



International Conference on the Great Lakes Region

Regional Programme of Action for Economic Development and Regional Integration

Project No. 3.3.6

Feasibility Study on the Rehabilitation and Navigability of
the Congo River Basin

October 2005
As amended August 2006
Original Version: French

1. INTRODUCTION

The Great Lakes region requires a more coherent network of roads, railways and waterways priority infrastructures to respond to the concern expressed by the Heads of State and Governments of the Great Lakes region in their Dar-es-Salaam Declaration adopted in the United Republic of Tanzania on 20 November 2004, to create a space of cooperation based on strategies and policies of convergence (para. 14), to promote a shared vision of economic development and regional integration that supports comprehensive and sustainable development (para.37), and to promote regional cooperation in trade..., transport...(para 45)

The main objective of the present study is to highlight the activities for the rehabilitation and the navigability on the Congo River for the benefit of the Great Lakes region, and to determine the financial support required for its execution.

The activities of the project sector covering the rehabilitation and the navigability will necessarily result from the determination of the role that the navigational infrastructures on the river will be required to play within the framework of the priority infrastructure network retained by the International Conference on the Great Lakes region. This requires a succinct analysis of the priority infrastructure network with regard to the most urgent constraints currently facing the Great Lakes region that need to be overcome. One should also examine the extent to which the technical institutions operating on that river could intervene in the implementation of the project, and consequently plan their effective participation within this framework.

2. THE MOST URGENT CONSTRAINTS TO BE OVERCOME

The Great Lakes Region, at the centre of the International Conference, shows four critical features:

The first feature results from the fact that within this whole, the DRC occupies a strategic geopolitical position: its territory shares nine borders with the ten other countries of the region. This very specific situation should constitute a major regional asset in an environment favouring the economic and social development of the region, and particularly in the prospect of the emergence of cross-border development basins within this peripheral area of the DRC

The second feature stems from the fact that among the ten countries bordering on the DRC, five – including the CAR in the north, Uganda, Rwanda and Burundi in the East, and Zambia in the South, are landlocked and the DRC itself, with a surface area of 2.345.000 km², is semi-landlocked: to the West, the Congo is not a land-locked country but the whole area called “the Congolese bowl” is land-locked. Sudan is not, but all its territory bordering the DRC is landlocked. Tanzania is not landlocked but the part of its territory along Lake Tanganyika and bordering on the DRC is landlocked. Angola is

not, except for the part of its territory that borders on the DRC. The enclave of Kabinda, part of the Angolan territory which encircles the DRC as its central nucleus, is thus faced with quasi permanent economic suffocation, resulting from its landlocked situation.

The third feature is that if the dual asphyxiation confronting the periphery should persist, the immediate and inevitable consequence would be to subject the DRC - as the central nucleus of the Great Lakes region - to the same situation of suffocation.

The fourth feature is that, paradoxically, most of the economic resources of the Great Lakes region are concentrated in this peripheral zone and the central nucleus: petrol and forestry resources in the western part (the enclave of Kabinda, Congo Brazzaville, western DRC); forestry and mineral resources, precious stones, particularly in the north (CAR and the south-western of Sudan); agricultural resources in the East (Uganda, Rwanda, Burundi and eastern DRC), which is the regional food-basket but confronted to the highest ratio of demographic pressure within the Great Lakes region (density of over 250 inhabitants per square kilometre in Rwanda and Burundi); the most important mineral and oil resources of the Great Lakes region in the Eastern belt (copper belt in Zambia and diamonds in the South-western part of the DRC, oil in Angola); and the enormous economic potential of the central nucleus.

From this succinct analysis of the most urgent constraints to be overcome devolves the crucial role of the transport sector of the Great Lakes region, as well as the major priority to establish an infrastructure network that must be conceived with the vital objective to save the region from the triple situation of suffocation currently confronting two important parts of its territory: the DRC as the central nucleus, and the zone peripheral to the central nucleus.

