have not been resolved by mediation within six (6) months if the Parties so agree, the dispute shall be referred to a tribunal of Arbitrators (the Tribunal) appointed by the Parties, as follows:
   (a) the Tribunal shall comprise three (3) arbitrators, two of whom will be appointed by each Party;
   (b) the two (2) arbitrators appointed by each Party shall appoint the third arbitrator who shall be the chairperson.

4. The decision of the Tribunal of Arbitrators shall be final and binding on the Parties.

5. The costs of any arbitration under this Article shall be borne equally by the Parties.

6. While the process of resolving dispute(s) is ongoing, the Parties agree not to proceed with the object of the dispute(s) until they have been resolved.

ARTICLE25
Amendment(s)

1. This Agreement shall be amended at any time by mutual consent of the Parties, by an exchange of notes through diplomatic channels.

2. This Agreement shall be revised and updated every ten (10) years.

ARTICLE 26
Entry into Force, Duration and Termination

1. This Agreement shall be ratified by each Party.
2. This Agreement shall enter into force thirty (30) days after the deposit of the instrument of ratification by the Parties and shall remain in force for a period of ten (10) years.

3. The Agreement shall automatically be renewed for a similar period, unless either Party gives prior written notice of twelve (12) months of its intention to terminate the Agreement.

4. Unless otherwise specifically agreed by the Parties, termination shall not affect the validity of any ongoing activities not fully completed at the time of termination.

ARTICLE 27
Depositary of the Agreement

1. The Executive Secretary for SADC shall be the Depositary of this Agreement.

2. The Parties agree to inform each other on the completion of their internal legal processes.

3. The last Party to complete the internal process of ratification shall inform the other and shall be responsible for registering the Agreement with SADC within thirty (30) days.

4. The last Party to complete the internal process of ratification shall request SADC to register this Agreement with the United Nations.

5. In the event that this Agreement is terminated, the Party that initiated the process of termination, shall notify the depositary of the termination of the Agreement within three months after termination of this Agreement.

IN WITNESS WHEREOF the undersigned, being the duly authorized representatives of either Party, have signed this Agreement in two original copies, in both English and Portuguese languages, both texts being equally authentic.

