



# STATUS OF HUMANITARIAN DEMINING OPERATIONS



ECUADOR

*WE INVITE YOUR COUNTRY TO BE PART OF OUR OBJECTIVE:  
TO DECLARE ECUADOR A MINE FREE COUNTRY BY 2022*





# BACKGROUND



- The presence of anti-personnel and anti-vehicle mines in Ecuador is a result of the border conflict between Ecuador and Peru in February 1995
- Total area contaminated: 629,081.06 square meters
- Ecuador initiated humanitarian demining operations in 2000
- For the final phase of the program, Ecuador will require international support to achieve its objective by its 2022 deadline
- Since the initiation of operations, Ecuador requested two extensions to its demining timelines.



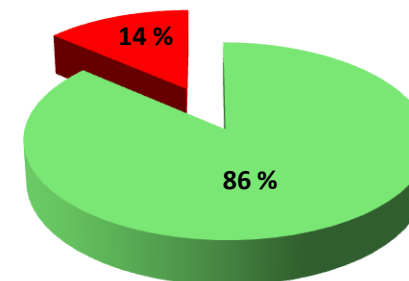
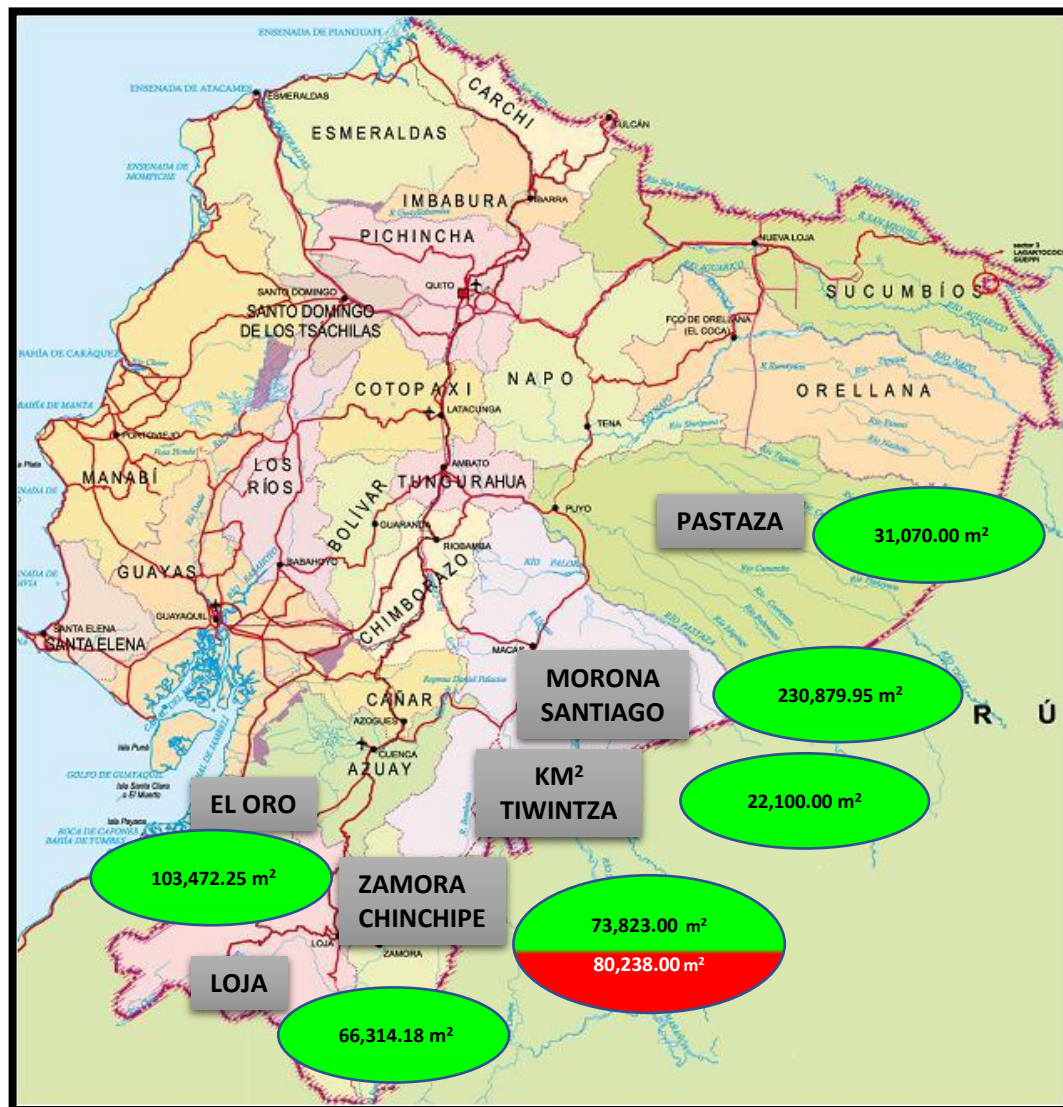


