

# PMR Operational Report

<b>Operation Number</b>	HA-L1097	<b>Chief of Operations Validation Date</b>	10/15/18
<b>Year- PMR Cycle</b>	First period Jan-Jun 2018	<b>Division Chief Validation Date</b>	
<b>Last Update</b>	09/11/18	<b>Country Representative Validation Date</b>	
<b>PMR Validation Stage</b>	Validated by Chief of Operations		

## Basic Data

### Operation Profile

<b>Operation Name</b>	Natural Disaster Mitigation Program II	<b>Loan Number</b>	3622/GR-HA
<b>Executing Agency</b>	Ministère de l'Agriculture, des Ressources Naturelles et du Développement Rural	<b>Sector/Subsector</b>	AG-DEV - AGRICULTURE AND RURAL DEVELOPMENT-SUSTAINABLE AGRICULTURAL DEVELOPMENT
<b>Team Leader</b>	DE SALVO, CARMINE PAOLO	<b>Overall Stage</b>	Disbursing (From eligibility until all the Operations are closed)
<b>Operation Type</b>	Loan Operation	<b>Country</b>	HAITI
<b>Lending Instrument</b>	Investment Loan	<b>Convergence related Operation(s)</b>	HA-G1031
<b>Borrower</b>	REPUBLIQUE D' HAITI		

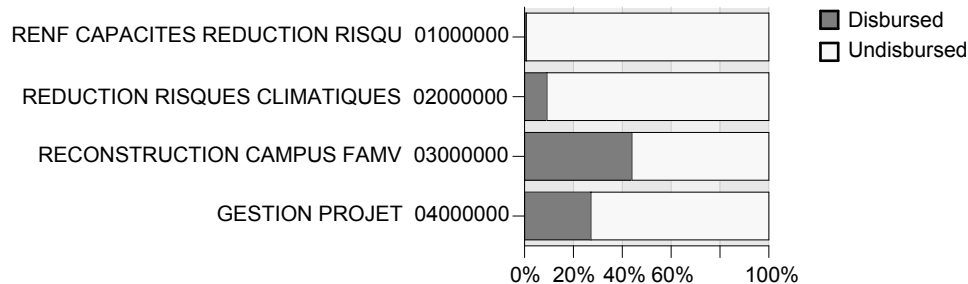
## Environmental and Social Safeguards

<b>Impacts Category</b>	B	<b>Was/Were the objective(s) of this operation reformulated?</b>	NO
<b>Safeguard Performance Rating</b>		<b>Date of approval</b>	
<b>Safeguard Performance Rating - Rationale</b>			

## Financial Data

Item	Total Cost and Source					Available Funds (US\$)			
	Original IDB	Current IDB	Local Counterpart	Co-Financing / Country	Total Original Cost	Current IDB	Disb. Amount to Date	% Disb	Undisbursed Amount
HA-G1031	4,500,000	4,500,000	0	0	4,500,000	4,500,000	791,221	17.58%	3,708,779
HA-L1097	42,000,000	42,000,000	750,000	0	42,750,000	42,000,000	13,143,872.24	31.29%	28,856,127.76
<b>Aggregated</b>	<b>46,500,000</b>	<b>46,500,000</b>	<b>750,000</b>	<b>0</b>	<b>47,250,000</b>	<b>46,500,000</b>	<b>13,935,093.24</b>	<b>29.97%</b>	<b>32,564,906.76</b>

## Expense Categories by Loan Contract (cumulative values)



Please note that the Overall Stage represents the stage of the operation at the time of this report's publication, which might not necessarily match the stage of the operation during the PMR Cycle to which the report pertains. Please also note that inactive indicators and outputs are not displayed; totals in the actual cost table may not match the sum of the cost of the outputs displayed, due to the cost of inactive outputs.

## PMR Operational Report

### RESULTS MATRIX

#### IMPACTS

**Impact Nbr. 0:** Increased agricultural productivity in targeted watersheds.

**Observation:**

Indicator		Unit of Measure	Baseline	Baseline Year		2021	EOP 2021
0.0	In selected gullies, where check-dams are built (upper watershed), difference in average annual gross value-added per plot between beneficiaries of check-dams and control group	US\$	0.00	2015	P		1,215.00
					P(a)		
					A		

#### Details

**Means of verification:** Impact Evaluation Report, based on a randomized selection of beneficiaries in the agro-forestry area.

**Observations:** Data source for baseline and EoP: Ex Post Economic Analysis of PMDN I (2015). Other comments: Gross value added = Value of Production – Intermediate Consumption. Annual gross value-added will not be calculated by individual crop but at the level of the plot as a whole since farmers in these areas typically implement complex mixed-crop systems.