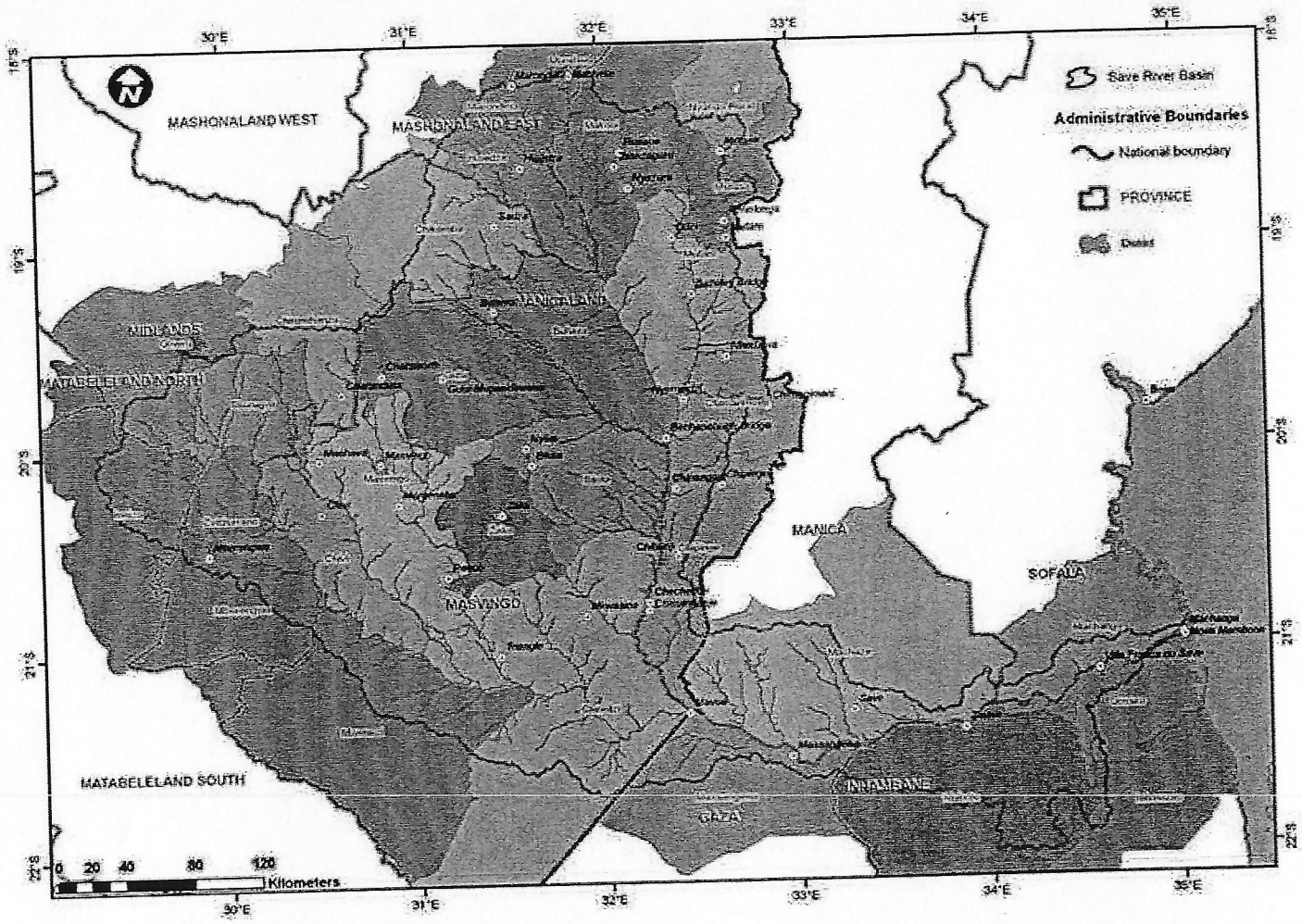
SIGNED AT.....on this.....day of the month of 2023

FOR THE
REPUBLIC OF ZIMBABWE

FOR THE
REPUBLIC OF MOZAMBIQUE

ANNEX 1

MAP OF THE SAVE WATERCOURSE


Save River Basin
Administrative Boundaries
National boundary
PROVINCE
District
MASHONALAND WEST
MASHONALAND EAST
MANICA
SOFALA
MIDLANDS
MATABELELAND NORTH
MASVINGO
MATABELELAND SOUTH
GAZA
INHAMBANE
0 20 40 80 120
Kilometers
30°E
31°E
32°E
33°E
34°E
35°E
15°S
19°S
20°S
21°S
22°S

ANNEX 2

PLANNED MEASURES

ARTICLE 1

Determining Criteria

1. The Parties accord a high priority to supply water for domestic, livestock and industrial irrigation and the environment. In particular, the Parties recognise the strategic importance of guaranteeing the future water demand of the cities and towns in both Mozambique and Zimbabwe.

2. The Parties recognise the projects in this Annex as projects to be implemented by the Parties.

3. For the mere reason that a project is listed in this Annex, the Party is not exempted from complying with the provisions of the Agreement.

4. In the event that more water is made available through structural and non-structural measures in the SaveWatercourse, the Parties shall give priority to the water uses referred to in Article 16 (3) of this Agreement when considering the allocation of the water, taking into account the equitable and reasonable utilization by the Parties of the water resources of the Save Watercourse.

