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# Komati River Basin Water Resources Development and Utilization Act, 1992

Act 6 of 1992

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Komati River Basin Water Resources Development and Utilization Act, 1992

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## eSwatini

# Komati River Basin Water Resources Development and Utilization Act, 1992

Act 6 of 1992

Published in Swaziland Government Gazette 903 on 25 September 1992

Assented to on 9 September 1992

Commenced

*[This is the version of this document at 1 December 1998.]*

**An Act to provide for the implementation of the Komati River Basin Treaty and the Joint Water Commission Treaty and for matters incidental thereto.**

### 1. Short title

This Act may be cited as the Komati River Basin Water Resources Development and Utilization Act, 1992, and shall come into force on such date as the Minister may by Legal Notice in the *Gazette* appoint.

### 2. Interpretation

In this Act, unless the context otherwise requires—

“**Commission**” means the Joint Water Commission established by the Joint Water Commission Treaty;

“**Government**” means the Government of Swaziland;

“**Joint Water Commission Treaty**” means the Treaty on the Establishment and Functioning of the Joint Water Commission between the Government of Swaziland and the Government of the Republic of South Africa as set out in the Second Schedule and includes amendments thereto from time to time;

“**Komati River Basin Treaty**” means the Treaty on the Development and Utilization of the Water Resources of the Komati River Basin between the Government of the Republic of South Africa and the Government of Swaziland as set out in the First Schedule, and includes amendments thereto from time to time;

“**Komati River Basin**” means the drainage area of the Komati River and all its tributaries, upstream of its confluence with the Crocodile River near Komatipoort in the Republic of South Africa;

“**KOBWA**” means the Komati Basin Water Authority established by the Komati River Basin Treaty;

“**Minister**” means the Minister responsible for natural resources;

“**project**” means the water storage project comprising the Driekoppies Dam on the Lomati River and the Maguga Dam on the Komati River together with the ancillary works referred to in [section 4](#).

### 3. Minister to be responsible for project

- (1) The Minister shall ensure that the terms of the Komati River Basin Treaty and Joint Water Commission Treaty are fully implemented in the best interests of Swaziland.
- (2) The Minister may appoint a Committee comprising officials of the Ministries, Departments and other agencies of Government having functions related to the functions of KOBWA to advise him on matters concerning the implementation of the project by KOBWA.

- (3) Without prejudice to subsection (2) the Minister may from time to time engage such technical and other experts as he thinks fit to advise him on any aspect of the implementation of the project by KOBWA.

#### **4. Implementation of the project**

- (1) Pursuant to the terms of the Komati River Basin Treaty the Government and the Government of the Republic of South Africa may jointly undertake a comprehensive development of the water resources of the Komati River Basin in this Act referred to as the “project”.
- (2) For the purposes of subsection (1) the Government and the Government of the Republic of South Africa by KOBWA shall jointly undertake the design, construction, operation and maintenance of the project.
- (3) The project shall comprise—
  - (a) the Driekoppies Dam on the Lomati River in the Republic of South Africa inundating part of Swaziland;
  - (b) the Maguga Dam on the Komati River in Swaziland; and
  - (c) such gauging weirs and other measuring devices as in the opinion of the Commission are necessary for the proper operation of the Driekoppies and Maguga Dams and for the proper determination of run-off, return seepage or flow in and water consumption from the Komati River Basin.

#### **5. Establishment of KOBWA**

- (1) For the purpose of carrying out the project there shall be established in accordance with the terms of the Komati River Basin Treaty a body to be known as the Komati Basin Water Authority referred to in this Act as “KOBWA”.
- (2) KOBWA shall possess legal personality in Swaziland and shall be capable of suing and of being sued in its own name.
- (3) KOBWA shall carry out the design, construction, operation and maintenance of the project in accordance with the terms of the Komati River Basin Treaty.
- (4) In the discharge of its functions under subsection (3) KOBWA shall exercise such rights and powers as are conferred upon it and shall undertake such obligations and duties as are imposed upon it by the Komati River Basin Treaty.
- (5) KOBWA shall be governed by a Board of Directors which shall consist of such persons as may be appointed by the Government and the Government of the Republic of South Africa in accordance with the terms of the Komati River Basin Treaty.
- (6) The Government shall be represented on the Board of Directors of KOBWA by such persons as may be appointed by the Minister in accordance with the terms of the Komati River Basin Treaty who shall hold office for a period of three years on such terms and conditions as the Minister may determine.

#### **6. Personnel of KOBWA**

Subject to the terms of the Komati River Basin Treaty, KOBWA shall engage such personnel as it considers necessary for the discharge of its functions under the Treaty.

## 7. Establishment of the Joint Water Commission

- (1) Pursuant to the terms of the Joint Water Commission Treaty there shall be established by the Government and the Government of the Republic of South Africa a Joint Water Commission referred to in this Act as the “Commission”.
- (2) The Commission shall possess legal personality in Swaziland.
- (3) The Commission may exercise such powers and functions as are conferred upon it and undertake such obligations and duties as are imposed upon it by the Joint Water Commission Treaty.
- (4) The object and functions of the Commission shall be to act as technical adviser to both the Government and the Government of the Republic of South Africa on matters relating to the development and utilization of the water resources of common interest to them, and to perform such other functions pertaining to the development and utilization of such resources as the Government and the Government of the Republic of South Africa may from time to time agree to assign to the Commission.
- (5) The Commission shall consist of such delegations as may be appointed respectively by the Government and the Government of the Republic of South Africa in accordance with the terms of the Joint Water Commission Treaty.
- (6) The Government shall be represented on the Commission by a delegation comprising not more than three persons who are competent in water resource development and management appointed by the Minister in accordance with the terms of the Joint Water Commission Treaty on such terms and conditions as the Minister may determine.

## 8. Funds for the implementation of project by Government

Funds may be provided from the Consolidated Fund or from such other sources as the Government considers appropriate to carry out such aspect of the project as the Government is required in terms of the Komati River Basin Treaty to execute

## 9. Environmental protection

The Minister shall take all reasonable measures to ensure that the design, construction operation and maintenance of the project are, within Swaziland, compatible with the protection of the existing quality of the environment, and in particular the Minister shall pay due regard to the maintenance of the welfare of persons and communities which are immediately affected by the project.

## 10. Relocation of affected residents, roads, utilities etc.

- (1) Subject to the terms of the Komati River Basin Treaty, the Government shall, in accordance with a relocation plan approved by the Commission, be responsible for—
  - (a) the physical relocation of all persons resident on or having a right to use land within the area made available to KOBWA for the construction, operation and maintenance of the project;
  - (b) the relocation of roads, power lines, telephone lines and other services and graves which may become necessary as a result of the Government having to make land available to KOBWA for the construction, operation and maintenance of the project.
- (2) Subject to the terms of the Komati River Basin Treaty, the Government may—
  - (a) construct and operate within Swaziland hydro-electric power complexes at any dam in the Komati River Basin;
  - (b) utilise within Swaziland the reservoir areas or other sites under the control of KOBWA for the promotion of tourism or for the development of the recreational or commercial potential of such area or site.

- (3) The Government shall use its best endeavours—
  - (a) to minimize waste and non-beneficial use of water from the Komati River Basin within Swaziland;
  - (b) to ensure that the necessary steps are taken to prevent water pollution in the Komati River Basin within Swaziland; and
  - (c) to minimize soil erosion in the Komati River Basin within Swaziland.
- (4) The Government shall within Swaziland and at its own cost afford KOBWA all such assistance as KOBWA may from time to time request for the security of the project and for the safety of its personnel.

## 11. Compensation

- (1) Compensation in respect of rights or interests in land, servitude, fishing rights, water rights or any other rights affected by the project within Swaziland shall be paid by the Government in accordance with the laws of Swaziland.
- (2) The Government shall be entitled to such compensation as may be agreed upon with the Government of the Republic of South Africa for that part of Swaziland which forms part of the reservoir area of the Driekoppies Dam.

