

# Consulting Services for Environmental Flows Assessment and Water Quality Modelling within the Lesotho Lowlands Water Development Project Phase II (LLWDP II) Monthly Progress Report, February 2021

Ministry of Water, Lesotho



March 5<sup>th</sup>, 2021

Prepared by

**Multiconsult**

**Deltares**  
Enabling Delta Life 



**Multi - Nodal**  
Development Consultants

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## REPORT

PROJECT	<b>Consulting Services for Environmental Flow Assessment (EFA) and Water Quality Modelling within the Lesotho Lowlands Water Development Project Phase II (LLWDP II)</b>	DOCUMENT CODE	10223685-TVF-MPR-002
SUBJECT	Monthly Progress Report, February 2021	ACCESSIBILITY	Restricted
CLIENT	<b>Ministry of Water, Lesotho</b>	PROJECT MANAGER	Leif Birger Lillehammer
CONTACT	Nthame Monare	EDITED BY	Leif Birger Lillehammer
		PREPARED BY	Leif Birger Lillehammer, Filip Patocka
		RESPONSIBLE UNIT	Natural Resources, Multiconsult Norge AS

### SUMMARY

This is the second monthly progress report of the *Consulting Services for Environmental Flow Assessment (EFA) and Water Quality Modelling within the Lesotho Lowlands Water Development Project Phase II (LLWDP II)*. It covers period from week 5 to week 8 in 2021.

At the end of the last reporting period, the Draft Inception Report was delivered to the Client on 5<sup>th</sup> of February 2021. Since then the Consultants team had an internal workshop for the DRIFT method on February 17<sup>th</sup>. The Consultant as well observed the Covid-19 situation in Lesotho and South Africa in order to plan for the site works accordingly.

The Consultant was further engaged with purchase of equipment for monitoring, which is partly impacted by Covid-19 by prolonged delivery times.

The Consultant as well progressed on financial matters. An advance payment guarantee in three currencies was issued to the Client. Subsequently an invoice for advance payment in the three currencies a specified by the Contract was issued with payment due in week 9.

00	04.03.2021	Monthly Progress Report, February 2021	Leif Lillehammer, Filip Patocka	Leif Lillehammer	Gro Dyrnes
REV.	DATE	DESCRIPTION	EDITED BY	CHECKED BY	APPROVED BY

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## Attachment

Attachment 1 Workplan

Attachment 2 Invoice log

## 1 Overall status

Status for the last 3 reporting periods:

	None yet		Week 1-5, 2021		This Period	
	Status	Trend	Status	Trend	Status	Trend
Financial						
Time / progress						
Quality						

Colour codes:

- Green Status – as planned and under control, high probability of goal achievement
- Yellow Status – a few challenges, some corrective actions needed for goal achievement
- Red Status – major challenges, needs corrective actions, low probability of goal achievement

## 2 Main challenges, critical areas and proposal for measures

The main challenge for time and progress of the project is the Covid-19 pandemic. The Consultant proposed a contingency plan to outline possible strategies for coping with Covid-19 restriction scenarios. The plan is part of the submitted Draft Inception Report.

## 3 Health, Safety and Environment

Internal procedures for Health, Safety and Environment of the project are in place. They will be further reviewed prior to commencement of site work.

## 4 Quality

Internal quality plan following ISO 9001:2015 has been set up to control quality on the project and will be continuously reviewed against the work being undertaken to assure satisfactory quality is achieved.

## 5 Risk

Internal risk procedures connected to project execution, travelling and site work had been reviewed and are in place. Further risk evaluation will be done prior to commencement of site work.

## 6 Project Activities

The project activities in February has as agreed with MoW been on the low side, awaiting the possibilities for reconnaissance trip and first major field trips. These are now planned for early April and second week of May, respectively, and upon approval by MoW. The Consultant has however had an internal consultant's team workshop on the DRIFT methodology and its tailoring to this study. It was arranged on 17<sup>th</sup> February, and most of the team members participated. The consultant has also started to procure some of the monitoring equipment (See Section 6.2).