5. A Party may develop any other project not listed in this Annex, in accordance with the provisions of the Agreement.

Article 2

Planned Projects in Zimbabwe

The following are planned water resources development projects each with a storage capacity greater than 5Mm^3 in the Runde sub-basin in Zimbabwe (Table 1a):

Table1a: Planned water utilization and development projects in the Runde Sub-basin in Zimbabwe

ID	Dam site	Name of River	Sub zone	Proposed Capacity (Mm^3)	Purpose
1	Majiri	Mavidze	EUT2	5.00	Irrigation
2	Neshurosache	Sache	EL2	5.21	Domestic
3	Shavi	Shavi	EN1	5.58	Irrigation
4	Veza	Veza	EC2	6.00	Irrigation
5	Mushamukuru	Rusore	EL2	6.00	Irrigation

ID	Dam site	Name of River	Sub zone	Proposed Capacity (Mm^3)	Purpose
6	Chatikobo	Chihobvu	EUT2	6.30	Domestic
7	Nyamachere	Nyamachere	EUT5	6.70	Irrigation
8	Mushavute	Mushavute	EUT1	6.97	Irrigation
9	Bora	Nyaratedzi	ET1	8.20	Irrigation
10	Musavezana	Musavenzana	ET1	12.00	Irrigation
11	Nemawanga	Nemawanga	EUT2	14.20	Irrigation
12	Rurwi	Rurwi	EC2	15.00	Domestic
13	Matize	Matize	EUT2	15.00	Irrigation
14	Mushavutwe	Mushavutwe	EC2	15.00	Irrigation
15	Nhengwe	Nyarutedzi	ET1	15.00	Irrigation
16	Munzviru	Munzviru	EUT2	18.60	Domestic
17	Chisenga	Mushambingwe	ET1	19.00	Irrigation
18	Tana's Pool	Runde	ET5	34.20	Irrigation
19	Buhwa	Buhwa	EN1	38.30	Domestic/Irrigation
20	Chivaka	Chivaka	EC2	45.00	Domestic/Irrigation
21	Makwangwangwa-Mafe	TokweTrib	ET1	60.00	Irrigation
22	Mangururnguma	Mangurunguma	EUT1	100.00	Irrigation
23	Nyajena	Mutirikwi	EUT1	102.40	Irrigation
24	Ghoko	Ghoko	EN2	120.00	Irrigation
25	Buffalo	Chiredzi	EC1	170.00	Irrigation/Domestic
27	Lubongo	Runde	EL4	330.00	Domestic
28	ChipindaPools	Runde	EL1	1,000.00	Domestic/Irrigation
29	LundiTende	Runde	EL2	2,400.00	Irrigation

The following are planned water resources development projects each with a storage capacity greater than $5Mm^3$ in the Save sub-basin in Zimbabwe (Table 1b):

Table 1b: Planed water utilization and development projects in Save Sub-basin in Zimbabwe

	Dam Site	Name of River	Sub-zone	Capacity (Mm^3)	Purpose
1	Nyagari	Odzani	EO4	6.04	Irrigation
2	Nyagambi	OdzaniTrib	EO4	8.82	Irrigation
3	Mukwasine	Mukwasine	ES1	9.90	Irrigation
4	Shitowa	Odzi	EO5	14.80	Irrigation

5	Rutegeni	Odzi	ES1	14.90	Irrigation
6	Hera	Devure	ES4	31.40	Irrigation
7	Mujichi	Turwi	ES3	35.50	Irrigation
8	Mubvumira	Mubvumira	EO5	53.30	Irrigation
9	Chisurgwe	Devure	ES4	57.40	Irrigation
10	Dzidzi	Mukwasine	ES1	64.60	Irrigation
11	Nyashanu	Mwerihari	ES7	95.20	Irrigation
12	Chinyika	Turwi	ES3	101.10	Irrigation
13	Chitowe	Save	ES2	1,542.00	Irrigation
14	Condo	Save	ES8	3,565.00	Irrigation

Planned Projects in Mozambique

The following are planned water resources development projects each with a storage capacity greater than 5 Mm^3 in the Massangena sub-basin in Mozambique (Table 2):

Table 2: Planned water utilization and development projects in Mozambique

ID	Dam Site	Name of River	Sub-zone	Capacity (Mm^3)	Purpose
1	Massangena Weir	Save	-	5.00	Irrigation
2	Jofane Dam	Save	-	500.00	Irrigation, flood and drought mitigation
3	Massangena Dam	Save	-	7,263.00	Irrigation, flood and drought mitigation

ANNEX 3

GUIDELINES ON WATER QUALITY MONITORING

ARTICLE 1

Objective of water quality monitoring

1. The objective of water quality monitoring is to ensure that the SaveWatercourse is used in a sustainable manner, in accordance with this Agreement, particularly Articles 12 and 13.

