



*Presented by Svein Stoveland, Norplan at annual meeting at NORAD, Oslo March 2014*

# MRRD- RuWatSIP, NORAD funded Project

Capacity Building and  
Institutional Cooperation in  
the field of Hydrogeology for  
Faryab Province



**NORPLAN** 

 **DACAAR**



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# Content of presentation

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- ❖ Focus on project-
- ❖ Target groups
- ❖ Topics
- ❖ Project schedule
- ❖ Progress
  - ❖ Hydrogeology
  - ❖ GIS
  - ❖ Wat- SAN
  - ❖ Training programmes
  - ❖ Reporting
  - ❖ Annual meeting guidance needed.







# RUWATSIP, MRRD

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## DEVELOPMENT OF METHODS

## PROJECT ACTIVITIES

## TRAINING & CAPACITY BUILDING

## OUTPUTS

Design hydrogeological methods

Design Database / GIS-MIS system

Prepare methods for use of hydrogeo data in water supply planning and design

Collect data about ground water resources, desk study, field survey

Data analysis, make GIS & Web ground water user maps

Use maps to plan/ design good rural water supplies

About 25 short courses run twice practical/theoretical

3 geophysical investigations  
8 hydrogeology

5 GIS -database software  
2 data capture/managem

3 Plan. WS using maps  
5 WS technology & design  
2 O&M, managem, social

- 200 - 400 persons trained
- Provincial hydrogeological survey methodology developed
- Hydrogeological survey for Faryab province (pilot)
- Database for hydrogeological data set
- GIS Hydrogeological mapping system for pc and paper maps
- Web "Water Use Atlas"
- Capacity building in MRRD RuWatSIP and sector agencies
- Survey and prelim design WS for 3 towns

NORAD Support to MRRD, RUWatSIP for Capacity-Building and Institutional Cooperation in the Field of Hydrogeology for Faryab Province, Project

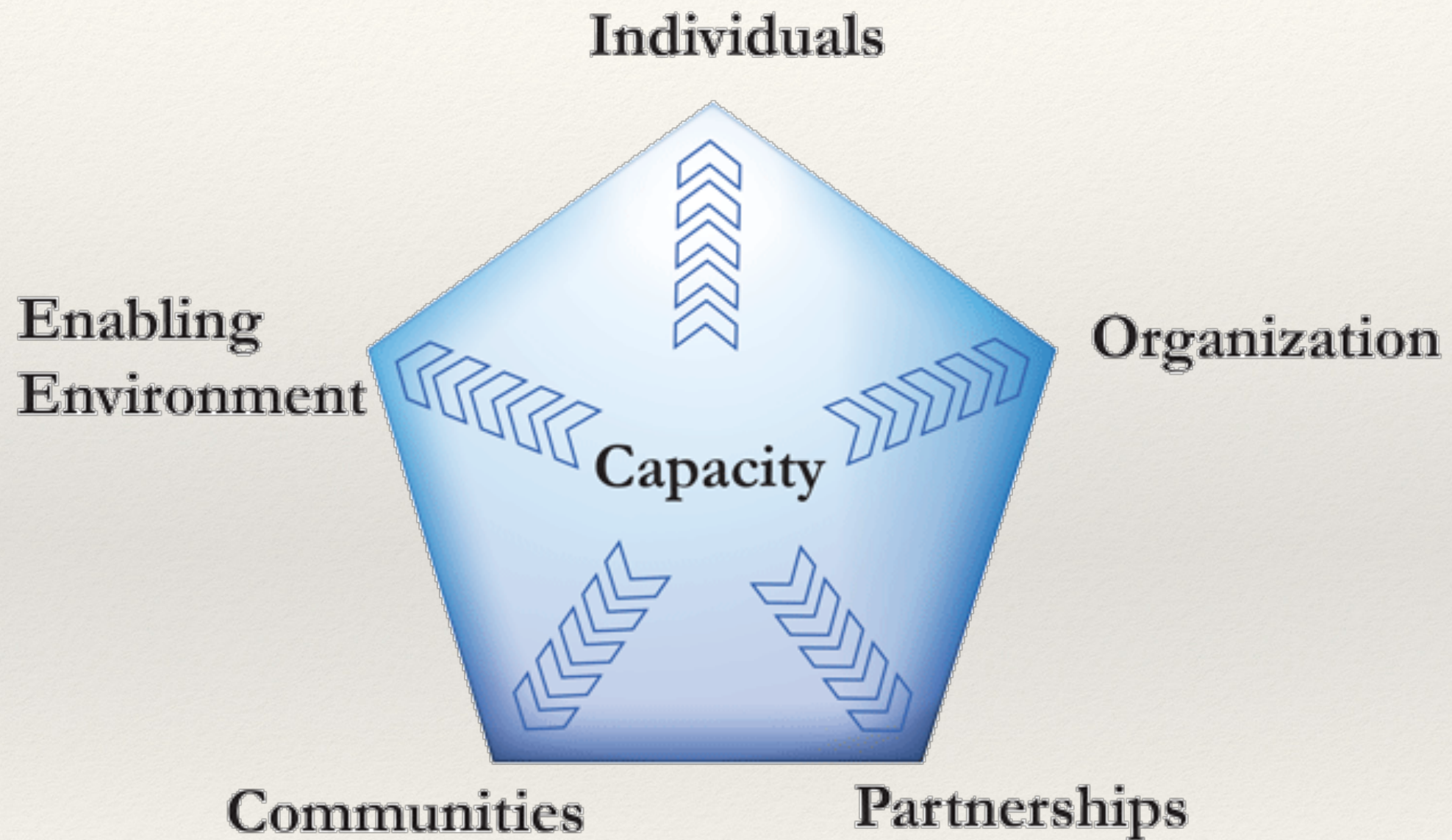


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# CAPACITY BUILDING





# Key themes:



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- ❖ Hydrogeology
- ❖ GIS- MIS information management
- ❖ Water supply development use of hydrogeological data
- ❖ Training and capacity building