3. RELATIONSHIP BETWEEN THE NAVIGABILITY ON THE CONGO RIVER AND DIFFERENT TRANSPORT CORRIDORS IN THE GREAT LAKES REGION

The rehabilitation and the navigability of the Congo River should be conceived taking into account its relationship with other infrastructure projects proposed in the framework of the Conference, that is:

- **The Trans-African highway Lagos-Mombasa.** Its track, as established by the Economic Commission for Africa within the framework of the programme for the Decade of Transport and Communication in Africa, stretches from Mombasa, through Nairobi, (Kenya), Kampala (Uganda), Kisangani (DRC), Bangui (CAR) to Lagos. In this regard it constitutes a horizontal East-West highway to integrate and open up the northern part of the peripheral zone of priority intervention.

- **The road network of the northern corridor.** Its bi-modal axis linking Mombasa to Kampala thus joins up with the Trans-African highway

Lagos – Mombasa. It runs south from Kampala, opening up into a tri-modal network (road, lake, rail) to drain the whole southern part of the peripheral zone. Its articulation with the central corridor at the level of Kigali and Bujumbura, and in particular with the Upper Reach of the Congo river and the southern corridor (project Great Lakes railway) turns it into a vertical North-South system to integrate and open up the eastern part of the peripheral zone. This deployment into a tri-modal network and its multiple articulations with other corridors at that level responds to the socio-economic requirements of this eastern part of the peripheral zone, i.e. food-producing agriculture and export, agro-industry, intense demographic pressure.

- **The southern corridor (project Great Lakes railway).** It prolongs the network of the northern corridor towards the south, for drainage of the eastern part of the peripheral zone. Through its articulation with the eastern corridor at the level of the Copper Belt, the Lobito corridor as well as the so-called national highway of the DRC (Lubumbashi -Ilebo- Kinshasa-Matadi), it constitutes at the same time an axis of North-South integration and opening of the eastern part of the peripheral zone, while it also opens up the southern part of that zone;

- **The Lobito corridor :** This is a railway axis running along the whole western Angolan part of the peripheral zone. Through its prolongation to the east at the level of the Copper Belt it links up with the system of the Central corridor and thus becomes a horizontal East-West axis to integrate and open up this part of the peripheral zone. Its articulation at the same level with the national highway of the DRC and the southern corridor strengthens its capacity to open up the western part of the peripheral zone;

- **The Mombasa – Kisangani railway** constitutes an additional access to the northern part of the peripheral zone. Through its articulation with the Congo river at the level of the Kisangani harbour it becomes an important axis to open up the central nucleus of the Great Lakes region ;

- **The Congo River and its four principal ramifications.** The major western axis of the Oubangi river, linked at the level of Bangui with the Trans-African highway Lagos – Mombasa, drains upriver from Bangui the northern part of the peripheral zone and constitutes downriver from Bangui towards Kinshasa/Brazzaville an axis for both vertical North-South integration and opening of the western part of the peripheral zone ; the major southern axis Ilebo – Kinshasa/Brazzaville services the DRC part of the southern peripheral zone, and joins at the level of the Copper Belt the southern corridor, the central corridor through a double highway via Kalemie and via Tanzania-Zambia Railways (TAZARA), and the northern corridor via Kalemie ; the principal axis of the central nucleus, Kisangani – Kinshasa/Brazzaville constitutes primarily the basis for the internal access to the central nucleus of the Great Lakes region and secondly and principally the infrastructure that links the priority transport infrastructures of the Great Lakes region between themselves. The principal eastern axis constituted by the river-lake networks (Kivu – Tanganyika, river axis Kindu – Ubundu) is integrated with the modal coordination of the railway networks of the corridors North, Central and South to support the role of vertical North/South integration in particular, and of

opening up the eastern part of the peripheral zone. The map below situates the three principal axes and presents the priority infrastructures network of the Great Lakes region with their possible connections.

- La carte jointe ci-après situe les trois axes principaux *présente le réseau d'infrastructures prioritaires* de la Région des Grands Lacs avec leurs connexions possibles

C.I.C.O.S.