ARTICLE 2

Water Quality Management

1. Water quality is described by the physical, chemical and biological characteristics of the watercourses.

2. Water quality will be managed considering also the character and condition of the in-stream and riparian habitat and the characteristics, condition and distribution of the aquatic biota.

3. The Parties shall conduct specific studies to define the requirements in terms of water quantity and quality for environmental conservation in important sections of the SaveRiver and its tributaries and at the estuary.

ARTICLE 3

Water Quality Management Goals

1. The water quality management goals for the Save watercourse should ensure that existing aquatic ecosystems are protected.The goals should focus on prevention of significant adverse transboundary impacts, and conform to the values set for the parameters indicated in Appendix A.

2. The Partiesshall, at any time, revise the parameters as provided in Appendix A.Revisions may be considered at the request of either Party, in respect of specific river reaches or estuary and whenever there are significant changesdue to natural causes, human activities,infrastructural development orimprovements in technical and scientific knowledge.

3. The values mentioned in Appendix A may be temporarily waived in the case of extreme natural hydrological occurrences, including natural enrichment in certain substances. Where a Party waives the stipulated values, it shall forthwith notify the other Party thereof, stating its reasons, the periods anticipated and the proposed mitigation measures to be

introduced.

4. Whenever surface water fails to comply with the values for parameters set in Appendix A, the Parties shall adopt, without delay, the measures required for the improvement of its quality. Parallel to the remedial action, the Parties shall institute a thorough investigation of the sources and impacts of pollution.

ARTICLE 4

Monitoring of surface water quality

1. Surface water sampling and analysis shall be done for the parametersmentioned in Appendix A, and at the prioritized surface monitoring stations, listed in Appendix B or at suitable locations in the vicinity of these stations.

2. The results from water quality monitoring shall be exchanged within a week after sample analysis are done.

3. The Parties shall immediately alert each other if any values outside the permissible range are found for the parameters indicated in Appendix A.

4. Existing historical water quality data for the surface water monitoring stations in the Save Watercourse, listed in Appendix B, shall be exchanged between the Parties within twelve months of signing of the Agreement.

5. Quarterly reports on the water quality status at the monitoring stations shall be exchanged by the Parties, within thirty (30) days after the reporting period.

6. An annual report on the water quality status at the monitoring stations shall be exchanged by the Parties, by 31st January for each year.

7. The Parties shall individually or, where agreed, jointly promote actions to identify, design, establish and re-enforce monitoring systems for the Save watercourse.

ARTICLE 5

Monitoring of Groundwater Quality

1. Groundwater is part of the watercourse and the sustainable development of groundwater resources at a regional and transboundary level shall be promoted. The Parties shall initiate

the assessment, exploitation and protection of the groundwater component of the watercourses.

2. Each Party shall install and maintain a number of boreholes in selected aquifers for the purpose of monitoring groundwater quality.

ARTICLE6

Bio-monitoring of Water Quality

The Parties shall develop and implement bio-monitoring programmes in the Save Watercourse.

APPENDIX A: WATER QUALITY GUIDELINES

The Parties agree that the minimum parameters to be monitored are those specified in Table3.

Table 3 Water Quality Monitoring Parameters

PARAMETER	UNIT	STANDARDS			
BASIC PHYSICO-CHEMICAL CHARACTERIZATION		BLUE	GREEN	YELLOW	RED
TEMPERATURE	°C	<35	<40	≤40	≤45
ELECTRICAL CONDUCTIVITY	µS/CM	<1000	<2000	<3000	<3500
pH	pH UNITS	6-9	5-6	4-5	0-4
			9-10	10-12	12-14
DISSOLVED OXYGEN	%SATURATION	>60	>50	>30	>15
TOTAL DISSOLVED SOLIDS	MG/L	<500	<1500	<2000	>3000
TOTAL SUSPENDED SOLIDS	MG/L	<25	<50	<100	<150
TURBIDITY	NTU	<5	*	*	*
INORGANIC NON-METALLIC					
BIOLOGICAL OXYGEN DEMAND	(MG/L)	<30	<50	<100	<120
CHEMICAL OXYGEN	(MG/L)	<60	<90	<150	<200

