

Minutes of the Seventeenth Meeting of the  
**EUROPEAN REGIONAL WORKING GROUP (ERWG)**  
 Tehran, Iran  
 17 October 2011: 09.00-12:30 hours

**Year of Establishment: 1995**

**Mandate:** The mission of ERWG is to promote awareness about critical ICID relevant water issues at all levels in Europe and to pay special attention to the environmentally sustainable water management in Europe.

**Members Present:** (1) Vice President Dr. Laszlo Hayde, Chairman (2010) (Hungary, 2005); (2) Vice President Hon. Prof. Dr. Peter Kovalenko, Vice-Chairman (2005) (Ukraine, 1999); (3) VPH Dr.- Ing. Eiko Lübbe (Germany, 2002) represented by Ir. Jano Anter (Germany); (4) Vice President Hon. Dr. Ricardo Segura (Spain, 1999); (5) Mr. Jaakko Sierla (Finland, 2001); (6) Mr. Mati Tonismae (Estonia, 2002); (7) Dr. Irina G. Pankova (Russia, 2007) represented by Ir. Yurii Ianko (Russia); (8) Dr. Sami Bouarfa (France 2010) represented by Ir. Bernard Vincent (France); and (9) Secretary General, ICID represented by Dr. Vijay K. Labhsetwar, Director, ICID Central Office.

**Member Honoraire:** President Honoraire Peter Lee (UK).

**Observer:** Dr. Irina Bondarik (Secretary for Russian Speaking Countries).

**Others:** (i) Prof. Klaus Röttcher (Germany), (ii) Ir. Vladimir Kundius (Russia), (iii) Ir. Valentina Kundius (Russia), (iv) Ir. Osmo Purhonen (Finland), (v) Ms. Sabine Walser (Germany), (vi) Mr. Olli-Matti Verta (Finland), (vii) Dr. Kaluvai Yella Reddy (India), (viii) Dr. Klaus-Dieter Vorlop (Germany); and (ix) Mr. Theo Augustin (Germany).

**Ex-Officio Members Present:** VPH Prof. Dr. Peter Kovalenko (Ukraine), Chairman, ERWG Work Team on Sustainable Irrigation Management.

**Website:** <<http://www.erwg.icidonline.org>>

**Item 1 : Confirmation of the minutes of the 16<sup>th</sup> and the Interim meetings of the Working Group**

No comments had been raised and therefore the minutes of the 16<sup>th</sup> meeting of the Working Group held on 12 October 2010 at Yogyakarta (Indonesia) were confirmed.

No comments had been raised, and therefore the minutes of the Interim Meeting of the Working Group held on 17 May 2011 at Groningen (The Netherlands) were confirmed.

**Item 2 : Review of membership of the Working Group**

VPH Brane Maticic (Slovenia), Mr. Pol Hakstege (The Netherlands), Prof. Joachim Quast (Germany) and Dr. Bouarfa (France) informed by e-mails that they will not be able to attend this meeting.

The ICID Central Office requested (26 May 2011) the British National Committee of ICID (ICID.UK) to send a fresh nomination of a professional for the membership of the European Regional Working Group (ERWG) for consideration. PH Peter S. Lee informed the meeting that he had been nominated by the UK National Committee as an ordinary member of ERWG. The meeting confirmed his membership.

Ms. Sabine Walser (Germany) was nominated by the German National Committee of ICID (GECID) to be young professional member in the ERWG. Ms Walser sent her CV for discussion. Rules and regulations of ICID allow to have a second member from one country if he or in this case she is a young professional. Ms. Sabine Walser had been accepted as a member by the meeting.

The National Committees of Belgium, Bulgaria, Poland and Slovak Republic became inactive in the past. The Central Office had also invited Albania, Belarus, Bosnia & Herzegovina and Moldova, for ICID membership. VP Laszlo Hayde (Germany) was in negotiation with Bulgaria and recently contacted Macedonia for their return to ICID. The Central Office may continue its efforts in bringing these countries into ICID's fold.

