

CRISIS RESPONSE

VOL:11 | ISSUE:4 | MAY 2016

WWW.CRISIS-RESPONSE.COM

JOURNAL

PROTECTION | PREVENTION | PREPAREDNESS | RESPONSE | RESILIENCE | RECOVERY



ZIKA VIRUS

NEW CHALLENGES, NEW INSIGHTS

PLUS: World Humanitarian Summit; Call for sustainable life practices; Crisis leadership & management; Families against terrorism and extremism; Brussels attacks; Drones in emergencies; Artificial Intelligence; Apps to support emergency management

SUBSCRIBE TO

CRISIS RESPONSE JOURNAL

IN PRINT | DIGITAL | ONLINE

The *Crisis Response Journal* is available by subscription only

Subscribers receive our quarterly hard copy, along with iPad or Android tablet version. A full archive of all past and current articles is also available to all subscribers.

Choose the right subscription plan for you, from Individual Full, Digital Only, Institutional & Corporate or Student

Visit our website for around-the-clock news, blogs and events updates

www.crisis-response.com

DR

Editor in Chief
Emily Hough
emily@crisis-response.com

Business Development
Jeffrey Montgomery
jeff@crisis-response.com

Chief Scientific Editor
Ian Portelli, BCDM, PhD
ian@crisis-response.com

Urban Resilience Editor
Andy Marshall
andy@crisis-response.com

Design and Production
Tim Baggaley
www.graphicviolence.co.uk

Subscriptions and Administration
Emma Wayt
emma.wayt@crisis-response.com

Web Administration
Rhys Jones
rhys@crisis-response.com

Director
Colin Simpson
colin.simpson@crisis-response.com

Subscriptions
Crisis Response Journal is published quarterly; it is available by subscription in hard copy, digital and online
Tel: +44 (0) 208 1661690; subs@crisis-response.com

Back issues
Existing subscribers: £25 (US\$45; €36) per hard copy issue (free with online access);
Non subscribers: £40 (US\$72; €58) per issue
Tel: +44 (0) 208 1661690;
backissues@crisis-response.com

Published by Crisis Response Journal Ltd
PO Box 6269, Thatcham, RG19 9JX, UK
Tel: +44 (0) 208 1661690; mail@crisis-response.com
www.crisis-response.com
COPYRIGHT Crisis Response Journal Ltd 2015
Articles published in may not be reproduced in any form without prior written permission
Printed in England by Gemini Press
ISSN 1745-8633

www.crisis-response.com
join the CRJ LinkedIn group
follow us on twitter @editorialcrj



contents

News	4	Soufrière's eruptions	28
Comment	8	Dave Sloggett looks at the Soufrière Hills eruption in 1995, and the preparedness of the community that still lives on the island	
Features			
Unified response in London	12	Call for sustainable life practices	30
A large and complex emergency exercise was held in London earlier this year, says Peter Cowup		Christine Jessup calls for a paradigm shift in the way society faces up to today's global crises	
Oil spill volunteers	14	Humanitarian World Humanitarian Summit	33
Reita Waara describes how Finland has recognised the importance of voluntary actors in response to major oil spills		The World Humanitarian Summit hopes it can unite and galvanise world leaders, aid agencies, crisis affected communities and others into action, writes Emily Hough	
Falkland Islands response	16	Time for change?	36
In November 2015, a cruise ship lost power after an engine room fire and drifted in heavy seas near the Falkland Islands, writes Andrew Almond-Bell		Emily Hough looks at a report calling for a complete rethink of the current humanitarian system, saying that incremental reform may no longer be enough	
An unexpected lifesaving ally	18	Learning from Haiti's cholera crisis	38
Rats receive a lot of bad press, writes Fredrik Keate. But, thanks to an NGO that trains rats in landmine and tuberculosis detection, their reputation may be changing		Elizabeth Carthy suggest ways of ensuring that the country's worst cholera epidemic is not repeated elsewhere	
Using data for resilience	20	A turning point for security in Pakistan?	42
Recent flooding in the UK created a considerable challenge for local communities. Ruth Cole examines whether resilience to such events can be predicted		Vittorio Oppizzi says high levels of insecurity have hindered NGOs operating in Pakistan	
Rapid response anywhere and everywhere ...23		Leadership & Management Picking the dream crisis team	44
Jay Levinson and Avi Domb describe a volunteer organisation that transcends politics to provide emergency medical care		Rob Shimmin puts a microscope on individuals tasked with making decisions in a crisis	
Zika: New challenges and insights	24	Leadership during crisis	48
What is the Zika virus, and why is it so important for the international community to bring it under control? Ian Portelli and colleagues investigate		Ian Portelli and colleagues scrutinise examples of effective and ineffective disaster leadership	

