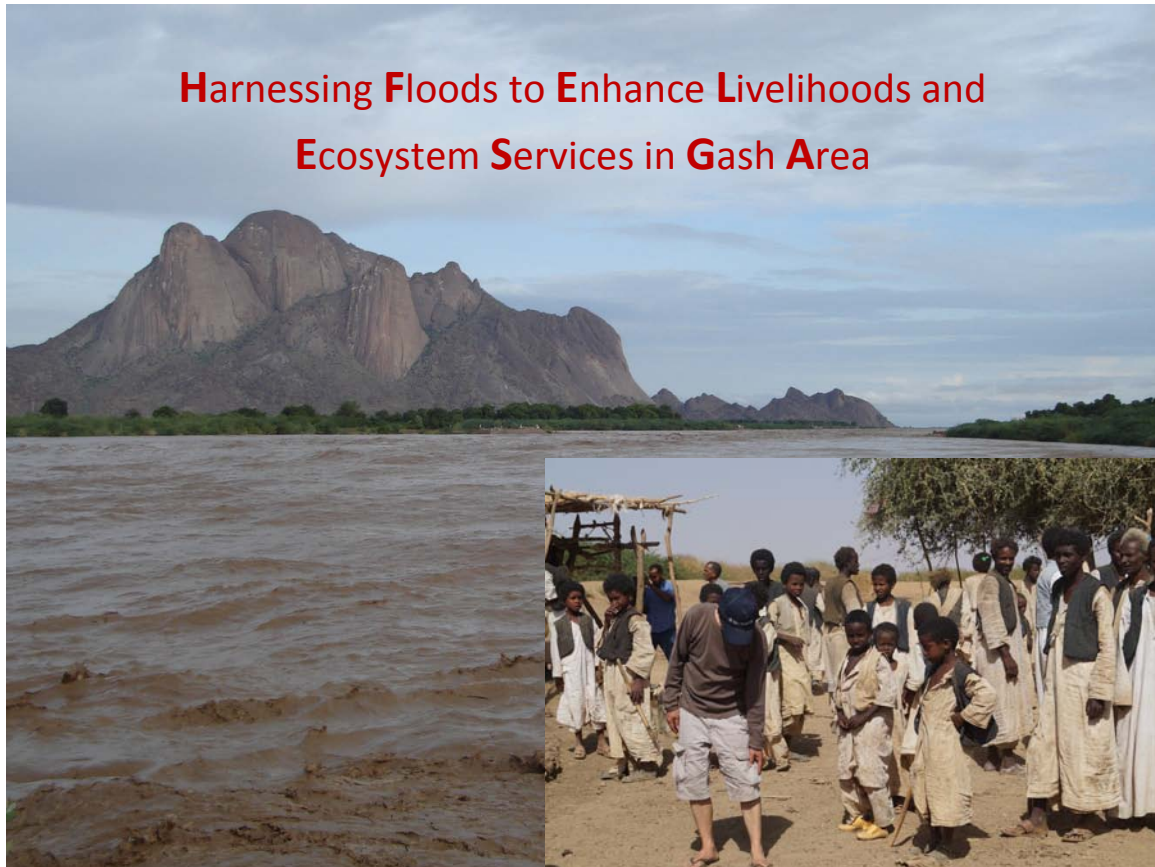


*Inception Workshop Report:*



**Harnessing Floods to Enhance Livelihoods and Ecosystem Services in Gash Area**

**Ministry of Water Resources and Electricity**  
**The Hydraulics Research Center**  
**P. O. Box 318**  
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*May 2015*

*Inception Workshop Report*

**Harnessing floods to enhance livelihoods and ecosystem services  
in Gash area**

**Background**

The research project “**Harnessing floods to enhance livelihoods and ecosystem services**” is funded by CGIAR research program on Water, Land and Ecosystems and it will be implemented in the Gash area in Sudan by the Hydraulics Research Center (HRC) of the Ministry of Water Resources and Electricity over the period Jan. 2015 to Dec. 2016. The leading partner is MetaMeta/Spate Irrigation Network Foundation (SpNF), the Netherlands. The research project aims to optimize the use of floods for agriculture and ecosystem services to support livelihoods settings in the Gash.

