13th CHRIS MEETING 17-19 September 2001, Athens, Greece

(Rosario LA PIRA)

MEMORANDUM Of UNDERSTANDING

FOR CO-OPERATION WITHIN THE

MEDITERRANEAN and BLACK SEA Virtual RENC

signed and operated by and between the National Hydrographic Offices of

and

any other National Hydrographic Office joining the MOU

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GLOSSARY

International Maritime Organisation (IMO)

The specialised organisation of the United Nations responsible among others to provide machinery for co-operation among Governments in the field of governmental regulation and practises relating to technical matters of all kinds affecting shipping engaged in international trade, and to encourage the general adoption of the highest practicable standards in matters concerning maritime safety and efficiency of navigation.

IMO SOLAS Convention

International Convention for the Safety of Life at Sea developed by the IMO. The contracting governments undertake to promulgate all laws, decrees, orders and regulations and to take all other steps which may be necessary to give the present Convention full and complete effect, so as to ensure that, from the point of view of safety of life, a ship is fit for the service for which it is intended.

Electronic Chart Display and Information System (ECDIS)

The navigation information system designed to meet the requirements of marine navigation, which is considered the legal equivalent of the nautical chart, displaying selected information from an electronic navigation chart (ENC) integrated with data from positional and, optionally, other sensors.

IMO Performance Standards for ECDIS

Minimum performance requirements for ECDIS, adopted by IMO 23 November 1995 as Assembly Resolution and published as Annex to IMO Resolution A19/Res. 817 (15 December 1995 and its later amendments).

International Hydrographic Organisation (IHO)

Intergovernmental organisation with the object of:

- Co-ordinating the activities of the NHOs,
- Achieving the greatest possible uniformity in nautical charts and documents,
- Adopting reliable and efficient methods of carrying out and exploiting hydrographic surveys,
- Developing the sciences in the field of hydrography and the technique employed in descriptive oceanography.

Its international Convention entered into force in 1970. It has a secretariat, the International Hydrographic Bureau (IHB), located in Monaco.

Electronic Navigational Chart (ENC)

A database, standardised as to content, structure and format, issued for use with ECDIS on the authority of government authorised Hydrographic Offices (HOs). It contains all chart information necessary for safe navigation and may contain supplementary information in addition to that contained in the paper chart (e.g. sailing directions), which may be considered necessary for safe navigation.

ENC Service

The service comprising the supply of ENCs and ENC updates, issued officially on the authority of the government authorised Hydrographic Offices (HOs), designed to satisfy the requirements of international shipping in compliance with the relevant IMO resolutions and IHO standards.

Electronic Navigational Chart Data Base (ENCDB)

The master database created from national ENC data sets.

Waters

Area of sea of national jurisdiction for which a HO normally compiles nautical charts from original source data.

World-wide Electronic Navigational Chart Data Base (WEND)

A common, world-wide network of ENCs, based on IHO standards, designed specifically to meet the needs of international maritime traffic using ECDIS which conform to the IMO Performance Standards for ECDIS.

Regional Electronic Navigational Chart Co-ordinating Centre (RENC)

In the World-wide Electronic Navigational Chart Data Base (WEND) the regional node being responsible, as an Issuing Authority, for official ENCs and official ENC updates compiled from national ENC data.

Virtual Regional Electronic Navigational Chart Co-ordinating Centre (VRENC)

In the World-wide Electronic Navigational Chart Data Base (WEND) the regional forum responsible for managing the co-operation between regional HOs finalised at harmonising their development as Issuing Authorities for their own official ENCs and official ENC updates.

MBS Virtual* RENC (MBS VRENC)

The regional forum responsible for advancing collaboration between HOs and assisting their development as Issuing Authorities for their own official ENCs and official ENC updates in the area of Mediterranean and Black Sea and possibly beyond.

* The MBS concept of RENC is defined "virtual" to emphasize that it's aim IS NOT the creation of independent and costly physical infrastructures (which in any case are deemed unnecessary), but rather to extend and strengthen cooperation within the regional hydrographic community, dedicated to coordinating and assisting participating HOs in the field of ENC related activities.

Issuing Authority

The official agency which issues the ENCs and ENC updates validated to comply with the relevant standards and quality requirements.