Oil spill volunteers p14



Kuvaaja Sampsala | WWF

Security in Nigeria p66



Julian Simmonds | Rex

Entrepreneurial resilience	52	Families and countering violent extremism ...72
Lee Miles examines the importance of innovation in disaster management, saying that entrepreneurial resilience makes an important contribution		Emily Hough reports from the FATE summit on how more emphasis should be placed upon the role of families in policies on counter-radicalisation efforts
Beyond command	56	Technology R&D: Drones for safety
Eric J Russell contends that leaders within emergency services can help promote mental resilience amid those who respond to traumatic incidents		74
Responder welfare	58	Ian Portelli and colleagues examine the growing potential of drones, a vital tool in emergency response
Addressing stress in frontline responders should be a priority for every emergency organisation, says Catherine Thomas		Artificial intelligence
Terrorism & Security Suicide bomber targets families	60	76
On Easter Sunday a suicide bomber set off his device in a crowded park, killing 80 people, reports Luavut Zahid		Michael McCabe says that although artificial intelligence brings benefits in security and resilience, it is unlikely the human factor will become obsolete
Terrorism: The threat picture	62	Lifesaving drones in Africa
'Know yourself, know your allies, and know your enemy'. Sun Tzu's advice still holds true in today's terrorist risk landscape, says Roger Gomm		78
Can Europe learn from Israel?	64	UAVs are set to be lifesavers in Africa, writes David Oliver
Meir Elran suggests key lessons that Europe can take from Israel's counter-terrorism experience		Safer on The Strip
Nigeria's terrorism response	66	80
Oludare Ogunlana traces the development of unrest, insurgency and the increase in terrorist attacks in Nigeria		Tim Hall presents a case study on an upgraded traffic system for emergency responders in Las Vegas
Double attacks in Brussels	68	Innovations in communication
Lina Kolesnikova looks at the March terrorist attacks in Brussels, highlighting warning signs that nuclear facilities may be on the list of prized targets		82
Lifesaving rats p18		Alina O'Keeffe spotlights the role of communication in crises
Communication innovation p82		In Depth Apps for emergency management support ...86
		Terrorism: Outcomes and impacts88
		The Vienna Convention90
		Regulars Events92
		Diary dates95
		Looking back96
		Europe97
		Frontline98