**Pro-Gender** No **Pro-Ethnicity** No

Indicator		Unit of Measure	Baseline	Baseline Year		2021	EOP 2021
0.1	In selected areas, difference in average annual gross value-added per farm between beneficiaries of research program and control group	US\$	0.00	2015	P		1,442.00
					P(a)		
					A		

#### Details

**Means of verification:** Same as Impact Indicator 1 above.

**Observations:** 910 direct beneficiaries of research program (25% of which will be women) Data source for EoP: Chand et al. (2012)

**Pro-Gender** No **Pro-Ethnicity** No

## PMR Operational Report

### RESULTS MATRIX

#### IMPACTS

**Impact Nbr. 1:** Decreased crop, livestock and infrastructure losses caused by floods in targeted watershed.

**Observation:**

Indicator		Unit of Measure	Baseline	Baseline Year		2021	EOP 2021
1.0	Reduction of losses caused by a one year return period flood event in the targeted watersheds	US\$	0.00	2015	P		1,351,414.00
					P(a)		
					A		

#### Details

**Means of verification:** Follow up panel surveys in the lower watersheds (using AECOM and ARTELIA methodologies).

**Observations:** The total estimated losses for the prioritized watersheds for a 1-2 year return period are US\$34,429,835 (Aecom, 2015 and Artelia, 2013). Losses include agricultural production, infrastructure and personal property. Baseline values will be recalculated at the beginning of project execution. The reduction of annual losses is a combination of the reduction attributed to mitigation works and EWS. The indicator only considers losses by floods and not erosion because erosion will not impact the irrigation channels before the evaluation. Data source for baseline and EoP: AECOM 2015 / ARTELIA 2013.

<b>Pro-Gender</b>	No	<b>Pro-Ethnicity</b>	No
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## PMR Operational Report

### RESULTS MATRIX

#### OUTCOMES

**Outcome Nbr. 0:** Outcome 1. Increased capacity for adaptation to climate change and DRM in the agriculture sector

**Observation:**

Indicator		Unit of Measure	Baseline	Baseline Year		2017	2018	2019	2020	2021	EOP 2021
0.0	Indicator 1.1. Number of climateproof agricultural techniques disseminated through MARNDR's technological transfer program.	Number	0.00	2016	P				5.00	5.00	10.00
					P(a)						
					A						

#### Details

**Means of verification:** Field visits and monitoring reports.

**Observations:** MARNDR's technological transfer programs are programs such as PTTA (HA-L1059), RESEPAG (financed by the World Bank) and other similar ones.

<b>Pro-Gender</b>	No	<b>Pro-Ethnicity</b>	No
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Indicator		Unit of Measure	Baseline	Baseline Year		2017	2018	2019	2020	2021	EOP 2021
0.1	Indicator 1.2. Agricultural techniques adoption rate among farmers.	Percent	0.00	2016	P		75.00	75.00	75.00	75.00	75.00
					P(a)						
					A						

#### Details

**Means of verification:** Field visits and monitoring reports. Other comments: This outcome indicator refers to new technologies being promoted.

**Observations:** This is a core indicator for PPCR This indicator refers to the adoption rate among beneficiaries of the applied research program as well as MARNDR's technological transfer program. It will be disaggregated by gender (75% of the 25% women participants in the research program are expected to adopt the techniques). Data source for EoP: PTTA monitoring document (GAFSP); Impact Evaluation of 2223/BL-BO; Bentley et al. (2011)

<b>Pro-Gender</b>	No	<b>Pro-Ethnicity</b>	No
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Indicator		Unit of Measure	Baseline	Baseline Year		2017	2018	2019	2020	2021	EOP 2021
0.2	Indicator 1.3. iGOPP-FP subindex.	Percent	0.51	2016	P	0.51	0.51	0.51	0.51	0.51	3.60
					P(a)						
					A						

#### Details

**Means of verification:** iGOPP endline report.

**Observations:** Details on the iGOPP methodology can be found at: <https://publications.iadb.org/handle/11319/6717> Data source: Index of Governance and Public Policy in Disaster Risk Management (iGOPP). National Report, Haiti. <https://publications.iadb.org/handle/11319/6875>

<b>Pro-Gender</b>	No	<b>Pro-Ethnicity</b>	No
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Indicator	Unit of	Baseline	Baseline		2017	2018	2019	2020	2021	EOP 2021
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## PMR Operational Report

