

RELATÓRIO DE VIAGEM

Assunto : ICOLD 78rd - REUNIÃO ANUAL DAS COMISSÕES TÉCNICAS

Referência : Comissão de Registro e Documentação de Barragens – WRDD – Reunião no dia 24/05/10 no período de 9:00 as 14:30 – no centro de convenções de Hanoi

Participante : SERGIO CORRÊA PIMENTA

Data : Dia 24/05/2010

Membros do Comitê (ou substitutos) presentes na reunião:

1. Mr. Werner H. Floegl – Chairman – Austria;
2. Mr. Patrick Le Delliou –Vice-Chairman – França;
3. Mr. Minoru Sayama – Japão;
4. Mr. José J. Rocha Afonso – Portugal;
5. Mr. Sérgio Corrêa Pimenta – Brasil;
6. Mr. L. Satrapa – Republica Tcheca
7. Mr Majid Sayyari – Irã;
8. Mr. Konstantinos Anastaspoulos – Grecia
9. Mr. A. Wang – China (representado por substituta);
10. Miguel Sória –Ouvinte – Itaipu/Brasil
11. Claudio Osako- Ouvinte - Itaipu/Brasil

Membros do Comitê ausentes na reunião:

1. Mr. G. N. Mathur – India;
2. Mrs. Angélica Catalano – Itália;
3. Mr. José Jaureguizar de Cea – Espanha;
4. Mr. Y. Jiao – China;
5. Mr. Woogu Kim – Coréia do Sul
6. Mr. Georgy I. Tikhonov – Tajikistan
7. Mr. Christian Heitefuss – Alemanha;
8. Mrs. Henriette Anderson – Africa do Sul;
9. Mrs. Rebecca Reagan – EUA;

a) Assuntos Tratados

- Aprovação da agenda de 2010 discutida no início da reunião;
- Leitura do Relatório da Reunião de Brasília, Brasil;
- História do World Register of Dams;

1. Introduction

The World Register of Dams (WRD) is a fizzy fountain of information. The update 2006 which will be finished and edited in early 2011 includes more than 40.000 (¹) dams with heights over 15 m. For each dam more than 30 statistical informations are given, amongst them geographical data, data of the dam, the spillway, the reservoir, the responsables as well as important environmental data. The WRD is a magnificent source of information for design, construction, scientific work and statistical evaluations, also unfortunately it is something like an "untapped treasure" (ICOLD: Dams Newsletter, Mai 2004), not promoted enough and therefore not utilized enough by the dam engineering community and other interested groups. Nevertheless it is worth to look back to the first attempts of creating a world wide register of large dams corresponding to the ICOLD criteria of such dams.

2. First Edition

At the 25th Executive Meeting of the International Commission on Large Dams, held in New York in September 1958, it was decided to prepare a detailed register of all large dams which were storage dams with a height of 15 m or 50 feet from deepest foundation level to crest, according to the definition adopted by ICOLD in 1932 [1].

In 1959 a special committee on the world register of dams was appointed under the chairmanship of J. Guthrie Brown, Vice President of ICOLD, Great Britain.

Other members of the committee of 1959 were

- T. W. Mermel, USA
- D. José Toran Pelaez, Spain
- Niilo Saarivirta, Finland
- Yasushi Sugaya, Japan

It was realized that the value of the world register depended on having records of the greatest possible number of dams in each country, rather than a much smaller list of very high dams [1].

The first edition was published in early 1964 during the presidency of Claudio Marcello. It contained 9 315 dams either completed on the 31 December 1962 or under

construction or projected at the date. 17 informations were foreseen for each dam, both in metric and Anglo American units of measurement. The data collection was carried out in 48 member countries of ICOLD at that time.

The decision to adopt a loose-leaf-system of four volumes (fig. 1) was taken so as to ensure that the record of dams could be kept up-to-date by including in the future further loose-leaf-pages of additional dams completed, under construction or in project. Any new countries that become members of ICOLD should be required to furnish particulars of their large dams so as to include this information in the volumes of the WRD.

The first update of the WRD which is included in the volumes of 1964 was by the end of 1965, when 12 more countries had become members of ICOLD and approximately 1.350 new dams were included in the update.

In the second update 1968 large dams of 44 non-member-countries were included.

It may be mentioned that the chairman Guthrie Brown became president of ICOLD in 1964 and T. W. Mermel took over chairmanship in the same year. He stayed chairman of the committee until 1976 and was responsible for the updates 1965, 1968 and 1976 as well as for the second edition 1973.