## **2.1 Election of New Secretary**

Since VP Laszlo Hayde had been elected as the Chairman of the ERWG during the 16<sup>th</sup> meeting of the European Regional Working Group (ERWG) held on 12 October 2010 in Yogyakarta, Indonesia and since he was the previous Secretary of the ERWG since 2005, new Secretary had to be elected.

Dr. Irina Bondarik (Russia) had been elected also during the 16<sup>th</sup> meeting of the European Regional Working Group (ERWG) held on 12 October 2010 in Yogyakarta, Indonesia, as a second Secretary of the WG, to take care of the Russian speaking countries. Since a Working Group normally has only one Secretary, it is proposed to include Dr. Bondarik as an Observer and assist the WG with Russian speaking countries. This would also comply with 52<sup>nd</sup> IEC (2001) decision of "*not more than one membership from one country should normally be maintained*". However, the member from Russia Ms. Irina Pankova was also a young professional.

Following the discussions in Yogyakarta, Central Office invited (26 May 2011) proposals / expression of interest from the representatives of the National Committees in the European Regional Working Group. The Finnish National Committee had nominated for young professional membership and for this position Mr. Olli-Matti Verta (Finland) in their letter dated on 28 June, 2011. He had been present in the Interim Meeting where he introduced himself, however the present 17<sup>th</sup> meeting of the European Regional Working Group (ERWG) in Tehran, Iran had to officially approve his nomination. CV of Mr. Olli-Matti Verta was made available during the meeting for consideration. Mr. Olli-Matti Verta (Finland) had been accepted as a member and also Secretary of the European Regional Working Group. Further, Mr. Olli-Matti Verta being a young professional, there was no conflict with any regulations or rules.

Before the formal approval of the nomination, the Chairman informed the members on the January-February, 2011 e-mail exchange between him and the Central Office on the rules and regulations related to the two secretary positions, on the questions of electing non member for position in the WG; the rule of 'one member from one country' and the question of whether a permanent observer could be elected to position in the WG. In their reply Central Office indicated that the second person from a certain country is allowed provided that he/she is a young professional. Also stated that "...you can allow a '*Permanent Observer*' to help the working group in whatever manner considered appropriate. It can be suitably acknowledged also. Perhaps this can be done without diluting the provision of by-laws."

## **Item 3 : Links with regional and trans-national organizations for co-operation**

The Chairman apprised the members on new developments / cooperation, especially with regard to European Water Association (EWA), the International Commission for Protection of the Rivers Rhine, Danube, and Odra. The ERWG network includes 7 National Water Management Associations (**Annex 1**). The Chairman invited members to strengthen these links further.

## **Item 4 : Dialogue on Water for Food and Environment**

It was agreed that the ICID-ERWG, Central and Eastern Europe Global Water Partnership (CEE-GWP) and World Wide Fund and Nature (WWF) will continue to co-operate with each other and share invitations for conferences organized by ICID like European Regional Conferences and International Drainage Workshops.

ERWG members continued the dialogue on the topic on WFD implementation through tools of the Common Agriculture Policy in the year 2007-2013. The new Directives could be accessed at the following website: <http://ec.europa.eu/environment/water/>

The Chairman encouraged the members to actively participate in this dialogue and give feedback to Chair with copy to Central Office.

## **Item 5 : European Work Team on Water Related Risk Analysis (EWTWRA)**

The idea of merging of Drought and Flood Work Teams under the frame of Risk Management was proposed (2007) by Dr. Vermes (Hungary). After detailed discussions on the proposed aims, the WG accepted the idea of merging

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European Work Team on Drought (EWTDRO) and European Work Team on Floods (EWTFFLO) to create a new Work Team under the name Work Team on Water Related Risk Analysis (EWTWRRRA). The WG deliberated on the new mandate of the Work Team during New Delhi (2009) and Yogyakarta (2010) meetings and agreed to consider the impacts of extreme events on agricultural production at situations of water scarcity and inundation and to develop risk mitigation strategies. Agreeing to the importance of the WT, Dr. Sandor Szalai (Hungary), President of HUCID agreed kindly to provide an initial work plan which had been distributed in the Yogyakarta (2010) meeting and was attached to the Agenda.