*Lorem Ipsum Dolor*

National activities  
with Faryab at pilot  
province

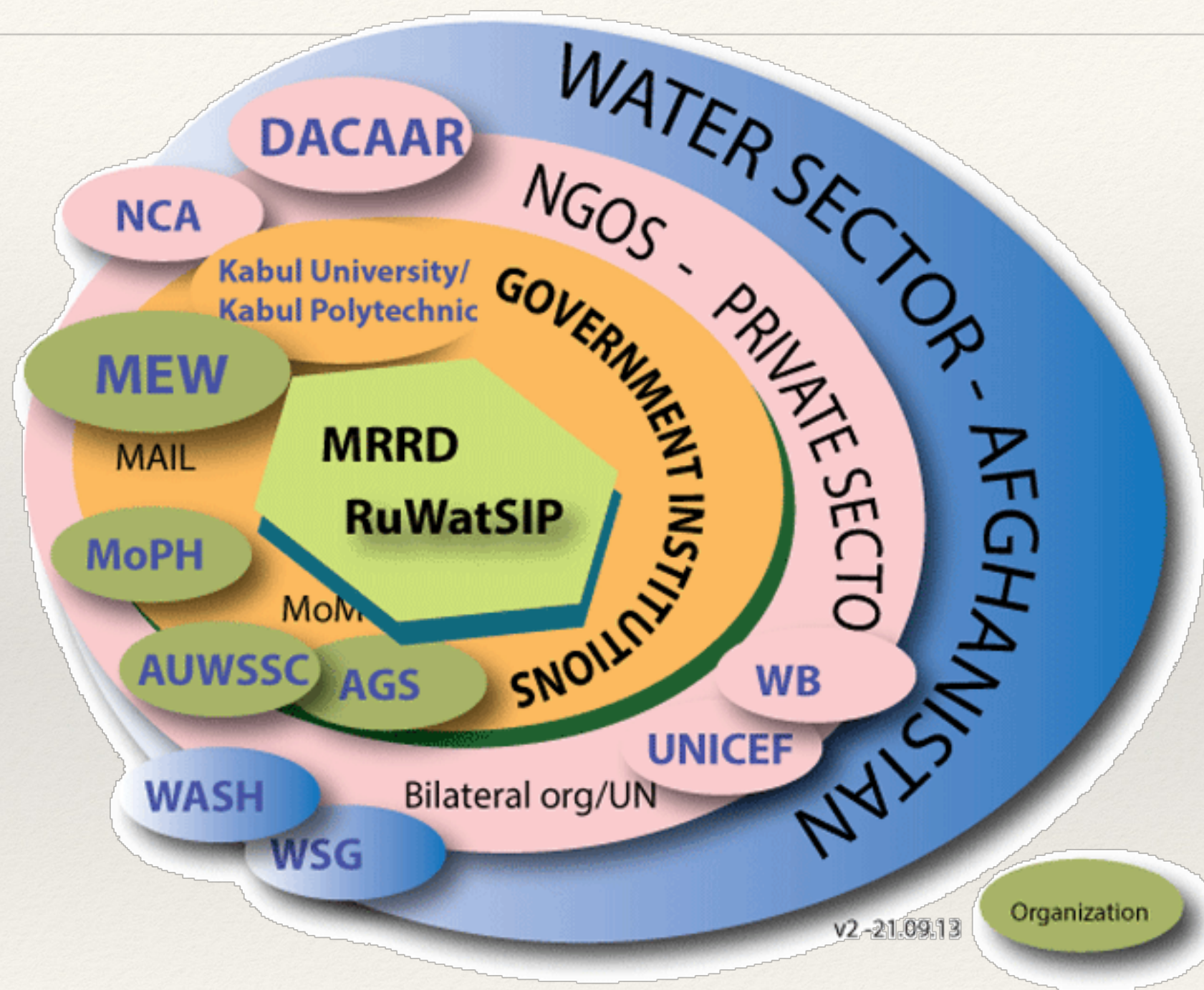


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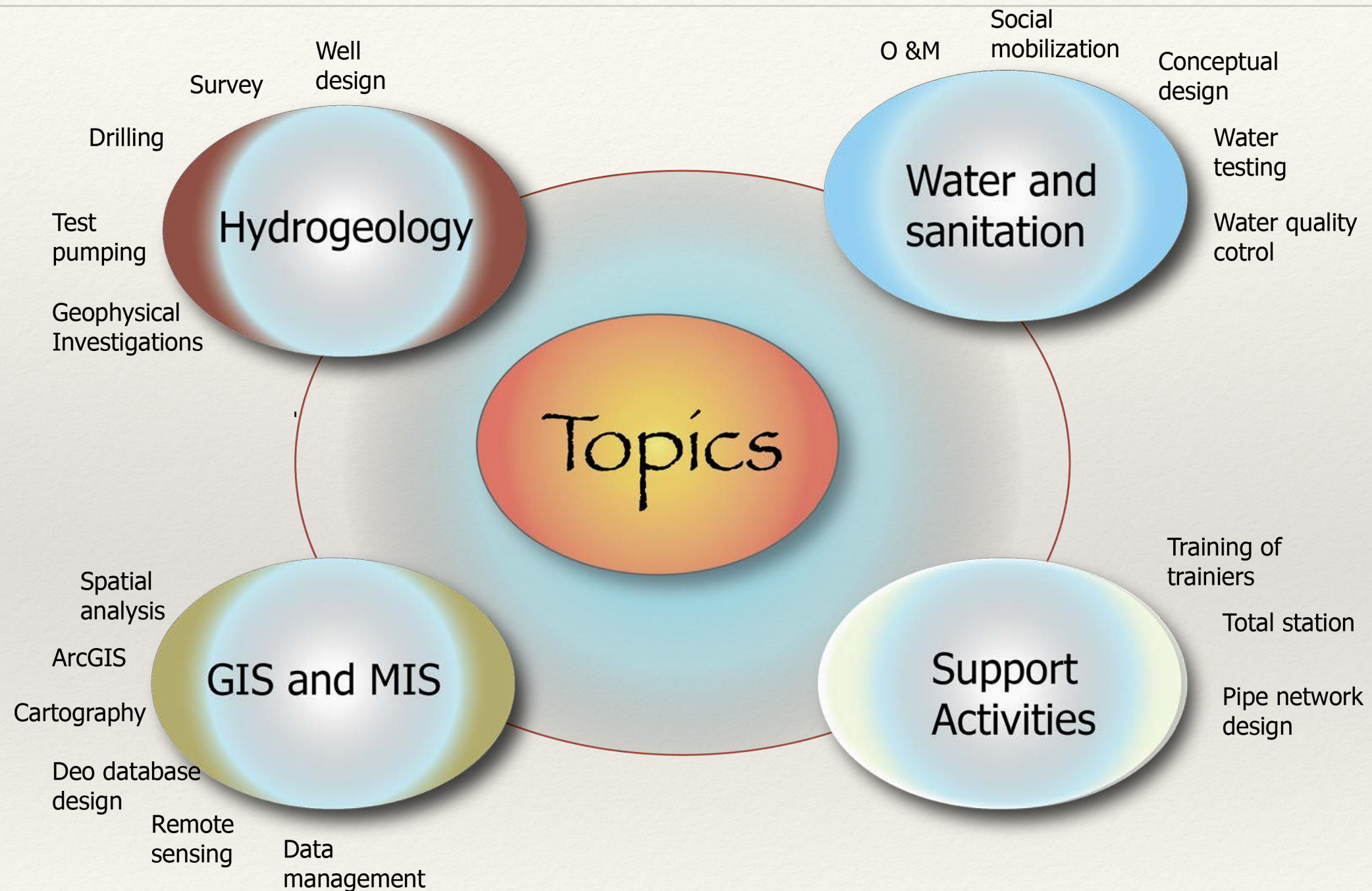


