5.2 Information Systems and Services (ISS), including implications of the WIS and difficulties of migration to the TDCF

5.2.1 The meeting noted with appreciation the report of Mr Ichijo, the Coordinator of the Subgroup on Regional Aspects of the Global Telecommunication Systems and Data Management, of the outcome of the Implementation Co-ordination Meeting on the GTS in Region II, which was held in Khabarovsk from 10 to 12 September 2007. The main deliberations of the ICM and recommendations are given below. The RA-II-WG-PIW endorsed those recommendations.

Implementation plans for the further development of the RMTN
5.2.2 Improvement of the RMTN should be continued in compliance with the following implementation strategies: (**Recommendation 5.2.2**)
• Acceleration of TCP/IP migration as a first priority;
• Selecting an appropriate network service with a possible framework such as bilateral and multilateral collaboration schemes;
• Seeking possibility to use cost-effective network services such as Frame Relay and IP-VPN (Virtual Private Network) with MPLS (Multi Protocol Label Switching);
• Actual data communication speed more than 9.6kbps (preferably over 64kbps) to meet regional WWW requirements:
• Use of the Internet for a GTS circuit as the very end solution;
• Introducing VPN techniques to Internet-based GTS circuits for secure data communication.

5.2.3 All RTHs should keep the benefits of a tight technical coordination with their associated NMCs for the implementation, operation and further improvement of data communication techniques and procedures for the GTS, including sharing experience and advice between the data-communication experts of the RTH and of the NMCs (**Recommendation 5.2.3**).

5.2.4 Highest priority should be given to the implementation of efficient GTS links with RTH Tehran, especially RTH Jeddah – RTH Tehran and RTH Tehran – RTH New Delhi regional circuits (**Recommendation 5.2.4**).

5.2.5 The current Regional plan includes three Regional GTS circuits for the connection of NMC Kabul and two for NMC Baghdad that are not implemented. With a view to focusing efforts in the reconstruction process, only one single GTS circuit linking each NMC to its associated RTH should be retained in the plan (**Recommendation 5.2.5**).

5.2.6 RTH New Delhi should continue to make efforts so that the NMC Thimpu (Bhutan) is not isolated from the GTS (**Recommendation 5.2.6**).

5.2.7 Considering an increasing role of the Internet for the exchange, access to and delivery of a wide range of data and products in complement to the GTS, and also enabling the access to emerging WIS services (i.e. servers and portals), all NMCs are urged to implement the required facilities for accessing the Internet, including for establishing VPN connections with other WWW centres, in particular RTHs (**Recommendation 5.2.7**).

5.2.8 NMHSs are urged to take benefit of all the guidance material, which is available on the WMO Web server, when implementing their Information and communication systems and services. In this regard, development of interactive services for training and “online help desk” functions would be extremely valuable for many NMHSs.

5.2.9 Detailed GTS routeing plan for Tsunami Watch Information (TWI) should be regularly

reviewed and made available to all centres concerned, including on the WMO Web WWW pages. To confirm the routeing plan, all RTHs should participate in operational tests of the distribution of TWI over the GTS with their associated NMCs (**Recommendation 5.2.9**).

WMO Information System (WIS) including Integrated Global Data Dissemination Service (IGDDS)
5.2.10 NMHSs should participate in the WIS VPN Pilot Project in Regions II and V as a very effective capacity building initiative, and WMO should, as far as possible, provide assistance for their participation (**Recommendation 5.2.10**).

5.2.11 RA-II-WG-PIW agreed that Mr Ichijo would serve as an ad hoc rapporteur to assist the Working Group in specifying the regional requirements for IGDDS based on the standard spacebased data and products inventory. The requirements shall then be submitted to the respective operators of IGDDS infrastructure components for inclusion in the dissemination programmes (**Recommendation 5.2.11**).

Data Management issues
5.2.12 For progressive implementation of the Integrated WWW monitoring (IWM) in the Region, the following plan should be coordinated: (**Recommendation 5.2.12**)
- RTH Tokyo will initiate the implementation of IWM in early 2008 as a pilot leading RTH, in coordination with its associated NMCs;
- RTH Tokyo will share the experience gained with other RTHs in the Region, with a view to facilitating further IWM implementation.

5.2.13 NMHSs which have not nominated national focal points on codes and data representation matters in the Region should complete the nomination as soon as possible as a first step of migration to Table Driven Code Forms (TDCFs), (**Recommendation 5.2.13**).