**Kickoff workshop**

The inception workshop has taken place in Kassala Sudan from 28<sup>th</sup> to 30<sup>th</sup> April 2015. Its objectives can be summarized as follows:

- To enlighten the key stakeholders with the overall framework of the research project.
- To detail the research program in the Gash Agricultural Scheme in Sudan viz:
  - a) Major research questions, approaches and methods
  - b) Main deliverables and communication strategies

The workshop program is shown in Annex (1).

**Workshop sessions and activities**

Around 31 of key stakeholders were invited from governmental and non-governmental organizations representing different specializations with relevance to the scope of the research program. A list of participants is given in Table (1) in the Annex.

Mr. Magzoub Abu Musa, State Minister of Agriculture, Irrigation and Forestry in Kassala State attended the opening session and he has treasured the researches conducted in the Gash and their importance to enhance the livelihoods.



The leading partner institution was represented by:

1. Dr. F. van Steenberg, the project leader, and
2. Mr. M. Kool, researcher

Also, three senior staff from the UNESCO-IHE – the Netherlands, the project partner, have attended the workshop, Table (2). From HRC side, the list of the project staff is given in Table (3).

The first day was rich of short and intensive power point presentations on various themes describing the overall background of the research program, existence of spate irrigation systems in Sudan, historical review of the Gash Agricultural Scheme, the experience of the Water Users Associations (WUAs). Also, short description on the research framework in Gash area in addition to material on gender status and socio-economic issues in the GAS were presented.



Effective discussions were held among the participants and many proposals on hot areas of research needed in the Gash were mentioned, List (1).



The second day has followed the same scenario of the first day with power point presentations on water resources allocation, ground water modeling, and means of documentation and communication.

### **Field visit to Gash die**

The field visit to Gash die on the third day was under the guidance of Mr. Tirk, the president of the Higher Council of WUAs, leader of Hadandawa tribe.

Different sites were visited, e.g.

- Etma Hafeer, the oldest water pond, where many inhabitants and livestock rely on it for water supply
- Hadalya main canal where the study team has discussed its performance and experimental mesga is selected for study purposes
- Some wells in Karakon



### **Workshop outcomes**

By the end of the workshop, many proposals were suggested by the key stakeholders as hot issues for the development of GAS and to enhance livelihoods as given in List (1) in the Annexes. However, in the framework of this research project, the following research themes would be in depth investigated over the project duration:

- The optimal allocation and distribution of Gash River's water resources considering different water uses namely for agriculture, water supply, groundwater recharge and environmental needs by applying RIBASIM, a tool for water resources modeling
- The availability of groundwater resources and the possible interlinkage with surface water resources
- Upstream/downstream interventions with special emphasis on the impact of the current and future upstream developments on Gash die
- Investigation of the optimum mesga canal, most efficient irrigation scheduling and soil moisture utilization in the GAS by conducting intensive on farm measurements in two selected farms located in Kassala and Hadalya Blocks respectively with full support from the WUAs body in the GAS

### **Social programs**

The workshop was associated with social programs organized by the Kassala state and the Water Users Associations body.



## Annexes

### Annex (1): Project Launch Workshop Harnessing Floods to Enhance Livelihood and Ecosystem Services April 28 to 30, Kassala, Sudan

This inception workshop with key stakeholders aims at:

- Having a shared clear understanding of the overall research for development framework of the project.
- Detailing the research programme in the Gash Agricultural Scheme in Sudan: a) key research questions, approaches and methods; b) major deliverables and communication strategies