apopo.org



Victor Grigas | Wikimedia

Cover story: Zika virus
Cover illustration: Nick Lowndes

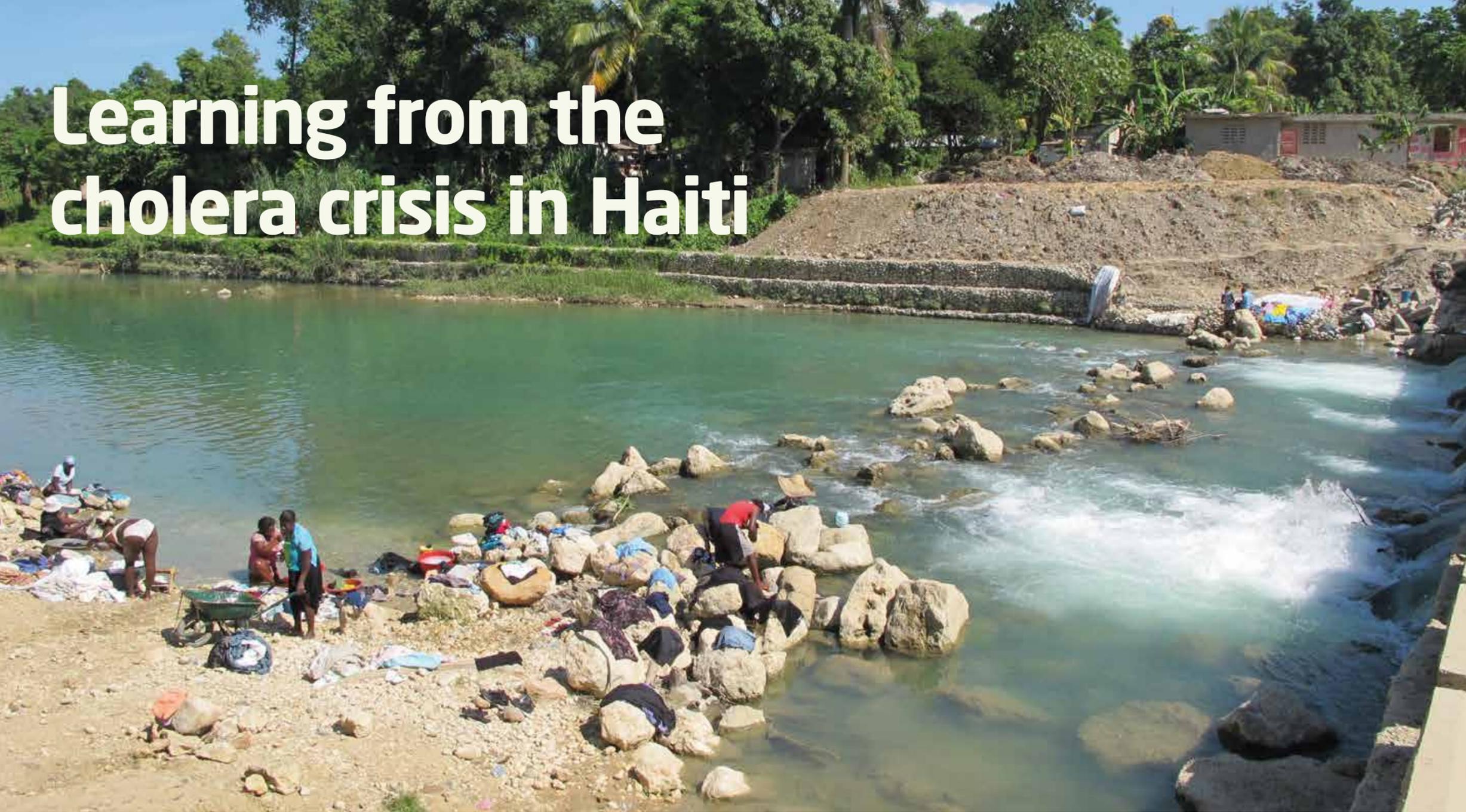
comment

We are facing a greater frequency and wider spread of crises than ever before. Emergencies such as the Zika virus (p24), along with the pernicious effects of climate disruption, urbanisation, population growth and conflict, are seeding unprecedented fragility from which no region is immune. Natural disasters, environmental emergencies, public health crises, unrest, terrorism, mass displacement and migration are just some of the tragic consequences. None of these crises stand in isolation, nor are many of them spontaneous by their nature. A paradigm shift in human thinking is therefore critical, and the oft-neglected role of communities is paramount within this. On p14, we describe a plan in Finland that integrates volunteers into official emergency response plans. We report on how the Falkland Islands community helped in a maritime disaster (p16), while page 20 analyses how communities with good social connections can give practical and emotional support to each other during emergencies, enhancing resilience and recovery. The power of a community is not limited to natural emergencies. Page 64 looks at societal resilience in areas blighted by terrorism, while p72 reports on how families are a key factor in preventing radicalisation and terrorist acts. Communications technology is also empowering communities (p82 and p86). But a change in institutional mindset is required to release this potential fully, to make people central agents of their own resilient destinies. This is one of the fundamental tenets of the World Humanitarian Summit, which has issued a call to cast aside institutional divides between aid, development and response (p33). A holistic approach to safety, preparedness, response and recovery also requires corruption and criminal activity to be addressed. Impartial and unbiased law enforcement is an essential element in reducing the fragility – and therefore vulnerability – of communities (see p66). If resilient societies are the warp, then sustainable and responsible development, aid and response – coupled with fair, honest and effective national and international law enforcement – are the weft. The pattern and colours are irrelevant; it is the strength and resilience of humanity's fabric that count.

Emily Hough



Learning from the cholera crisis in Haiti



potential for cross-contamination,” and that the base routinely disposed of untreated faecal waste in unprotected, open air pits in the ground that created a serious risk of overflow. The experts concluded the “evidence overwhelmingly supports” that: “The outbreak was caused by bacteria introduced into Haiti as a result of human activity; more specifically by the contamination of the Meye Tributary System,” with a South Asian strain of cholera.

The Pan-American Health Organisation has called this outbreak: “One of the largest cholera epidemics in modern history.” A recent study by Médecins Sans Frontières suggests the mortality rate was undercounted in the official statistics in 2010–2011, and that the actual death toll may be three to ten times as high.

Pre-deployment interventions for peacekeepers, compliance with environmental standards on peacekeeping bases and accountability mechanisms must be implemented to prevent a similar public health disaster in the future.

To minimise the risk of cholera introduction to peacekeeping operations, the IP recommended three pre-deployment intervention strategies: Screening for cholera carriage; administering prophylaxis; and immunisation with cholera vaccines.

In November 2015, the UN updated its Medical Support Manual for UN peacekeeping missions, establishing the minimum protocol for pre-deployment medical procedures, and stressing that troop-contributing countries should be: “Mindful of the danger inherent in the introduction of diseases into the host country’s environment, particularly where such diseases are assumed to be non-existent prior to peacekeeping. This is especially important for communicable diseases such as cholera.”

Although the updated manual makes cholera vaccination mandatory for all peacekeepers, the UN has rejected the other two recommendations, citing a lack of scientific evidence.