# GENERAL STATUS





# CURRENT STATUS



Released area: 548,843.06 square meters

Remaining challenge: 80,238.00 square meters

Area to be Released		
Province /Sector	Area Square meters	Estimated number of mines
Zamora Chinchipe	80,238.00	3,260
Total	80,238.00	3,260



# LOJA PROVINCE



Mine clearance operations finalized in 2012, with a total area of 63,318,18 square meters having been addressed, destroying 56 anti-personnel mines and 4 antivehicle mines, providing new opportunities for commercial development, contributing to a strengthened agricultural and livestock sector and renewed economic activity, as well as supporting the protection and preservation of unique species in both flora and fauna of the region.







## LOJA PROVINCE: LAND USE FOLLOWING DEMINING OPERATIONS



**PRESERVATION OF FLORA AND FAUNA, PODOCARPUS NATIONAL PARK**



**AGRICULTURAL ACTIVITIES**

**DEMINING OPERATIONS HAVE ENABLED**



**LIVESTOCK ACTIVITIES**



**LOCAL TOURISM**





# EI ORO PROVINCE



Mine clearance operations finalized in 2012, with a total area of 103,472.25 square meters having been addressed, destroying 203 anti-personnel mines and 70 antivehicle mines, providing new opportunities for commercial development, contributing to a strengthened agricultural and livestock sector, artisanal and commercial fishing activities and renewed economic activity in general, as well as supporting the protection and preservation of unique species in both flora and fauna of the region.







## EI ORO PROVINCE: LAND USE FOLLOWING DEMINING OPERATIONS



**PRESERVATION OF FLORA AND FAUNA, ARENILLAS NATURAL RESERVE**



**AGRICULTURAL ACTIVITIES**

**DEMINING OPERATIONS HAVE ENABLED**



**FISHERIES LOCAL AND COMMERCIAL**



**LOCAL TOURISM**





# PROVINCE OF PASTAZA



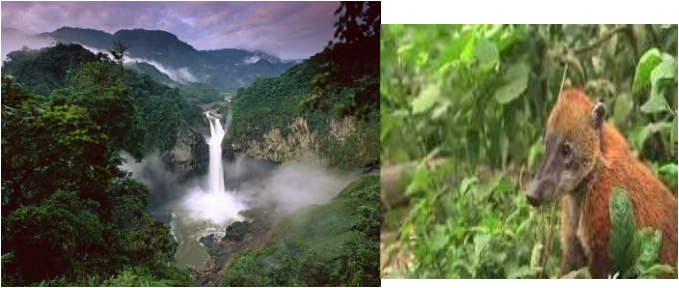
Mine clearance operations finalized in 2015, with a total area of 31,070.00 square meters having been addressed and destroying 12 anti-personnel mines, providing new opportunities for commercial development, contributing to a strengthened agricultural and livestock sectors and renewed economic activity, as well as supporting the protection and preservation of unique species in both flora and fauna of the region. Furthermore operations contributed to the protection and preservation of different ethnic groups of the eastern region of Ecuador.