| Time  | Topic   | Speaker  | Chair/Reporter   |
|---|---|--|--|
| <i>Day 1: 28 April: Focus on project rationale, background and overall research framework</i> |   |  |  |
| 8:30-9:00   | Registration  | Eng. Amira and Eng. Soona  |  |
| 9:00-10:00  | Opening Remarks   | Prof. Yasir, Director of HRC   | Chair and reporter:<br>Prof. Yasir                     |
|   |   | Dr. Simon Langan (IWMI-WLE)  |  |
|   |   | Dr. Frank (MetaMeta and Spate Irrigation Network Foundation)           |  |
|   |   | Dr. Suryadi (NESCO-IHE)  |  |
|   |   | <b>Official Opening: State Minister of Agriculture – Kassala State</b> |  |
| 10:00-10:30   | Refreshments  | Facilitation: Eng. Amira, Eng. Soona                                   |  |
| 10:30-11:00   | The WLE Research for development Programmes: The Nile Basin & East Africa Focal Region        | Dr. Simon Langan, IWMI   | Chair: Dr. Abraham<br><br>Reporters: Saied and Mathijs |
| 11:00 to 11:30  | The overall research programme of the project: Harnessing Floods for Enhanced Livelihoods and | Dr. Frank  |  |
| 11:30-11:50   | Introduction to FBFS in Sudan   | Assoc. Prof. Abu Obieda  |  |
| 11:50 -12:10  | The Gash Agricultural Scheme (GAS): Status, potential & challenges                            | Eng. Kamal, DG of GAS  |  |
| 12:10-12:40   | The GAS WUAs: organizational structure, achievements, challenges, future plans                | Eng. Mahmoud, Chair Apex WUA   |  |
| 12:40 to 13:10  | Discussion  | Participants   |  |
| 13:10 to 14:30  | Lunch   | Facilitation: Eng. Amira, Eng. Soona                                   |  |
| 14:30 to 15:00  | WLE project in Sudan: Background, objectives, and Research framework                          | Eng. Amira/Abu Obieda/Yasir  | Chair: Dr. Suryadi<br>Reporters: Saied and Ewout       |
| 15:00 to 15:20  | Ecosystem services in GAS   | Dr. Hassan M. Ahmed  |  |
| 15:20 to 15:50  | Anthropology/ Gender issues in GAS  | Ms. Khadiga  |  |
| 15:50 to 16:15  | Coffee Break  | Facilitation: Eng. Amira, Eng. Soona                                   |  |
| 16:15 to 17:15  | Discussions/Wrap-Up   | Participants / Prof. Yasir, Dr. Frank                                  |  |

**Project Launch Workshop**  
**Harnessing Floods to Enhance Livelihood and Ecosystem Services**  
**April 28 to 30, Kassala, Sudan**

| Time  | Topic  | Speaker   | Chair/Reporter   |
|---|--|---|--|
| <b>Day 2: 29 April: Focus on the research programme in Sudan: work plan, methods, deliverables, communication strategies</b>  |  |   |  |
| 9:00 to 9:30  | Introduction to the draft work plan  | Dr. Abraham   | Chair: Simon Langan<br><br>Reporters: Suryadi and Ewout                                      |
| 9:30 to 10:00   | Water allocation - RIBASIM modeling  | Eng. Abdel Nassir   |  |
| 10:00 to 10:30  | Groundwater modeling   | Eng. Kabeer   |  |
| 10:30 to 11:00  | Soil fertility in GAS: status and implications on food insecurity and nutrition deficiency                 | Dr. Frank and Dr. Abraham                                   |  |
| 11:00 to 11:30  | Refreshments   | Facilitation: Eng. Amira, Eng. Soona                        |  |
| 11:30 - 12:00   | WLE communication strategies and communication support   | Abby , WLE and IMWI   |  |
| 12:00-12:30   | Communication strategies for the Project: Harnessing floods for enhanced livelihoods and ecosystem service | Mr. Mathijs and Eng. Ahmed                                  |  |
| 12:30-13:15   | Discussion   | Participants  |  |
| 13:15 to 14:30  | Lunch  | Facilitation: Eng. Amira and Eng. Soona                     |  |
| 14:30-16:30   | Group discussion on the work plan  | Participants  | Facilitators: Abby and Abraham   |
| 16:30-17:30   | Feedback from the group discussion/wrap-up   | Group discussion representatives/ Prof. Yasir and Dr. Simon |  |
| <b>Day 3: 30 April: Field trip to the Gash Agricultural Scheme (GAS): Upstream and downstream</b>   |  |   | Field visit guide: Eng. Kamal, Saied, Prof. Yasir<br><br>Reporters: Amira, Mathijs and Ewout |
| Objective: to get acquainted with the main features of the scheme and link the planned research activities to field realities.<br><br>A separate detailed programme will be prepared and shared prior to the field visit. |  |   |  |