## 12. Rights and duties of KOBWA and JWC

For the purposes of the implementation of the project the Government shall give full effect to the rights and duties of KOBWA and the Commission in accordance with the terms of the Komati River Basin Treaty and the Joint Water Commission Treaty.

## 13. Personnel of Government, KOBWA etc to have right of access

The personnel including consultants and contractors of the Government or the Government of the Republic of South Africa or KOBWA or the Commission may be granted all powers, authorization, exemption and rights including access rights necessary for the design, construction, operation and maintenance of the project.

## 14. Obstruction of personnel of Government, KOBWA etc.

Any person who obstructs, prevents or otherwise interferes with the personnel referred to in [section 13](#) in the exercise of their rights and powers under this Act shall be guilty of an offence and liable on conviction to a fine not exceeding E5,000 or to imprisonment not exceeding 2 years or to both.

## 15. Damage to or interfering with the project

Any person who damages, destroys, interferes with or trespasses on the project and an appurtenant ancillary work to the project shall be guilty of an offence and liable on conviction to a fine not exceeding E50,000 or to imprisonment not exceeding 10 years or to both.

## 16. Regulations

The Minister may by Legal Notice published in the *Gazette* make regulations for generally carrying out the principles and purposes of this Act.

## First Schedule

### **Treaty on the development and utilisation of the water resources of the Komati River Basin between the Government of the Kingdom of Swaziland and the Government of the Republic of South Africa**

#### **Preamble**

The Government of the Kingdom of Swaziland and the Government of the Republic of South Africa;

CONSCIOUS of the value of the scarce water resources in the Southern African region;

CONSCIOUS of the advantages of regional development and recognising that co-operation between them with regard to the establishment of mutual projects for the development of water resources of common interest, in particular the water resources of the Komati River Basin, will significantly contribute towards their economic prosperity and the welfare of their peoples in particular as well as the Southern African region in general; and

WISHING to maintain the tradition of good neighbourliness and peaceful co-operation between them acknowledged by the “Agreement between the Government of the Republic of South Africa and the Government of the Republic of Portugal in regard to Rivers of Mutual Interest and the Cunene River Scheme”, 1964, to which the Kingdom of Swaziland acceded in 1967, and wishing to further promote the tradition of good neighbourliness and peaceful co-operation between them on the basis of the rules relating to the uses of the waters of international rivers approved in 1966 at Helsinki by the 52<sup>nd</sup> Conference of the International Law Association.

HEREBY agree as follows:

#### **Article 1 – Definitions**

In this Treaty, unless the context otherwise requires—

“**Capital Cost**” means the cost referred to in Articles 5(1) and (2);

“**High Assurance**” means a 2% risk in any one year of only partial availability;

“**JWC**” means the Joint Water Commission established by a separate Treaty between the Parties;

“**KOBWA**” means the Komati Basin Water Authority as established by Article 7;

“**Komati River Basin**” means the drainage area of the Komati River, and all its tributaries, upstream of its confluence with the Crocodile River near Komatipoort in the Republic of South Africa;

“**Low Assurance**” means a total unavailability for up to 20% of the time on average in respect of 30% and a 2% risk in any one year of only partial availability in respect of the remaining 70%;

“**Net Consumption**” means the quantity of water abstracted or diverted from natural water courses within the Komati River Basin as well as water supplied directly or released on order from dams in the said basin, less any increase in the natural streamflow within the said basin resulting from return seepage or flow of such abstraction, diversion, supply or release which is assessed by the JWC to be practically and beneficially utilisable by downstream consumers within the said basin;

“**Operation and Maintenance Cost**” means the cost referred to in Articles 6(1) and (2);

“**Parties**” means the Government of the Kingdom of Swaziland and the Government of the Republic of South Africa;

“**Project**” means the water storage project comprising the Driekoppies Dam on the Komati River and the Maguga Dam on the Komati River together with the ancillary works as more fully set out in Article 4;

“**Reservoir Area**” means the area at a dam designated by the JWC from time to time for the purpose of, *inter alia*, inundation, housing and appurtenant facilities;

“**South Africa**” means the Government of the Republic of South Africa;

“**Swaziland**” means the Government of the Kingdom of Swaziland;

“**Vis Major**” means—

- (a) any overwhelming occurrence of nature, including extreme drought or flood, not planned for;
- (b) any of the following occurrences initiated by human agency: war, invasion, blockade, foreign hostile act, civil war, rebellion revolution, insurrection or sabotage;
- (c) strikes or other similar stoppages of work by employees which are not the result of the unreasonable conduct of a Party or KOBWA; or
- (d) any other event beyond the control of a Party or KOBWA if the Parties agree that such event constitutes Vis Major.

## Article 2 – Purpose of the Treaty

The purpose of this Treaty is to provide in principle for the development and utilisation of the water resources of the Komati River Basin and in particular for the design, construction, operation and maintenance of the Project and the establishment of KOBWA, as well as for all matters related thereto.

## Article 3 – Komati River Basin development plan

1. The Parties hereby agree in principle to develop the water resources of the Komati River Basin by means of a comprehensive development plan which when fully implemented will, together with existing dams, secure a total net storage capacity of between 1200 and 1900 cubic hectometres within the said basin and afford the Parties concomitant control of the run-off of the said basin.
2. The implementation of the development plan shall entail the construction of the dams and related works on the Komati and Lomati Rivers referred to in Article 4 and the phased construction of the dams and related works at the sites referred to in sub-article 6 of this Article, the proposed diversion of the Theespruit into the proposed Boekenhoutrand Dam or any other dams, gauging weirs or related works as agreed to by the Parties.
3. Subject to the provisions of Article 4(3)(b), as a first phase towards the implementation of the development plan, the Parties hereby agree jointly to design, construct, operate and maintain the Project.
4. The implementation of any subsequent phase of the development plan shall be subject to further study and recommendation by the JWC and agreement between the Parties.
5. The Parties recognise the right of the Republic of Mozambique to a reasonable and equitable share in the use of the waters of the Inkomati River Basin of which the Komati River Basin is an integral part. The Parties agree to enter into negotiations with each other when such share is claimed by the Government of the Republic of Mozambique in order to determine—
  - (a) the contribution of water to the Inkomati River Basin from the Komati River Basin;
  - (b) the possible allocation of water from the Project to the Republic of Mozambique; and
  - (c) the need to implement any subsequent phase of the development plan, and further also agree subsequently to enter into joint negotiations with the Government of the Republic of Mozambique in order to establish and make available to the Republic of Mozambique its reasonable and equitable share in the use of the waters of the said basin.



6. The Parties shall use their best endeavours to discourage development within the Reservoir Areas of the following dam sites as shown in Annex 1 hereto which, subject to the provisions of sub-article 4, are agreed upon for the implementation of further phases of the development plan—
  - (a) in the Kingdom of Swaziland on the Komati River at Silingane and on the Lomati River at Ngonini; and
  - (b) in the Republic of South Africa on the Komati River at Boekenhoutrand and Tonga and on the Lomati River at Vlakbult.
7. The Parties shall furnish each other through the JWC with particulars of any development undertaken or approved by government and affecting the Reservoir Areas of the dams in their respective territories referred to in sub-article 2, where possible prior to such development being undertaken, but in any case as soon as it has come to the knowledge of the Party concerned.
8. On the implementation of any further phase of the development plan involving any of the sites referred to in sub-article 6, the cost involved in making the site available for such implementation shall form part of the apportionable cost of such phase to the extent agreed to by the Parties at that time.