### RESULTS MATRIX

#### OUTCOMES

		Measure		Year							
0.3	Indicator 1.4. iGOPP-RC subindex.	Percent	5.00	2016	P	5.00	5.00	5.00	5.00	7.00	7.00
					P(a)						
					A						

#### Details

**Means of verification:** iGOPP endline report.

**Observations:** Data source: Same as Indicator 1.3 above.

Pro-Gender	No	Pro-Ethnicity	No
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Indicator	Unit of Measure	Baseline	Baseline Year		2017	2018	2019	2020	2021	EOP 2021
0.4	Indicator 1.5. Share of MARNDR mitigation works design based on climate risk analysis information system in the selected watersheds	Percent	0.00	2016	P			40.00	80.00	
					P(a)					
					A					

#### Details

**Means of verification:** Field visits and monitoring reports.

**Observations:** Data source for EoP: Discussion with senior MARNDR management.

Pro-Gender	No	Pro-Ethnicity	No
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Indicator	Unit of Measure	Baseline	Baseline Year		2017	2018	2019	2020	2021	EOP 2021
0.5	Indicator 1.6. Queries to the risk information system registered through the web page.	Number	0.00	2016	P		200.00	300.00	500.00	
					P(a)					
					A					

#### Details

**Means of verification:** monitoring reports.

**Observations:** Data source for EoP: Estimated based on data of other countries where iGOPP is measured.

Pro-Gender	No	Pro-Ethnicity	No
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**Outcome Nbr. 2:** Outcome 3. Reduced risk of economic losses due to floods and erosion in targeted watersheds.

**Observation:**

Indicator	Unit of Measure	Baseline	Baseline Year		2017	2018	2019	2020	2021	EOP 2021
2.0	Indicator 3.1. Reduction of expected average annual economic losses due to floods in targeted watersheds	US\$	0.00	2016	P			1,738,539.00	1,738,539.00	1,738,539.00
					P(a)					

## PMR Operational Report

### RESULTS MATRIX

#### OUTCOMES

2.0	Indicator 3.1. Reduction of expected average annual economic losses due to floods in targeted watersheds	US\$	0.00	2016	A						
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#### Details

**Means of verification:** Results of climate risk modelling (output 1) considering the effects of the project mitigation works, and final reception report of the mitigation works.

**Observations:** Reduction in economic losses comes from both EWS and infrastructures. Data sources for baseline and EoP: AECOM 2015 and Artelia 2013. The total average loss for the prioritized watersheds between 2 a 100 year return period is US\$ 28,575,996 (Aecom, 2015 and Artelia, 2013).

**Pro-Gender** No **Pro-Ethnicity** No

Indicator	Unit of Measure	Baseline	Baseline Year		2017	2018	2019	2020	2021	EOP 2021
2.1	Indicator 3.2. Reduction of expected average annual economic losses due to erosion affecting the irrigation canals in Artibonite	US\$	0.00	2016	P			13,242,090.00	13,242,090.00	13,242,090.00
					P(a)					
					A					

#### Details

**Means of verification:** Results of climate risk modelling (output 1) considering the effects of the project mitigation works, and final reception report of the mitigation works.

**Observations:** Data sources for baseline and EoP: AECOM 2015 and Artelia 2013.

**Pro-Gender** No **Pro-Ethnicity** No

Indicator	Unit of Measure	Baseline	Baseline Year		2017	2018	2019	2020	2021	EOP 2021
2.2	Indicator 3.3. Community based early warning systems functioning in targeted watersheds	System	0.00	2016	P			5.00		5.00
					P(a)					
					A					

#### Details

**Means of verification:** Practical drill evaluated by external expert.

**Observations:** Early warning systems (EWS) will be installed in the targeted watersheds. The EWS will be considered to be “functioning” if the results of a practical drill are satisfactory.

**Pro-Gender** No **Pro-Ethnicity** No

**Outcome Nbr. 1:** Outcome 2. Improved water and sediment conservation in selected gullies of priority watersheds.

**Observation:**

Indicator		Unit of Measure	Baseline	Baseline Year		2017	2018	2019	2020	2021	EOP 2021
1.0	Indicator 2.1.: Total volume of sediment contained by checkdams	m3	0.00	2016	P	2,800.00	18,500.00	28,400.00	7,000.00	0.00	56,700.00
					P(a)	800.00	20,500.00	28,400.00	7,000.00	0.00	
					A						