PREAMBLE

The National Hydrographic Offices of Member States to the MSBHC Who have signed this MOU, Hereinafter called the Participants

Considering that the United Nations with Resolution A/53/32 had invites States to cooperate in carrying out hydrographic surveys and providing nautical services for the purpose of ensuring safe navigation as well as to ensure the greatest uniformity in charts and nautical publications and to coordinate their activities so that hydrographic and nautical information is made available on a worldwide scale.

Considering that the International Maritime Organization with SOLAS Convention Regulation V/9 states that:

- 1. Contracting Governments undertake to arrange for the collection and compilation of hydrographic data and the publication, dissemination and keeping up to date of all nautical information necessary for safe navigation.
- 2. In particular, Contracting Governments undertake to co-operate in carrying out, as far as possible, the following nautical and hydrographic services, in the manner most suitable for the purpose of aiding navigation:
 - .1 to ensure that hydrographic surveying is carried out, as far as possible, adequate to the requirements of safe navigation;
 - .2 to prepare and issue nautical charts, sailing directions, lists of lights, tide tables and other nautical publications, where applicable, satisfying the needs of safe navigation;
 - .3 to promulgate notices to mariners in order that nautical charts and publications are kept, as far as possible, up to date.
 - .4 to provide data management arrangements to support these services.
- 3. Contracting Governments undertake to ensure the greatest possible uniformity in charts and nautical publications and to take into account, whenever possible, relevant international resolutions and recommendations.
- 4. Contracting Governments undertake to co-ordinate their activities to the greatest possible degree in order to ensure that hydrographic and nautical information is made available on a world-wide scale as timely, reliably, and unambiguously as possible.

Noting the responsibilities of Hydrographic Offices (HOs) authorised by Governments to issue for their Waters adequate and up-to-date nautical charts and publications for the safety of navigation;

Noting that the SOLAS Convention includes a carriage requirement for all ships with respect to adequate and up-to-date nautical charts and publications for the intended voyage; and that

mariners require such charts and relative services at the earliest possible date to assist safe navigation;

Noting that if an ECDIS is to satisfy the SOLAS carriage requirement using electronic navigational charts, as set out in the "IMO Performance Standards for ECDIS", only ENCs and ENC updates issued under the authority of a Government authorised Hydrographic Office can be used;

Noting that in order to ensure the greatest level of harmonisation and consistency in the establishment of ENC services to international shipping, the IHO Member States have agreed the WEND concept and a set of associated WEND Principles, including the establishment of regional co-ordination;

Noting that IHO has adopted a Resolution to promote the implementation of the WEND System that recommends Member States to:

- a) create the appropriate climate for regional and international co-operation in the capture and management of digital hydrographic data, acknowledging the ownership of the data,
- b) give high priority to the production of data that are validated and conform to the ENC Product Specification,
- c) promote the production of ENCs and the use of ECDIS,
- d) establish mechanisms for the national, regional and international distribution of ENCs in accordance with the WEND Principles.

Noting that some MBSHC member states have already begun or are beginning to develop national ENC portfolios, but have not yet addressed issues of regional harmonization and distribution and that others have expressed the need for economic and/or technical support in launching their own ENC development programs;

Having considered that the best way to implement the WEND Principles for their ENC services is to establish a Virtual RENC;

Noting that the Mediterranean and Black Sea region presents a number of geo-political challenges which require on-hand attention and local representation to effectively manage such;

Noting that the content of the ENCs and ENC updates issued within the framework of the MBSHC Virtual RENC remains the responsibility of each Participant;

Noting that the issuing of the ENCs and ENC updates to the market will be done in a non-discriminatory way, and will aim to ensure their widest possible use;

Noting that the Private Sector has proven to be a reliable source of economical, efficient and effective products and services for the generation, management and distribution of ENC data;

Noting that in accordance with the Article XVII of the IHO Convention, the execution of this MOU will not include matters involving questions of international policy;

Have agreed that - by way of steady technical and economic development pursued over gradual phases, and accompanied by political initiative on both the national and European Commission levels - a Virtual RENC (VRENC) may be established to quickly achieve and make available to navigators high quality ENCs for all MBS waters.