# Key project stakeholders



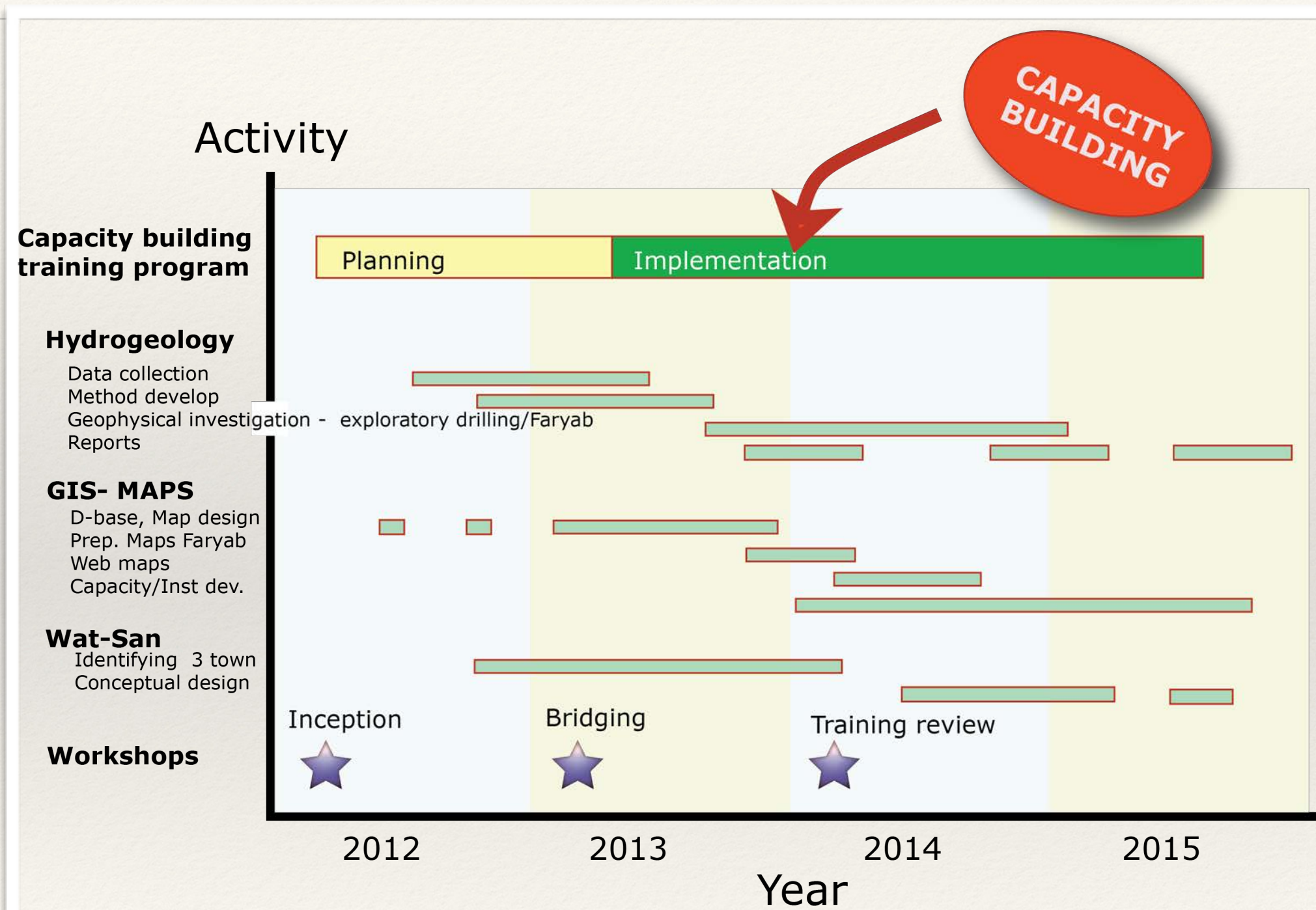


# Themes for training





# Overview of time schedule





# Challenges:



- ❖ Lets acknowledge that some elements are delayed:
  - ❖ Tax agreement approved after 2 years.
  - ❖ GIS adviser and GIS unit operational first after 1 year.
  - ❖ Cars and import of equipment only starting for flow after 2 years.
- ❖ WE HAVE SOME DELAYS IN STARTUP THICH EXPLAINS SOME OF THE PROJECT NEEDING EXTENSION FOR TIDY COMPLETION.



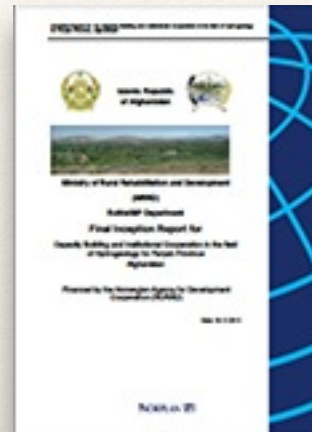
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# Reporting 2012

Revised Inception  
report, and  
budget, March  
2012



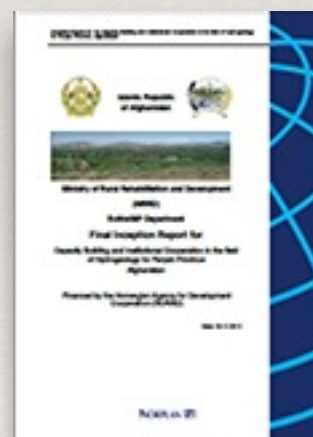
Budget



Inception  
Workshop Report

ANNUAL MEETING NOVEMBER 2012

Revised Inception  
report, and  
budget,  
December 2012



Repost



Budget



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# Reporting 2013

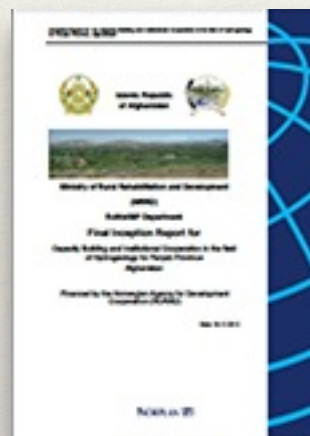
Continuous  
project update,  
Web  
[www.norplan.af](http://www.norplan.af)



Bridging  
Workshop Report



Planning report,  
and budget,  
September 2013



Planning  
report



Revised  
Budget



Progress  
report 2

Progress  
report 3 -  
comparison to  
TOR



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All info on Web  
[www.norplan.af](http://www.norplan.af)



Norplan in Afghanistan from 2012

HOME OBJECTIVE ACTIVITIES OUTPUTS FARYAB GENDER KEY ACTORS NEWS CONTACT US

RuWatSIP STAFF COORDINATION HYDROGEO. GIS-MIS WAT-SAN TRAINING MANAGEMENT PROGRESS

## CAPACITY BUILDING AND INSTITUTIONAL COOPERATION IN HYDROGEOLOGY WITH MRRD FOR PILOT PROVINCE FARYAB

 Picture Gallery

 Short Videos Training

 R & D Technology

 Thematic illustrations



**News heading**

[more news](#)

[More that 200 now trained](#)

### Project Summary

The project has focus on implementing a hydrogeological survey in Faryab Province, using that province as a pilot area to develop a methodology for provincial hydrogeological mapping. With the methodology developed, train RuWatSIP/MRRD and key Rural Water water supply and sanitation sector actors) so that a the rest of the provinces can later be covered by the ministry using trained staff, developed hydrogeological GIS maps and a developed web water user atlas for ground water. The field work and pilot area is Faryab province while the methodologies and capacities will be focussed much on National level sector developmen









*Filed survey and sampling in Faryab, b DACAAR*

# Hydrogeology



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# Hydrogeology

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## Hydrogeology:

Desk study : hydrogeology for Faryab

Internet, visit offices in Kabul, Govt, NGOs, Archives, Moscow

## Developed Methods:

- Defined field surveying methods
- Drafted method how to conduct provincial hydrogeological survey.