PROVINCE OF PASTAZA: LAND USE FOLLOWING DEMINING OPERATIONS



PRESERVATION OF FLORA AND FAUNA, YASUNI NATIONAL PARK OF



AGRICULTURAL ACTIVITIES

DEMINING OPERATIONS HAVE ENABLED



PROTECTION OF DIFFERENT ETHNIC GROUPS IN THE REGION



LOCAL TURISM







# PROVINCE OF MORONA SANTIAGO



Mine clearance operations finalized in 2015, with a total area of 233,148.95 square meters having been addressed and destroying 9,924 anti-personnel mines, providing new opportunities for commercial development, contributing to a strengthened agricultural and livestock sector and renewed economic activity, as well as supporting the protection and preservation of unique species in both flora and fauna of the region. Furthermore operations contributed to the protection and preservation of different ethnic groups of the eastern region of Ecuador.





PROVINCE OF MORONA SANTIAGO: LAND USE FOLLOWING DEMINING OPERATIONS



PRESERVATION OF FLORA AND FAUNA, SANGAY NATURAL PARK



AGRICULTURAL ACTIVITIES

DEMINING OPERATIONS HAVE ENABLED



PROTECTION OF DIFFERENT ETHNIC GROUPS IN THE REGION



LOCAL TOURISM





# PROVINCE OF ZAMORA CHINCHIPE



The remaining challenge is located in this province with mine clearance operations ongoing. To date a total area of 64.874,00 square meters have been addressed, having destroyed 1024 anti-personnel mines. This is the most difficult area to access for demining operations due to its geographic and meteorological conditions. It is one of the regions with the greatest biodiversity in terms of animals in danger of extinction. A great variety of ethnic groups live close to mined areas.



Area to be released		
Province /Sector	Área in square meters	Estimated number of mines
Zamora Chinchipe	80.238,00	3.260
Total	80.238,00	3.260



# PROVINCE OF ZAMORA CHINCHIPE DURING THE DEMINING PROCESS



## COMMUNITIES IN PROXIMITY OF MINED AREAS



LOCATING MINED AREAS AND CLEARANCE





# METHODS EMPLOYED

<b>Manual Demining</b>	<p>Output of 3 - 5 square meters / an hour under normal conditions.</p> <p>Output of 1 – 1.5 square meters in jungle conditions.</p>
<b>Mechanical Demining (ROBOT MV-4)</b>	<p>Output of 100 - 150 square meters per hour in favourable conditions in terms of weather and slope</p> <p>Output of 40 - 50 square meters jungle conditions and minor slope of 4%.</p>
<b>Mine Dog Detection</b>	<p>Output of 500 square meters a day</p> <p>Quality control</p>





# RESULTS AND PROGRESS



Year	Area cleared (square meters)	Area cancelled (square meters)	Area reduced (square meters)	Total area released	Number of AP Mines destroyed	Number of AT Mines destroyed	Number of UXO destroyed
2000	43.956,50			43.956,50	2.699	23	
2001	11.021,00			11.021,00	1.469		
2002	3.999,00			3.999,00	135	37	1
2003	24.971,19			24.971,19	60	1	1
2004	12.990,00			12.990,00	35	3	
2005	7.122,20			7.122,20	32		3
2006	12.219,00			12.219,00	68		2
2007	2.586,50			2.586,50	123	1	1
2008	6.215,25			6.215,25	176	4	
2009	8.191,38			8.191,38	85	3	
2010	33.438,72	9.500,00		42.938,72	5	2	
2011	60.110,30	6.166,54		66.276,84	29		
2012	21.910,80	47.106,00		69.016,80	813		5
2013	12.331,00			12.331,00	183		
2014	39.660,50	47.744,50		87.405,00	4.181		9
2015	66.414,00	16.177,00		82.591,00	773		2
2016	1.410,00	3.267,00		4.677,00	565		2
2017	15.476,39			15.476,39	453		5
2018	14.068,00		*20.790,29	34.858,29	247		3
<b>Total</b>	<b>398.091,73</b>	<b>129.961,04</b>	<b>20.790,29</b>	<b>548.843,06</b>	<b>12.131</b>	<b>74</b>	<b>34</b>