#### **Article 4 – Implementation of the Project**

1. The Project shall comprise—
  - (a) the Driekoppies Dam on the Lomati River in the Republic of South Africa and inundating part of the Kingdom of Swaziland;
  - (b) the Maguga Dam on the Komati River in the Kingdom of Swaziland, as shown in Annex 1 hereto; and
  - (c) such gauging weirs and other measuring devices as in the opinion of the JWC are necessary for the proper operation of the Driekoppies and Maguga Dams and for the proper determination of run-off, return seepage or flow in and water consumption from the Komati River Basin.
2. Subject to changes approved by the JWC—
  - (a) the Driekoppies Dam will be constructed with a full supply level at 328,5 metres above sea level, a gross storage capacity of 251 cubic hectometres and covering an area at full supply level of 1870 hectares;
  - (b) the Maguga Dam will be constructed with a full supply level at 626,0 metres above sea level, a gross storage capacity of 332 cubic hectometres and covering an area at full supply level of 1042 hectares; and
  - (c) the Reservoir Area shall comprise 1550 hectares at Maguga Dam and 2500 hectares at Driekoppies Dam, of which 380 hectares will be situated in the Kingdom of Swaziland.
3. The Project shall be implemented in two sub-phases of which—
  - (a) sub-phase 1A shall comprise the Driekoppies Dam and the appurtenant ancillary works contemplated by sub-article 1(c), the construction of which shall commence within two years from the date of coming into force of this Treaty; and
  - (b) sub-phase 1B shall comprise the Maguga Dam and the appurtenant ancillary works contemplated by sub-article 1(c). Swaziland shall within two years from the date of coming into force of this Treaty commit itself to the implementation of sub-phase 1B, the construction of which shall commence within three years from the date of such commitment, failing which the Maguga Dam shall cease to form part of the Project and the site thereof shall be added to the dam sites referred to in Article 3(6)(a).

## Article 5 – Apportionment of the capital cost of the project

1. Subject to the further provisions of this Article, all costs incurred by KOBWA for the design and construction of the Project including the cost of financing shall be Capital Cost.
2. Subject to agreement by the JWC, any cost incurred by a Party in connection with the design and construction of the Project, shall also form part of the Capital Cost.
3.
  - (a) The Parties shall each in accordance with a relocation plan approved by the JWC, make available to KOBWA sufficient land in their respective territories, free of all third party interests, as required by KOBWA for the construction, operation and maintenance of the Project.
  - (b) Subject to the provisions of paragraph (c), costs incurred by a Party in making land referred to in Paragraph (a) available shall, to an amount not exceeding the value of such land as determined by the JWC, also form part of the Capital Cost or, in the event that such costs are less than the value of such land so determined, the value of such land shall also form part of the Capital Cost.
  - (c) South Africa shall as part of its cost for the construction of sub-phase 1A of the Project, compensate Swaziland on a basis to be agreed to by the Parties, for that part of the Kingdom of Swaziland forming part of the Reservoir Area of the Driekoppies Dam.
4.
  - (a) The Parties shall each in accordance with a relocation plan approved by the JWC, be responsible for the physical relocation of all persons resident on or having a right to use land within their respective territories which is to be made available in accordance with sub-article 3(a).
  - (b) Costs incurred by a Party in connection with such relocation shall, after approval by the JWC, also form part of the Capital Cost.
5.
  - (a) The Parties shall each in accordance with a relocation plan approved by the JWC, be responsible for the relocation of roads, power lines, telephone lines and other services and of graves in their respective territories, necessitated as a direct result of having to make available land referred to in sub-article 3(a).
  - (b) Costs incurred by a Party in connection with such relocation shall, after approval by the JWC, also form part of the Capital Cost.
6. The Capital Cost shall—
  - (a) in respect of sub-phase 1A of the Project be for the account of South Africa;
  - (b) in respect of sub-phase 1B of the Project be divided between the Parties in accordance with Annex 2 hereto; and
  - (c) in respect of any gauging weir or other measuring device constructed as part of the Project in terms of Article 4(1)(c) and which is not included as an appurtenant ancillary work in either sub-phase 1A or sub-phase 1B be divided between the Parties in accordance with section 2.3 of Annex 2:  
  
Provided that in the even of an agreed change in the size of any such dam, a change in the water allocations stated in Article 12(2) or the areas of afforestation stated in Article 12(8), the Parties shall redetermine the apportionment of Capital Cost in accordance with the principles set out in Annex 2.
7. Capital Cost shall be reimbursed in the manner prescribed in Article 11.

## Article 6 – Apportionment of the Operation and Maintenance Cost of the Project

1. All costs incurred by KOBWA for the operation and maintenance of the Project shall be the Operation and Maintenance Cost.
2. Subject to agreement by the JWC, any cost incurred by a Party in connection with the operation and maintenance of the Project, shall also form part of the Operation and Maintenance Cost.

3. The Operation and Maintenance Cost shall be apportioned between the Parties on the basis set out in Article 5(6) in respect of the Capital Cost.
4. Operation and Maintenance Cost shall be reimbursed in the manner prescribed in Article 11.

### **Article 7 – Establishment of KOBWA**

1. The Parties hereby establish KOBWA which shall become operative on a date determined by the JWC. The location of the headquarters of KOBWA shall be as determined by the JWC from time to time.
2. KOBWA shall possess legal personality in the territory of each Party.
3. The object of KOBWA shall be the design, construction, operation and maintenance of the Project in accordance with the provisions of this Treaty as directed by the JWC from time to time.
4. KOBWA shall in its own name perform all such acts as are necessary for or incidental to the attainment and realisation of its object, the exercise of its powers and the execution of its functions in terms of this Treaty.

### **Article 8 – Structure and functioning of KOBWA**

1. KOBWA shall be managed and controlled by a Board of Directors
2. The Board of Directors shall consist of—
  - (a) such number of members, but not less than two, as the JWC determines from time to time and who shall not be employees of KOBWA, of whom an equal number shall be appointed by each Party within one month of the date of KOBWA becoming operative as provided for in Article 7(1) for such periods as each Party may determine, who shall further be persons with such qualifications and expertise as shall enable them to contribute to the effective design, construction, operation or maintenance of the Project; and
  - (b) the Chief Executive Officer, appointed in terms of Article 9, who shall be *ex officio* a member.
3. Any vacancy occurring in respect of the members referred to in sub-article 2(a), shall be filled by the Party concerned within one month of the occurrence of such vacancy.
4. The first meeting of the Board of Directors shall be convened by the JWC as soon as practicable after the date of KOBWA becoming operative as provided for in Article 7(1).
5. All subsequent meetings of the Board of Directors shall take place as determined by the members: Provided that the Chief Executive Officer may, when he considers it necessary, convene a meeting of the Board of Directors and shall, if requested to do so by not less than half of the members appointed in terms of sub-article 2(a), convene a meeting within fourteen days of such request.
6. The members of the Board of Directors shall elect one of their number, appointed in terms of sub-article 2(a), as Chairman of the Board of Directors for a period of two years and such a member may on the expiry of his term of office be re-elected subject to the approval of the JWC.
7. In the absence of the Chairman at any meeting of the Board of Directors, the members present shall elect one of their number who shall not be the Chief Executive Officer, to act as Chairman at that meeting.
8. No decision of the Board of Directors shall be binding unless taken at a meeting attended by a quorum consisting of three members and which is maintained throughout the meeting: Provided that at least one of the members appointed by each Party in terms of sub-article 2(a) is present throughout the meeting.
9. All decisions of the Board of Directors shall as far as possible be taken on the basis of consensus. If no consensus can be reached, the matter before the Board of Directors shall be decided by a simple majority vote of members present and voting: Provided that the Chief Executive Officer shall have no voting power.

10. Any matter on which the Board of Directors has taken a vote as provided for in sub-article 9 and which resulted in an equality of votes, shall be referred to the JWC for a decision.
11. The Board of Directors may, on such conditions as it determines, delegate any of its functions or powers to the Chief Executive Officer or a committee appointed by the Board of Directors.

