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REVIEW OF THE IMPLEMENTATION STATUS OF THE TRANS AFRICAN HIGHWAYS AND THE MISSING LINKS

VOLUME 4: APPENDICES

Final Report

**SWECO International AB, Sweden
Nordic Consulting Group AB, Sweden**

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In Association With:
**BNETD, Ivory Coast
UNICONSULT, Kenya**



REPORT LAYOUT

The amount of information collected under this project is quite large. Major efforts have been made to concentrate the presentation in this Draft Report to the most relevant aspects but the volume remains substantial. In order to make the material as accessible as possible we have opted to organize the presentation in four separate volumes as follows:

Volume 1, Main Report

In this volume the major aspects of the TAH scheme are presented, divided into subject matters rather than geographic corridors (although corridor information in summary form is included in Volume 1).

Volume 2, Description of Corridors

This volume contains the detailed description of the 9 TAH corridors, based on information collected at country, REC and regional levels.

Volume 3, Way Forward

This volume contains the background and presentation of what needs to be done to the Trans African Highways and the conditions for the road traffic and transport using the network. It also formulates a vision for the future and suggests a Work Programme for the coming years.

Volume 4 Appendices

In this volume background information, detail survey data, etc are presented.

It is only thanks to the kind co-operation and support from a great number of people in Ministries, Highway Administrations, RECs, ECA and last but not least the African Development Bank that it has been possible to produce this report within the short time-span available for the field work activities. For that the Team is most grateful.

The study has been carried out by an international group of consulting firms comprising SWECO and NCG of Sweden, Uniconsult of Nigeria and BNEDT of Cote d'Ivoire. The work was carried out by two teams. The members of the Anglophone team were Messrs Kisslig, Mbau, and Sedin. The francophone team comprised Messrs Biagone, Meyer, and Vasur. Mr Sedin has been the Team Leader.

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ACRONYMS

ADB	African Development Bank
CEMAC	Communauté Économique et Monétaire d'Afrique Centrale
CEN-SAD	Community of Sahel and Saharan States
CLRT	Comité de Liaison de la Route Transsaharienne
COMESA	Common Market for Eastern and Southern Africa
EAC	East African Cooperation
ECA	Economic Commission for Africa
CEEAC / ECCAS	Communauté Économique des États de l'Afrique Centrale / Economic Community of Central African States
ECOWAS	Economic Community of West African States
GIS	Geographic Information System
NEPAD	New Partnership for Africa's Development
OAU	Organization of African Unity
REC	Regional Economic Community
SADC	Southern Africa Development Committee
SATCC	Southern Africa Transport and Communications Commission
Sida	Swedish International Development Agency
TAH	Trans African Highways
TRLC	Trans Saharan Road Liaison Committee
UEMOA	Union Economique et Monetaire Ouest-Africaine
UMA	Union du Maghreb Arabe
UNTACDA	United Nations Transport and Communications Decade

APPENDIX 1: COLLECTED TAH DATA

APPENDIX 1.0: FIELD INVENTORY

The main objective for the collection of the existing conditions of various road links was to find the relevant information for a description of a road link and the level of standard for comparison reason with other road links.

Information about the status of the Trans African Highways has been collected by country-visits, investigating reports and site visits on some road links. The quality of information varied substantially between the countries visited. Whereas in some countries information could be found in road databases, other information was given by recording from individual memories. Another source of information was the availability of studies and reports, like feasibility studies, inventory reports, pavement management systems etc.

Whenever time was available and possibility was found, a site visit to the actual road link was carried out, in order to judge about the reliability of received information, mostly regarding the condition of the pavement structure.

The criteria for the assessment within the limits of this report have been chosen in a simplified manner, resulting in a form, which was presented to all interviewed persons. Some information was collected for comparison reason, other information should give indications about the readiness and capacity to maintain existing road infrastructures. Still other information will help to define recommendations for international and regional development of road infrastructure uniformity for road users.

Some of the parameters are self-instructing, others had to be defined as follows:

- **Type of Road.** Illustrates the road class within the country, which the Trans African Highway link belongs to.
- **Type of pavement.** 3 different types are considered: (a) paved roads include surfacing consisting of asphalt concrete, surface treatment like surface dressing, cape seal or similar, cement concrete; (b) road with gravel surfacing; (c) earth roads with no surfacing.
- **Condition of pavement.** It is referred to the structural condition rather than to the riding comfort. Factors like amount and type of cracking, rutting, heaving, loss of stone are parameters which affect the condition of a road pavement and its remaining life expectancy.

- **Alignment standard.** The criteria for the alignment standard is the type of terrain, resulting in varying design speed and construction and maintenance cost.
- **Design speed.** Indicating the correlation between the alignment standard and terrain type.
- **Travel speed.** This will give an indication about the relevance in the condition of the road. The non-physical barriers are not considered in this information.
- **Road parameters.** Information is searched for about the physical widths for carriageway, shoulders and road reserves.

Paved width means the width between the road markings, excluding edgestrips, alternatively the total width of a gravelled surface.

Road reserve is the legal width, which can be used for road facilities.

- **Number of bridges.** Whenever available an approximate figure about bridges on a special section is recorded. The definition of a bridge may vary, e. g. from a length of 6 m or 10 m.
- **Load limit / Total weight for heavy vehicles.** This information is vital for the assessment of uniformity along the road link, for heavy vehicles travelling between different countries.
- **Traffic flow.** Traffic composition is asked for, especially the number of heavy vehicles, which affects the structure and the cross-section of a road.
- **Truck companies opinions.** Whenever possible a judgement by road users about the road standard is asked for.
- **Status of planning.** Various planned inputs like rehabilitations, reconstructions, design etc for certain road sections shall be listed.
- **Estimated cost to reach design standard.** If road conditions are not considered as good, or alignment standard does not correspond to the standard of road type, the Road Authority's estimation is recorded to bring the road section to the proper standard.

Furthermore information about design, construction, planning facilities and similar are recorded, like design standard used in country, country specific construction specifications, availability of laboratory facilities, etc.

All collected information are presented in the following tables.

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APPENDIX 3.1: ANGLOPHONE TEAM

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APPENDIX 4

PROCEEDINGS OF THE PEER REVIEW WORKSHOP ON THE IMPLEMENTATION STATUS OF THE TRANS-AFRICAN HIGHWAYS AND THE MISSING LINKS