# PROGRESS IN HUMANITARIAN DEMINING



- In fulfilling our international agreements, the organization in charge of this difficult mission is the National Centre for Demining of Ecuador (CENDESMI). Since 2000, mine clearance operations are carried out by the Engineering Battalion N° 68 “COTOPAXI” in accordance with annual national plans.
- Support for the execution of these operation has been provided by the State of Ecuador, through the project “Release of areas contaminated by mines and unexploded ordnance”, which is reaching its final stage in its efforts to declare Ecuador free of mines by 2022. This is an important milestone for Latin American and the world.





# PROGRESS IN HUMANITARIAN DEMINING



## CHALLENGES

### HUMANITARIAN DEMINING OPERATIONS 2019 – 2022

LOCATION	CANTON / SECTOR	ID OF TASK	TYPE OF MINES	MINES TO BE DESTROYED	DATE OF EMPLACEMENT	COMPLEMENTARY INFORMATION	
						ESTIMATED AREA (SQUARE METERS)	NUMBER OF MINED AREAS
ZAMORA CHINCHIPE	Nangaritza	PV-2_07	AP PRB M-35	240	N/D	6.215,00	1
	San Francisco	PV-Peringos_01	AP PRB M-35	1.280	N/D	7.009,00	1
	Zamora	Varios_ZCh	AP TAB-1	1.440	1,994	25.699,00	1
	El Panguí	PV_La media	AP P4-A1	300	N/D	41.315,00	1
TOTAL				3.260		80.238,00	4



# PROGRESS IN HUMANITARIAN DEMINING



## SOCIAL IMPLICATIONS:

- Approximately 14 communities and 25 ethnic groups of the eastern region are living in border areas located in proximity to different mined areas.
- The mined areas limit the free transit of these communities, including to water sources, which are of great importance to the sustainability of these groups and their different livelihood activities including agriculture, hunting and fishing.
- Children must carefully transit these areas to reach the different teaching institutions.
- In spite of all the different mine risk education campaigns in these areas, the integrity of member of these communities is exposed by not knowing the procedures to safeguard life when a mine accidents occurs.







# PROGRESS IN HUMANITARIAN DEMINING



## ECONOMIC IMPLICATIONS:

- Mine contamination significantly impacts activities related to the preservation of the different species in natural reserves and national parks of Ecuador, as well as possible tourism activities.
- The agricultural and livestock sectors in the different areas has been affected as the presence of anti-personnel mines is an obstacle for development in the region.





# PROGRESS IN HUMANITARIAN DEMINING



## WORK PLAN

### DEMINING PLAN 2019 – 2022

ANNUAL DEMINING PROJECTIONS TO BE ACHIEVED 2019 - 2022						
PROVINCE / SECTOR	DETAILS	2019	2020	2021	2022	TOTAL
Zamora Chinchipe	Number of objectives to be addressed	12	12	10	26	60
	Area to be addressed	23.383,00	18.299,00	20.688,00	17.868,00	80.238,00
	Subtotal	23.383,00	18.299,00	20.688,00	17.868,00	80.238,00
TOTAL						80.238,00