The Finnish National Committee had prepared their comments which had been discussed and will be circulated to the members soon. Due to the moderate activity in this topic and limited capacity to be mobilised, the reconsideration of the importance of this WT had been discussed. The importance of the topic was emphasized by Estonia and Spain NCs.

Mr. Peter Lee (UK) informed the meeting about the upcoming event on Water Security and suggested to take into consideration their conclusions in making a decision on the future of this WT.

The meeting decided to discuss the topic again in Adelaide 2012 meetings after the presentation of the Finish NC on a brief inventory about the ongoing activities in this area in the EU and receiving the outcomes of the UK event on Water Security.

The Chairman reminded the members to nominate members for membership of this new Work Team.

#### **Item 6 : European Work Team on Sustainable Irrigation Management (EWTSIM)**

The German National Committee of ICID (GECID) nominated Dipl. Ing-Agr. Sabine Walser (Germany) for the membership of European Work Team on Sustainable Irrigation Management (EWTSIM). With her acceptance to ERWG as mentioned above, her membership in the WT has become possible.

The document on "*Irrigation Sector Reform in Central and Eastern European Countries*", based on the project results (Phase I), has been published (2006) and distributed as a hard copy and CD-ROM. Vice President Hon. Prof. Peter Kovalenko (Ukraine) distributed a new proposal for the Phase-II of the project "*Irrigation Sector Reform in Central and Eastern European Countries*", prepared by the Ukrainian National Committee and President Hon. Bart Schultz (The Netherlands). Due to financial constraints, this could not be taken up and has been postponed.

VPH Kovalenko has contacted GTZ to explore funding opportunities. The new report (incorporating new irrigation technologies, water saving, efficiency, etc.) may serve as a "manual" for GTZ to raise awareness.

Prof. Kovalenko apprised the members on the importance of the topic. Although the continuation was not assured, yet the meeting decided to keep this topic on the agenda of the WG for next year.

#### **Item 7 : European Work Team on Drainage (EWTDR)**

The ICID Central Office was in contact (26 May 2011) with Vice President Hon. Dr. Georgi Georgievich Gulyuk (Russia), WT Chairman for the full list of other activities of the WT for consideration during the Tehran (2011) meeting. Response had not been received due to ongoing changes in the Russian NC. Ms. Irina Bondarik informed the meeting that she will send the feedback to Chair after discussing the matter within RuCID.

Due to the importance of drainage in Europe, the French and UK representatives felt that new and refreshing ideas towards a policy needed to be brought to fore.

The reformulation of this WT will be discussed in the Adelaide 2012 meeting.

#### **Item 8 : Conferences supported by ERWG**

- **Feedback from the 24<sup>th</sup> European Regional Conferences (ERC), Orléans, France**

Mr. Bernard Vincent (France) provided more details about the outcomes and informed that the proceedings and the presentations of the conference were available on the Conference website: <[http://www.groundwater-2011.net/program\\_and\\_proceedings](http://www.groundwater-2011.net/program_and_proceedings)>.

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- **Feedback from the 25<sup>th</sup> European Regional Conference of ICID, 2011, The Netherlands**

Ir. Bert Toussaint (The Netherlands) had circulated the outcomes of the conference to the members by e-mail. The papers and keynote presentations were available on the conference website: <http://www.icid2011.nl/>

- **11<sup>th</sup> International Drainage Workshop (IDW)**

The ICID's 11<sup>th</sup> International Drainage Workshop (IDW) will be hosted by the Egyptian National Committee of ICID (ENCID) during 23-27 September 2012 at Cairo, Egypt, with the support of the ICID Working Group on Drainage (WG-DRG). The main theme of the workshop is '*Agricultural Drainage Needs and Future Priorities*' under which six topics and 27 subtopics will be addressed. The first announcement and call for papers of the 11<sup>th</sup> IDW has been issued and widely circulated amongst ICID National Committees and International Organizations for dissemination amongst potential participants.