PARAMETER	UNIT	STANDARDS			
AMMONIA (NH_3)	MG/L	≤0.5	≤1.0	≤1.5	<2.0
TOTAL NITROGEN (N)	MG/L	≤10	≤20	≤30	≤50
NITRATES $(NO_3)^-$	MG/L	<10	<20	<30	<50
PHOSPHATES $(PO_4)^{-3}$	MG/L	<0.5	<1.5	<3	<5
SULPHATES $(SO_4)^{-2}$	MG/L	<250	<300	<400	<500
OXYGEN ABSORBED	PV	<10	<15	<25	<40
DISSOLVED	(MG/L)	>60	>50	>30	>15
METALS					
ALUMINIUM (AL)	MG/L	*	*	*	≤5
CADMIUM (CD)	MG/L	≤0.01	≤0.05	≤0.1	≤0.3
CHROMIUM (CR)	MG/L	≤0.05	≤0.1	≤0.2	≤0.5
COPPER (CU)	MG/L	≤1.0	≤2.0	≤3	≤5590
LEAD (PB)	MG/L	≤0.05	≤0.1	≤0.2	≤0.5
IRON (FE)	MG/L	≤1.0	≤2.0	≤5.0	≤8.0
NICKEL (NI)	MG/L	<0.3	<0.6	<0.9	<4.5
SELENIUM (SE)	MG/L	≤0.05	≤0.1	≤1.5	≤3
ZINC (ZN)	MG/L	<0.5	<4.0	<5.0	<15.0
MANGANESE (MN)	MG/L	<0.1	<0.3	<0.4	<0.5
MERCURY (HG)	µG/L	≤0.01	≤0.02	≤0.03	≤0.05
CHLORIDE $(CL)^-$	(MG/L)	<250	<300	<400	<500
CYANIDE (CN) AND	PPM	≤0.07	≤0.1	≤0.15	≤1
COMPOUNDS (CN) CYANIDE (AS FREE	PPM	≤0.07	≤0.1	≤0.15	≤0.3
MICROBIOLOGY					
FAECAL COLIFORMS (NO./ 100 ML)	(NO./ 100 ML)	≤1000	>1000	>1500	≤2000

The following parameters are to be analysed *in situ*: pH, Temperature, Dissolved Oxygen (DO), Turbidity, Electrical Conductivity (EC).The water quality analysis should be carried out at certified laboratories.

The sampling and laboratory analysis should be made quarterly and more or less evenly distributed along the hydrological year, covering the wet and the dry seasons. If technical or financial reasons put a constraint on the number of measurements, the minimum should be two per year, one during the wet season and one during the dry season.

Although the laboratory analyses of metals, particularly cadmium, iron, lead, manganese, zinc and mercury, are quite expensive, an effort should be made in both countries to do it once a year, even if in fewer sites which are deemed to be more critical.

APPENDIX B: SURFACE WATER QUALITY MONITORING STATIONS

The Parties agree that the surface water quality monitoring stationsin Zimbabwe are as shown in Table 4a and 4b.

Table 4a: Surface water quality monitoring sites in Save sub-basin in Zimbabwe

	Station Code	Coordinates	Name of River	Location
1	ER95	19.26° S 31.65° E	Mwerihari River	Murambinda growth point
2	ER100	18.93° S 31.95° E	Macheke River	Nyazura-Murambinda Road bridge
3	ER89	19.75° S 32.42° E	Nyanyadzi River	Mutare – Birchenbough Bridge Road
4	ER99	19.96° S 32.23° E	Devure River	Mutare-Masvingo Road Bridge
5	ER102	19.96° S 32.34° E	Save River	Birchenough Bridge
6	ER57	20.08° S 32.35° E	Save River	Taona irrigation scheme
7	ER61	19.75° S 32.42° E	Odzi River	Nenhohwe irrigation pump station
8	ER 94	20.79° S 32.22° E	Save River	Chisumbanje pump station
9	ER91	19.52° S 32.61° E	UmvumvumvuRiver	Chimanimani – Mutare Road bridge