## 6.1 Internal DRIFT Workshop

The internal DRIFT workshop was a 3 hours event, where Professor Cate Brown guided the team in the DRIFT methodology the first two hours, including its tailoring to the Hlotse EFlow study. This helped the Consultants team to have a uniform and agreed approach to the study and the interfaces between the various topics. The last hour were set aside for discussion on the tailoring of the different topics, and its interaction, in the DRIFT DSS, and the study as a whole.

## 6.2 Purchase of monitoring equipment

The Consultant was been in contact with the Client's Department of Water Affairs prior to procurement of monitoring equipment in order to confirm its suitability as it will be handed over to the Client at the end of the project.

It was confirmed that the ISY ProDSS equipment is suitable, and the Consultant therefore proceeded with the purchase of the equipment.

Due to Covid-19 it is high likely that the delivery will take longer than expected, and the Consultant is in communication with the provider in order to minimise the delivery time to minimum.

## 7 Interfacing

The Consultant is in contact with the Client's team through the project manager Leif Birger Lillehammer and his administrative assistant Filip Patocka.

For the reconnaissance trip and first major field trips the Consultant will possibly need an introductory letter from MoW, also in order to be able to cross the border between RSA and Lesotho.

## 8 Organisation and manning

Full team of Multiconsult, Deltares, Southern Waters and Multi-Nodal relevant to the delivery of the ongoing tasks has been successfully mobilised.

The consultancy team members are outlined in the Preface section of the Draft Inception Report.

## 9 Contract

As planned and agreed, except the slight change in delivery time of the Draft Inception Report.

### 9.1 Economy

The Consultant issued three Advance Payment Guarantees, one for each currency as specified in the contract, on 8<sup>th</sup> February 2021 through Consultant's bank Nordea.

The Consultant consequently issued three invoices, one for each currency, for the Advance Payment. The advance payment represents 20% of the contract amount. The due date is 5<sup>th</sup> March 2021.

See the Attachment 2 for the Invoice log for details.

### 9.2 Delivery status

The Draft Inception Report was delivered to the Client on 5<sup>th</sup> of February 2021.

The list of deliverables is listed overleaf.

<b>Deliverables</b>	<b>Delivery date - From the commencement of the assignment, after:</b>
Kick-Off Meeting	18 <sup>th</sup> December 2020
Draft Inception Report	5 <sup>th</sup> February 2021
Final Inception and Scoping Report	5 months
Regular Progress Reports	Monthly (11 reports). The first on February 10 <sup>th</sup>
Baseline Monitoring Report	9 months
Monitoring and Modelling Report	9 months
Training Manual	9 months
Water Resources and Water Quality Assessment Report	11 months
Hydraulics Report	11 months
EFlows Assessment Report	11 months
DRIFT DSS and Hlotse Database	11 months
Customised Hlotse DRIFT Manual	11 months
EFMP	12 months
Completion Report	12 months

### **9.3 Milestones**

The first achieved milestone was delivery of the Draft Inception Report.

## **10 Disbursements and Invoicing**

There had been no payment made within the reporting period. The first payment will be the Advance Payment due on 5<sup>th</sup> of March 2021.