CICOS

QUATRE ETATS MEMBRES

- * République du Cameroun
- * République Centrafricaine
- * République du Congo
- * République Démocratique du Congo



La CICOS en chiffres

Fleuve Congo :

- longueur: 4 700 km
- bassin versant : 3 632 000 km²
- module à Kinshasa/Brazzaville: 40 910 m³/s

Oubangui :

- longueur 2 300 km
- bassin versant 500 000 km²
- module à Bangui 4 337 m³/s

Sangha

- longueur 1 700 km
- bassin versant 165 500 km²
- module à Ouesso 1 850 m³/s

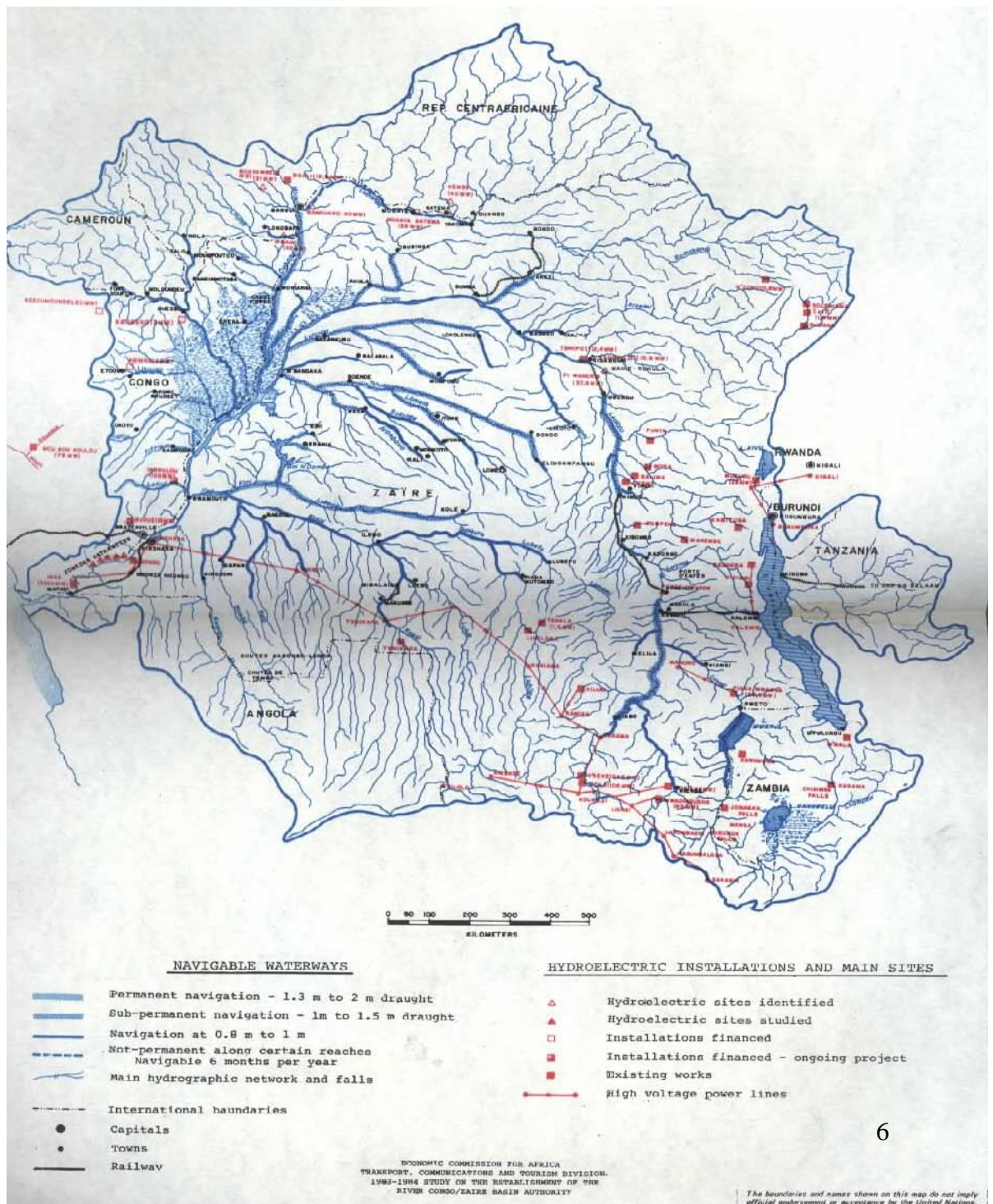
Kasai

- longueur 2 000 km
- bassin versant 904 000 Km²
- module 11.318 m³/s

Supported by a certain effort to coordinate the activities to be undertaken for their development, the priority transport infrastructures of the Great Lakes region constitute globally the basic indispensable network in order to urgently overcome the identified constraints.