## PMR Operational Report

### RESULTS MATRIX

#### OUTCOMES

Details											
Means of verification: Field visits and monitoring reports.											
Observations: Data source for baseline and EoP: Estimations are based on PMDN I monitoring data, which show that the average volume of sediments contained by check-dam is 100 m3.											
Pro-Gender		No		Pro-Ethnicity		No					
Indicator		Unit of Measure	Baseline	Baseline Year		2017	2018	2019	2020	2021	EOP 2021
1.1	Indicator 2.2.: Cultivable area created by check dams in the gullies	Ha	0.00	2016	P	14.00	92.50	142.00	35.00	0.00	283.50
					P(a)	8.00	98.50	142.00	35.00		
					A						
Details											
Means of verification: Field visits and monitoring reports.											
Observations: Data source: Estimations are based on the Ex Post Economic Evaluation of PMDN I, which shows that check-dams create on average an additional 0.5 Ha of cultivable area.											
Pro-Gender		No		Pro-Ethnicity		No					
Indicator		Unit of Measure	Baseline	Baseline Year		2017	2018	2019	2020	2021	EOP 2021
1.2	Indicator 2.3.: Total volume of water contained by checkdams that is available during the dry season	m3	0.00	2016	P	297.00	1,944.00	2,970.00	729.00	0.00	5,940.00
					P(a)	97.00	2,144.00	2,970.00	729.00		
					A						
Details											
Means of verification: Field visits and monitoring reports.											
Observations: Data source for EoP: Estimations are based on PMDN I data which shows that the average volume of check dams' water retention tanks is 13.5 m3. Out of the 567 check dams that are going to be built, 440 are going to be equipped with water retention tanks.											
Pro-Gender		No		Pro-Ethnicity		No					
Indicator		Unit of Measure	Baseline	Baseline Year		2017	2018	2019	2020	2021	EOP 2021
1.3	Indicator 2.4.: Farmers who benefit from new cultivable area created by check-dams.	Farmers (#)	0.00	2016	P	28.00	185.00	284.00	70.00	0.00	567.00
					P(a)	15.00	198.00	284.00	70.00		
					A						
Details											
Means of verification: Field visits and monitoring reports.											
Observations: This is a core indicator for PPCR. It will be disaggregated by gender. Data source: It corresponds to the number of microdams that are going to be built (the hypothesis is that, on average, there is one farmer cultivating one check-dam).											

## PMR Operational Report

### RESULTS MATRIX

#### OUTCOMES

Pro-Gender	Yes	Pro-Ethnicity	No
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**Outcome Nbr.** 3: Outcome 4. Educational capacity of the FAMV campus restored

**Observation:**

Indicator		Unit of Measure	Baseline	Baseline Year		2017	2018	2019	2020	2021	EOP 2021
3.0	Indicator 4.1. Annual number of research papers published by FAMV on disaster risk management, and climate-proof agriculture.	research paper	0.00	2016	P	6.00	6.00	6.00	8.00	12.00	12.00
					P(a)	0.00	6.00	6.00	10.00	16.00	
					A						

#### Details

**Means of verification:** field visits and monitoring reports.

**Observations:** Data source for baseline: FAMV

Pro-Gender	No	Pro-Ethnicity	No
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Indicator	Unit of Measure	Baseline	Baseline Year		2017	2018	2019	2020	2021	EOP 2021
3.1	Indicator 4.2. Reduction of expected loss of human lives due to collapse of FAMV buildings	Person	0.00	2016	P				122.00	122.00
					P(a)					
					A					

#### Details

**Means of verification:** The Ministry of Public Work (MTPTC) will verify the infrastructure's compliance with the Code national des bâtiments publics (2011)

**Observations:** Data source for baseline: Structural evaluation of the FAMV (2015)

Pro-Gender	No	Pro-Ethnicity	No
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# RESULTS MATRIX