5.2.14 The RA-II-WG-PIW, following the proposal of the Coordinator of the Subgroup on the Regional Aspects of the GTS and DM approved the revised TOR of the Subgroup (see Annex 7), (**Recommendation 5.2.14**).

5.2.15 The RA-II-WG-PIW noted that the Sub-group has a wide range of tasks from telecommunication to data management, such as GTS, Codes, WIS, migration to TDCFs, each of which needs different kinds of knowledge and techniques. Actually, it is too hard to address those tasks by one person, unless the Sub-group meets frequently and contributions from sub-group members are obtained as appropriate. Therefore, it is proposed to change the composition of the subgroup and to rename it as “Subgroup on Regional Aspects of Information Systems and Services (ISS)”. The Subgroup on ISS should be composed of two coordinators (**Recommendation 5.2.15**).

Recommendation 5.2.2
Improvement of the RMTN should be continued in compliance with the following implementation strategies:
• Acceleration of TCP/IP migration as a first priority;
• Selecting an appropriate network service with a possible framework such as bilateral and multilateral collaboration schemes;
• Seeking possibility to use cost-effective network services such as Frame Relay and IP-VPN (Virtual Private Network) with MPLS (Multi Protocol Label Switching);
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• Use of the Internet for a GTS circuit as the very end solution;
• Introducing VPN techniques to Internet-based GTS circuits for secure data communication.

Recommendation 5.2.3
All RTHs in the Region should keep the benefits of a tight technical coordination with their associated NMCs for the implementation, operation and further improvement of data communication techniques and procedures for the GTS, including sharing experience and advice between the datacommunication experts of the RTH and of the NMCs.
Highest priority should be given to the implementation of efficient GTS links with RTH Tehran, especially RTH Jeddah – RTH Tehran and RTH Tehran – RTH New Delhi regional circuits.

Recommendation 5.2.5
The current Regional plan includes three Regional GTS circuits for the connection of NMC Kabul and two for NMC Baghdad that are not implemented. With a view to focusing efforts in the reconstruction process, only one single GTS circuit linking each NMC to its associated RTH should be retained in the plan.

Recommendation 5.2.6
RTH New Delhi should continue to make efforts so that the NMC Thimpu (Bhutan) is not isolated from the GTS.

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Considering an increasing role of the Internet for the exchange, access to and delivery of a wide range of data and products in complement to the GTS, and also enabling the access to emerging WIS services (i.e. servers and portals), all NMCs are urged to implement the required facilities for accessing the Internet, including for establishing VPN connections with other WWW centres, in particular RTHs.

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- RTH Tokyo will initiate the implementation of IWM in early 2008 as a pilot leading RTH, in coordination with its associated NMCs;
- RTH Tokyo will share the experience gained with other RTHs in the Region, with a view to facilitating further IWM implementation.

Recommendation 5.2.13
NMHSs which have not nominated national focal points on codes and data representation matters in the Region should complete the nomination as soon as possible as a first step of migration to Table Driven Code Forms.

Recommendation 5.2.14
The RA-II-WG-PIW agreed on the revised Terms of Reference of the Subgroup on the Regional Aspects of the GTS and DM (see Annex 7).

Recommendation 5.2.15
The RA-II-WG-PIW proposed to change the composition and the name of the Subgroup on the Regional Aspects of the GTS and DM and to rename it as “Subgroup on Regional Aspects of Information Systems and Services (ISS)”. The Subgroup on ISS should be composed of two coordinators.

TERMS OF REFERENCE

Subgroup on the Regional Aspects of the GTS and DM

RA-II-WG-PIW-5 proposed to rename the Subgroup to:
Subgroup on Regional Aspects of Information Systems and Services (ISS)

(i) To keep under review the organizational, technical and procedural aspects of the Global Telecommunication System (GTS) in the Region;

(ii) To keep under review the status of implementation and operation of the Regional Meteorological Telecommunication Network (RMTN), including in particular routing arrangements for the exchange of observational data and processed information within the Region and with other Regions;

(iii) To keep under review both real-time and non-real-time WWW monitoring activities pertaining to the GTS in the Region;

(iv) To keep abreast of developments in telecommunication techniques, procedures and equipment, including in particular satellite-based telecommunication services, and to study their applicability, as appropriate, to the RMTN;

(v) To formulate recommendations for the further development and upgrading of the RMTN;

(vi) To formulate recommendations for the coordination of the implementation of telecommunication facilities and techniques;

(vii) To promote regional contributions to implementation of the WMO Information System (WIS);

(viii) To support the regional activity for the WIS VPN Pilot Project in Regions II and V including promoting further participation of NMHSs in the Region;