PROVISIONS OF THE MOU

Article I Purpose, Objectives and Scope

- 1. The purpose of this MOU is to constitute an MBSVRENC dedicated to the establishment of a framework, which actively fosters the harmonized development and dissemination of ENC data in the region, and to upholding the following principles:
 - The definition of harmonized and conterminous national data sets across the region;
 - The definition of a harmonized ENC marketing policy within the region;
 - The implementation of those political and technical exchanges needed to support the objectives of the MBSVRENC.
- 2. The objectives of this MOU are to co-operate:
 - In establishing an ENC Service comprising ENCs and ENC updates, in order to satisfy the requirements of all navigators in the region, without the financial burden of a centralized stable organization or the expensive expansion of the internal services of each individual HO;
 - In supporting the sustainable development of National HOs, including their infrastructure and personnel, for the effective generation of ENC services, that meet the relevant standards of the IMO and the IHO.
 - In contributing to the safety of navigation, the protection of the environment and the effective operation of maritime activities;
 - In ensuring sustainability of the ENC services;
 - In co-ordinating the efforts of the Participants in order to ensure the integration, uniformity, timeliness and quality of the data required for the ENC services.
- 3. The scope of this MOU, through the co-operation of the Participants, will extend throughout the:
 - establishment of national HO infrastructure and training of personnel.
 - creation of homogeneous ENC scale levels, based on the S-57 v3.0 cell structure, via interim product generation and gradual data upgrading programs.
 - performance of inter-regional datum harmonization and edge matching to obtain truly seamless cartography across national data sets.
 - implementation of real-time updating of the resulting data sets, via synchronized maintenance between National HOs.
 - achievment of real-time distribution to the widest possible range of applications navigation and other via private sector specialists.
 - generation of revenue and product improvement feedback from distribution activities.
- 4. This MOU is open for accession by any Hydrographic Office or equivalent national authority.

Article II Administration

- 1. The MBS VRENC will be directed and administered on behalf of the Participants by an organisation consisting of:
 - The VRENC Committee (VC);
 - The President of the VRENC Committee
 - The VRENC Coordinating HO.
 - The Training Resources

Article III VRENC Committee

- 1. The VRENC Committee (VC) consists of all Participants.
- 2. The VC gives general directives on the functioning and work of the MBS VRENC;
- 3. The VC will supervise the MBS VRENC operation, providing assistance, advice and guidance to the MBS VRENC Coordinating HO on the development and operation of the MBS VRENC to ensure that it meets its objectives.
- 4. The VC will convene as requested by the President, at least once a year. A two months advance notice in writing will be required.
- 5. The VC will develop and decide on any amendments to the MOU according to Article XI
- 6. The detailed tasks of the VC are contained in its Terms of Reference, see Annex 2.
- 7. The VC elects its own President for a period of two (2) years.
- 8. The VC may grant Observer status to the IHB, others HOs and organizations who wish to participate in the VC meetings.
- 9. Each Participant will have one vote. A quorum exists when at least two/thirds of the Participants are present. This requires that no decision be made except on issues listed in the call for the VC meeting. All decisions will be taken under the above quorum.
- 10. All decisions except those specified below will be taken by a simple majority of votes.
- 11. A two/thirds majority decision of the Participants will be required:
 - To accept new Participants where objections are raised by one or more existing Participants;
 - To agree on Terms of Reference and Rules of Procedure.
 - To amend the Annexes to this MOU.

12. Between sessions of the VRENC Committee the VC President may also consult the Participant Members by correspondence. The voting procedure shall conform to that provided for in above paragraphs of this Article, the majority being calculated in this case on the basis of the total membership of the MBS VRENC.

Article IV MBS VRENC Coordinating HO

- 1. The MBS VRENC activities are executed by Sub-Committees, directed by a member HO acting as the Coordinating HO, for and on behalf of the Participants, according to this MOU and Annexes.
- 2. Italy will act as Coordinating HO.
- 3. The Coordinating HO shall operate the VRENC in accordance with the provisions of this MOU and with directives given by the VC.
- 4. The Coordinating HO is responsible for interaction with the President and VRENC Committee in order to implement established strategy and policy via daily management of VRENC activities. The detailed tasks of the Coordinating HO are contained in Annex 3.
- 5. The coordinating HO, will report to the VC at least twice a year.

Article V Training Resources

Training resources fulfill the primary scope of providing participating HOs with the personnel and general development support required to achieve national and regional ENC related objectives, according the principles of the VRENC. While such activities may eventually cover a wide variety of materials and issues, special attention will be paid to preparing HOs for the effective and efficient generation, quality assurance, maintenance, and distribution of their ENCs.