4- THE CONGO RIVER

The map inserted below shows the limits of the Congo River basin and presents the whole of its hydrographical network.



5. PROJECT JUSTIFICATION

A mere glance at this map shows that, from North to South and East to West, with the exception of the parts Sudan – DRC and Uganda – DRC of the peripheral zone, the network of the Congo River covers the whole of the two critical zones of the Great Lakes region: the central nucleus, the DRC and its peripheral zone.

This invests the river with major importance, as means of transport and communications. When studying the above maps, one is tempted to conclude without hesitation that it would suffice to render only certain parts of this network accessible in order to offer to the Great Lakes region the priority transport infrastructures permitting to overcome the most urgent constraints identified.

For this to be achieved, it would be urgent to initiate activities for the identification of new navigational roads on the Congo River, in addition to the existing one. At the moment, the rehabilitation of the classic navigational roads which have been quasi neglected since the emergence of instability in the region, constitutes a major concern. Thus defined (rehabilitation), the project can only target the classic navigable roads included in the framework of the Transport Programme of the International Conference on the Great Lakes Region, not only as infrastructures of external exchange but also as infrastructures for capacity building in the two nerve centres of the region: the central nucleus, the DRC and the zone peripheral to this nucleus. These axes have been identified under item 3, as follows:

- The river-lake system comprising the lakes Kivu and Tanganyika as well as the river stretch Kindu – Ubundi: these are the navigable ways of the Upper Reach, integrated into the railway network of the eastern part of the peripheral zone;
- The network of the Middle Reach comprising the principal axis Kisangani – Kinshasa/Brazzaville and servicing the central nucleus of the Great Lakes Region, the principal axis Oubangi for servicing the northern and western parts of the peripheral zone, and the axis Ilebo – Kionshasa/Brazzaville servicing the southern part of the peripheral zone.

6. MANAGEMENT MECHANISMS OF THE CONGO RIVER BASIN

An objective identification of the activities to undertake on these infrastructures can only be achieved in concert with the existing institutional mechanisms of management of these infrastructures. On the other hand, as has been requested by the International Conference on the Great Lakes, the effective participation of these institutions in the implementation of the project should be mobilised to the extent possible.

6. 1. Integrated management mechanism of the Lake Tanganyika basin

In the 1980s, UNDP had initiated a study for the integrated management of the Lake Tanganyika basin. The important volume of the financial envelope required for the implementation of the multi sector activities that would result was responsible for abandoning the project.

6. 2. The project for the establishment of an authority for the integrated management of the Congo River Basin

In the framework of the programme of the UN Decade of transport and communication in Africa, the ECA had undertaken the first feasibility study aimed at the establishment of an authority for the integrated management of the Congo river basin which covers over 3.200.000km², and comprises 10 riverside countries : Angola, Cameroon, Burundi, Uganda, the DRC, the Republic of Congo, the CAR, Rwanda, Tanzania and Zambia. Only Cameroon is not part of the Great Lakes Region.

More than 98% (2.310.000 km² of the 354.000 km²) of the territory of the central nucleus of the region, the DRC, are situated in the basin. The study undertaken by the ECA also covers, as for Lake Tanganyika, the integral and multi sector management of this immense territory. It led naturally to a substantive programme which not only discouraged the donors but became at the same time the subject of dead-end negotiations, with two major factors having caused the failure of the project.

6. 3. Currently existing inter-state institutional management mechanisms

Drawing from the experience of these two failures, the ECA had re-shaped the project, focalising the efforts on the integrated management of one single sector: navigation on the river.