# PROGRESS IN HUMANITARIAN DEMINING



## DEMINING PLAN 2019

Ord.	Province	ID_Objetivo	Area to be addressed	# of mines to be located	Mined destroyed	Coordinates UTM WGS-84		Observations
						Coordinates_X	Coordinates_Y	
1	Zamora Chinchipe	PV_La Media	10.162,00	75	100	789439,95	9593127,02	In progress
2		Obst_D-16	316,00	75	75	789030,42	9592586,67	In progress
3		Obst_D-34	60,00	19	—	789940,45	9606426,54	Pending
4		Obst_D-36	80,00	15	—	790040,45	9606426,54	Pending
5		Obst_C-19	9.000,00	100	—	789440,44	9601226,59	Pending
6		Obst_C-20	75,00	15	—	789332,44	9600726,59	Pending
7		Obst_C-21	45,00	14	—	789440,44	9600926,59	Pending
8		Obst_C-22	600,00	15	—	789490,44	9601236,59	Pending
9		Obst_D-12	1.140,00	50	—	788947,42	9592426,67	Pending
10		Obst_D-13	275,00	50	—	788390,44	9595546,69	Pending
11		Obst_D-14	1.280,00	50	—	788510,43	9592026,67	Pending
12		Obst_D-21	350,00	25		789130,43	9593516,66	Pending
TOTAL		12	23.383,00	503				





## PROGRESS IN HUMANITARIAN DEMINING

### DEMINING PLAN 2020

Ord.	Province	ID_Objetivo	Area to be addressed	# of mines to be located	Mined destroyed	Coordinates UTM WGS-84		Observations
						Coordinates_X	Coordinates_Y	
1	Zamora Chinchipe	PV_La Media	10108,00	75	100	789439,95	9593127,02	Pending
2		PV-2_07	6215,00	240	—	787695	9582072	Pending
3		Obst_D-32	250,00	50	—	788090,41	9585816,73	Pending
4		Obst_D-33	100,00	30	—	787850,42	9585586,73	Pending
5		CG-242	80,00	5	—	779836	9566932	Pending
6		CG-243	50,00	15	—	779883	9566958	Pending
7		CG-245	75,00	10	—	770216	9558160	Pending
8		CG-224	420,00	10	—	769832	9553324	Pending
9		CG-225	250,00	5	—	769832	9553324	Pending
10		CG-226	525,00	17	—	769784	9553102	Pending
11		CG-227	0,00	6	7	769745	9553214	Pending
12		CG-235	100,00	6	—	760103	9518180	Pending
13		CG-237	126,00	12	—	759999	9505366	Pending
TOTAL		13	18.299,00	481				



# PROGRESS IN HUMANITARIAN DEMINING



## DEMINING PLAN 2021

Ord.	Province	ID_Objetivo	Area to be addressed	# of mines to be located	Mined destroyed	Coordinates UTM WGS-84		Observations
						Coordinates_X	Coordinates_Y	
1	Zamora Chinchipe	PV_La Media	10.348,00	75	100	789439,95	9593127,02	Pending
2		PV-Peringos_01	7.009,00	1280	—	787461	9582555	Pending
3		CG-215	1.10,00	4	—	770065	9552299	Pending
4		CG-216	154,00	6	—	770065	9552299	Pending
5		CG-217	45,00	3	—	770065	9552299	Pending
6		CG-218	300,00	5	—	770065	9552299	Pending
7		CG-219	200,00	6	—	770065	9552299	Pending
8		CG-220	120,00	6	—	770065	9552299	Pending
9		CG-221	52,00	4	—	770065	9552299	Pending
10		CG-222	1.600,00	6	—	770065	9552299	Pending
11		CG-223	750,00	15	—	770065	9552299	Pending
TOTAL		11	20.688,00	1410				