**Table (1): Stakeholders List**

| No. | Name                          | Organization                                   | Position                      | Contact              |
|-----|-------------------------------|--|-------------------------------|----------------------|
| 1   | Eng. Eltayeb Mohamed Yousif   | Gash River Training Unit, MWRE                 | Executive director            | 0912861662           |
| 2   | Eng. Saied Magzoub Saied      | Gash River Training Unit, MWRE                 | Deputy director               | 0912665186           |
| 3   | Eng. Soona B. A. Rahim        | Gash River Training Unit, MWRE                 |                               | 0912292099           |
| 4   | Eng. Hashim A. Ibrahim        | Gash Agricultural Scheme, MoA                  | Deputy DG                     |                      |
| 5   | Mohamed Abdalla               | Gash Agricultural Scheme, MoA                  | Block inspector               |                      |
| 6   | Ahmed Abu Tahir               | Gash Agricultural Scheme, MoA                  | Block inspector               |                      |
| 7   | Mr. Mohamed Abdel Hay         | Groundwater Research - Kassala                 | DG                            | 0912318200           |
| 8   | Mr. Ishag Babiker             | Groundwater Research - Kassala                 |                               | ishaggwwdi@yahoo.com |
| 9   | Mr. Ibrahim Elsadig Ibrahim   | Agricultural Resarch Cooperation - Kassala     | DG                            |                      |
| 10  | Mr. Ali Isa Hassan            | Ministry of Agriculture, Forestry & Irrigation | DG                            | 0918053930           |
| 11  | Mr. Abdel Gader Haj Ali       | Ministry of Agriculture, Forestry & Irrigation | Extension services,manager    | 0901971857           |
| 12  | Ms. Ibtisam Ali Nimer         | Ministry of Agriculture, Forestry & Irrigation | Horticulture manager          | 0916850072           |
| 13  | Dr. Anwar M. Osman            | Ministry of Agriculture, Forestry & Irrigation |                               | 0911327465           |
| 14  | Dr. Mansour Babiker           | Kassala Uni.                                   | Dean - Faculty of Engineering | 0122908279           |
| 15  | Dr. Hassan M. Ahmed           | Kassala Uni.                                   | Dean - Faculty of Economy     | 0912258382           |
| 16  | Dr. El Hadi Isa               | Kassala Uni.                                   | Faculty of Engineering        | 0123852319           |
| 17  | Mr. Karar Abdel Rahim Mohamed | Meteorology Dep.                               | Manager                       | 0122022382           |
| 18  | Mr. M. Ahmed M. Alamin Tirk   | WUA, GAS                                       | Leader                        | 09122785641          |
| 19  | Eng. Mahmoud Adam Mohamed     | Higher Council WUA                             | Secretary                     | 0912636326           |
| 20  | Mr. Ahmed Mohamed Omer        | WUA  |                               | 0919022021           |
| 21  | Mr. Birer Adrob Mustafa       | WUA  |                               | 0912813699           |
| 22  | Mr. Mohamed Osman Karm Alla   | Fruits and Vegetables Union                    | President                     | 0912278576           |

|    |                               |                                      |                |            |
|----|-------------------------------|--------------------------------------|----------------|------------|
| 23 | Mr. Ali Elzein Alaabdeen      | Fruits and Vegetables Union          | Deputy         | 0912210593 |
| 24 | Mr. Osman Mohamed Mahsos      | Fruits and Vegetables Union          |                | 0912676190 |
| 25 | Mr. Ahmed Humed Barsi         | Pastoralism's Union                  |                | 0911262776 |
| 26 | Eng. Abdel Hakeem M. Elhassan |                                      |                | 0912320682 |
| 27 | Ms. Badria Alamin             | Women's Union                        |                | 0912888820 |
| 28 | Mr. Amir Babo Rafay           | Civil Organizations, Plan Sudan      |                |            |
| 29 | Mr. Zu Elfar Ismail           | Civil Defence                        | Deputy manager | 0912819554 |
| 30 | Mr. Hashim M. Abdel Latif     | National Water Corporation - Kassala | DG             | 0916406660 |
| 31 | Khadiga Mohamed Abbkar        | Non-gov. organization                |                | 0912333123 |