For the Upper Reach, at the level of the CEPGL, the Standing Committee for transport on the lakes Kivu and Tanganyika, (COPTRALAC) was established with the support of the ECA. COTRALAC had undertaken numerous studies including:

- the study for the restoration of buoy markers and low-water marking scales of Lake Kivu which led to the establishment of these navigational aids (co-funding DRC/Rwanda);
- the study of the needs for dragging of the ports CEPGL of Lake Tanganyika led to the implementation of hydrographical works of pre-dragging of the CEPGL ports of the lake;
- the study on the development of transport on the lakes Kivu and Tanganyika;
- the study on the cooperative execution of the maintenance works of the navigable waterways of the two lakes, the study for the creation of a joint transport enterprise on the two lakes;
- The study for the establishment of a joint transport company on both lakes, and;
- the study on the needs of dragging of the ports on lake Kivu.

For the implementation of the recommendations of these studies, the principle of a financing agreement had been established, then suspended, and the funds were allocated to other activities following the unrest. The conclusions of the studies are available at the offices of SRO/EA in Kigali. COMESA had established a technical standing committee. Negotiations had started to merge the two Committees. They could not be pursued.

The technical committee thus reunified should be strengthened in order to cover the following waterways : Lake Kivu 150 km on the DRC side and 120 km on the Rwanda side ; Lake Tanganyika 1700 km of international navigable ways and 400 km of national navigable roads; the river road Kindu -Ubundu of 370 km, i.e. a total of 2740 km.

For the Lower Reach, the ECA had undertaken two studies ; one for the elaboration of joint regulations for the navigation on the Congo/Oubangi/Sangha basin (COS), the other for the establishment of an international commission for the management of the COS basin, the CICOS. The joint regulations have been adopted and the CICOS is established and currently functioning.

As planned in the Agreement establishing the CICOS, CICOS should cover three major navigation routes on the Congo River: the Oubangui route with its major tributaries, the Kisangani-Kinshasa/Brazzaville with its major tributaries and Ilebo-Kinshasa/Brazzaville route with its major tributaries. The whole network inserted in the above map cover a total of 10.700 km spread over as follows: Oubangu/Sangha route: 4000km, Kisangani-Kinshasa/Brazzaville route: 4700 km and Ilebo-Kinshasa/Brazzaville route: 2000 km

6. 4 The national institutions

The following institutions intervene directly on the navigable ways of the Congo River. They undertake, often at their own costs, specific works to improve navigability. These are:

- along the Upper Reach: the Directorate of Navigable Ways of Burundi; the TRC agency based in Mwanza and operating on Lake Tanganyika in Tanzania, the Kalemie branch of the Régie des Voies Fluviales of the DRC ;
- Along the Middle Reach: the Direction de la Régie des Voies Fluviales (RVF) in Kinshasa, the Service Commun d'Entretien des Voies Navigables (SCEVN) of Congo and the CAR (Brazzaville, Bangui). SCEVN, currently a public enterprise, will soon become a privatized grouping of economic interest. (GEI)

7. MAJOR CONSTRAINTS

The navigation on the Congo river must play the most crucial role for servicing the Great Lakes region (opening up and integration of the nerve centres : the peripheral zone and the central nucleus). At present navigation on the Congo River is far from being able to play this role and might eventually lead to the opposite situation, creating an obstacle to the opening and integration of the region if urgent measures are not taken.

7. 1. The Upper Reach

a) Lakeside area:

- Weak exploitation in view of the implementation of the pertinent recommendations of numerous studies undertaken to improve the navigability of the lake waterways of the Upper Reach
- Lack of adaptation of the current conventional transport system to the multi modal transport system imposed by the structure of priority infrastructures of the Great Lakes region;
- Lack of harmonisation or availability of navigational instruments (regulations, nautical charts of navigable waterways...);
- Lack of availability of navigational aids;
- Sedimentation of the areas of lakeside for the manoeuvring of boats in the ports ;
- Absence of search and rescue mechanisms;
- Weak consideration of pollution-related risks;
- Insufficient activity on the part of the two inter-state management mechanisms.

b) River area :

- Suspension of navigation activities following the unrest.

c) The whole of the Upper Reach :

- Very low level of servicing (opening-up and integration) of the critical zones of the Great Lakes region, due in particular to the shortcomings of these institutions in terms of concerted management of navigation on the Upper Reach.