Article VI Financial Provisions

The VRENC is intentionally designed to require minimal economic resources in order to fulfill its primary objectives of coordination and harmonization.

The HO appointed as VRENC coordinating HO by the VC will insure full funding of all coordination activities.

Funding for additional activities (ie: infrastructure development, surveys, training, chart production, etc...), while not essential for the operation of the VRENC, will enhance and expedite its implementation and may be achieved via 3rd parties – international organizations and bodies who habitually make resources available for such developmental initiatives (ie: World Bank, EC, regions, etc...) – through the coordination of the Coordinating HO.

Article VII Liability

Each Participant will assume liability for the content of the ENCs and ENC updates provided by that Participant through the MBS VRENC.

Article VIII Claims from Third Parties

The Participants will promptly inform each other of any developments, claims or other important issues concerning this MOU and the execution of it.

Article IX Accession to the MOU

- 1. Should a non-Participant apply to join the MOU, the President of the VC will forward such application to the Participants, giving them no less than three (3) months to respond. If no objections are raised, the President of the VC will make the necessary MOUs for the new Participant to join the MOU.
- 2. If one of the existing Participants raises objections, the matter will be referred to the next meeting of the VC for deliberations and decision.

Article X Execution of this MOU

- 1. This MOU is written in English The original signed copy will be deposited with the IHB.
- 2. This MOU consists of the Glossary, Preamble, Provisions, and Annexes.
- 3. Fulfilling the provisions of the MOU is subject to national laws and regulations.
- 4. If a Participant becomes unable to fulfil the provisions of the MOU, it will promptly notify the other Participants.

Article XI Amendment

- 1. Any amendments to this MOU must be in writing and signed by all Participants.
- 2. The Annexes can be amended by the VC.

Article XII Settlement of Disputes

- 1. Any disputes regarding the interpretation and implementation of this MOU will be resolved only by consultation among the Participants.
- 2. If consultation does not result in a solution, the matter will be referred to the VC for deliberations and decision.

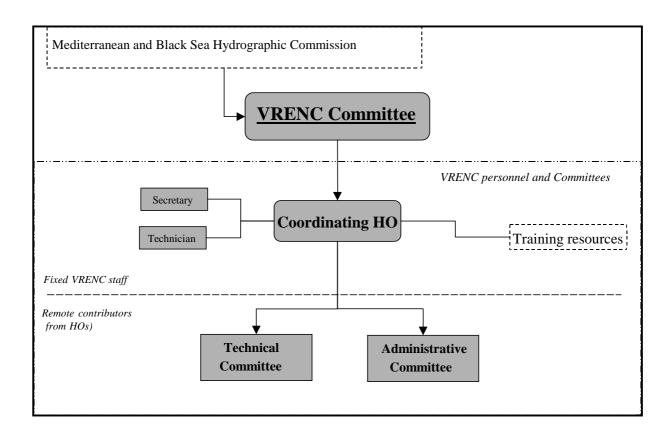
Article XIII Withdrawal and Termination

- 1. In the event that a Participant finds it necessary to withdraw from the MOU, the following procedure will apply:
 - The withdrawing Participant must consult with the other Participants about the reasons for and consequences of the withdrawal and the possibility of preventing it, before it makes a formal notice of withdrawal.
 - The formal notice of withdrawal must be given in writing to all other Participants,.
 - The withdrawing Participant will meet in full his commitments up to the effective date of withdrawal.
- 2. In the event that the Coordinating HO finds it necessary to withdraw from the charge the following procedure will apply:
 - The withdrawing coordinating HO must consult with the VRENC Committee about the reasons for and consequences of the withdrawal and the possibility of preventing it, before it makes a formal notice of withdrawal.
 - The formal notice of withdrawal must be given in writing to all other participanting HOs one year in advance.
 - The withdrawing coordinating HO must consult with the VRENC Committee in order to appoints responsabilty for VRENC coordination to a new selected participating HO, within the effective date of withdrawal.
- 3. The Participants will jointly decide on the arrangements necessary to effect the dissolution of the activities covered by the MOU.

Article XIV Effective date and Signature

The MOU will become effective for every new Participant upon signature. Signature is given on a separate "Record of Accession", contained in Annex 5.