## Collecting existing data

Field surveys of water facilities, 200 addn. facilities

Sampling snow, water, soil

River profiling of water movement, evaporation and water loss.



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# Hydrogeology cont.-

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Data analysis

Data analysis, 250 samples

Screening data for about 2000 records

Data reporting:

Drafting Hydrogeological Atlas

Hydrogeological report for Faryab (in draft)



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# Field work after training in Faryab





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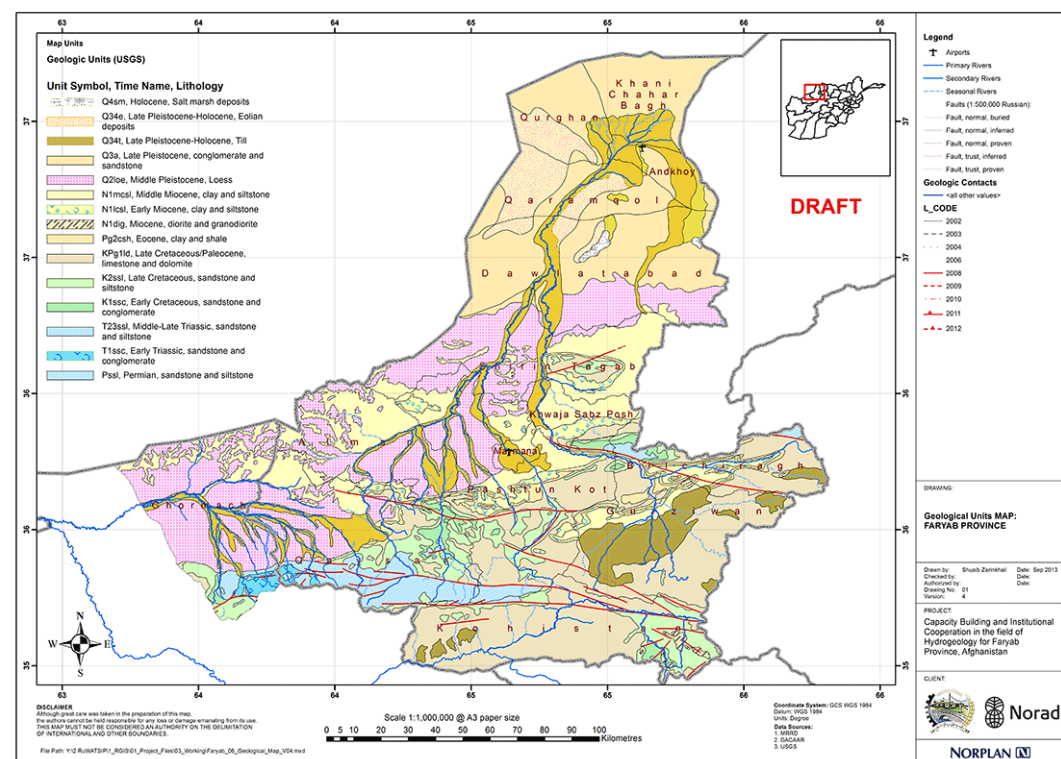
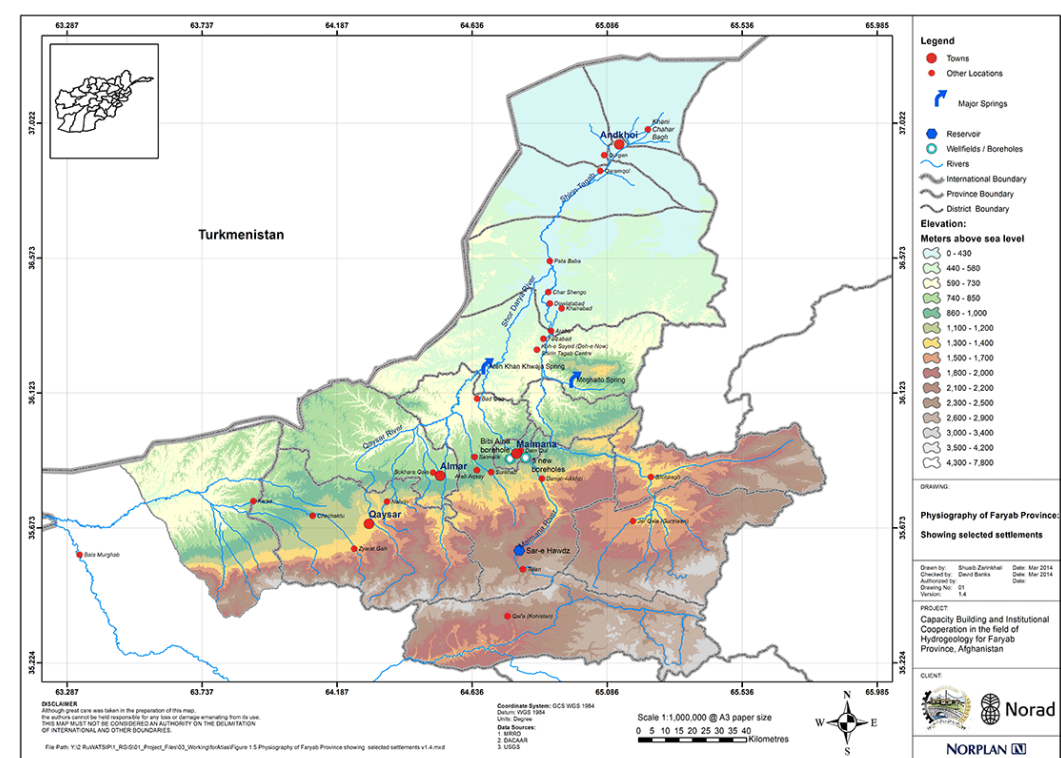
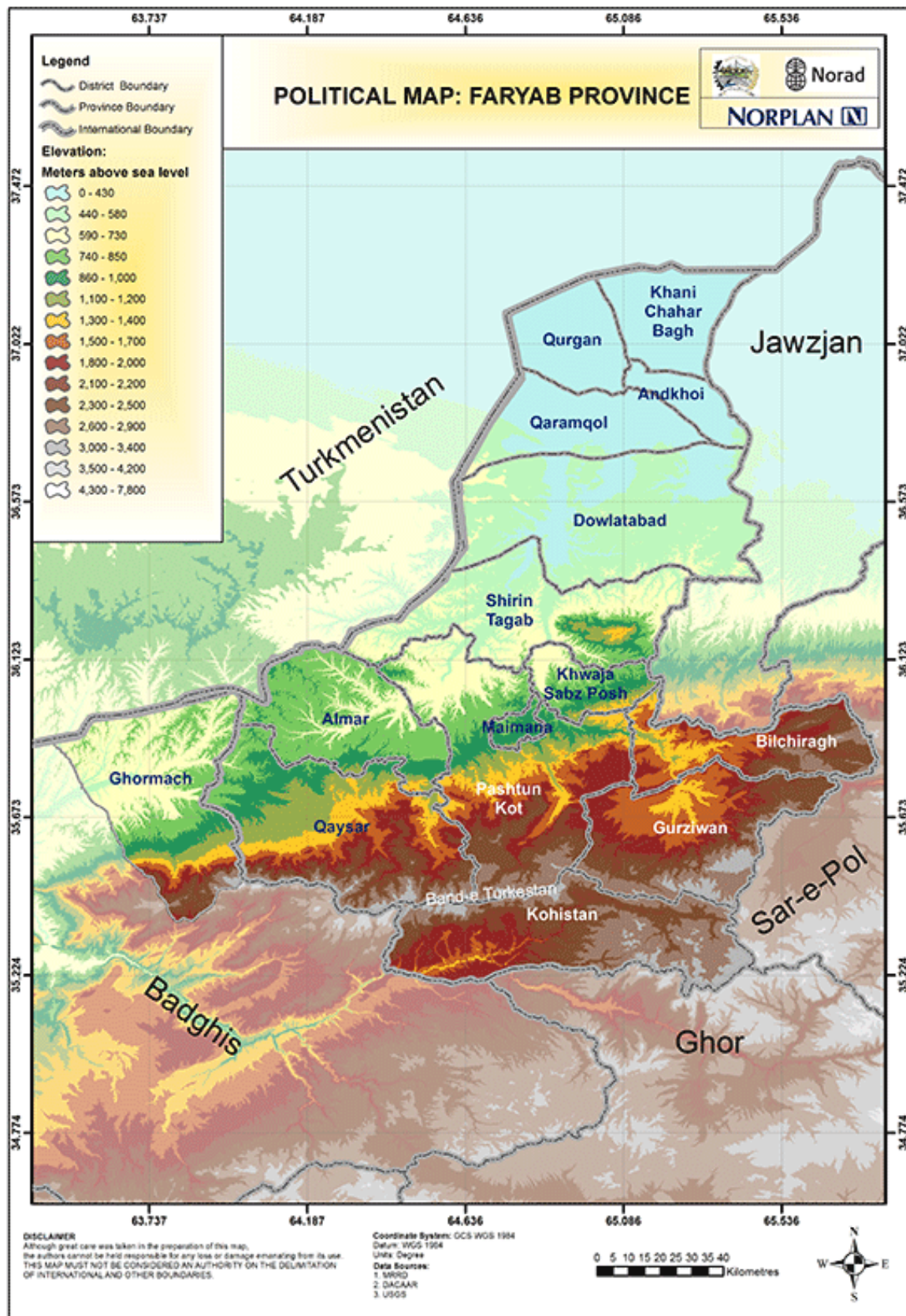
# GIS- MIS