## **Article 9 – Powers and functions of KOBWA**

- 1 Pursuant to the provisions of Article 7 and subject to sub-article 3 of this Article, KOBWA shall in particular have the power to—
  - (a) employ and dismiss staff and determine their conditions of service;
  - (b) appoint consultants;
  - (c) award contracts;
  - (d) raise money by way of loans and arrange overdrafts from its bankers;
  - (e) purchase, lease or otherwise acquire land or other property or any rights in such land or other property and exchange, let, hypothecate, sell or in any other manner dispose of such land or other property or any rights in such land or other property; and
  - (f) institute or defend any legal proceedings.
2. Pursuant to the provisions of Article 7 and subject to sub-article 3 of this Article, KOBWA shall in particular have the function to—
  - (a) on such terms and conditions as KOBWA may determine, appoint a Chief Executive Officer who shall be responsible to the Board of Directors for the conduct of the day to day business of KOBWA;
  - (b) establish a comprehensive accounting system which shall be subject to periodic review;
  - (c) prepare budgets, cost plans and funding plans as required by the JWC and cash flow forecasts as provided for in Article 11;
  - (d) on the basis of normal commercial considerations and unless otherwise directed by the JWC, insure against risks of all loss, damage and liability from whatever cause, which may arise in the course of the design, construction, operation and maintenance of the Project;
  - (e) appoint a firm of chartered accountants as auditors;
  - (f) formulate operating rules and conditions relating to, *inter alia*, maximum and minimum water abstraction rates by the Parties in the Komati River Basin, storage and use during subsequent years of unutilised water from the annual entitlement referred to in Article 12(2), releases from storage of water surplus to anticipated storage requirements for hydro-electric power generation only in terms of Article 14(1)(a) and restrictions on water allocations during periods of water shortages in the said basin;
  - (g) prepare standing orders relating to the conduct of its meetings and financial regulations governing but not limited to administration, financial management, property control and procurement.
- 3 Subject to sub-article 4, the exercise by KOBWA of the following powers and functions all be subject to the prior approval of the JWC—
  - (a) the detailed design of the works comprising the Project as well as tender procedures and documents;
  - (b) the appointment of consultants;
  - (c) the award of contracts;

- (d) the staff establishment of KOBWA, the designation of certain posts on the staff establishment as senior posts and the conditions of service of all staff;
  - (e) the appointment of the Chief Executive Officer and persons to senior posts and the dismissal of all such persons;
  - (f) financing arrangements and loan agreements;
  - (g) implementation plans including key events;
  - (h) all budgets, cost plans, funding plans and cash flow forecasts;
  - (i) operating rules and maintenance plans;
  - (j) the acquisition or disposal of any property referred to in sub-article 1(e);
  - (k) the instituting and defending of any legal proceedings;
  - (l) the appointment of auditors; and
  - (m) any other matter determined by the JWC from time to time.
4. The JWC may, to the extent and subject to such conditions as it may determine, exempt KOBWA from the requirement to obtain its prior approval in respect of any or all of the matters referred to in sub-article 3.

### **Article 10 – Financial administration of KOBWA**

1. The funds of KOBWA shall consist of—
  - (a) loans raised including overdraft facilities;
  - (b) moneys received from the Parties by way of their respective contributions to the Capital Cost and the Operation and Maintenance Cost of the Project;
  - (c) grants or contributions from any source;
  - (d) interest accruing on bank deposits; and
  - (e) such other moneys as the Parties may determine.
2. KOBWA shall utilise its funds solely for its object as set out in Article 7(3).
3. All funds not immediately required for its operations shall be placed on interest bearing bank deposit.
4. The financial year of KOBWA shall be for a period of twelve months commencing on the first day of April of any given year and ending on the last day of March of the following year, both days inclusive.
5. The books and accounts of KOBWA shall be audited annually or as may be required by the JWC.
6. Within three months after receipt of a report of the audit of its books and accounts, KOBWA shall submit to the JWC eight copies of a report on its activities during the financial year or the other period to which the audit relates, together with the duly audited financial statements and the auditor's report.

### **Article 11 – Procedure for the reimbursement of Capital Cost as well as Operation and Maintenance Cost to or by KOBWA**

1. Unless otherwise determined by the JWC, KOBWA shall, for reimbursement by the Parties of all Capital Cost as well as all Operation and Maintenance Cost incurred by KOBWA, prepare at least four months before the beginning of each financial year—
  - (a) a long-term cash flow forecast covering a period of five financial years, which shall include an analysis of such cash flow on an annual basis; and

- (b) a short-term cash flow forecast for the ensuing financial year, which shall include an analysis of such cash flow on a monthly basis.
2. KOBWA shall, at such intervals as are determined by the JWC or whenever necessitated by circumstances, prepare reconciliation statements with regard to the long-term and short-term cash flow forecasts and shall update such forecasts accordingly.
3.
  - (a) All cash flow forecasts to be prepared in terms of sub-article 1 shall reflect all funds available to KOBWA from whatever source and shall distinguish between cost incurred as Capital Cost and cost incurred as Operation and Maintenance Cost.
  - (b) in the event of any cash flow forecast reflecting a cash shortfall, such shortfall shall be shown as payments due by the Parties in the proportions contemplated respectively in Articles 5(6) and 6(3).
4. KOBWA shall as soon as possible after approval by the JWC of a short-term cash flow forecast or, as the case may be, an updated short-term cash flow forecast, submit such forecast to the respective officers designated by the Parties as responsible for making all payments to KOBWA. Each Party shall pay the amounts due by it not later than the dates shown on such forecast.
5.
  - (a) Subject to the provisions of Article 5(3)(d), a Party may at any time by notice in writing to KOBWA, claim reimbursement for any amount actually expended by that Party in compliance with Article 5(3)(a) which, in terms of Article 5(3)(b), forms part of the Capital Cost. Such reimbursement shall be made by KOBWA within four calendar months from the date of such notice.
  - (b) The difference between the value of land made available by a Party in terms of Article 5(3)(a) and the aggregate of the amounts claimed by that Party in terms of paragraph (a) of this sub-article, if any, shall be set off by KOBWA against any amount due and payable by that Party to KOBWA in terms of this Article.
6. A Party may at any time by notice in writing to KOBWA, claim reimbursement for any amount actually expended by that Party in terms of Article 5(2), 5(4)(a), 5(5)(a) or 6(2) and which, in terms of Article 5(2), 5(4)(b) 5(5)(b) or 6(2) forms part of the Capital Cost or the Operation and Maintenance Cost, as the case may be. Such reimbursement shall be made by KOBWA within four calendar months from the date of such notice.

## Article 12 – Allocation of water

1. Allocations of water to the Parties set out in the following sub-articles have been derived as set out in Annex 3 hereto.
2. Subject to the other provisions of this Article the Parties shall, after completion of the Project comprising sub-phases 1A and 1B and from the date to be determined by the JWC, be entitled annually to the following Net Consumption:
  - (a) Swaziland—
    - 15.1 cubic hectometres at High Assurance
    - 260.2 cubic hectometres at Low Assurance; and
  - (b) South Africa—
    - 157.8 cubic hectometres at High Assurance
    - 381.0 cubic hectometres at Low Assurance.
3.
  - (a) The quantity of water to which a Party is entitled in terms of sub-article 2 of this Article, shall be available only in accordance with the operating rules and conditions referred to in Article 9(2)(f);