7. 2. Middle Reach

- a) The whole of the three major axes of the Middle Reach (Oubangui and its tributaries, Kisangani-Kinshasa/Brazzaville and tributaries, Ilebo-Kinshasa/Brazzaville and tributaries)
- Difficulties of application of the common code of navigation on the navigable roads of CICOS;
 - Lack of adequate execution of water buoy works;
 - Lack of adequate execution of dragging works and re floating of shipwrecks ;
 - Absence of consideration of other solutions aimed at improving the navigability of the navigational ways;
 - Lack of availability of CICOS nautical and navigational maps;
 - Lack of harmonisation of the geodesic reference systems (x, y z) of the CICOS navigational network ;
 - Weak servicing level (opening-up and integration) of the critical zones of the Great Lakes region following insufficient exploration of the possibilities of river traffic in these zones;
 - Insufficient equipment for intervention on the part of the CICOS;.
- b) Main Oubangi axis and tributaries :
- Persistent and alarming tendency towards decrease of water flow;
 - Increasing exposure to pollution risks.

8. PROJECT OBJECTIVES

The immediate objective of the project aims at improving the servicing by river and lake of the critical zones (peripheral zone and central nucleus) of the Great Lakes region, in close coordination with all the priority transport infrastructures, so that this service may efficiently contribute to open-up (internal and external) and integrate (internal and external) these critical zones, which are essential factors to reinforce regional integration, to re-launch economic development and consolidate security and peace in the Great Lakes region.

The long-term objectives aim at contributing to:

- The implementation, in the framework of the NEPAD, of the programme of the Decade of Transport and Communication in Africa, leading to the integration of the African Union:
- The implementation of the NEPAD sectors related to the rehabilitation of the navigational infrastructures of the Congo River.

To that end, it is therefore recommended to undertake a feasibility study which should among other things, take into consideration the rehabilitation of waterways and ports currently in use on the Congo River and the exploration of other sections of the River as a prerequisite to any feasibility study on their navigability.

9. ACTIVITIES TO BE INITIATED

The constraints identified can be grouped into two categories:

- Constraints linked to those concerning the feasibility studies of certain rail infrastructures within the transport programme. Activities of the project for the navigability of the Congo river aimed at overcoming this category of constraints will be integrated with the activities linked to the execution of these railway feasibility studies
- Constraints specifically linked to the navigability of the Congo River: the related activities can start without delay. As a result, the activities to be undertaken within the framework of the study on the navigability of the Congo river must be regrouped, taking into account these two categories of constraints.

Furthermore, each of these activities will be accompanied by measures such as training of relevant specialists.

1. ACTIVITIES LINKED TO NAVIGATION ON THE CONGO RIVER :

1.1.1. Upper Reach

1.1.2. Formulation of concrete proposals for the adequate exploitation of the studies on the navigability of the lakes Kivu and Tanganyika;

1.1.3. (i) Study to harmonize the regulations
(ii) Study for the establishment of nautical charts of the navigable roads of the lakes Kivu and Tanganyika;

- 1.1.4. Study for the harmonisation, establishment and elaboration of navigational aids (water buoy markers, signalisation, nautical instructions).
- 1.1.5. Study for the execution of dragging works in the ports of lakes Kivu and Tanganyika.
- 1.1.6. Study for the institution of a search and rescue mechanism;
- 1.1.7. Study for the prevention of pollution and conservation of the environment of the lakes Kivu and Tanganyika
- 1.1.8. Merger of the two technical standing committees and strengthening of the unified Committee.

1.2. Middle Reach

- 1.2.1. Study of the needs of assistance of the CICOS for the application of the joint navigational code on the navigable roads of CICOS.
- 1.2.2. Study for the harmonisation of the basic geodesic reference systems of the COS basin.
- 1.2.3. Study for the effective execution of hydrographical works of the navigable ways of CICOS (navigational charts, nautical instructions, ...)
- 1.2.4. Study for the executive execution of the dragging works of the navigable roads of CICOS and the re-floating of shipwrecks
- 1.2.5. Study for the improvement and establishment of the buoy and signalisation system of the navigable roads of CICOS;
- 1.2.6. Study for the improvement of the intervention capacities of CICOS;
- 1.2.7. Re actualisation of the pre feasibility study for support of the water flow through a multi functional dam (energy, navigation, agriculture) in Palambo;
- 1.2.8. Study for the identification of appropriate solutions to improve the navigability of the navigable roads of CICOS;
- 1.2.9. Study for the exploration of the CICOS water ways with a view to a more efficient servicing of the Great Lakes region.