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- ❖ Data base unit established in RuWatSIP
- ❖ Local technical adviser recruited in Dec 2012.
- ❖ Database for hydrogeo. data designed based on existing data sets.
- ❖ Map formats designed for hydrogeological maps.
- ❖ Maps ready for Faryab.
- ❖ Coordinating GIS and Database with UNICEF supported water supply functionality and water quality info system









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# GIS - MIS

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- ❖ Remaining:
  - ❖ Establishing institutional framework for scaling up
  - ❖ Training staff and defining roles
  - ❖ Testing system in two new provinces





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# Water and Sanitation

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- ❖ Water testing development - unforeseen challenges where project as provided useful support
- ❖ Consultation - priority areas Faryab
- ❖ Training - and development conceptual design



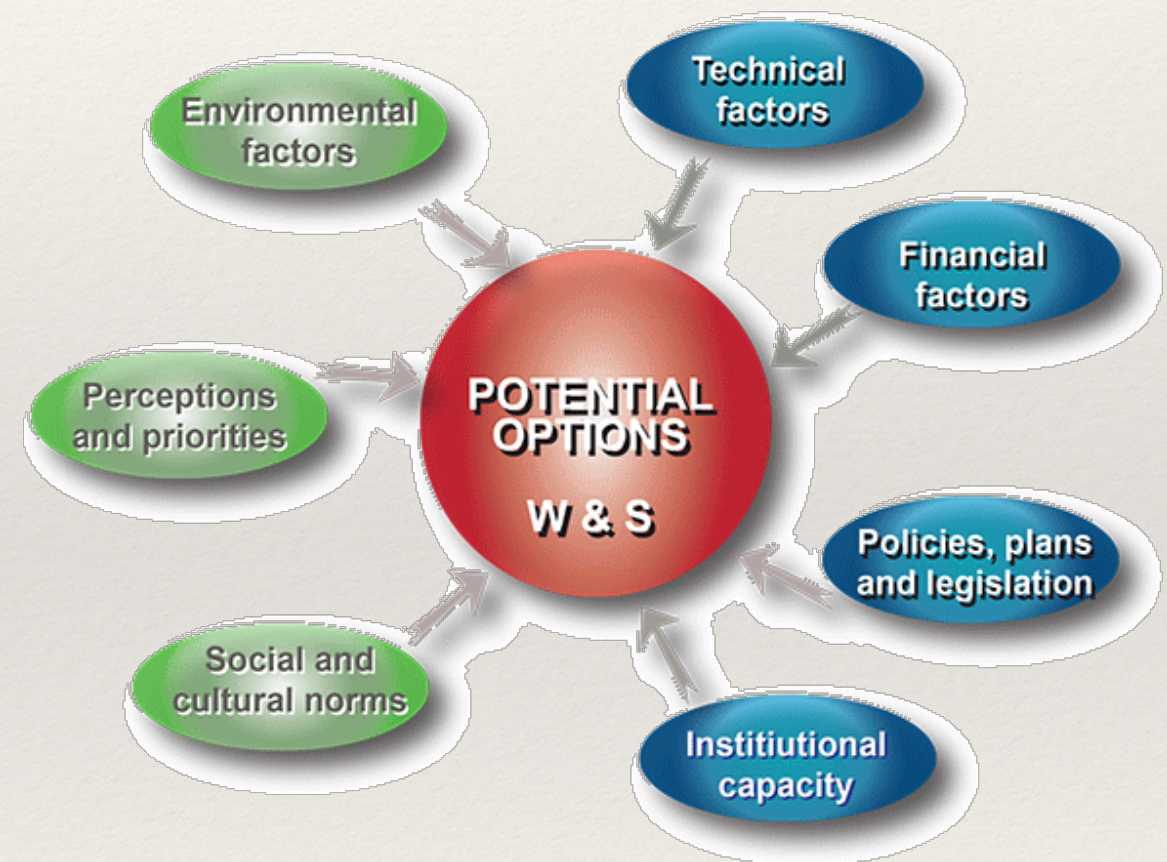




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- ❖ Water testing development  
- unforeseen challenges  
where project as provided  
useful support
- ❖ Consultation - priority  
areas Faryab
- ❖ Training - and development  
conceptual design



Factors to consider when identifying potential options  
for sustainable water supply and sanitation services  
(Adapted by WEDC from IRC 1997)



# Water and Sanitation



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- ❖ Discussion of appropriate locations for water supply and sanitation planning in Faryab





# FOCUS ON CAPACITY BUILDING & TRAINING



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- ❖ Training of individuals
- ❖ Stakeholder coordination
- ❖ Develop training courses and training modules
- ❖ Training videos
- ❖ Training of trainers





# Development of Training program and courses - and revisions undertaken



Inception Workshop



Bridging workshop

Training  
Matrices

[Click to see  
details \(pdf\)](#)

A screenshot of a detailed training matrix table with multiple columns and rows, representing the initial course plan.