The 11<sup>th</sup> IDW will be organized under the guidance of VPH Prof. Dr. M.H. Amer, Chairman of ENCID (Email: [encid@link.com.eg](mailto:encid@link.com.eg)). Please access announcement of 11<sup>th</sup> IDW at <http://www.encid.org.eg/idw11> for more information.

- **12<sup>th</sup> International Drainage Workshop**

Dr. Irina G. Bondarik (Russia) made an inviting presentation on the preparations for the 12<sup>th</sup> International Drainage Workshop (IDW) to be held in June 2014 at St. Petersburg, Russia.

- **6th World Water Forum**

The 6th World Water Forum will be hosted by Europe and will take place in Marseille, from 12 to 17 March 2012. The Chairman apprised the members on the past related events and on the preparations.

Information about the Greater Europe Regional Process at: <http://world-water-forum-2012-europa.eu/spip.php?rubrique13>

The 12 Specific Europe Region Priority Targets (SERPT) at: <http://world-water-forum-2012-europa.eu/spip.php?rubrique15>

Several preparatory session events were organised. Agenda and more information on the Europe Region Process at: <http://world-water-forum-2012-europa.eu/spip.php?article79>

**Item 9 : ERWG Letter Editorial Board**

The National Committees in ERWG were invited to offer their proposals for the future work on the ERWG Letter. In absence of any proposal, the representative from UK raised the issue of merging the newsletter with the website of ERWG. The Chairman may invite proposals from European members for the future work on the ERWG Letter.

**Item 10 : Young Professional Fora**

The Young Professional Fora were successfully organized during the 24<sup>th</sup> and 25<sup>th</sup> ERCs in March and May 2011 at France and The Netherlands, respectively.

**Item 11 : Any other business**

- **Henri Tardieu Award**

The price was awarded to the best paper of the past year in the ICID Irrigation and Drainage Journal making it possible for the first author of the paper to attend and present the paper in the coming ICID meeting. The first price was already awarded to a young professional from Tunisia.

- **New Programme on Land Reclamation – RuCID**

Central Office received the information (8 February 2011) from Russian National Committee on Irrigation and Drainage (RUCID) that the RUCID would be intensifying its activities in ICID with the support of Ministry of

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Agriculture of Russian Federation. It was seen that they have to strengthen the new programme on land reclamation in the Russian Federation next year. We expected that Mrs. Elena Skrinnik, Hon'ble Minister of Agriculture of the Russian Federation may join the Russian delegation for the upcoming 21<sup>st</sup> Congress in Tehran and provide an excellent opportunity to meet with ICID management and Chair-persons of various National Committees.

The main objectives of the Russian programme were:

- arrangement of general conditions in effective functioning of agriculture at the expense of reconstruction and development of reclamation objects (reclaimed land and reclamation systems);
- significant crop yield increase due to integrated land improvement, the use of innovative agricultural technologies, high productive crop rotations, applying fertilizers and plant protection;
- environmentally safe use of land, water and other renewable natural resources in agricultural production, improvement of soil fertility to the optimum level in each particular area;
- forage production on reclaimed lands, to improve the growth rates of cattle, guaranteed provision of population with rice, vegetables, fruits and berries;
- security and reliability of hydraulic facilities; financial support to farmers growing agricultural produce on reclaimed lands.

These topics will be also presented and discussed in the IEC meeting on 23 October 2011 in Tehran where the minister will be represented by Prof. Sergey Goryachev, advisor to the minister for Foreign Affairs.