2. Conditional activities

2.1. Upper Reach

- 2.1.1. Study to adapt the navigational infrastructures of the Upper Reach to the exigencies of multi modal transport with the railway studies of the northern and southern corridors
- 2.1.2. Study to re-launch the navigational activities on the sector Kindu-Ubundu of the Upper Reach, taking into account the railway studies of the northern corridor, the Great Lakes railway and/or of the Mombasa-Kisangani railway).

2.2. Middle Reach

- 2.2.1. Studies to adapt the navigational infrastructures of the Middle Reach to the requirements of multi modal transport with the study of the Lobito railway and/or of the Great Lakes railway.

10. MODALITIES OF IMPLEMENTATION

(i) Organ of implementation (basic)

For each of the two reaches, an implementation team led by one (1) Head of mission (team), international expert (coordinator of the activities of the study) will be established.

The team's role will be to collect and analyse existing, available studies on navigability, including documents related to the development of multi modal transport, to prepare relevant terms of reference for the implementation of each activity of the study and to obtain their approval from the technical coordination body of the study, to identify the national consultants required for the implementation who will be recruited by the technical coordination body of the study, to coordinate the activities of the team, to analyse the various national progress reports and transmit them to the technical coordination body.

The national consultants recruited by the technical coordination body, whose number will be determined by the head of mission with regard to the terms of reference that he will have established, will implement the sector of the study entrusted to them in conformity with the terms of reference. They will report to the head of mission (team).

(ii) Coordination body

The coordination for the Upper Reach will be ensured by the Technical committee of the Upper Reach resulting from the merger of COPTRALAC (CEPGL) and of the standing technical committee (COMESA). CICOS will ensure the coordination of the Lower Reach.

Its major role will be:

- Study and approval of the terms of reference of the activities prepared and presented by the head of mission (team)
- Study and approval of the progress reports presented by the head of mission (team)
- Study and approval of the reports of the studies undertaken by the implementation body.
- Initiate the initial fund raising activities (BOT) for the implementation of the project
- Report on the progress of the study to the International Conference on the Great Lakes Region or to its organ in charge of monitoring the infrastructure programmes.

(iii) Follow up Organ of the International Conference

This emanates from the International Conference on the Great Lakes region in charge of the global coordination and implementation of the various recommended studies and programmes. Its main role is to :

- Examine and approve the reports submitted by the coordination body (Upper Reach and Middle Reach)
- Undertake steps towards the financing for the implementation of the projects of the programme.

11. BUDGET

1. Upper Reach

Item	Activities	Men	Costs (Salary per diem, Travel)
1 Head of mission	- Collection and analysis of data, TOF - Coordination study (all activities) - Elaboration final report (all activities)	2 M/m 3 M/m 4 M/m Total 9,0 M/m	21,000 USD 31,500 USD 42,000 USD Sub-Total : 94,500 USD
2 National experts Buoy markers, dragging and nautical cartography (DVN, RVF, Ministries) 2 National experts regulations (DVN, TRC, RVF, Ministries)	-Sector navigational and dragging aids (activities 1.1.3., 1.1.2, et 1.1.4) Sector regulations, search and rescue, and , environment (activities 1.1.2i, 1.1.5 et 1.1.6)	2 X 3 M/m = 6 M/m 2 X 3 M/m = 6 H/m Total = 12M/m	63,000 USD 63,000 USD Sub-Total = 126,000 USD
2 National experts in naval construction 1 National expert (TRC, RVF, Ministries)	- Sector conditional activities 2.1.1 (integrated into the railway study - Sector conditional activities 2.1.2 (integrated into the railway studies)	2 X 2 M/m = 4 M/m 2 M/m Total : 6 m/m	42,000 USD 21,000 USD Sub -Total : 63,000 USD