(ix) To monitor the requirements for the IGDDS, to study and keep informed of the regional availability of Integrated Global Data Dissemination Service (IGDDS);

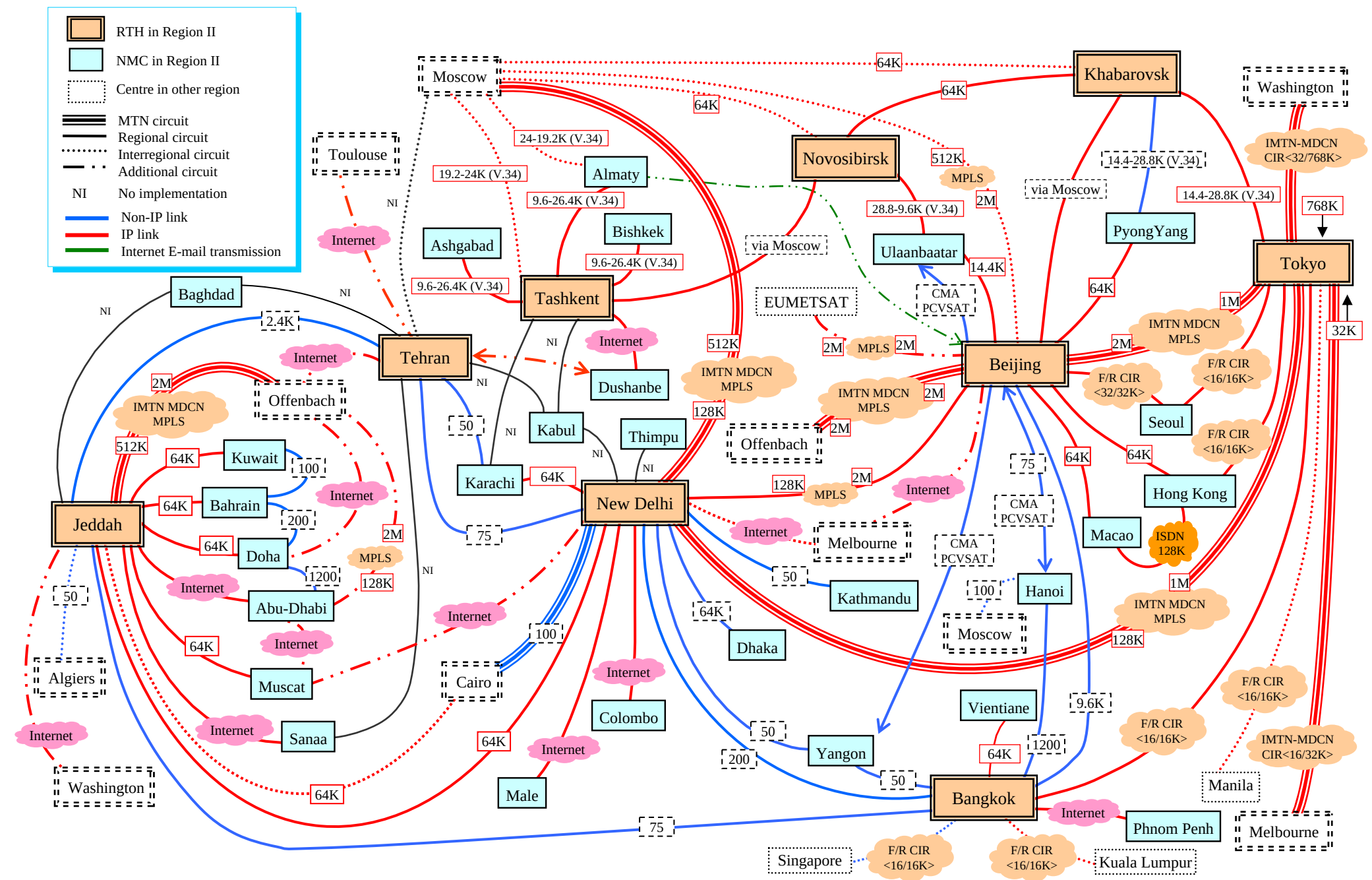
(x) To keep under review data representation matters, including migration to Table Driven Code Forms (TDCFs) and regional codes, and make recommendations;

(xi) To keep under review data and product selection and presentation to recipients' National Meteorological Centres (NMCs);

(xii) To review procedures for the reception of WWW data and products in case of major outages at key facilities;