It also may be mentioned that the Secretary Generals and C.O. were always involved very much in the achievements of the registers.

The first edition of WRD led to a modification of the ICOLD constitution providing "that each National Committee undertake to compile and submit to the Central Office as soon as possible after admission to membership a register of large dams in its country" to add it to the WRD [2].

3. Second Edition 1973

The committee chaired by T. W. Mermel, USA, prepared the second edition of the register of dams by the end of 1971 [2]. It was possible to collect data in 66 member countries and 44 non-member countries. A book of 1.000 pages was published in 1973. The format of the book was changed (fig. 2). The metric system only was adopted.

To facilitate responses and preparations some data of secondary interest were omitted, informations about type of dam, spillway type, the maximum discharge capacity of spillways were edited. The number of informations per dam decreased to 16.

In the first Update 1976 a table statistics for each member country was created, in the second updating (1979) classified tables were added which gave lists of dams in order in presidency on account of their height, type, volume or other interesting figures [3].

It may be mentioned that the second edition of WRD was published under the presidency of José Toran Pelaez who had been a member of the first committee on WRD.

4. Third Edition 1984

16 committee members, chaired by J. G. du Plessis, cared for data collection in 74 member countries and obtained further informations from 59 non member countries by

surface area of the reservoir at full supply level. The number of informations rose to 18.

The third edition contains informations about 36.047 large dams in the world (in operation: 34.798 in member countries, 348 in non-member-countries, 901 under construction)

although it is mentioned that international dams may appear twice (in each country) [4].

For the first time each member of the committee was assigned a group of countries connected in some way with his own to promote accuracy and reduced work load on C. O. The first electronical national registers were created especially in countries with a large number of dams.

The first Update 1988 included all dams completed during the years 1983-1986 and dams under construction at the end of 1986. 37.589 dams are recorded (in operation: 36.563, under construction: 1.026).

In the following years several attempts were made to computerize the WRD. Finally a new computer programme was developed by C. O. in close interchange with the chairman

F. Teixeira Direito and Vice chairman D. Bister of the committee on the WRD (1992-1998).

The final result was achieved in 1996 [5].

5. Fourth Edition 1998

The 15 committee members, chaired by F. Teixeira Direito, collected data of operational dams at the end of 1996 electronically. The full register was prepared on a disc [5]. The "print section" of the new WRD 98 (fig. 3) was seen basically as a summary for those in a hurry [6].

As a new information the purpose of dam was included in data collection. The Edition 98 contained 25.410 dams although member countries reported 41.413 operational dams in 1996 [5].

For the first update of the fourth edition which was published in 2003 and contains dam data until the end of 2001 five new fields were introduced to have some reliable data on benefits and concerns on large dams:

- electric installed capacity
- mean annual electric energy produced
- irrigated area
- volume of water stored for flood protection
- number of people affected by resettlement

15 committee members, chaired by D. Bister, tried to get dam information data from 120 countries (tab. 1). Due to complementary data given by USA (+ 2.000), China

The second update of the fourth edition will be put on the web site and be published in 2011. As China has reported in the register also dams between 15 and 30 m the number of dams contained in the register will increase by more than 10.000 dams. For the Update 2010 data collection has been extended to 176 countries or almost all countries of the world except countries which were not supposed to have dams, like Vatican State, San Marino, Monaco or Vanuatu etc. Final numbers and figures will be given after evaluation of the data collection on ICOLD web site, in the printed version and on the attached CD.

6. Conclusion

The committee on WRDD 2004-2010 is very happy to have almost completed the – for this time – very demanding data collection due to reduced support in some national committees and the high number of investigations in non-member countries where it proved hopeless in many cases even to find a contact person.