## OUTPUTS: ANNUAL PHYSICAL AND FINANCIAL PROGRESS

### Component Nbr. 1 Component 1. Capacity Building to Reduce Climate Risk

	Output	Unit of Measure		PHYSICAL PROGRESS		FINANCIAL PROGRESS	
				2018	EOP 2021	2018	EOP 2021
1.1	Produit 1. Modèles d'analyses de risques climatiques développés	Etude	P	2	4	250,000	800,000
			P(a)	2	4	270,000	800,000
			A	0	0	0	0
1.2	Produit 2. Système d'information sur les risques climatiques en agriculture développé	Système	P		1	50,000	300,000
			P(a)	0	1	50,000	300,000
			A	0	0	0	0
1.3	Produit 3. Programme de recherche&formation agricole/resilience CC/dynamique BV mis en oeuvre	Programme	P		3	556,377.5	2,750,000.04
			P(a)	0	3	670,000	2,750,000.04
			A	0	0	22,604.78	37,507.26
1.4	Produit 4. Programme de formation en gestion de risques climatiques dans l'agriculture développé et mis en oeuvre	Programme	P		1	30,000	300,000
			P(a)	0	1	30,000	300,000
			A	0	0	0	0
1.5	Produit 5. Formation conduite sur l'évaluation des pertes et dommages dus aux désastres naturels dans l'agriculture	Formation	P		1		50,000
			P(a)	1	1	50,000	50,000
			A	0	0	0	0
1.6	Produit 6. Plan national de contingence dans le secteur agricole en cas d'événement climatique extrême élaboré et diffusé.	Plan	P		0		0
			P(a)	0	1		150,000
			A	0	0	0	0
1.7	Produit 6. Formation conduite sur l'évaluation des pertes et dommages dus aux désastres naturels dans l'agriculture	Plan	P	3	3	135,000	150,000
			P(a)	3	3	0	0
			A	0	0	0	0
1.8	Produit 7. Comités de Gestion de Bassins Versants (CGBV) renforcés	CGBV	P		0	100,000	350,000
			P(a)	0	3	210,000	350,000
			A	0	0	0	0

## RESULTS MATRIX

### OUTPUTS: ANNUAL PHYSICAL AND FINANCIAL PROGRESS

#### Component Nbr. 2 Component 2: Climate Risk Reduction

	Output	Unit of Measure		PHYSICAL PROGRESS		FINANCIAL PROGRESS	
				2018	EOP 2021	2018	EOP 2021
2.1	Produit 8. Systèmes communautaires d'alerte précoce aux inondations développés	Comites	P	3	3	300,000	1,500,000
			P(a)	3	3	330,000	1,500,000
			A	0	0	0	10,800
2.2	Produit 9. Infrastructures de protection de bassins versants - Amont (Nord et Sud)	Ouvrage	P	826	3,303	700,000	3,170,000.44
			P(a)	500	3,353	730,000	3,170,000.44
			A	709	1,295	285,400.62	719,093.07
2.3	Produit 10. Infrastructures de protection de bassins versants - Amont (St Raphael / St Michel)	Ouvrage	P	429	1,717	523,000.25	2,100,000.75
			P(a)	250	1,718	500,000.25	2,100,000.75
			A	462	914	90,250.46	251,499.46
2.4	Produit 11. Infrastructures de protection de bassins versants - Aval	Ouvrage	P	1	5	2,500,000	19,429,999.8
			P(a)	0	6	2,700,000	18,777,814.8
			A	1	2	1,464,794.36	2,150,953.71
2.5	Produit 12.-Subvention aux agriculteurs du Sud	Agriculteur	P		0		0
			P(a)	0	2,650	0	421,928
			A	0	2,650	0	421,928
2.6	Produit 13-Curage et nettoyage du perimetre irrigue de Dubreuil et réparation et construction de 4 km de canaux primaires et secondaires	Metres	P		0		0
			P(a)	0	52,035	0	0
			A	0	52,035	0	0
2.7	Produit 13.1-Curage et nettoyage du perimetre irrigue de Dubreuil	Metres	P		0		0
			P(a)	0	48,000	0	200,000
			A	0	48,000	0	200,000
2.8	Produit 13.2-Réparation et construction de 4 km de canaux primaires et secondaires	Metres	P		0		0
			P(a)	0	4,035	0	30,257
			A	0	4,035	0	30,257

#### Component Nbr. 3 Component 3: Reconstruction of Faculty of Agronomics and Veterinary Medicine (FAMV)

	Output	Unit of Measure		PHYSICAL PROGRESS		FINANCIAL PROGRESS	
				2018	EOP 2021	2018	EOP 2021
3.1	Produit 12. Faculté d'Agronomie et Médecine Vétérinaire construite et équipée	Faculte	P		1	2,000,000	9,999,999.59
			P(a)	0	1	2,230,396	9,999,999.59
			A	0	0	5,034,974.85	5,314,414.44

#### Other Cost

	Gestion / Audit / Evaluation / Imprevus	P			889,853.09	5,599,999.79
		P(a)			985,853	5,599,999.79
		A			353,805.64	842,391.81

#### Total Cost

	Total Cost	P			8,034,230.84	46,500,000.41
		P(a)			8,756,249.25	46,500,000.41
		A			7,251,830.71	9,978,844.75

### CHANGES TO THE MATRIX

No information available for this section