Table 4b: Surface water quality monitoring sites in Runde sub-basin in Zimbabwe

	Station Code	Coordinates	River	Location
1	ER26	20.02° S 30.44° E	Shashe	Bridge along Bere/Bwanya Townships - Gaths Mine Road
2	ER27	20.03° S 30.41° E	Tokwe	BwanyaSchool
3	ER35	20.11° S 30.86° E	Shagashi	Foot bridge downstream of Masvingo Teachers' College
4	EL07	20.25° S 31.03° E	Mutirikwi	E6 Mutirikwi Dam Downstream Gauging Weir
5	ER25	21.20° S 31.74° E	Runde	Bridge at Chipinda pools
6	ER38	20.64° S 31.17° E	Mutirikwi	Upstream of Bangala dam near Renco mine
7	ER40	21.08° S 31.41° E	Mutirikwi	Low level bridge of MpapaRoad
8	ER30	20.75°S 30.92° E	Tokwe	Tokwe - Mukosi confluence
9	E174	21.14° S 31.27° E	Tokwe	TokweRunde Confluence
10	ER116	21.10^0 S 31.45^0E	Mutirikwi	Mamandi
11	ER25	20.38^0 S 31.10 E	Mutirikwi	Main Drain

The Parties agree that the surface water quality monitoring stationsin Mozambique are as shown in Table 5.

Table 5: Surface water quality monitoring sites in Mozambique

	Station	Coordinates	River	Location
1	E420	21.38° S 32.52° E	Save	Mavue
2	E86	21.55° S 32.95° E	Save	Massangena
3	E204	21.37° S 33.93° E	Save	Covane
4	48	21.30° S 34.29° E	Save	Jofane
5	47	21.13° S 34.56° E	Save	Vila Franca do Save
6	573	20.99° S 35.01° E	Save	Nova Mambone

ANNEX 4

EXCHANGE OF DATA AND INFORMATION

ARTICLE 1
General Principles

1. The Parties shall exchange or facilitate the exchange of data and information on water quantity, water quality, water use, hydraulic infrastructures and other relevant data and information.

2. The Parties shall individually or, where agreed, jointly develop a mutually accessible and appropriate website where information to be exchanged, as required in terms of the Main Agreement and this Annex, shall be posted and updated by the Parties.

3. The Parties shall put the necessary administrative procedures in place in order to comply with the exchange of data and information.

4. The Parties shall individually and, where agreed, jointly determine the budget necessary for the actions described, including activities for providing equipment, software and its installation, running and maintenance costs and training activities.

5. The Parties shall establish clear channels of communications, indicating the responsibilities of each involved institution, the personnel and the contacts (phone, cell, fax and e-mail) as well as contacts for emergency situations.

ARTICLE 2
Use of Information and Data

1. Save basin related information published by a Party within its territory may be used by the other Party for any purpose relevant to the objectives of the Agreement, subject to acknowledgment of the source.

2. Information given by one Party for the exclusive use of the other Party for the purpose of planning, development and management of the Save watercourse shall only be used for that purpose.

ARTICLE 3
Rainfall Data

1. The following table lists the rainfall monitoring network (Table 6) whose data is to be collected and exchanged by the Parties.