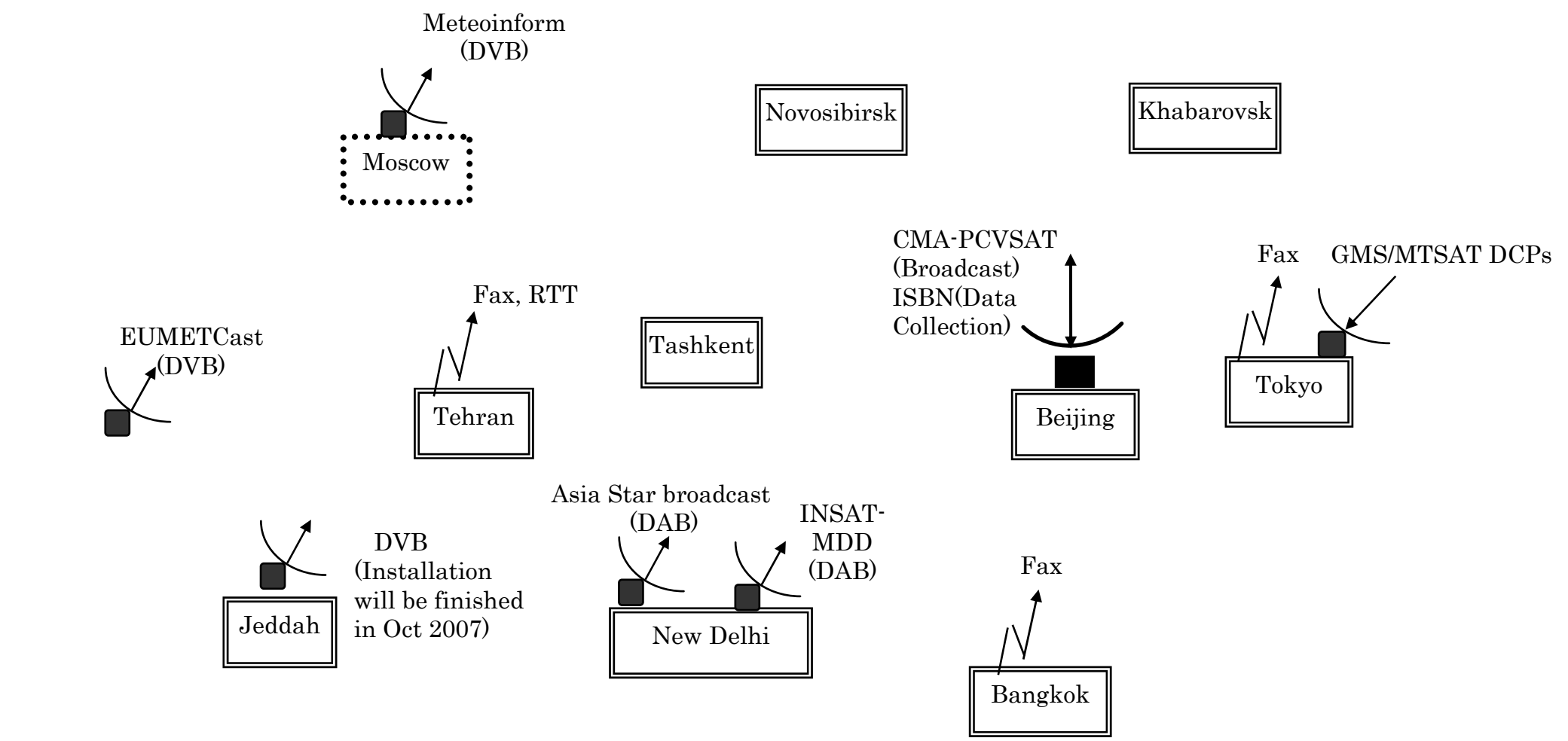
(xiii) To advise and report to the chairperson of the Working Group on all matters concerning the regional aspects of the GTS, WIS and data management in the Region;

(xiv) To represent the Region on the CBS Implementation Coordination Team on Information Systems and Services.



Regional Meteorological Telecommunication Network for Region II (Asia)

Current status as of 24 August 2007



Members equipped with CMA-PCVSAT receivers: Bangladesh, Democratic People's Republic of Korea, Mongolia, Myanmar and Vietnam.

Members equipped with Meteoinform-receivers: Kazakhstan, Kyrgyz, Tajikistan

Members equipped with INSAT-MDD/VSAT receivers: Bangladesh, Maldives and Sri Lanka

Members equipped with EUMETCast (incl. MDD) receivers: Oman (C and Ku bands), Uzbekistan

Multipoint telecommunication systems in Region II