- **Change in structure and hosting of the Secretariat of GECID**

The members noted the changes in the GECID.

- **Change in structure and hosting of the Secretariat of NETHCID**

The members noted the changes in the NETHCID.

- **UK representative informed the meeting about changes in the UK National Committee**

The new ICID UK Chairman is Professor Bruce Lankford, professor of Water & Irrigation Policy, University of East Anglia. E-mail: b.lankford@vea.co.uk

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## EUROPEAN REGIONAL WORKING GROUP (ERWG)

### Profile

The European Regional Working Group (ERWG) of ICID was founded at the 46th IEC Meeting in Rome in September 1995, and is acting under the motto "Comprehensive land and water management in European river basins for the sustainable development of the rural landscape". The tasks of ERWG can be summarized as follows:

- Knowledge transfer and exchange of experience in matters of border crossing water and land management in European countries
- Co-operation of experts and organisations engaged in national, supranational and international objectives of water management and irrigated agriculture
- Development and promotion of border crossing projects and conferences
- Members are the ICID National Committees of 24 European countries, as below :

Country Representatives			
<b>Austria</b>	Mr. Frederick M. Cate	<b>Lithuania</b>	Dr. Antanas Maziliauskas
<b>Croatia</b>	Prof. Davor Romic	<b>Macedonia*</b>	Prof. Zvonimir Vukelic
<b>Cyprus</b>	Mr. Nicos Tsiourtis	<b>Portugal</b>	Mr. Pedro Eduardo da Cunha Serra
<b>Czech Republic</b>	Prof. Svatopluk Matula	<b>Romania</b>	Prof. Ion M. Nicolaescu
<b>Estonia</b>	Mr. Mati Tonismae	<b>Russia</b>	Dr. Irina G. Pankova
<b>Finland</b>	Mr. Jaakko Sierla	<b>Serbia-Montenegro</b>	Mr. Peter Pantelic
<b>France</b>	Dr. Sami Bouarfa ( <i>to be confirmed by AFEID</i> )	<b>Slovenia</b>	Prof. Brane Maticic
<b>Germany</b>	Dr.- Ing. Eiko Luebbe	<b>Spain</b>	Mr. Ricardo Segura Graino
<b>Greece</b>	Prof. Dr. A. Poulouvassilis	<b>Switzerland</b>	Mr. Claude Alain Vullier
<b>Hungary</b>	Dr. Laszlo Hayde	<b>The Netherlands</b>	Mr. Pol Hakstege
<b>Ireland</b>	Dr. John Martin	<b>Ukraine</b>	Prof. Peter Kovalenko
<b>Italy</b>	Dr. Michele A. Cuccaro	<b>United Kingdom</b>	Mr. Peter S. Lee
<p><i>*The membership of Macedonia, due to non-payment of subscription has fallen under "inactive" category. The country representation would revive once the arrears are cleared.</i></p>			

<b>Chairman</b>	:	Dr. Laszlo Hayde (Hungary)
<b>Vice-Chairman</b>	:	Prof. Dr. Peter Kovalenko (Ukraine)
<b>Secretary (1)</b>	:	Mr. Olli-Matti Verta (Finland)
<b>Observer(1)</b>	:	Ms. Dr. Irina Bondarik (Russia) <i>for Russian speaking countries</i>
<b>Observer (2)</b>	:	Mr. Mohammed Benblidia (IME)

### Countries with observer status

<i>Bosnia &amp; Herzegovina</i>	:	Prof. Dr. Mihovil Vlahinic
<i>Moldova</i>	:	Mr. Valeriu Catrinescu
<i>Serbia</i>	:	Prof. Dr. Svetimir Dragovic