Course plan April 2012,  
Inception

A screenshot of a detailed training matrix table, showing updates from the previous version.

Course plan May 2013, After  
first course and engagement of  
addn. expert de Jong.

A screenshot of a detailed training matrix table, showing the most recent version of the plan.

Training plan as of  
February 2014

**Revised  
program  
2014**



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# Training calendar prepared updated

PROPOSAL

Training Calendar 2013

Revised 02 February 14/Prof Egar

Training Calendar 2023														Kensho 02 February 197 Prof. eqgr																																						
Month	January				February				March				April				May				June				July				August				September				October				November				December							
Week no	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
Date of first day of week	5	12	19	26	2	9	16	23	2	9	16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29	6	13	20	27	3	10	17	24	31	7	14	21	28	5	12	19	26	2	9	16	23	30	7	14	21	28
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Training Calendar 2014

Working Calendar - 2024																																																					
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Date of first day of week	4	11	18	25	1	8	15	22	1	8	15	22	29	5	19	26	3	10	17	24	31	7	14	21	28	5	12	19	26	2	9	16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29	6	13	20	27		
Saturday				4.11	1.10		Ub				4.12	1.8	4.5				4.4			5.2	1.2	1.7	1.9	6.4		5.5	5.3					4.7		5.1	1.4			2.5	4.8			5.6	1.3		2.3	2.5	1.2						
Sunday				4.11	1.10		5.7	4.13		2.3	4.12	1.8	4.5				4.4			5.2	1.2	1.7	1.9	Ram		5.5	5.3				5.6		4.7		5.1	1.4	5.4		Adh	2.5	4.8			5.6	1.3		2.3	2.5	1.2				
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Training Calendar 2015

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Key code:  
Public holidays

## Hydrogeology I (Norplan)

- 1.1 Groundwater investigation
- 1.2 Geophysical survey, 7 daysx2
- 1.3 Well drilling methods, 4 daysx2
- 1.4 Water well design and completion, 5 daysx2
- 1.5 Well hydraulics, 7 daysx2
- 1.6 Hydrochemistry, interpretation of data
- 1.7 Planning and implementation of provincial hydrogeologic survey
- 1.8 Geophysical borehole logging, planning and, 6 days x 2
- 1.9 Geophysical borehole logging interpretation of data
- 1.10 well construction and pumping test (KAE)

## Hydrogeology II (DACAAR)

- 2.1 Interpretation of data, 5 daysx2
- 2.2 Preparing thematic maps, 5 daysx2
- 2.3 Water quality testing and GPS use in the field
- 2.4 Practical Geophys. Investig. and Siting-in the province
- 2.5 Well construction and pumping test (Province)
- 2.6 Pumping test and data collection of exploratory well (Faryab)
- 3.1 Training methods, 2 daysx2
- 3.2 Best practice, 2 daysx2

## Training of trainers (DACAAR)

- 4.1 National hydrogeological conference
- 4.2 national conference in GIS and web.tool

Key points

## GIS

- 4.1 ArcGIS Software Introduction
- 4.2 ArcGIS Databases
- 4.3 ArcGIS Spatial analyses
- 4.4 RGIS viewer administration, 3 days (Norplan)
- 4.5 RGIS viewer how to use, 1 day (Norplan)
- 4.6 RGIS design, 1 day (Norplan)
- 4.7 Data management, 5 days (Norplan)
- 4.8 Data capturing, 1 day (Norplan)
- 4.9 Cartography, 2 days (Norplan)
- 4.10 GIS for hydrogeologist
- 4.11 Remote sensing
- 4.12 Cartography-2
- 4.13 Data Management 2 (Excel & ACCESS)
- 5.2 Development of hydrogeological water atlas-half day
- 5.4 training course evaluation

## Water and sanitation

- 5.1 Planning using water atlas, 2 daysx2 (Norplan)
- 5.2 Conceptual design 3 daysx2 (Norplan)
- 5.3 O&M 1 daysx2 (DACAAR)
- 5.4 Social aspects, WASH policy, 4 daysx3 (DACAAR)
- 5.5 Water network design 4 days (regional expert)
- 5.6 Totalstation, use of, 2 daysx2 (local expert Nasen)
- 5.7 Laboratory Quality Control-1



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# Where are participant from