- (b) Subject to the operating rules and conditions referred to in Article 9(2)(f), water to which a Party is entitled in any one year in terms of sub-article 2 of this Article, which has not been utilised during that year, may be retained in storage in the Project.
4. Subject to the approval of the JWC, a Party may convert its allocation from one category of assurance to another. For the purpose of the Project, the multiplication factor for converting water at Low Assurance to water at High Assurance shall be 0.794, unless otherwise determined by the JWC.
5. The Parties hereby record and accept that in addition to the water allocations set out in sub-article 2—
- (a) 42.0 cubic hectometres per year at Low Assurance have been set aside for water transmission losses; and
- (b) 22.7 cubic hectometres per year on average at High Assurance have been set aside for water evaporation losses from Nootgedacht, Vygeboom, Maguga, Sand River and Driekoppies Dams only.
6. The water allocations set out in sub-article 2 shall be adjusted *pro rata* with due regard to the different assurances of the respective water allocations, if upon review by the JWC of the losses referred to in sub-article 5, the JWC considers such adjustment to be necessary.
7. Should the hydrological data on which the water allocations as set out in sub-article are based be subsequently revised by the JWC, the water allocations shall be adjusted *pro rata* with due regard to the different assurances of the respective water allocations.
8. In addition to the water allocations set out in sub-article 2, the Parties shall be entitled to the following maximum areas of afforestation in the Komati River Basin:
- (a) Swaziland— 32 442 hectares (estimated mean gross annual water use 46 cubic hectometres); and
- (b) South Africa— 90 233 hectares (estimated mean gross annual water use 99 cubic hectometres).
9. The areas of afforestation set out in sub-article 8 may be increased or decreased by each Party: Provided that a corresponding adjustment as determined by the JWC is made to the water allocations set out in sub-article 2.
10. In order to promote the best utilisation of the Project each Party shall, in the form and at the intervals determined by the JWC from time to time, submit to the JWC for approval particulars regarding the extent and location of existing and intended abstractions of water from the Komati River Basin.
11. (a) The Parties record and accept that 134.5 cubic hectometres of water per year at High Assurance and 23.8 cubic hectometres of water per year at Low Assurance which have been included in the water allocation to South Africa in sub-article 2, will be supplied from the portion of the Komati River Basin upstream of and including the Vygeboom Dam and the Poponyane River and Gladdespruit diversions into the Vygeboom Dam, which present system is only capable of supplying 128.7 cubic hectometres of water per year at High Assurance and 23.8 cubic hectometres of water per year at Low Assurance.
- (b) Pursuant to the allocation referred to in paragraph (a), South Africa may at any time implement measures to secure the said allocated quantities of water from the said portion of the basin without diminishing the availability of water at both High Assurance and Low Assurance from the Project for use other than for the generation of hydro-electric power only, except under circumstances where such generation is undertaken with water assigned by a Party for such purpose in terms of Article 14(1)(a) and South Africa undertakes to submit to the JWC for approval only such proposed measures.
12. No Party shall allow within its territory the construction of any water storage work in the Komati River Basin with a capacity in excess of 250 000 cubic metres without the prior approval of the JWC.
13. In the event that sub-phase 1B is not implemented as provided for in Article 4(3)(b), the entitlement of the Parties to water as set out in this Article, shall be renegotiated without prejudicially affecting existing or committed projects in their respective territories.

14. After completion of any sub-phase and prior to the completion of the other sub-phase of the Project, the JWC may, on such conditions as it may determine, permit the use by any Party of water secured by the first completed sub-phase, in anticipation of the provisions of sub-article 2 becoming effective.

### **Article 13 – Social and environmental considerations**

The Parties agree to take all reasonable measures to ensure that the design, construction, operation and maintenance of the Project are compatible with the protection of the existing quality of the environment and, in particular, shall pay due regard to the maintenance of the welfare of persons and communities immediately affected by the Project.

### **Article 14 – General rights and obligations of the Parties relating to the project**

- I. A Party may, subject to approval by the JWC and the conditions imposed by it, at its own expense and in consultation with KOBWA—
  - (a) construct and operate within its territory, hydro-electric power complexes at any dam in the Komati River Basin: Provided that no water shall be released from storage for the purpose of hydro-electric power generation only, unless such Party has assigned water from its allocation in terms of Article 12 for this purpose, or KOBWA has approved the release from storage of water in terms of the operating rules referred to in Article 9(2)(f);
  - (b) utilise within its own territory, Reservoir Areas or other sites under the control of KOBWA for the promotion of tourism or for the development of the recreational or any commercial potential of such area or site.
2. Each Party shall, where necessary, enact appropriate legislation to enable it to give effect to the terms of this Treaty and shall ensure that any such legislation be enacted in time to allow for the effective design, construction, operation and maintenance of the Project.
3. Each Party shall, in respect of its territory, cause KOBWA or the other Party as the case may be, to be granted all powers, authorisations, exemptions and rights including access rights, necessary for the design, construction, operation and maintenance of the Project.
4.
  - (a) Each Party shall, subject to the normal requirements of national legislation, ensure the granting of visas and other travel documents to personnel of KOBWA or the other Party, as the case may be, engaged in the design, construction, operation and maintenance of the Project and shall ensure the necessary freedom of access to the location of the works forming part of the Project to such personnel.
  - (b) The provisions of paragraph (a) shall not be construed so as to affect, in any way, the sovereign right of a Party to prohibit the entry into or call for the removal from its territory of any person.
  - (c) While the Parties acknowledge and accept that any person who may at any time be engaged within their respective territories for a legitimate purpose in connection with the implementation of this Treaty is subject to their respective civil and criminal laws, the Parties hereby undertake to forthwith advise each other through the diplomatic channel, of any legal proceedings they respectively propose to institute against any such person.
5. Each Party shall in its own territory be responsible for the payment of all dues and fees for the utilisation of any naturally occurring unprocessed rock, sand, clay and sand found suitable and economical by KOBWA for use in the construction of the Project.
6. The Parties shall use their best endeavours to—
  - (a) minimise waste and non-beneficial use of water from the Komati River Basin within their respective territories; and



- (b) ensure that the necessary steps are taken within their respective territories to prevent water pollution and to minimise soil erosion within the said basin.
7. Each Party shall be responsible for the maintenance at its own cost of any fencing or other means of demarcating any Reservoir Area or part thereof within its territory, except that fencing which has been designated by the JWC as necessary for security purposes, shall be maintained by KOBWA at its own cost.
8. Each Party shall within its own territory and at its own cost afford KOBWA all such assistance as KOBWA may from time to time request for the security of the Project and the safety of its personnel.
9. Notwithstanding anything contained in this Treaty—
  - (a) no Party shall be entitled to any compensation as a return on or depreciation of any asset in respect of which an amount has been included in the Capital Cost; and
  - (b) the making available by a Party of any land to KOBWA in terms of this Treaty or the incurring of any cost which in terms of this Treaty may be included in the Capital Cost or Operation and Maintenance Cost of the Project shall not, only by virtue thereof, confer any right of ownership or equity.
10. Subject to the provisions of this Treaty, the Kingdom of Swaziland and the Republic of South Africa shall retain their sovereignty over the land in their respective territories which they have made available to KOBWA to form part of the Reservoir Areas of the Project.

### **Article 15 – Procedure in case of Vis Major**

In the case of any substantial impairment of the implementation of the provisions of this Treaty caused by Vis Major, KOBWA, the JWC and the Parties shall at their various levels, jointly and severally, immediately take all necessary measures permitted by circumstances to mitigate such impairment whereafter the Parties shall agree on further action.

### **Article 16 – Settlement of disputes**

1. Any dispute concerning the interpretation or application of this Treaty shall at the request of either Party be resolved through negotiations between the Parties.
2. In the event of the Parties failing to settle a dispute within three months from the date of a request referred to in sub-article 1 or within such other period as may be agreed upon by the Parties, either Party may submit the dispute to arbitration on giving written notice of its intention to the other Party.
3. Arbitration shall be by a tribunal composed of an arbitrator appointed by one Party, an arbitrator appointed by the other Party and an arbitrator appointed jointly by the two arbitrators, who shall be chairman.
4. If after a period of three months from the delivery to a Party of the notice referred to in sub-article 2, either Party has failed to appoint its arbitrator to the arbitral tribunal or the arbitrators concerned have failed to agree on the arbitrator to be appointed by them, either Party may request the Secretary General of the United Nations to appoint such arbitrator or arbitrators.
5. The arbitral tribunal shall adopt its own rules of procedure.
6. The decision of a majority of the arbitrators of the arbitral tribunal shall be final and binding on the Parties.
7. Each Party shall be responsible for the remuneration of the arbitrator appointed by or for it and for all other costs connected with such appointment and all costs incurred in the preparation and presentation of its case to the arbitral tribunal. All other costs incurred in connection with the arbitration proceedings shall be shared equally between the Parties.