For the next new edition of WRD which should be published in 2014 or 2015, a new access to data collection has to be found and optimizations of the WRD have to be done, such as

- to improve the entrance to the WRD on web site
- to improve the handling and speed of the web interface
- to change data base from works to excel for easier handling
- to reduce access fee or give even free access to some data or all data of the register
- to care for free download possibilities
- to care for the possibility of world wide evaluations and river basin – wide evaluation
- to promote the World Register of Dams (fig. 4) by all means to keep the fizzy fountain gushing

7. References

- [1] J. G. Brown: Introduction to the 1st Edition of WRD, Paris 1964
- [2] T. W. Mermel: Introduction to the 2nd Edition of WRD, Paris 1973
- J. G. du Plessis: Introduction and Acknowledgements to the 3rd Edition of WRD, Paris 1984
- [4] J. Cotillon: Foreword to the 3rd Edition of WRD, Paris 1984
- F. Teixeira Direito: Introduction and Acknowledgements to the 4th Edition of WRD, Paris 1998
- [6] J. Lecornu, Y. Le May: Comments to the 4th edition of WRD, Paris 1998
- D. Bister: Introduction and Acknowledgments to the Update 2003 of WRD, Paris 2003

Fig. 1: Decision to adopt a loose-leaf-system of four volumes

Fig. 2: Change of Format

Fig. 3: Print section of the new WRD 98

Fig. 4: Promotion of the WRD

Tab. 1: Editions and Updates of WRD

- Discussão do Relatório de Progresso dos Membros do Comitê de Registro e Documentação de Barragens

- √ Foram discutidos entre os presentes a situação atual dos Países cujos bancos de dados foram levantados e concluídos. Estão sendo avaliados 90 países membros do ICOLD e 86 não membros perfazendo um total de 176 países. Até o presente momento já foram concluídos 51% dos dados dos 176 países cujos dados foram solicitados, sendo 68% de países membros do ICOLD e 17% de países não membros do ICOLD.
- √ Dados coletados terminados – 90 países sendo 62 membros e 28 não membros;
- √ Dados em progresso – 24 países sendo 16 membros e 8 não membros;
- √ Dados em progresso com dúvidas – 11 países sendo 3 membros e 8 não membros;
- √ Sem resposta – 42 países sendo 11 membros do ICOLD e 31 não membros;
- √ Sem informação – 9 países sendo todos não membros

O Brasil forneceu dados dos seguintes países:

- Brasil, Argentina, Uruguai, Paraguai, Bolívia e Panamá (solicitado posteriormente em São Petersburgo), não tendo conseguido informações de Antigua e Barbuda, Belize e Nicarágua. Estamos tentando conseguir informações sobre o Chile solicitado adicionalmente em São Petersburgo e de Guiana solicitada nesta reunião de Brasília. Quanto a Bolívia verificou-se nesta reunião que a Bolívia não atualizou o seu banco de barragens para não pagar valores altos ao ICOLD.

- √ Data final para a entrega dos dados ao ICOLD – agosto de 2010, para todas as barragens construídas ou em início de construção até o final de 2006;
- √ O WRD vai enviar propaganda (folders) para as instituições de engenharia e para os comitês nacionais.

- Nova edição do WRD - World Register of Dams

- √ A atualização do WRD será feita considerando os novos barramentos no período entre 2001 e 2008, para finalização e entrega do novo WRD ao ICOLD até o final de dezembro de 2010, tendo os países que enviar as informações ao chairman (Mr. Floegl) do grupo até o final de agosto de 2010. Serão considerados todos os barramentos que entraram em operação neste período, além de todos aqueles que tiveram a construção iniciada. Não serão considerados barramentos

- √ o modelo de apresentação destes dados será feito através de planilha em Excel que foram feitas pelos participantes em substituição as existentes em works;
 - √ Simplificar o software, os países vão entregar em excel, não mais em works.
 - √ Avisar ao chairman caso haja erros no banco de dados terminado;
 - √ Registrar somente barragens superiores a 15 m de altura ou com o volume maior que 3.000.000 m³ com altura variando entre 5 e 15 m.
 - √ Como proceder em relação ao WRD depois de finalizado esta etapa, continua o comitê ou não?
 - √ Resultados serão apresentados na próxima reunião na Suíça em 2011.
 - √ Será feito apenas em CD o próximo livro do WRD.
- Feedback from C.O.
 - √ Foi apresentado ao secretario geral e presidente do ICOLD as dificuldades do WRD para finalizar o livro a ser editado em 2010. A secretaria geral do ICOLD ficou de apoiar o WRD contratando um estagiário em Paris para apoio técnico.
 - Apresentação ao WRD dos novos membros a partir de 2011
 - √ O CBDB deverá enviar até agosto de 2010 o nome do membro do WRD que participará da nova gestão do WRD a partir de 2011.
 - √ Sugerimos colocar 2 nomes, sendo 1 titular e outro substituto (Claudio Osako, Itaipu/Brasil).

b) Despesas de Viagem

- Chegada em Hanoi - 21/05/10;
- Saída de Hanoi - 29/05/10;
- Custo da passagem de avião Fpolis/Hanoi/Fpolis= Parte em milhas até Londres e mais US\$ 2500,00 de Londres a Hanoi via Doha e Bangkok;
- Inscrição, Hotel, etc... = US\$ 2.315,30

Favor depositar o valor estipulado pelo CBDB da passagem mais a inscrição no Banco ITAU em nome de S. C. PIMENTA Agencia 0289, conta 58967-3, CNPJ 02.104.620/0001-04

Sem mais,

Atenciosamente,



Florianópolis, 14 de junho de 2010

Anexo (enviado pelo correio).