## Attachment 1 – Workplan

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	Name of Activity	Start	Finish	Duration	Kv. 1, 2021		Kv. 2, 2021		Kv. 3, 2021		Kv. 4, 2021		Kv. 1, 2022						
					jan	feb	mar	apr	mai	jun	jul	aug	sep	okt	nov	des	jan	feb	mar
1	<input type="checkbox"/> Task 1 - Inception and Mobilisation	07.01.2021	29.04.2021	74 dager															
2	Task 1.1 - Collate and review existing knowledge and data	07.01.2021	22.01.2021	12 dager															
3	Task 1.2 - Preliminary selection of IUAs, EFlows reaches and sites	11.01.2021	15.01.2021	5 dager															
4	Task 1.3 - Needs Assessment	11.01.2021	15.01.2021	5 dager															
5	Task 1.4 - Scenario Development	18.01.2021	22.01.2021	5 dager															
6	Task 1.5 - Preliminary list of indicators	18.01.2021	22.01.2021	5 dager															
7	Draft Inception Report	05.02.2021	05.02.2021	0 dager															
8	Final Inception and Scoping Report	29.04.2021	29.04.2021	0 dager															
9	<input type="checkbox"/> Task 2 - Field Data Collection	06.04.2021	02.03.2022	213 dager															
10	Task 2.1 - Reconnaissance	06.04.2021	12.04.2021	5 dager															
11	<input type="checkbox"/> Task 2.2 - Topographical and hydraulics	06.04.2021	30.07.2021	66 dager															
12	Part 1	06.04.2021	12.04.2021	5 dager															
13	Part 2	03.05.2021	07.05.2021	5 dager															
14	Part 3	26.07.2021	30.07.2021	5 dager															
15	<input type="checkbox"/> Task 2.3 - Water quality (monthly sampling WQ and sediments)	06.04.2021	02.03.2022	213 dager															
16	Month 1	06.04.2021	06.04.2021	1 dag															
17	Month 2	03.05.2021	03.05.2021	1 dag															
18	Month 3	07.06.2021	07.06.2021	1 dag															
19	Month 4	01.07.2021	01.07.2021	1 dag															
20	Month 5	02.08.2021	02.08.2021	1 dag															
21	Month 6	06.09.2021	06.09.2021	1 dag															
22	Month 7	04.10.2021	04.10.2021	1 dag															
23	Month 8	01.11.2021	01.11.2021	1 dag															
24	Month 9	06.12.2021	06.12.2021	1 dag															
25	Month 10	05.01.2022	05.01.2022	1 dag															
26	Month 11	02.02.2022	02.02.2022	1 dag															
27	Month 12	02.03.2022	02.03.2022	1 dag															
28	<input type="checkbox"/> Task 2.4 - Physical habitats	06.04.2021	30.07.2021	66 dager															
29	Part 1	06.04.2021	12.04.2021	5 dager															
30	Part 2	26.07.2021	30.07.2021	5 dager															
31	<input type="checkbox"/> Task 2.5 - Riparian and aquatic flora	06.04.2021	30.07.2021	66 dager															
32	Part 1	06.04.2021	12.04.2021	5 dager															
33	Part 2	26.07.2021	30.07.2021	5 dager															
34	<input type="checkbox"/> Task 2.6 - Benthic organisms	06.04.2021	30.07.2021	66 dager															
35	Part 1	06.04.2021	12.04.2021	5 dager															
36	Part 2	26.07.2021	30.07.2021	5 dager															



**Consulting Services for Environmental Flow Assessment (EFA)  
and Water Quality Modelling within the Lesotho Lowlands  
Water Development Project Phase II (LLWDP II)**