## Article 17 – Registration

In conformity with Article 102 of the Charter of the United Nations, this Treaty and any amendment thereof and any protocol thereto shall be registered by the Parties with the Secretariat of the United Nations.

## Article 18 – Amendment of Treaty

The Parties may agree to amend this Treaty. Any amendment agreed upon by them shall be committed to writing and signed on their behalf.

## Article 19 – Concluding provisions

This Treaty shall—

- (a) upon signature be subject to ratification in order to enable the Parties to comply with their respective constitutional requirements and shall enter into force on the date of exchange of instruments of ratification by the Parties;
- (b) supersede any previous agreement between the Parties relating to the utilisation and development of water resources of common interest to the Parties, to the extent that the provisions of such agreement are in conflict with this Treaty; and
- (c) terminate 12 months after the date of a written notice of denunciation has been given by one Party to the other whereupon the Parties shall dissolve KOBWA and divide its assets on a basis to be agreed by them.

IN WITNESS WHEREOF the Parties hereto acting through their respective representatives hereunto duly authorised, have caused this Treaty, in the English language, to be signed and sealed in duplicate in their respective names at Mbabane on 13th March, 1992.

For and on behalf of the Government of the Kingdom of Swaziland	For and on behalf of the Government of the Republic of South Africa
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## Annex 1

### Lay-Out of Komati River Basin Development Plan

## Annex 2

### Apportionment of capital cost (Article 5 refers)

#### 1. General principles

The general principles adopted for the apportionment of the Capital Cost of the Project are as follows:

The Basic Cost (B) is established as the sum of the cost of dams at Driekoppies and Maguga which are of such sizes as only to firm up, to the levels of assurance as defined in Article 1, the water supply to consumers (irrigation, domestic, livestock, municipal, industrial and mining use) downstream of Vygeboom Dam on the Komati River and along the Lomati River as they existed in 1981 but under conditions of afforestation as it existed in 1978.

The Basic Cost is apportioned to Swaziland and South Africa in proportion to the mean basic water shortages experienced by the said consumers in each of the respective states in 1981 as set out in section B.1 of Annex 3.

The Total Cost (T) is established as the sum of the cost of dams at Driekoppies <sup>(T)(D)</sup> and Maguga <sup>(T)(M)</sup> as constructed in the implementation of the Project.

The Basic Cost shall be fixed as 0.599 times the Total Cost.

The Incremental Cost (I) is established as the difference between the Total Cost and the Basic Cost. Hence the Incremental Cost shall be fixed as 0.401 times the Total Cost.

The Incremental Cost is apportioned to Swaziland and South Africa in proportion to the incremental water allocations expressed as equivalent High Assurance water as set out in section B.2 of Annex 3.

**2. Cost apportionment formulae**

In the following formulae the following symbols are used in addition to those for costs given above:

Incremental water allocation –	South Africa	$i_r$
(Section B.2 of Annex 3)	Swaziland	$i_s$
	Total	$i_t$

**2.1 Swaziland**

Swaziland’s share of costs will be the sum of the Basic Cost Share and Incremental Cost Share as expressed below:

$$\begin{aligned}
 \text{Basic Cost Share} &= B \times 0.11 = 0.599 \times T \times 0.11 \\
 &= 0.06589 \times T \\
 \text{Incremental Cost Share} &= I \times \frac{i_s}{i_t} = 0.401 \times T \times \frac{i_s}{i_t}
 \end{aligned}$$

The factors  $S_s$  defined as Swaziland’s share of the Total Cost expressed as a proportion of the cost of Maguga Dam is derived as follows:

$$S_s = \frac{T}{T_M} \times (0.06589 + 0.401 \times \frac{i_s}{i_t})$$

Under this formula Swaziland’s share or the Capital Cost is equivalent to  $S_s$  times the cost of sub-phase 1B.

**2.2 South Africa**

South Africa’s share of the costs will be the sum of the Basic Cost Share and Incremental Cost Share as expressed below:

$$\begin{aligned} \text{Basic Cost Share} \quad B \times 0.89 &= 0.599 \quad \times T \times 0.89 \\ &= 0.53311 \quad \times T \\ \text{Incremental Cost Share} \quad 1 \times \frac{i_r}{i_t} &= 0.401 \quad \times \frac{i_r}{i_t} \end{aligned}$$

Under this formula South Africa's share of the Capital Cost is equivalent to the full cost of sub-phase 1A of the Project plus  $(1-S_s)$  times the cost of sub-phase 1B.

### 2.3 Ancillary works

In the event that any gauging weir or other measuring device is constructed as part of the Project in terms of Article 4(1)(c) but which is not or has not been included as an appurtenant ancillary work in either sub-phase 1A or sub-phase 1B, the respective Capital Cost shares of the Parties shall be as follows:

$$\begin{aligned} \text{Swaziland} \quad & (0.06589 + 0.401 \times \frac{i_s}{i_t}) \\ \text{South Africa} \quad & (0.53311 + 0.401 \times \frac{i_r}{i_t}) \end{aligned}$$

### 3. Cost apportionment determination

For the purpose of cost apportionment, KOBWA shall prepare revised estimates of Total Cost (comprising separate estimates of the total cost of the Driekoppies and Maguga Dams) at least four months before the beginning of each financial year in accordance with the principles set out in section 4 below.

Subject to the approval of the JWC, such estimates shall be used to determine the proportions referred to in Articles 5(6)(b), 5(6)(c) and 6(3) in accordance with the formulae set out in section 2 above. Such proportions shall be used during the financial year in question to determine the payments due by the Parties to KOBWA in terms of Article 11(3)(b):

Provided that from a date to be determined by the JWC following the completion of both Driekoppies and Maguga Dams, such proportions shall be set equal to those determined for the financial year in which such date falls and no further revision to Total Cost shall be made.

### 4. Principles for preparation of estimates of total cost

Estimates of the Total Cost shall be prepared in accordance with the following principles:

The Total Cost shall include all elements of cost identified as part of the Capital Cost in Article 5 except that the cost of financing shall be excluded.

All costs shall be expressed in South African Rand. If it becomes necessary to convert costs incurred in Swaziland Emalangeni to South African Rand at a rate other than parity, such cost shall be converted at a rate equal to the average of the means of the buying and selling spot rates quoted by The Standard Bank of South Africa and First National Bank for that amount at 11:00 two business days prior to transaction date.

Where costs are incurred in currencies other than South African Rand or Swaziland Emalangeni such costs shall be converted at the exchange rate applicable to the transaction.

All costs shall be adjusted to constant prices at the levels prevailing at a date approved by the JWC, utilising the cost escalation formula included in any applicable contract documents or, where no such formula is specified, by reference to an appropriate weighted selection from the following Price Indexes for the Civil Engineering Industry published by the Central Statistical Service of the Republic of South Africa referenced as follows:

1. Labour index— weighted average
- 2.3 Civil engineering plant index (1981)
- 3.2 Civil engineering materials (1981)
- 4.1 Fuel index— diesel— coast

as approved by the JWC.