**Table (2): International Experts**

| No. | Name                         | Organization   | Position                       | Contact                      |
|-----|------------------------------|----------------|--------------------------------|------------------------------|
| 1   | Dr. Franciscus van Steenberg | MetaMeta/ SpNF | Managing director              | fvansteenbergen@metameta.nl  |
| 2   | Mr. Matthijs Bram Kool       | SpNF           | Researcher                     | mkool@metameta.nl            |
| 3   | Dr. Abraham M. Haile         | UNESCO-IHE     | Senior lecturer and researcher | A.MehariHaile@unesco-ihe.org |
| 4   | Dr. Fransiscus X. Suryadi    | UNESCO-IHE     | Senior researcher              | f.suryadi@unesco-ihe.org     |
| 5   | Mr. Ewout J. Heeringa        | UNESCO-IHE     |                                | E.Heeringa@unesco-ihe.org    |

**Table (3): HRC Staff List**

| No. | Name                    | Organization | Position          | Contact                |
|-----|-------------------------|--------------|-------------------|------------------------|
| 1   | Prof. Yasir A. Mohamed  | HRC          | DG                | y.mohamed@hrs-sudan.sd |
| 2   | Mr. Abu Obieda B. Ahmed | HRC          | Senior researcher | hrs_abdo@hotmail.com   |
| 3   | Ms. Amira Mekawi        | HRC          | Researcher        | hrs_amira@hotmail.com  |
| 4   | Mr. Ahmed Hayaty        | HRC          | Researcher        | ahmedhayaty@live.com   |
| 5   | Mr. M. Kabeer           | Groundwater  | GW specialist     | Mkabor5@yahoo.com      |
| 6   | Mr. Elnoor H. Etayeb    | HRC          | IT engineer       | elnooor@hotmail.com    |
| 7   | Ms. Tahani Gadalla      | HRC          | Media coverage    |                        |



**List (1): All research proposals as raised by the stakeholders in GAS**

1. زمن الري وكمية المياه المناسبة للمحصول المحدد (30-20-15 يوم).
2. تقسيم وتسوية المساقى بتقليل مساحتها وذلك لتسهيل الري ورفع كفاءة استخدام الماء داخل الحقل.
3. تنويع المحاصيل وإدخال محاصيل نقدية تتناسب مع تقنية الري الفيضي.
4. توزيع وإدارة مياه الري أثناء الفيضان من الفم الرئيسي حتى المسقا.
5. معالجة مشكلة الإطماء بالفموم (فوتا ، مكلى ، هدايا).
6. تعميم روابط مستخدمي المياه علي تفتيش هدايا.
7. استخدام المكننة و التقنيات الحديثه فى الزراعة.
8. التحضير المبكر والجيد للموسم الزراعي وإزالة المسكيت.
9. عمل دراسات استراتيجيه طويله المدى لتطوير ونجاح المشروع.
10. مراجعة تقنيات ترويض نهر القاش لتقادي الكسورات للاستفادة من مياه النهر.
11. عمل منشآت مفيض لتقادي أخطار الفيضان.
12. التنسيق بين الجهات ذات الصلة المهتمه بإدارة المياه والزراعة.
13. رفع التوعيه لإنسان القاش باهميه المياه والمنشآت وزيادة معرفته بإدارة المياه.
14. تفعيل المرأة الريفيه وتطوير طرق كسب المعيشة وإيجاد موارد لتمويل المشروعات الصغيره والكبيره، وتدريبها والعمل علي تبادل الخبرات مع المجتمعات الأخرى.
15. تقييم التجارب السابقه لمعرفة الأسباب السالبة التي تجعل المجتمعات لا تستفيد من التدخلات السابقه لتحسين سبل الكسب لرفع مستوى المعيشة.
16. استخدام تقنيات حصاد المياه في (القاش داي) للاستفادة القصوى من المياه.
17. التغييرات المناخية وتأثيرها علي البيئه.
18. التنبؤ بالفيضان لتحسين استغلال المياه و تقادى الأخطار.
19. إدارة المياه الجوفية.