ANNEX 1 VRENC ORGANIZATION



The Technical Committee (TC)

Scope – the TC oversees all technical issues related to the VRENC, and especially those that involve the harmonization of data across the region, the quality of data utilized in ENCs, the actual technologies employed to synchronize participating States and eventually private industry. The final objective is to produce and maintain a series of policy documents, which define the technical aspects of acquisition, maintenance and quality of data sets, as well as harmonization issues within the region.

Primary activities of the TC include:

Survey and Data Source Quality

Dedicated to determining a Mediterranean strategy whereby source data and final ENC data may be considered suitable for electronic navigation, as well as harmonization in the assignment of data quality attributes, etc...

Objective(s): Generate a harmonized policies for determining and assigning data quality attributes set for each ENC or portion of ENC and informing users regarding the appropriate application of ENC data for navigation purposes.

Data Production

Dedicated to the specifications and conventions applied by participating States VRENCS in the course of S-57 ENC production.

Objective(s): Generate a harmonized Product Specification to be applied by all member States in their generation of ENC data.

Data Set Harmonization

Dedicated to coordinating data set extensions and limits between conterminous nations in order to ensure the supply of mutually exclusive ENCs over the region as per S-57/3 requirements.

Objective(s): Generate the model for and assist in the implementation of technical accords for data coverage responsibilities between adjacent member States, and with neighboring States / other RENCS, based on the current MEDINCHART accord.

Database Linking

Dedicated to the technologies and habits for linking ENC databases between VRENC HOs in order to achieve a virtual regional database of ENCs and updates. This virtual regional database will serve as the basis for data exchange between HOs/RENCs/distributors.

Objective(s): Generate technical specifications and exchange procedures to be applied by all member states in the implementation of their ENC and update databases.

The Administrative Committee (AC)

Scope - the AC oversees all policy and administrative issues related to the VRENC, and especially those that involve the division and dissemination of ENC data and eventual relationships between participating States and the private sector. The AC is to produce and maintain model policies and contracts for the division and distribution of ENC data, as well as directly support member States in the adaptation and implementation of these.

Primary activities of the AC include:

Inter-HO Relations

Dedicated to establishing and maintaining harmonized policies for the functional interaction between HOs in the region who have data in the same ENC cell(s), and who will share distribution responsibilities, while ensuring the flow of royalty revenue back to the "owners" of data (in proportion to the amount in a given cell).

Objective(s): The generation of a model data exchange and distribution scheme to be utilized between member states in their division and distribution of ENC data and revenue sharing.

Data Distribution Policies

Dedicated to coordinating harmonized policies amongst participating states for the most effective and capillary dissemination of ENC data and updates.

Objective(s): A policy document which establishes the policies and guidelines that member States agree to adhere to with regard to data availability and distribution.

Private Industry Relations

Dedicated to establishing and maintaining harmonized policies for the functional interaction with private industry, especially as regards the dissemination of ENC data and the flow of royalty revenue back to participating States.

Objective(s): The generation of a model distribution contract to be utilized by all member States in their distribution of ENC data through private sector or other channels.

ANNEX 2 TERMS OF REFERENCE FOR THE VRENC COMMITTEE OF THE MBS VRENC

VRENC Committee of the MBS VRENC

The MBS VRENC is constituted by the MOU on Co-operation within the MBS VRENC, hereafter called "the MOU", and its Participants. The VRENC Committee (VC) is part of the organisation of the MBS VRENC. The purpose of the VC is to supervise the activities of the MBS VRENC, which are executed by the VRENC Coordinating HO, in accordance with the provisions of the MOU.

Tasks

The VC shall:

- Appoint a President, an Hydrographer, from one of its participating HOs,
- Identify appropriate training resources within the region.
- Provide assistance, advice and guidance to the VRENC Coordinating HO on the development and operation of the MBS VRENC to ensure it meets its objectives;
- Define the Participants common objectives for the MBS VRENC and organise their implementation;
- Administer and monitor the performance of the MOU;
- Define and keep up-to-date its Terms of Reference and establish Rules of Procedure, as necessary to satisfy its purpose;
- Establish and disband any subordinate bodies as deemed necessary to accomplish specific tasks or to carry out specific functions;
- Define and keep up-to-date the Terms of Reference and Rules of Procedure for any subordinate body in conjuction with the VRENC Coordinating HO;
- Develop and decide on any amendments to the MOU according to Article XI of the MOU;
- Approve a commercial and distribution strategies and related guidelines for the MBS VRENC;
- Consider any query and suggestion arising from the implementation of the MOU;
- Monitor and assess the experiences accruing from operating the MBS VRENC and employing the WEND Principles as well as other IHO Standards and Regulations, and suggest any improvements to IHO;
- Decide on any other issues left to the VC in the MOU.

