

PMR Operational Report

Operation Number	HA-L1097	Chief of Operations Validation Date	10/13/17
Year- PMR Cycle	First period Jan-Jun 2017	Division Chief Validation Date	
Last Update	10/13/17	Country Representative Validation Date	
PMR Validation Stage	Validated by Chief of Operations		

Basic Data

Operation Profile

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

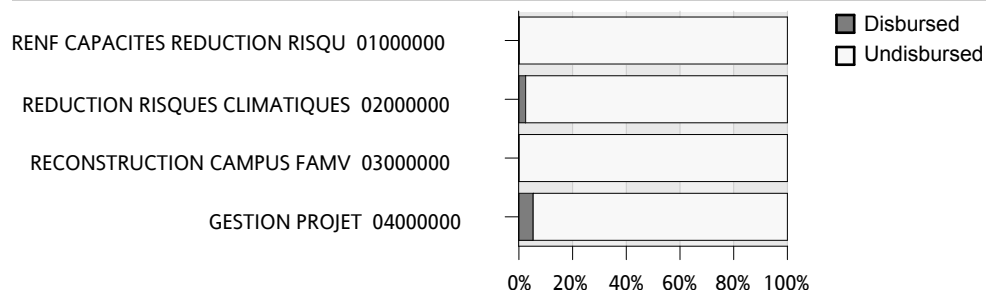
Environmental and Social Safeguards

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

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	86,050	1.91%	4,413,950
HA-L1097	42,000,000	42,000,000	750,000	0	42,750,000	42,000,000	1,709,215.91	4.07%	40,290,784.09
Aggregated	46,500,000	46,500,000	750,000	0	47,250,000	46,500,000	1,795,265.91	3.86%	44,704,734.09

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.

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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\$	0.0	2015	P	
					P(a)	
					A	
						1,215.00

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 $\hat{}$ 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\$	0.0	2015	P	
					P(a)	
					A	
						1,442.00

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

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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\$	0.0	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.

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

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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	0.0	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.

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

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	0.0	2016	P		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)

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

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	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>

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

Indicator	Unit of Measure	Baseline	Baseline Year		2017	2018	2019	2020	2021	EOP 2021
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OUTCOMES

		Measure		Year							
0.3	Indicator 1.4. iGOPP-RC subindex.	Percent	5.0	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

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	0.0	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

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	0.0	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

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\$	0.0	2016	P			1,738,539.00	1,738,539.00	1,738,539.00
					P(a)					

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OUTCOMES

2.0	Indicator 3.1. Reduction of expected average annual economic losses due to floods in targeted watersheds	US\$	0.0	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\$	0.0	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	0.0	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 ζ functioning ζ 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	0.0	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						

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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	0.0	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	0.0	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 (#)	0.0	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).

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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	0.0	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	0.0	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	
			2017	EOP 2021	2017	EOP 2021
1.1 Produit 1. Modèles d'analyses de risques climatiques développés	Etude	P		4	150,000	800,000
		P(a)	0	4	80,000	800,000
		A	0	0	0	0
1.2 Produit 2. Système d'information sur les risques climatiques en agriculture développé	Système	P		1	40,000	300,000
		P(a)	0	1	40,000	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	504,346.15	2,750,000.04
		P(a)	0	3	300,000	2,750,000.04
		A	0	0	0	6,826.48
1.4 Produit 4. Programme de formation en gestion de risques climatiques dans l'agriculture développé et mis en oeuvre	Programme	P		1	10,000	300,000
		P(a)	0	1	10,000	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	1	50,000	50,000
		P(a)	1	1	20,000	50,000
		A	0	0	0	0
1.6 Produit 6. Formation conduite sur l'évaluation des pertes et dommages dus aux désastres naturels dans l'agriculture	Plan	P		3	15,000	150,000
		P(a)	0	3	15,000	150,000
		A	0	0	0	0
1.7 Produit 7. Comités de Gestion de Bassins Versants (CGBV) renforcés	CGBV	P		0	110,000	350,000
		P(a)	0	0	50,000	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	
			2017	EOP 2021	2017	EOP 2021
2.1 Produit 8. Systèmes communautaires d'alerte précoce aux inondations développés	Comites	P		3	174,000	1,500,000
		P(a)	0	3	70,000	1,500,000
		A	0	0	0	0
2.2 Produit 9. Infrastructures de protection de bassins versants - Amont (Nord et Sud)	Ouvrage	P	330	3,303	593,256.46	3,170,000.44
		P(a)	170	3,173	300,000	3,170,000.44
		A	0	0	0	935.45
2.3 Produit 10. Infrastructures de protection de bassins versants - Amont (St Raphael / St Michel)	Ouvrage	P	172	1,717	210,000	2,100,000.75
		P(a)	70	1,645	100,000	2,100,000.75
		A	0	0	0	8,704
2.4 Produit 11. Infrastructures de protection de bassins versants - Aval	Ouvrage	P		5	873,998.82	19,429,999.8
		P(a)	0	5	500,000	19,429,999.8
		A	0	0	0	105,853.35
2.5 Produit 12.-Subvention aux agriculteurs du Sud	Agriculteur	P		0		0
		P(a)		0		0
		A	2,600	2,600	400,000	400,000
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		0
		A	52,035	52,035	250,000	250,000
2.7 Produit 13.1-Curage et nettoyage du perimetre irrigue de Dubreuil	Metres	P		0		0
		P(a)		0		0
		A	48,000	48,000	50,000	50,000
2.8 Produit 13.2-Réparation et construction de 4 km de canaux primaires et secondaires	Metres	P		0		0
		P(a)		0		0
		A	4,035	4,035	200,000	200,000

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

Output	Unit of Measure		PHYSICAL PROGRESS		FINANCIAL PROGRESS	
			2017	EOP 2021	2017	EOP 2021
3.1 Produit 12. Faculté d'Agronomie et Médecine Vétérinaire construite et équipée	Faculte	P		1	855,000	9,999,999.59
		P(a)	0	1	500,000	9,999,999.59
		A	0	0	0	9,835.59

Other Cost

Gestion / Audit / Evaluation / Imprevus	P			772,121.38	5,599,999.79
	P(a)			600,999	5,599,999.79
	A			0	244,293.17

Total Cost

Total Cost	P			4,357,722.81	46,500,000.41
	P(a)			2,585,999	46,500,000.41
	A			900,000	1,276,448.04

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CHANGES TO THE MATRIX

Section	Name	Type of Change	Reasons	Entered in the System	Agreed with Executing Agency
Output	Produit 13.2-Réparation et construction de 4 km de canaux primaires et secondaires	Modify Output	This change was introduced as a response to Hurricane Matthew, which hit Haiti in October 2016.	10/12/2017	02/06/2017
Output	Produit 13.1-Curage et nettoyage du perimetre irrigue de Dubreuil	Modify Output	This change was introduced as a response to Hurricane Matthew, which hit Haiti in October 2016.	10/12/2017	02/13/2017