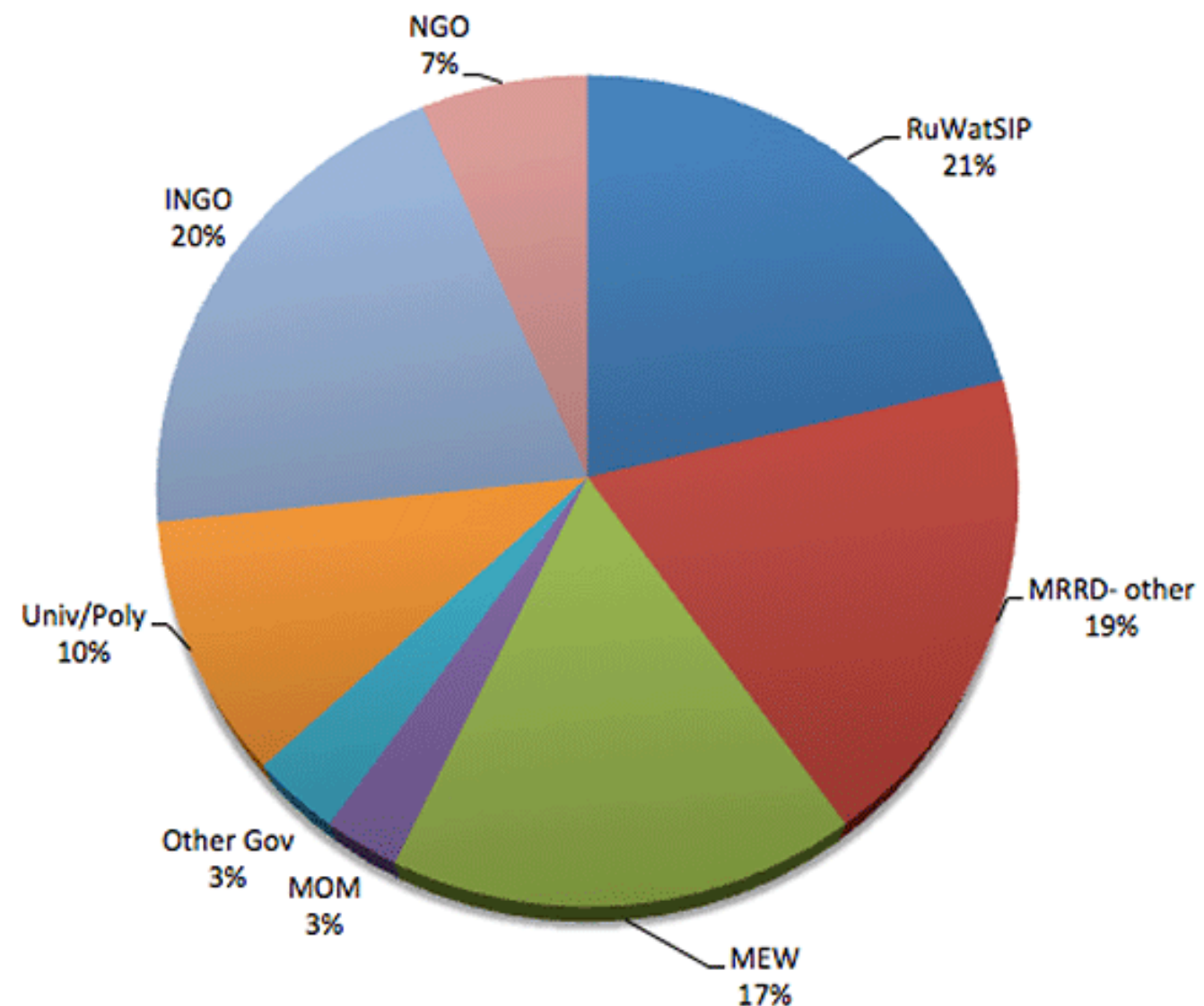


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- ❖ Pie showing where 409 participants came from
- ❖ 20 courses completed
- ❖ 220 different persons
- ❖ 190 male and 30 female

**Background of 409 course participants attending 20 courses so far completed**





# Attendance at different courses

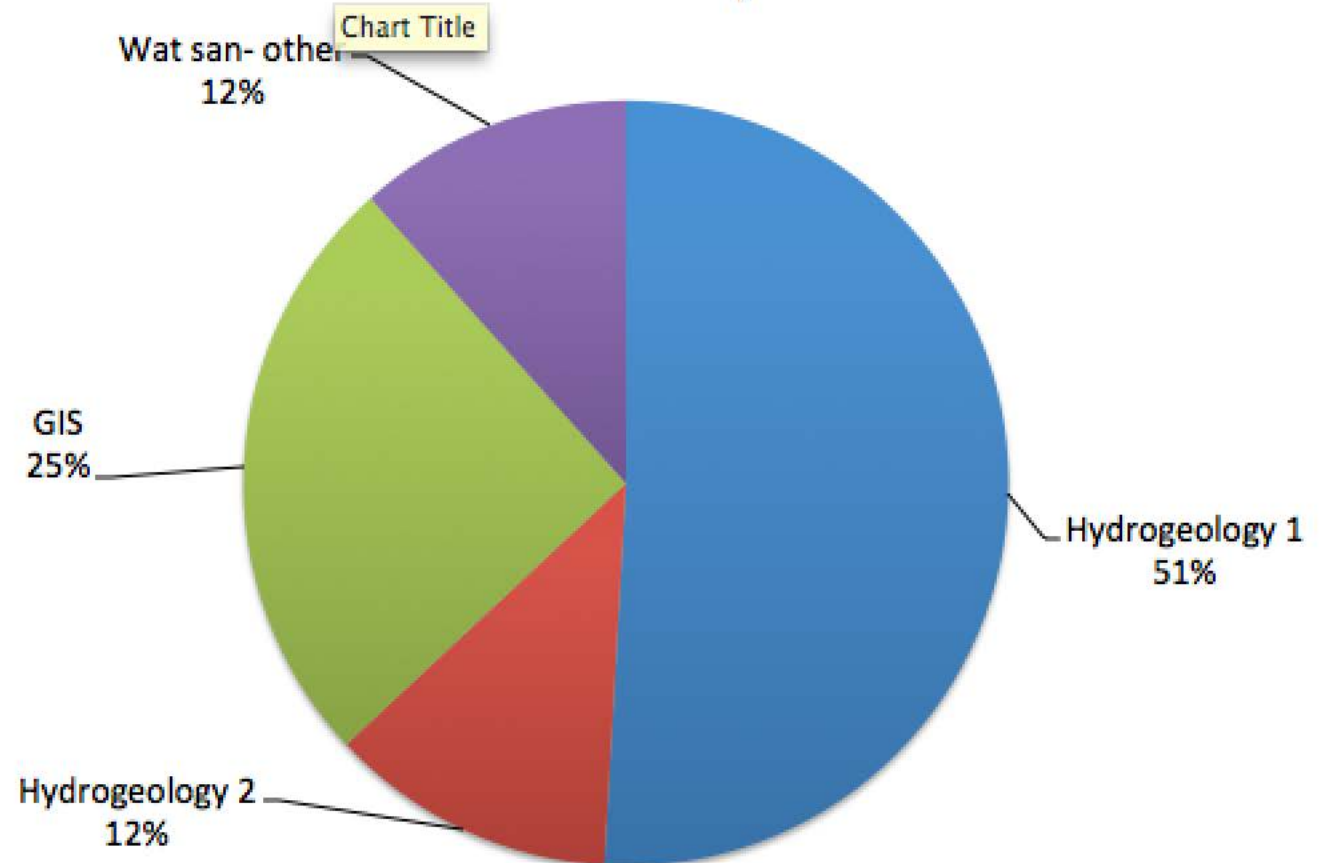


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- ❖ Note that some courses could start earlier than others..

**% age of course participants at different courses , (after 20 courses and 409 participants attended)**





# Sector coordination



RuWatSIP - training all sector actors



MEW- strategic planning

ANSA  
National  
water  
quality  
system



UNICEF - annual meeting



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# Project Expenditures: 31.12.13

**Note: This form is MANUALLY updated!**

**Form F2: SUMMARY OF COSTS**

**NOW UPDATED FOR EXPENDITURES TO DATE:**

**31/12/2013**

Item	Inception Stage (NOK)	Planning Stage*) (NOK)**	Implementation Stage (NOK)**	Total Cost (NOK)
<b>Foreign Staff Remuneration</b>	<b>Total from Box A</b>	<b>Total from Box B</b>		
Carried over from Form F3	1,261,250	3,870,000	6,365,000	11,496,250
Expenditure per 31.12.2013	1,314,558	9,793,212		11,107,770
<b>Local Staff (DACAAR) Remuneration</b>				
Carried over from Form F3	133,250	399,750	1,865,500	2,398,500
Expenditure per 31.12.2013	133,000	1,144,362		1,277,362
<b>Sub Total Remuneration</b>	<b>1,394,500</b>	<b>4,269,750</b>	<b>7,241,000</b>	<b>12,905,250</b>
<b>Total expenditure Remuneration per 31.12.2013</b>	<b>1,447,558</b>	<b>10,937,574</b>		<b>12,385,132</b>
<b>Reimbursable Costs</b>	<b>Total from Box C</b>	<b>Total from Box D</b>		
Carried over from Form F4	323,228	1,018,432	9,318,465	10,660,125
Expenditure per 31.12.2013	261,952	1,389,170		1,651,122
<b>Sub Total Reimbursable</b>	<b>323,228</b>	<b>1,018,432</b>	<b>9,318,465</b>	<b>10,660,125</b>
<b>Total expenditure Reimbursable per 31.12.2013</b>	<b>261,952</b>	<b>1,389,170</b>	<b>0</b>	<b>1,651,122</b>
<b>Equipment Procurement</b>	<b>Total from Box E</b>			
Carried over from Form F5	945,359	4,619,425		5,564,784
Expenditure per 31.12.2013	687,662	1,331,001		2,018,663
<b>Sub Total Equipment</b>	<b>945,359</b>	<b>4,619,425</b>	<b>9,318,465</b>	<b>14,883,249</b>
Expenditure per 31.12.2013	687,662	1,331,001	0	14,883,249
Expenditure per 31.12.2013	2,397,172	13,657,745		16,054,917
<b>Total Amount</b>	<b>2,663,087</b>	<b>9,907,607</b>	<b>16,559,465</b>	<b>29,130,159</b>