#### 5. Worked Example

The following worked example is provided for illustrative purposes only and is based on cost estimates prepared at September 1984 prices and on incremental water allocations given in section B.2 of Annex 3:

Total Cost of Driekoppies Dam	$T_D$	=	R 104.7 million
Total Cost of Maguga Dam	$T_M$	=	R 138.3 million
Hence: Total Cost	$T$	=	R243.0 million cubic hectometres per year.
South Africa: incremental water allocation	$i_r$	=	111.0
Swaziland: incremental water allocation	$i_s$	=	72.6
Hence: Total incremental water allocation	$i_t$	=	183.6

Hence Swaziland's share of the Total Cost expressed as a proportion of the cost of Maguga Dam is given by:

$$\begin{aligned}
 S_s &= \frac{T}{T_M} \times \left( 0.06589 + 0.401 \times \frac{i_s}{i_t} \right) \\
 &= \frac{243.0}{138.3} \times \left( 0.06589 + 0.401 \times \frac{72.6}{183.6} \right) \\
 &= \frac{243.0}{138.3} \times (0.06589 + 0.15857) \\
 &= \frac{243.0}{138.3} \times 0.22446 \\
 &= 0.39438
 \end{aligned}$$

Accordingly South Africa's share of the Total Cost of Maguga Dam (1-S<sub>s</sub>) is 0.60562.

### Annex 3

#### Water allocations and water data for apportionment of capital cost (Article 12 refers)

##### A. Water allocations

##### A.1 High Assurance

The total allocations of water (in cubic hectometres per year— hm<sup>3</sup>/a) at High Assurance stated in Article 12(2) have been derived as follows:

	Existing (1981)	Provision for future	Total
South Africa:			
Upstream of Vygeboom Dam	134.5 <sup>1</sup>	0.0	134.5
Other	5.5 <sup>2</sup>	17.8	23.3
Sub-total South Africa	140.0	17.8	157.8
Swaziland	10.92	4.2	15.1
Total	150.9	22.0	172.9

##### A.2 Low Assurance

The total allocations of water (in cubic hectometres per year) at Low Assurance state in Article 12(2) have been derived as follows:

1

As stated in Article 12(11)(a)

2

Excludes means evaporation losses from Nooitgedacht and Vygeboom Dams (7.5hm<sup>3</sup>/a) and Sand River Dam (4.0 hm<sup>3</sup>/a). Together with Maguga Dam (3.8 hm<sup>3</sup>/a and Driekoppies Dam (7.4 hm<sup>3</sup> (a), total evaporation losses are estimated to be approximately 22.7 hm<sup>3</sup>/a) as stated in Article 12(5)(b).

	Existing (1981)	Provision for future	Total
South Africa:			
Upstream of Vygeboom Dam	23.8 <sup>1</sup>	0.0	23.8
Other	260.2 <sup>2</sup>	97.0	357.2
Sub-total South Africa	284.0	97.0	381.0
Swaziland	177.2	83.0	260.2
Total	461.2	180.0	641.2

### A.3 Conversion factor

The multiplication factor for converting water at Low Assurance to water at High Assurance stated in Article 12(4) has been calculated as the ratio of the sum of the constant drafts<sup>1</sup> from Driekoppies and Maguga Dams to the sum of the stepped drafts<sup>2</sup> from Driekoppies and Maguga Dams operated independently of each other. The multiplication factor of 0.794 stated in Article 12(4) is based on the assumption that the gross, storage capacities, constant and stepped drafts are as follows:

1

As stated in Article 12(11)(a).

2

Includes the evaporation losses from Shiyalongubo Dam, which have not been quantified separately.

1

The constant draft used was that flow which can be abstracted from a dam at a uniform monthly rate throughout the simulation period without the dam failing in any one month.

2

The stepped draft used was made up of two elements, the upper draft and the lower draft. The upper draft is a uniform monthly flow which can be abstracted from a dam at least 80% of the time on average (whenever the dam storage is above a particular rule curve). The lower draft is a uniform monthly flow which can be delivered throughout the remainder of the simulation period without the dam failing in any one month. The transmission loss allowance of 42 cubic hectometres per year at Low Assurance stated in Article 12(5)(a) is a preliminary estimate which may be adjusted in accordance with the provisions of Article 12(6).

	<b>Drikoppies</b>	<b>Maguga</b>	<b>Total</b>
Gross storage capacity (hm <sup>3</sup> )	130	295	
Constant draft (hm <sup>3</sup> /a)	154	282	436
Stepped draft (hm <sup>3</sup> /a)	183	366	549

#### A.4 **Transmission losses**

Transmission losses are deemed to be the water released from Driekoppies and Maguga Dams for use other than the generation of hydro-electric power only plus the utilisable runoff downstream of the said dams minus Net Consumption downstream of the said dams.

#### A.5 **Afforestation**

The maximum areas of afforestation in hectares stated in Article 12(8) have been derived as follows:

	<b>Existing (1978)</b>	<b>Provision for future<sup>1</sup></b>	<b>Total</b>
Republic of South Africa	53 100	37 133	90 233
Kingdom of Swaziland	29 400	3 042	32 442
Total	82 500	40 175	122 675

The estimated mean gross water use of these areas of afforestation in terms of reduction of mean annual runoff is accepted to be as follows in cubic hectometres:

1

Areas based on afforestation permits issued between 1972 and 1981 but which had not been developed by 1978.

The provision for future afforestation in the Republic of South Africa and the Kingdom of Swaziland is estimated to be equivalent to High Assurance demands of 16.2 cubic hectometres per year and 2.5 cubic hectometres per year respectively.



	<b>Existing (1978)</b>	<b>Provision for future <sup>1</sup></b>	<b>Total</b>
Republic of South Africa	63	36	99
Kingdom of Swaziland	42	4	46
Total	105	40	145

## B. Water data for apportionment of capital cost

### B.1 Mean basic water shortages

The mean basic water shortages are defined as those shortages experienced by consumers (irrigation, domestic, livestock, municipal, industrial and mining use) downstream of Vygeboom Dam on the Komati River and along the Lomati River as they existed in 1981 but under conditions of afforestation as it existed in 1978. These shortages are deemed to be divided as follows:

	<b>Cubic Hectometres per year</b>	<b>Proportion</b>
Republic of South Africa	29.2	0.89
Kingdom of Swaziland	3.6	0.11
Total	32.8	1.00

### B.2 Incremental water allocations

The incremental water allocations based on the provisions for future use given above, are as follows:

1

Areas based on afforestation permits issued between 1972 and 1981 but which had not been developed by 1978.

The provision for future afforestation in the Republic of South Africa and the Kingdom of Swaziland is estimated to be equivalent to High Assurance demands of 16.2 cubic hectometres per year and 2.5 cubic hectometres per year respectively.

	<b>South Africa</b>	<b>Swaziland</b>
Low Assurance future allocation <i>(refer section A.2)</i>	97.0	83.0
Low Assurance converted to High		
Assurance at 0.794 <i>(refer section A.3)</i>	77.0	65.9
High Assurance future allocation <i>(refer section A.1)</i>	17.8	4.2
Afforestation equivalent <i>(refer section A.5)</i>	16.2	2.5
Total incremental water allocation expressed as equivalent High Assurance water	111.0	72.6
Symbol in formulae in Annex 2	$i_r$	$i_s$

## Second Schedule

### **Treaty on the establishment and functioning of the Joint Water Commission between the Government of the Kingdom of Swaziland and the Government of the Republic of South Africa**

#### Preamble

The Government of the Kingdom of Swaziland and the Government of the Republic South Africa (hereinafter called “the Parties”);

CONSCIOUS of the value of the scarce water resources in the Southern African region;

CONSCIOUS of the advantages of regional development and recognising that co-operation between them with regard to the development of mutual projects in respect of water resources of common interest will significantly contribute towards their economic prosperity and the welfare of their peoples in particular as well as the Southern African region in general;

WISHING to maintain the tradition of good neighbourliness and peaceful co-operation between them acknowledged by the “Agreement between the Government of the Republic of South Africa and the Government

of the Republic of Portugal in regard to Rivers of Mutual Interest and the Cunene River Scheme”, 1964, to which the Government of the Kingdom of Swaziland acceded in 1967;

ANTICIPATING the further promotion of the tradition of good neighbourliness and peaceful co-operation between them on the basis of the rules relating to the uses of the waters of international rivers approved in 1966 at Helsinki by the 52<sup>nd</sup> Conference of the International Law Association; and

REALISING that closer co-operation between them in the development and utilisation of water resources of common interest will necessitate the formal structuring and an extension of the functions of the Joint Permanent Technical Committee concerning Water Resources of Common Interest which has since 1979 served as a liaison channel and discussion forum on all matters of mutual interest to them relating to water resource development and water utilisation.