# PROGRESS IN HUMANITARIAN DEMINING



## DEMINING PLAN 2022

Ord.	Province	ID_Objetivo	Area to be addressed	# of mines to be located	Mined destroyed	Coordinates UTM WGS-84		Observations
						Coordinates_X	Coordinates_Y	
1	Zamora Chinchipe	PV_La Media	10.347,00	75	100	789439,95	9593127,02	Pending
2		Obst_C-26	180,00	17	—	—	—	Pending
3		Obst_C-1	69,00	10	—	—	—	Pending
4		Obst_C-2	45,00	10	—	—	—	Pending
5		Obst_C-3	28,00	14	—	—	—	Pending
6		Obst_C-4	60,00	19	—	—	—	Pending
7		Obst_C-5	90,00	10	—	—	—	Pending
8		Obst_C-6	165,00	38	—	—	—	Pending
9		Obst_C-7	400,00	40	—	—	—	Pending
10		Obst_C-8	12,00	5	—	—	—	Pending
11		Obst_C-9	90,00	120	—	—	—	Pending
12		Obst_C-12	600,00	40	—	—	—	Pending
13		Obst_C-13	600,00	43	—	—	—	Pending
14		Obst_D-19	500,00	81	—	—	—	Pending
15		Obst_D-20	3.200,00	68	—	—	—	Pending
16		Obst_D-22	525,00	44	—	—	—	Pending
17		Obst_D-23	90,00	4	—	—	—	Pending
18		Obst_D-24	75,00	14	—	—	—	Pending
19		Obst_D-25	260,00	68	—	—	—	Pending
20		Obst_D-40	100,00	8	—	—	—	Pending
21		Obst_D-41	30,00	10	—	—	—	Pending
22		Obst_D-42	10,00	3	—	—	—	Pending
23		Obst_D-43	150,00	15	—	—	—	Pending
24		Obst_C-23	80,00	20	—	—	—	Pending
25		Obst_C-25	135,00	15	—	—	—	Pending
26		Obst_C-27	18,00	15	—	—	—	Pending
27		Obst_C-28	9,00	3	—	—	—	Pending
TOTAL		27	17.868,00	809				





# DETAIL OF THE BUDGET REQUIRED FOR THE EXECUTION OF HUMANITARIAN DEMINING OPERATIONS

BUDGET			
2019	2020	2021	2022
2'302.140,44	2'020.656,24	2'119.656,24	1'617.944,35
TOTAL		8'060.397,27	



# PROGRESS IN HUMANITARIAN DEMINING



## CHALLENGES:

- As a fundamental part of this last phase of the humanitarian demining process in Ecuador, it is necessary to obtain economic resources for the execution of operations that are planned until the year 2022.
- Guarantee the integrity and development over time of the different ethnic groups that exist throughout the eastern region, ensuring that they avoid risks.
- Communities close to these contaminated areas require continuous awareness campaigns to reduce the impact caused by living in areas surrounded by this type of artifacts.





# PROGRESS IN HUMANITARIAN DEMINING



## CHALLENGES:

- Establish and implement at the national level an efficient victim assistance plan, cooperating in a meaningful way with the people who are exposed to this type of threat.
- Promote the development of reforestation activities in the areas worked to return the stability and normal functioning of the different environments and its varied fauna.







## NEEDS



<u>REQUESTS</u>	<u>DETAILS</u>
PERSONAL PROTECTION EQUIPMENT	<ul style="list-style-type: none"><li>❖ Deminer protective equipment</li><li>❖ Deminer boots Visor and helmet</li></ul>
PERSONAL EQUIPMENT	<ul style="list-style-type: none"><li>❖ Detectors</li><li>❖ Deminer tool kit</li><li>❖ ATLS backpack</li></ul>
VEHICLES	<ul style="list-style-type: none"><li>❖ Pick up trucks</li><li>❖ Buses</li><li>❖ Trucks</li></ul>
FINANCIAL SUPPORT	<ul style="list-style-type: none"><li>❖ Food</li><li>❖ Internet</li><li>❖ Satellite phone</li><li>❖ Maintenance of vehicles and equipment</li><li>❖ Aerial support</li></ul>
OTHERS	<ul style="list-style-type: none"><li>❖ Camp for deminers</li><li>❖ Training</li></ul>



# PROGRESS IN HUMANITARIAN DEMINING



## CONCLUSIONS:

- In light of the commitments made, Ecuador aims to be declared free of mines by 2022.
- The acquisition of equipment and personnel training will allow the continuity of operations in the final phase of Humanitarian Demining.
- Collaboration and international support is necessary for the successful completion of this process in Ecuador in light of the different needs and problems described.
- Full compliance with international norms and national standards, plus support with economic resources will allow the humanitarian demining program to be carried out as planned.