Figures in *italic* = Provisional Sum (PS)

\*) Indication only, subject to findings during the Inception Phase

\*\*) Planning and implementation phase are added together

Note: Equipment procurement:

Advance for inception report: NOK 1,000,000

Advance for planning stage: NOK 2500000

received

received



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**DACAAR** 



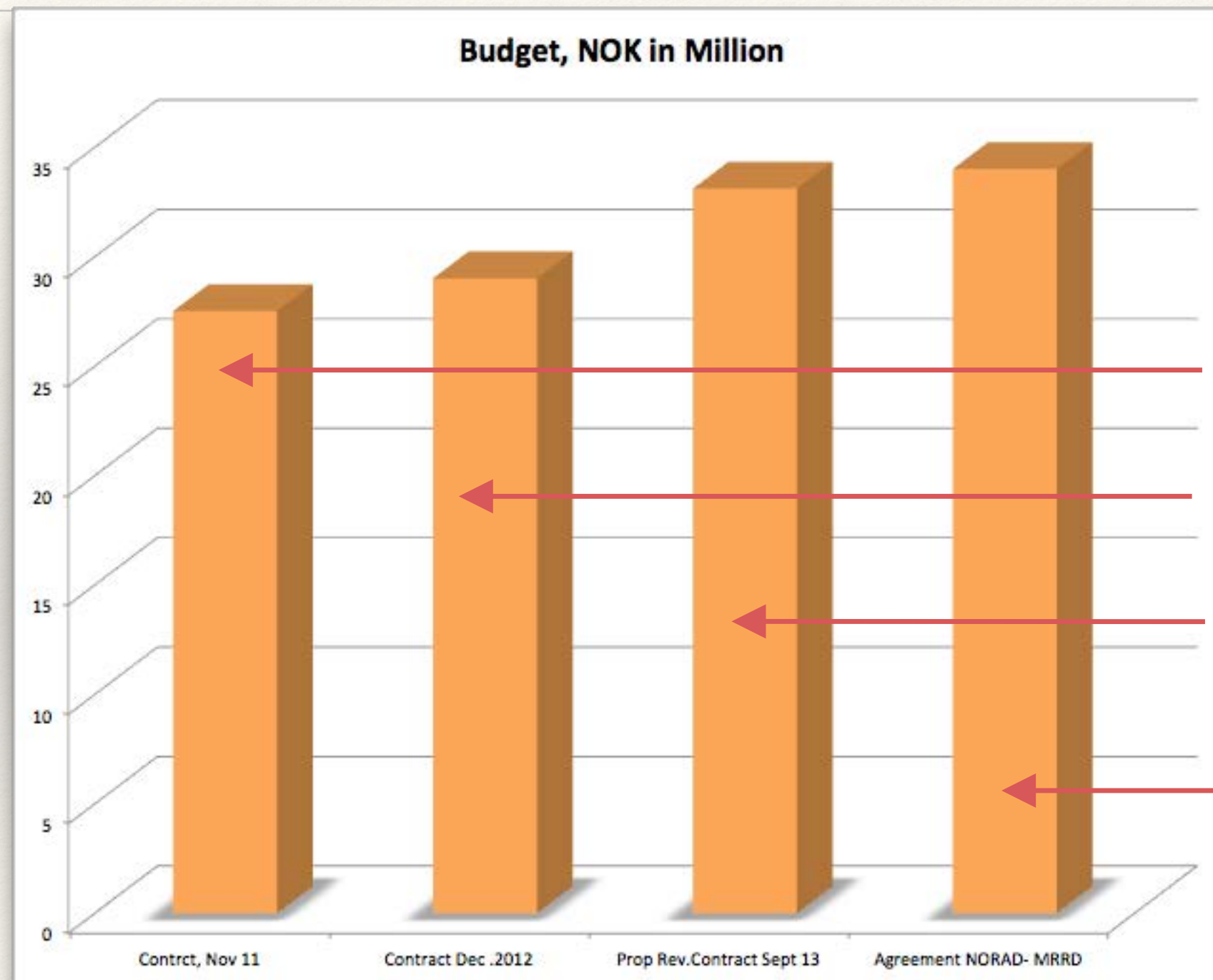
# Revised Budget: September 2014

## 2 FORM F2: SUMMARY OF COSTS

			Updated:	10th September 2014
Item	Inception Stage (increased from 2 to 4 months)	Planning Stage*) (increased from 8 to 12 months)	Implementation Stage	Total Cost**)
	(NOK)	(NOK)	(NOK)	(NOK)
Foreign Staff Remuneration	Total from Box A	Total from Box B		
Carried over from Form F3	2 086 800	5 511 074	10 808 307	18 406 181
Local Staff (DACAAR) Remuneration				
Carried over from Form F3	133 250	399 750	3 210 000	3 743 000
<b>Sub Total Remuneration</b>	<b>2 220 050</b>	<b>5 910 824</b>	<b>14 018 307</b>	<b>22 149 181</b>
Reimbursable Costs	Total from Box C	Total from Box D		
Carried over from Form F4	373 228	1 382 025	3 585 990	5 341 243
Equipment Procurement at Mobilisation	Total from Box E			
Carried over from Form F5	945 359			945 359
Equipment Procurement prior to Implementation				
Carried over from Form F5		4 619 425		4 619 425
<b>Sub Total Reimbursable</b>	<b>1 318 587</b>	<b>6 001 450</b>	<b>3 585 990</b>	<b>10 906 027</b>
<b>Total Amount</b>	<b>3 538 637</b>	<b>11 912 274</b>	<b>17 604 297</b>	<b>33 055 208</b>
Figures in <i>italic</i> = Provisional Sum (PS)				
*) Indication only, subject to findings during the Inception Stage				
**) Total project time increased from 36 to 42 months				



# Values: Contract- Agreement



Contract Value Dec 11

Contract Value Dec 12

Proposed Revised  
Contract Value Sep 13

Agreement  
NORAD- MRRD



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# Decisions and guidance needed

- ❖ Approval of revised budget
- ❖ Project implementation of be continued till mid 2015 with finalising manuals and documentation by end of 2015.
- ❖ Develop institutional cooperation with NGU, NIVA and University at As, UMB for capacity development and continued sector guidance through MRRD.
- ❖ NORAD to consider providing support so that possible planned water supply activities can be constructed?implemented.
- ❖ Next annual meeting in November to review progress.



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# Focus this year

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- ❖ Exploratory drilling in Faryab
- ❖ Developing solar still testing
- ❖ Continuing training program schedule as planned but revised for advance and basic courses. Include students and female participants
- ❖ Support to establishing national equality control for water laboratories
- ❖ Develop possible institutional links to NGU, NIVA, UMB in Norway
- ❖ Work further with Governor in Faryab for development of plans for water supply and sanitation for 3 rural towns.



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