### **Subordinate Work Teams**

*European Work Team on Water Related Risk Analysis (EWTWRRRA)*

**Chairman** To be elected (Dr. Sandor Szalai, Hungary)

**Members** To be elected

### **European Work Team on Sustainable Irrigation Management (EWTSIM)**

**Chairman** Prof. Peter Kovalenko (Ukraine)

**Members** Mrs. Helena Aijo (Finland),  
Mr. Frederick M. Cate (Austria),  
Mr. Jan Cermak (Czech Republic),  
Mrs. Jasmina Taseva (Macedonia),  
Prof. Dr.-Ing. Joachim Quast (Germany),  
Dr. Olga Zhovtonog, Secretary (Ukraine),  
Mrs. Ildiko Zima Szaloki (Hungary)

**Observer** World Bank representative

### **European Work Team on Drainage (EWTDRRA)**

**Chairman** Dr. Georgiy G. Gulyuk (Russia)

**Members** Dr. Irena Bondarik, Secretary (Russia)  
Prof. Brane Maticic (Slovenia),  
Dr. Iulian Mihnea (Romania),  
Mr. Toomas Timmusk (Estonia),  
Dr. Nicola Yacik (Ukraine),  
Mr. Daniel Zimmer (France)

### **Editorial Board of ERWG Letter (EBLET)**

**Editor** to be elected

**Secretary** to be elected

**Members** Dr. Frantisek Dolezal (Czech Republic),  
Mr. John Hennessy (UK),  
Dr. Lajos Szlávik (Hungary)

### **Water Network**

In addition to the European National Committees of ICID, the following organizations/association/institution have been incorporated in the ERWG Water Network :

#### **5 European professional organizations**

- CIPR - Commission Internationale pour la Protection du Rhin
- EurAgEng - Special Interest Group on Soil and Water, European Society of Agricultural Engineers
- EWA - European Water Association
- EWRA - European Water Resources Association
- TECHWARE - Technology for Water Resources

#### **7 National Water Management Associations**

- BSHE - Bulgarian Society of Hydraulic Engineers
  - DWA - German Association for Water Management, Waste Water and Waste
  - DONBH - Society for Irrigation and Drainage of Bosnia & Herzegovina
  - LZHS - Lithuanian Association of Land and Water Management Engineers
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- MHT - Hungarian Hydrological Society
- RSRE - Russian Society of Reclamation Engineers
- SITWM - Polish Association for Water Plant Construction and Land Improvement Engineers and Technicians

#### **6 European Water Management Institutes**

- ACVAPROJECT - Water Management Design Institute (Moldova Republic)
- DHI - Danish Hydraulic Institute
- IIDS - Institute of Irrigation and Development Studies, University of Southampton (United Kingdom)
- RIIDHE - Research Institute for Irrigation, Drainage and Hydraulic Engineering (Bulgaria)
- VITUKI - Water Resources Research Centre Plc. (Hungary)
- IME - Institut Méditerranéen de l'Eau (France)

#### **Work Results**

- ERWG Letter No. 1 to 20 (newsletters)
- Irrigation Sector Reform in Central and Eastern European Countries (project report book/CD)
- European Sector Vision on Water for Food and Rural Development (report)
- ICID Guide "How to work out a drought mitigation strategy" (guideline)
- Water Resources Management in the Czech Republic, Hungary, Lithuania, Slovenia (book)
- Diffuse Entries in Rivers of the Odra Basin (research report)
- Proceedings of several European conferences
- First and Second CEE WFE Dialogue Reports (Dialogue on Water, Food and Environment – Dialogue on the implementation of the EU Water Framework Directive in Agriculture in the Central and East European Countries) (reports)
- Danube Valley : History of Irrigation, Drainage and Flood Control (book)

#### **Current Projects**

- Flood risk mitigation by agricultural non-structural measures
  - Drought mitigation strategies
  - Implementation of the European Water Framework Directive
  - Flood plain management on Odra, Nemunas and Vistula
  - Flood prevention strategies
  - Point and diffused pollutants in the Odra basin
  - Sustainable irrigation and drainage management under the conditions of transitional economy
  - Dialogue on water for food and environmental security in Central and Eastern Europe
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## EUROPEAN WORK TEAM ON WATER RELATED RISK ANALYSIS (EWTWRA)