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Monthly Progress Report

Attachment 1- Workplan



	Name of Activity	Start	Finish	Duration	Kv. 1, 2021	Kv. 2, 2021	Kv. 3, 2021	Kv. 4, 2021	Kv. 1, 2022								
					jan	feb	mar	apr	mai	jun	jul	aug	sep	okt	nov	des	jan
73	<input type="checkbox"/> Task 7 - Development of a monitoring system	11.01.2021	23.12.2021	225 dager	[Gantt bar from Jan 2021 to Dec 2021]												
74	<input type="checkbox"/> Task 7.1 - Assess monitoring systems	11.01.2021	08.10.2021	171 dager	[Gantt bar from Jan 2021 to Oct 2021]												
75	Part 1	11.01.2021	22.01.2021	10 dager	[Bar]												
76	Part 2	13.09.2021	08.10.2021	20 dager									[Bar]				
77	Task 7.2 - Design and implement Baseline Monitoring	25.01.2021	10.09.2021	141 dager	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]
78	Task 7.3 - Design and cost implementation of follow-up monitoring	13.09.2021	23.12.2021	74 dager									[Bar]	[Bar]	[Bar]	[Bar]	[Bar]
79	<input type="checkbox"/> Task 7.4 – Procurement of Monitoring equipment	06.04.2021	08.10.2021	116 dager													
80	Part 1	06.04.2021	19.04.2021	10 dager									[Bar]				
81	Part 2	13.09.2021	08.10.2021	20 dager													
82	<input type="checkbox"/> Task 8 - Environmental Flow Management Plan	04.10.2021	23.12.2021	59 dager													
83	Task 8.1 - Liaison with the Client, and agreement of the EFlows	04.10.2021	12.11.2021	30 dager													
84	Task 8.2 - Preparation of an EFMP	12.11.2021	23.12.2021	30 dager													
85	<input type="checkbox"/> Task 9 - Capacity Building on EFlows and other study aspects	06.04.2021	17.09.2021	101 dager													
86	<input type="checkbox"/> Task 9.1 - DRIFT Training Courses	06.04.2021	13.08.2021	76 dager													
87	Part 1	06.04.2021	12.04.2021	5 dager													
88	Part 2	09.08.2021	13.08.2021	5 dager													
89	Task 9.2 - Water quality and hydraulic modelling course	06.04.2021	19.04.2021	10 dager													
90	<input type="checkbox"/> Task 9.3 - Practical experience with mentors	06.04.2021	10.09.2021	96 dager													
91	Part 1	06.04.2021	19.04.2021	10 dager													
92	Part 2	10.05.2021	02.06.2021	15 dager													
93	Part 3	26.07.2021	06.08.2021	10 dager													
94	Part 4	23.08.2021	10.09.2021	15 dager													
95	<input type="checkbox"/> Task 9.4 - Hands-on learning activity with the procured monitoring...	19.04.2021	17.09.2021	92 dager													
96	Part 1	19.04.2021	23.04.2021	5 dager													
97	Part 2	13.09.2021	17.09.2021	5 dager													
98	<input type="checkbox"/> Deliverables	06.11.2020	23.12.2021	263 dager	[Gantt bar from Nov 2020 to Dec 2021]												
99	<input type="checkbox"/> D 1 Inception Report	22.01.2021	29.04.2021	63 dager	[Gantt bar from Jan 2021 to Apr 2021]												
100	Draft Inception Report	22.01.2021	22.01.2021	0 dager													
101	Final Inception and Scoping Report	29.04.2021	29.04.2021	0 dager													
102	<input type="checkbox"/> D2 Monthly Reports	06.11.2020	08.10.2021	209 dager	[Gantt bar from Nov 2020 to Oct 2021]												
103	Month 1	05.02.2021	05.02.2021	0 dager													
104	Month 2	05.03.2021	05.03.2021	0 dager													
105	Month 3	09.04.2021	09.04.2021	0 dager													
106	Month 4	07.05.2021	07.05.2021	0 dager													
107	Month 5	04.06.2021	04.06.2021	0 dager													
108	Month 6	02.07.2021	02.07.2021	0 dager													