The VC President shall:

- Chair the VRENC Committee.
- Serve as the primary MBSHC representative to the VRENC and so generally monitor all VRENC activities.
- Support the coordination resources in the implementation of VRENC policy as well as in any other strategic decision making and or initiatives.

• Represent the VRENC in formal occasions and at international meetings, promoting its philosophies and activities.

VRENC Committee Meetings

The VC will meet at least once a year (locations and dates to be arranged). Details of how to invite and how to conduct the meetings are to be developed in the Rules of Procedure.

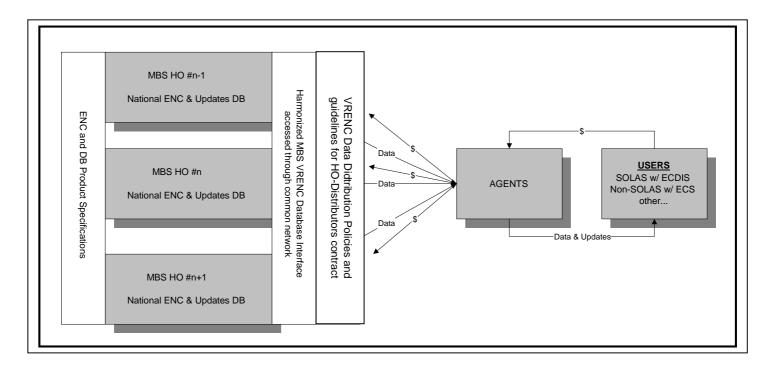
Validity of the Terms of Reference

These Terms of Reference will remain valid until amended by the VC.

ANNEX 3 RESPONSIBILITIES OF VRENC COORDINATING HO

- 1. VRENC Coordination will be directed by a participating HO acting as the VRENC Coordinating HO, which may utilize both internal and external resources to fulfill its responsibilities.
- 2. The VRENC Coordinating HO will...
 - Implement VRENC strategies and manage activities based on MBSVRENC Committee policy.
 - Report directly to the MBSVRENC Committee on all VRENC issues.
 - Represent the VRENC in international technical meetings,
 - Ensure that member States adhere to the principles of the VRENC and negotiate/mediate as necessary where such may not be the case.
 - Consult for member states on ENC and VRENC related development issues, helping to establish cooperative development programs where needed between member States and/or the VRENC itself.
 - Actively chair VRENC sub-committees and closely coordinate the contributions of remote members, ensuring the timely achievement of established objectives.
 - Synchronize activities and development with VRENC training resources.
 - Plan meetings and workshops as part of regular VRENC development activities.

ANNEX 4
VRENC GENERAL DISTRIBUTION FLOW



The Virtual RENC must be as remote as possible and maintain an agile structure centered on the technical, rather than the commercial aspects in order of acting as a catalyst for the creation and distribution of a comprehensive coverage of ENC data sets of the Mediterranean and Black Sea.

The VRENC is defined "Virtual" because it is not a physical entity with extensive facilities and staff. The basic principles of the VRENC distribution flow are outlined below:

The Virtual RENC will:

- take responsibility for harmonizing and defining the conterminous national data-sets of the region;
- take responsibility for harmonizing the ENC marketing policy of the countries of the region;
- assist the participant countries with the technology and the resources required to create and maintain the ENCs and the linked database of the region.
- support participant HOs and the private sector in pursuing the most effective and efficient means for functional ENC data distribution.

The Virtual RENC will NOT:

- become directly involved in the distribution of the ENCs to service providers or in its actual management of the data sets;
- become involved in the financial aspects, with its accounting burden, of the sales of data and licensing other than in an advisory position;
- Take over HO's national ENC production and managment.

ANNEX 5 RECORD OF ACCESSION

The following HOs have joined the Co-operation MOU for the MBS VRENC:

Name	
Date of Accession	Signature
Name of signatory	
Name	
Date of Accession	Signature
Name of signatory	
Name	
Date of Accession	Signature
Name of signatory	

ANNEX 6 RECORD OF AMENDMENTS