### Mandate of the Work Team

*To identify the basic risk factors and impacts of the water related disasters by evaluating prevailing risk assessment practices in countries and to develop a common risk evaluation plan towards harmonized national risk management action plans.*

### Background

Largest part of the natural disasters is connected to the meteorological/climatological events. The number of such events is growing significantly, according to the climate change theory. The biggest damages are caused by the disasters in connection with water related extremes in Europe. Climate change scenarios project problems with the extreme water availability, like intensification of hydrological cycle, especially precipitation, and decreasing precipitation amount first of all in the South-European region. These two events can be parallel, i.e. the less precipitation can fall in a more intensive way, which has a tuning worsening effect on the surface water balance. The consequence of intensification can be for example the growing frequency of flash floods.

Many projects have among their objectives assessing one or other water related disasters. Unfortunately, quite many methodological bases are lacking or are not unified setting back the international comparability of the results of investigations. More explicit is the surplus water part, e.g. floods and their impacts, and more latent is the water deficit part, e.g. drought.

According to the latest results, we can assume that the frequency of these events has been changing, and their tendencies have different signs in different part of Europe.

The hydrological research turns to the scale of river basin investigations (WFD, etc.). These are mostly done in international co-operation in Europe. Therefore, methodological development, comparability studies and general overviews are required.

### Aim

The aim of this co-operation is to identify the basic risk factors and impacts of the water related disasters. Applied methodologies of impact studies should be collected and an inventory should be done to summarise special advantages and disadvantages of the individual methods. Risk assessment of extreme events has similar theoretical basis even for different type of events. Probabilities (return periods, distributions etc.) are characteristic for the natural disasters and sensitivity, vulnerability are features of the sufferer (region, society, etc.). Real risk management includes both sides, e.g. the statistical features of the natural disaster and the level of development, adaptive capacity of region bearing the disaster. Therefore, the main task of this WT is to investigate these processes by common, or similar, but at least comparable methods. Comparability has to be the minimum condition, because not comparable methods (or methods still not have been compared) give not comparable results.

Methodology of such type of investigations is not agreed, the problems of vulnerability and sensitivity is not uniformly discussed.

Common, statistically well established methodology will be applied to characterize the risks and making them comparable internationally. As a second phase, risk evaluation and management action plans will be developed. These activities will improve the adaptive capacity of the countries and reduce their vulnerability.

### Objectives

1. Inventory of the methods used in the water related risk assessments.
  2. Evaluation of the methods in the inventory.
  3. Harmonisation of countries (meetings, software, knowledge transfer etc.).
  4. Identify stakeholders, contact with them.
  5. Identify possible risk events, stress sources, relationships between sources and receptors.
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6. Agreement in a common methodology.
7. Estimate the likelihood of risk events, exposure to the effects and its consequences, develop risk profile.
8. Impacts of extreme events on agricultural production.
9. Compare events and total risks with targets and criteria.
10. Assess existing risk assessment practices against risk profile.
11. In course of development of working plan, stakeholder communication.

#### **Basic actions**

1. Overview of the present situation (questionnaire)
2. Determine the needs of individual countries and the possible support activities
3. Contact with stakeholders on national level and keep them informed
4. Publish a methodological survey, suggest the most usable methods
5. Apply the suggested methods in each country, preparation an international overview
6. Comparison of different national practices

#### **Milestones**

1. year: Set up an inventory and evaluate the methods
2. year: Comparability studies (pilot events), contact with the stakeholders
3. year: Pilot study based on common methodology
4. year: Dissemination of results

#### **Applied tools**

1. Statistical methods, software
  2. Data base or data availability on hydrological, meteorological fields, data from other fields of impact
  3. Visualisation
  4. Internet home page
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