Table 6: Rainfall monitoring sites in the Save Watercourse

Location	Station Code	Coordinates	Name / location
Zimbabwe	67977	20.02^0 S 31.58^0 E	Buffalo Range
	67875	19.32^0 S 31.43^0 E	Buhera
	67983	20.20^0 S 32.62^0 E	Chipinge
	67871	19.03^0 S 30.88^0 E	Chivhu
	67867	19.40^0 S 29.80^0 E	Gweru
	67867	18.18^0 S 31.47^0E	Marondera
	67975	20.07^0 S 30.87^0 E	Masvingo
	67895	18.97^0S 32.67^0 E	Mutare
	67889	18.28^0 S 32.75^0 E	Nyanga
	67979	20.33^0 S 31.47^0 E	Zaka
	67971	20.32 S 30.07^0 E	Zvishavane
Mozambique	P110	21.55^0 S 32.95^0E	Massangena
	P338	21.32^0 S 34.30^0 E	Jofane
	P800	20.45^0S 35.02^0 E	Mambone
	P1096	20.97^0 S 35.00^0E	Machanga
	P112	21.15^0S 34.57^0E	Villa Franca do Save
	P-Sn	21.04^0S 34.01^0 E	Zinmuala
	P-Sn	21.39^0 S 32.52^0 E	Mavue
	P-Sn	21.37^0 E 33.93^0 S	Covane
	P284	20.82^0 S 33.38^0 E	Machaze

2. In each station, data should be collected on a daily basis.

3. Exchange of rainfall data should be done on a daily basis during the rainy season and monthly in normal situation.

4. If a flood is foreseen or a high value of rainfall[1] is recorded in a station of a Party, the exchange of information should be done on a daily or hourly basis.

ARTICLE 4
Runoff data

1. The following table lists the runoff monitoring network (Table 7) whose data is to be collected and exchanged by the Parties.

Table 7: Runoff monitoring sites in the Save Watercourse

Station Code	River	Location	Subzone	Area (km^2)	Latitude	Longitude
E43	Save	Save Gorge Causeway	ES1	43384	21.1800° S	32.2800° E
E17	Chiredzi	Ruware Ranch G/W	EC1	1700	20.7700° S	31.6300° E
E74	Runde	Downstream of Tokwe Confluence	EL2	29050	21.1300° S	31.2700° E
E86	Save	Massangena	Massangena	84150	21.55° S	32.95° E

2. In each station, water level data should be collected on a daily basis.

3. In each station not provided with a measuring weir, periodic flow measurements shall be made to allow for the re-calibration of the rating curve.

5. Water level data shall be converted into flow data using the adequate rating curve in each station.

6. Exchange of runoff data, comprising water levels, flows and flow measurements, should be done on a monthly basis.

7. If a flood is foreseen or a highwater level, above a defined level of alarm, is recorded in a station of a Party, the exchange of information should be done on a daily or hourly basis.

ARTICLE 5
Water quality data

1. The monitoring stations, the parameters to be observed and the frequency of sampling is defined in Annex 3.

2. The results from water quality monitoring shall be exchanged within a week after sample analyses are done.

3. The Parties shall be alerted immediately if any extreme values are found for the parameters indicated, where use of the watercourse could pose a hazard to humans, other water uses or the environment.

ARTICLE 6
Water use data

1. The Parties shall collect and analyse data on permits and effective water use in different categoriesnamely urban, rural, livestock, tourism, industry, mining and irrigation.

2. Exchange of water use data shall be done on a yearly basis.

ARTICLE 7
Hydraulic Infrastructure Data

1. The Parties shall exchange information about major hydraulic infrastructures, particularly storage dams greater than $5Mm^3$, indicating the characteristics of the dam, spillway and outlets, storage capacity and any other relevant aspect.

2. Each Party shall receive from the owners or the operators of the dams in its country, at least on a monthly basis, the following daily data: water level at the reservoir, reservoir outflow, estimated inflow, rainfall and evaporation.

3. Exchange of reservoir data shall be done on a quarterly basis, including water balance and dam status report.

ARTICLE 8
Annual Report

A joint annual report shall be preparedby the Parties and will include hydrometeorological,hydrogeological, water quality, water use and hydraulic infrastructures data and information.

ARTICLE 9
Other Relevant Information

1. The Parties shall exchange other relevant information as soon as it becomes available, including but not being limited to:

a. study reports on the Save Watercourse or relevant to the SaveBasin;

b. new legislation on water resources management or influencing water resources management; and

c. policies and strategies on water resources planning, development and management prepared at a national or regional level.