3. MIDDLE REACH

Item	Activities	Men/M	Costs (salary per diem, travel)
1 Head of mission (International experts)	Elaboration TORS -Coordination -Elaboration reports	3 M/m 6 M/m 3 M/m Total : 12 M/m	31,500 USD 63,000 USD 31,500 USD Sub-Total: 126,000 USD
1. International expert	Sectors 1.2.1 et 1.2.6 (assistance to CICOS) And capacity improvement	3 M/m	31,500 USD
1 national expert (national geographic institutes) 3 National experts (1 one for each of the 3 main axes) (RVF, SCEVN, Ministries) 3 National experts (1 for each of the 3 main axes (RVF, SCEVN, Ministries) 3 national experts (1 for each of the 3 main axes (RVF, SCEVN, Ministries) 3 national experts (1 for each of the 3 main axes (RVF, SCEVN, Ministries) 3 national experts (1for each of the 3 main axes (RVF, SCEVN, Ministries)	Activity 1.2.2 (geodesic references) Activity 1.2.3 hydrographical works Activity 1.2.4 dragging study Activity 1.2.5 study on buoys and signals Activity 1.2.8 and 1.2.9 study solutions for improvement and exploration	3 M/m 3 X 6 M/m= 18 H/m 3 X 6 M/m= 18 M/m 3 X 6 M/m= 18 M/m 3 X 6 M/m= 18 M/m 3 X 6 M/m= 18 H/m	31,500 USD 189,000 USD 189,000 189,000 USD 189,000 USD 189,000 USD Sub-Total :976,500 USD
1 Consulting bureau	Re actualisation of the pre feasibility study Palambo dam		Estimate 250.000 USD

	(hydroelectric and supporting water flow) Activity 1.2.7		
3 national experts on naval construction (1 for each of the 3 main axes)	Conditional activities (integrated into the railway study).	3 X 3 M/m= 9 M/m	Sub-Total : 94,500 USD

RECAPITULATION

International expertise

Upper Reach : 94,500 USD
Middle Reach : 157,000 USD

National expertise

Upper Reach : 189,000 USD (including 60'000 USD for conditional activities)
Middle Reach : 1,071,000 USD (including 90'000 USD for conditional activities)

Consulting Office : 250,000 USD

Grand Total : 1,761,500 USD

1.1. RISKS

- Insecurity constitutes a risk factor for the efficient development of the project (study and implementation). In particular the sectors of the project that concern high-risk localities in the Great Lakes region (Upper Reach: conditional activities 2.1.1 and 2.1.3; Middle Reach: activity 1.2.9 on the study of exploration of the navigational ways CICOS with a view to a more efficient servicing of the Great Lakes region).

The latest positive political developments towards stability in the Region on the one hand, and the implementation of these sectors of the study in parallel with the railway studies (Mombasa-Kisangani, railway project of the northern corridor, Great Lakes railway project) eliminate this risk factor which only concerns two sectors of the project.

The implementation of three sectors of the project integrated into the railway projects of the Great Lakes region (conditional activities 2.1.1 and 2.1.2 for the Upper Reach, 2.2.1 for the Middle Reach), depends on the implementation of one or the other of the railway studies of the Great Lakes programme. This condition of implementation of these sectors does not affect the implementation of the other sectors of the projects which presents no risk whatsoever.

12. STARTING PERIOD OF THE PROJECT

The project can be implemented in two phases :

1. THE FIRST PHASE

Is linked to the elaboration of detailed terms of reference for each of the activities, the approval of these terms of reference and the mobilisation of the funds required for the implementation of the project.

The elaboration of these terms of references will be entrusted to two international experts:

- one for the upper reach for 2 M/M, i.e.	21,000 USD
- one for the lower reach for 3M/M, i.e.	<u>31,000 USD</u>
Total PHASE 1	52,000 USD

2. THE SECOND PHASE

Comprises the implementation of the remaining project activities and requires financing of

Total PHASE II1,709,000 USD

Phase 1 of the project will start as soon as the amount of 74,000 required for its implementation has been mobilised.