- 1) Cópia da passagem e recibo do pagamento ao comitê vietnamita

BUSINESS CLASS درجة رجال الأعمال
BOARDING PASS بطاقة الصعود للطائرة
اسم الراكب
NAME OF PASSENGER
PIMENTA/SERGIO

DOHA **DOH**
FQTV QR-406768955/PRIV
LONDON **LGW**

الشركة/الرحلة
CARRIER/FLIGHT
QR 75
الدرجة
CLASS
C
التاريخ
DATE
10 JUN 2013

البوابة
GATE
18
وقت الانطلاق
BOARDING TIME
0045
رقم المقعد
SEAT
03A
XXX
PCS CK.WT. UNCK.WT. SEQ.NO. PCS CK.WT. UNCK.WT.
0 0 0

DC ETKT 1575991330578-4

BUSINESS CLASS درجة رجال الأعمال
BOARDING PASS بطاقة الصعود للطائرة
اسم الراكب
NAME OF PASSENGER
PIMENTA/SERGIO

BANGKOK **BKK**
FQTV QR-406768955/PRIV
DOHA **DOH**

الشركة/الرحلة
CARRIER/FLIGHT
QR 611
الدرجة
CLASS
C
التاريخ
DATE
09 JUN 2013

البوابة
GATE
G2
وقت الانطلاق
BOARDING TIME
1935
رقم المقعد
SEAT
04A
XXX
PCS CK.WT. UNCK.WT. SEQ.NO. PCS CK.WT. UNCK.WT.
0 0 0

DC ETKT 1575991330578-3

BUSINESS CLASS درجة رجال الأعمال
BOARDING PASS بطاقة الصعود للطائرة
اسم الراكب
NAME OF PASSENGER
PIMENTA/SERGIO

LONDON **LHR**
DOHA **DOH**

الشركة/الرحلة
CARRIER/FLIGHT
QR 6
الدرجة
CLASS
C
التاريخ
DATE
16 MAY 2015

البوابة
GATE
34
وقت الانطلاق
BOARDING TIME
0950
رقم المقعد
SEAT
14A
XX
PCS CK.WT. UNCK.WT. SEQ.NO. PCS CK.WT. UNCK.WT.
2 33 0

M4 ETKT 1575991330578-1

BUSINESS CLASS درجة رجال الأعمال
BOARDING PASS بطاقة الصعود للطائرة
اسم الراكب
NAME OF PASSENGER
PIMENTA/SERGIO

DOHA **DOH**
BANGKOK **BKK**

الشركة/الرحلة
CARRIER/FLIGHT
QR 612
الدرجة
CLASS
C
التاريخ
DATE
16 MAY 2015

البوابة
GATE
2000
وقت الانطلاق
BOARDING TIME
04A
رقم المقعد
SEAT
XX
PCS CK.WT. UNCK.WT. SEQ.NO. PCS CK.WT. UNCK.WT.
2 33 0

M4 ETKT 1575991330578-2



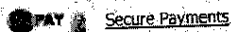
Invoice Reference: VNCO_201039165024
Created date: 09/04/10

Your invoice was paid successfully!

Merchant Name: VNGOLD AND VENUS
Merchant address: 4 Da Tuong Str., Hanoi, Vietnam
Tel: 84462916100 **Fax:** 84439447057
E-mail: 78icoldvn@venus-communications.com

Customer Information

Customer Name: SERGIO CORREA PIMENTA
Address: JORNALISTA ALIRIO BOSSLE NO. Country: Brazil
56/402 B, JOAO PAULO,
FLORIANOPOLIS, SC
Tel: **Fax:**
E-mail: sergio.pimenta@leme.com.br
Amount: **\$2.315,3**
Description:
Payment Method: Online payment via internet with Visa, MasterCard, American Express, JCB



Payments