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Monthly Progress Report

Attachment 1- Workplan



	Name of Activity	Start	Finish	Duration	Kv. 1, 2021	Kv. 2, 2021	Kv. 3, 2021	Kv. 4, 2021	Kv. 1, 2022									
					jan	feb	mar	apr	mai	jun	jul	aug	sep	okt	nov	des	jan	feb
109	Month 7	06.08.2021	06.08.2021	0 dager														
110	Month 8	03.09.2021	03.09.2021	0 dager														
111	Month 9	08.10.2021	08.10.2021	0 dager														
112	Month 10	06.11.2020	06.11.2020	1 dag														
113	Month 11	04.12.2020	04.12.2020	1 dag														
114	<input type="checkbox"/> <b>D3 Water Resources and Water Quality Report</b>	<b>19.11.2021</b>	<b>03.12.2021</b>	<b>10 dager</b>														
115	Draft	19.11.2021	19.11.2021	0 dager														
116	Final	03.12.2021	03.12.2021	0 dager														
117	<input type="checkbox"/> <b>D4 Hydraulics Report</b>	<b>19.11.2021</b>	<b>03.12.2021</b>	<b>10 dager</b>														
118	Draft	19.11.2021	19.11.2021	0 dager														
119	Final	03.12.2021	03.12.2021	0 dager														
120	<input type="checkbox"/> <b>D5 Baseline Monitoring Report</b>	<b>06.09.2021</b>	<b>24.09.2021</b>	<b>14 dager</b>														
121	Draft	06.09.2021	06.09.2021	0 dager														
122	Final	24.09.2021	24.09.2021	0 dager														
123	<input type="checkbox"/> <b>D6 Monitoring and Modelling Report</b>	<b>06.09.2021</b>	<b>24.09.2021</b>	<b>14 dager</b>														
124	Draft	06.09.2021	06.09.2021	0 dager														
125	Final	24.09.2021	24.09.2021	0 dager														
126	<b>D7 Training Manual</b>	<b>24.09.2021</b>	<b>24.09.2021</b>	<b>0 dager</b>														
127	<input type="checkbox"/> <b>D8 Eflows Assessment Report</b>	<b>19.11.2021</b>	<b>03.12.2021</b>	<b>10 dager</b>														
128	Draft	19.11.2021	19.11.2021	0 dager														
129	Final	03.12.2021	03.12.2021	0 dager														
130	<input type="checkbox"/> <b>D9 EFMP Report</b>	<b>06.12.2021</b>	<b>16.12.2021</b>	<b>8 dager</b>														
131	Draft	06.12.2021	06.12.2021	0 dager														
132	Final	16.12.2021	16.12.2021	0 dager														
133	<b>D10 Completion Report</b>	<b>23.12.2021</b>	<b>23.12.2021</b>	<b>0 dager</b>														
134	<b>D11 DRIFT DSS and Hlotse Database</b>	<b>03.12.2021</b>	<b>03.12.2021</b>	<b>0 dager</b>														
135	<b>D12 Customized Hlotse Drift Manual</b>	<b>03.12.2021</b>	<b>03.12.2021</b>	<b>0 dager</b>														
136	<input type="checkbox"/> <b>D13 Monitoring Equipment</b>	<b>06.04.2021</b>	<b>17.09.2021</b>	<b>100 dager</b>														
137	Draft	06.04.2021	06.04.2021	0 dager														
138	Final	17.09.2021	17.09.2021	0 dager														

## Attachment 2 – Invoice log

Consulting Services for Environmental Flows Assessment and Water Quality Modelling within the Lesotho Lowlands Water Development Project Phase II (LLWDP II)

### NOK Part

Client	Project No	Invoice No.	Description	Amount	Invoice Date	Due Date	Status	Paid	Received Amount	Outstanding Amount	Comments
Lesotho Lowlands Water Development Project II, Ministry of Water	10223685-01	10552144	Advance Payment	NOK 200,554.00	19.02.2021	05.03.2021	Active	No	NOK 0.00	NOK 200,554.00	
							-				
			<b>Sum Invoices</b>	<b>NOK 200,554.00</b>					-	<b>NOK 200,554.00</b>	

Consulting Services for Environmental Flows Assessment and Water Quality Modelling within the Lesotho Lowlands Water Development Project Phase II (LLWDP II)

### EUR Part

Client	Project No	Invoice No.	Description	Amount	Invoice Date	Due Date	Status	Paid	Received Amount	Outstanding Amount	Comments
Lesotho Lowlands Water Development Project II, Ministry of Water	10223685-02	10552145	Advance Payment	EUR 20,313.00	19.02.2021	05.03.2021	Active	No	EUR 0.00	EUR 20,313.00	
							-				
			<b>Sum Invoices</b>	<b>EUR 20,313.00</b>					-	<b>EUR 20,313.00</b>	

Consulting Services for Environmental Flows Assessment and Water Quality Modelling within the Lesotho Lowlands Water Development Project Phase II (LLWDP II)

### USD Part

Client	Project No	Invoice No.	Description	Amount	Invoice Date	Due Date	Status	Paid	Received Amount	Outstanding Amount	Comments
Lesotho Lowlands Water Development Project II, Ministry of Water	10223685-03	10552146	Advance Payment	USD 82,218.00	19.02.2021	05.03.2021	Active	No	USD 0.00	USD 82,218.00	
							-				
			<b>Sum Invoices</b>	<b>USD 82,218.00</b>					-	<b>USD 82,218.00</b>	