HEREBY agree as follows:

### **Article 1 – Establishment of the Joint Water Commission**

1. The Parties hereby establish and undertake to maintain the Joint Water Commission (hereinafter called “the Commission”).
2. The object and functions of the Commission shall be to act as technical adviser to the Parties on all matters relating to the development and utilisation of water resources of common interest to the Parties and to perform such other functions pertaining to the development and utilisation of such resources as the Parties may from time to time agree to assign to the Commission.
3. The Commission shall possess legal personality in the territory of each Party.

### **Article 2 – Constitution and functioning of the Commission**

1. The Commission shall consist of two delegations representing the Parties.
2. Each delegation shall consist of not more than three members to be appointed by the Party concerned, one of whom shall be designated by that Party as leader of its delegation.
3. The leader of a delegation may co-opt any number of persons as advisers to his delegation.
4. The first meeting of the Commission shall be convened by the Government of the Kingdom of Swaziland and shall be held in the Kingdom of Swaziland.
5. All subsequent meetings of the Commission shall be convened as agreed upon by the leaders of the two delegations: Provided that the Commission shall meet at least twice per year: Provided further that the venue of subsequent meetings shall alternate between the Kingdom of Swaziland and the Republic of South Africa, unless the leaders of the respective delegations determine otherwise in relation to a particular meeting.
6. The leader of the delegation of the Party hosting a particular meeting of the Commission shall in respect of that meeting be chairman, and be responsible for the preparation and timeous distribution of the proposed agenda, the recording and distribution of the minutes and making available of a suitable venue.
7. All decisions of the Commission shall be taken on the basis of consensus between the delegations but in the event that the Commission fails to reach consensus the matter under discussion shall be referred to the Parties by the respective leaders for further negotiation.

### Article 3 – Functions and powers of the Commission

1. In addition to any other functions or powers conferred on the Commission by the Parties, the functions and powers of the Commission shall be to advise the Parties on all technical matters relating to—
  - (a) measures that can be implemented by any one or both Parties to alleviate short-term problems resulting from shortages of water from any water resource of common interest to the Parties during periods of drought, taking into consideration the availability of stored water and the water requirements within the territories of the respective Parties at that time;
  - (b) the separate or joint investigation by the Parties of the development of any water resource of common interest including the construction, operation and maintenance of any water works in connection therewith;
  - (c) the joint development of water resources of common interest to the Parties;
  - (d) the criteria to be adopted in the allocation between the Parties of the utilisable portion of water resources of common interest and the application thereof;
  - (e) the taking of any action by any one or both Parties considered desirable by the Commission in connection with the operation and maintenance of any existing water work affecting a water resource of common interest, including steps in connection with the exercise of control over the abstraction of water, curtailments to be imposed on the abstraction of water and the operation or maintenance of such water work in the territory of any of the Parties as well as the implementation of any procedure or programme in connection therewith;
  - (f) any other matter pertaining to the hydrological regime of water resources of common interest;
  - (g) the prevention and exercise of control over the pollution of water resources of common interest and soil erosion affecting such resources; and
  - (h) any other matter pertaining to the development of water resources and utilisation of water referred to the Commission by any Party.
2. Pursuant to the provisions of sub-article 1, the Commission shall in particular have the power to appoint consultants to assist it in the gathering and processing of information on any matter on which it is to advise the Parties and may exercise any power or make a decision relating thereto as may be agreed upon by the Parties from time to time.
3. The Commission's advice to the Parties on any matter referred to in sub-article 1 shall, if required by a Party, be contained in a report signed by the leaders of the respective delegations, who shall be responsible for the submission of the report to their respective Governments.
4. Any report prepared by the Commission on any matter referred to in sub-article 1 shall include estimates of the cost involved in the implementation of the advice of the Commission and may include proposals for the apportionment of such cost between the Parties.
5. The Commission shall in all its deliberations and in any report presented to the Parties have regard for the interests of the Republic of Mozambique in any water resource of common interest between the Parties and the Republic of Mozambique.

### Article 4 – Financial arrangements

1. Each Party shall in respect of all meetings of the Commission be responsible for all costs incurred in connection with the attendance and participation of its delegation and of any person co-opted as adviser to its delegation by the leader concerned in terms of Article 2(3).

2. The Party hosting a meeting of the Commission shall be responsible for all costs incurred in making a venue available for the meeting, the preparation and distribution of the proposed agenda and for the recording and distribution of the minutes.
3. All other costs incurred or liabilities accepted by the Commission in the performance of its functions and the exercise of its powers, shall be shared equally by the Parties unless agreed otherwise by the Commission.

### **Article 5 – General obligations of the Parties**

Each Party shall, in respect of its territory—

- (a) supply such information and plans relating to the development and utilisation of the water resources of common interest to the Commission as the Commission may require for the performance of its functions; and
- (b) cause members of the delegations to the Commission to be granted all powers, authorisations, exemptions and rights including access rights, necessary for their participation in the performance of the functions and the exercise of the powers of the Commission.

### **Article 6 – Registration**

In conformity with Article 102 of the Charter of the United Nations, this Treaty and any amendment thereof shall be registered by the Parties with the Secretariat of the United Nations.

### **Article 7 – Settlement of disputes**

1. Any dispute concerning the interpretation of this Treaty shall at the request of either Party be resolved through negotiations between the Parties.
2. In the event of the Parties failing to settle a dispute within three months from the date of a request referred to in sub-article 1 or within such other period as may be agreed upon by the Parties, either Party may submit the dispute to arbitration on giving written notice of its intention to the other Party.
3. Arbitration shall be by a tribunal composed of one arbitrator appointed jointly by the Parties.
4. If after a period of three months from the delivery to a Party of the notice referred to in sub-article 2, the Parties have failed to agree on the arbitrator to be appointed by them either Party may request the Secretary General of the United Nations to appoint such arbitrator.
5. The arbitral tribunal shall adopt its own rules of procedure.
6. The decision of the arbitral tribunal shall be final and binding on the Parties.
7. Each Party shall be responsible for all costs incurred in the preparation and presentation of its case to the arbitral tribunal. All other costs incurred in connection with the arbitration proceedings shall be shared equally between the Parties.

### **Article 8 – Amendment of Treaty**

The Parties may agree to amend this Treaty. Any such amendment agreed upon by them shall be committed to writing and signed on their behalf.

### Article 9 – Concluding provisions

This Treaty shall—

- (a) upon signature be subject to ratification in order to enable the Parties to comply with their respective constitutional requirements and shall enter into force on the date of exchange of instruments of ratification by the Parties;
- (b) supersede any previous agreement between the Parties relating to the utilisation and development of water resources of common interest to the Parties, to the extent that the provisions of such agreement are in conflict with this Treaty; and
- (c) terminate 12 months after the date of a written notice of denunciation has been given by one Party to the other.

In WITNESS WHEREOF the Parties hereto, acting through their respective representatives hereunto duly authorised, have caused this Treaty, in the English language, to be signed and sealed in duplicate in their respective names at Mbabane on 13th March, 1992.

For and on behalf of the Government of the Kingdom  
of Swaziland

For and on behalf of the Government of the Republic  
of South Africa