Screening and prophylaxis

A separate study by researchers at Yale University into the effectiveness of the IP’s recommendations found that pre-deployment screening and prophylaxis would be the most effective ways of preventing cholera transmission. The study also found that vaccination is neither the most effective nor the cheapest option, and would require a substantial proportion of the global supply of cholera vaccine to be diverted to peacekeepers.

The authors believe the UN should revisit its decision and engage with this emerging evidence in a transparent, productive fashion, and that it should apply a similar approach to implementing appropriate measures for other serious public health risks posed by peacekeeping, such as the spread of artemisinin-resistant malaria.

The UN reportedly has an Environmental Policy for UN Field Missions setting out minimum standards for water and waste management and prohibiting the discharge of untreated wastewater directly into water bodies. An assessment conducted in November 2010, shortly after the outbreak began, documented that 70 per cent of Minustah’s bases in Haiti were discharging wastewater directly into the local environment.

The IP specifically recommended that: “UN installations worldwide should treat faecal waste using on-site systems that inactivate pathogens before disposal.” Since the outbreak, the UN indicates it has established an Environmental Compliance Unit to monitor waste management and has issued additional directives to reinforce existing policies and provide additional guidance on managing wastewater. Yet when Minustah’s

In 2010, one of the world’s worst cholera epidemics broke out in Haiti. Evidence has established that the disease was introduced via sewage mismanagement on a United Nations (UN) peacekeeping base, writes **Elizabeth Carthy**

Five-and-a-half years since its arrival, cholera had killed at least 9,300 people and sickened over 770,000. Studies indicate that an investment of approximately \$2,000 (£1,700) in preventative measures could have prevented the epidemic, while the UN estimates that eradicating cholera from Haiti through water and sanitation infrastructure will cost \$2.2 (£1.9) billion.

This article outlines key lessons drawn from the epidemic, and the importance of acting upon them in order to prevent a similar disaster in the future.

The epidemic highlights the danger that peacekeepers, which are meant to protect vulnerable populations, can end up as vectors

of disease. The risk is not limited to Haiti or cholera; the current UN peacekeeping model relies heavily on troop contributions from countries which themselves face high burdens of infectious disease, and peacekeeping forces are, by definition, deployed into areas where conflict has often resulted in high levels of poverty, inadequate health infrastructure, and difficulty accessing basic protective resources. Yet existing guidelines on peacekeeping and disease focus largely on protecting peacekeepers from local diseases, overlooking the risks to locals from imported ones.

The UN has also failed to establish adequate accountability frameworks to help deter reckless practices and provide an avenue

to resolve complaints by victims harmed by peacekeeping missions.

Cholera, a severe form of diarrhoeal disease caused by the bacterium *Vibrio cholera*, and transmitted by contaminated food and water, appeared in Haiti in October 2010 for the first time in at least a century. Genetic and epidemiological studies have since established that it was introduced by a contingent of UN peacekeepers from Nepal, where cholera is endemic.

The UN Stabilisation Mission in Haiti (Minustah) did not test the soldiers for cholera, nor otherwise take reasonable precautions to rule out or address the presence of the infectious bacteria, such as by providing vaccinations or prophylactic antibiotics before deployment.

Improper sanitation practices at the Minustah base led to untreated sewage entering the Meye Tributary. This flows into Haiti’s principal river system, upon which tens of thousands of Haitians rely as a primary source of water for drinking, washing and farming.

A UN appointed Independent Panel of Experts (IP) found that the sewage pipes on the base were: “Haphazard, with significant

Tens of thousands of Haitians rely on rivers as a primary source of water for drinking, washing and farming

Directrelief.org

► waste management system was independently audited by the Office of Internal Oversight in 2015, it was still found to be unsatisfactory. Out of seven missions audited in 2014–2016, none were deemed to have satisfactory waste management.

Transparent environmental impact assessments – which the UN does not currently conduct prior to establishing peacekeeping missions – could be critical to preventing waste mismanagement. In 2015, a High Level Independent Panel appointed to review UN peace operations recommended that environmental impact assessments be carried out. Although the Secretary-General welcomed this recommendation, the status of implementation was unclear at the time of this publication.

Finally, the cholera epidemic underscores the importance of establishing accountability mechanisms to evaluate and resolve victims' claims.

In November 2011, 5,000 victims of cholera filed claims with the UN, seeking remedies in the form of: Investments in water and sanitation infrastructure to combat the epidemic; just compensation; and a public admission of responsibility.

Fifteen months later, the UN rejected the claims as “not receivable” because: “Consideration of these claims would not necessarily include a review of political and policy matters,” and declined to establish the mandated claims commission.

The response reveals serious problems with the UN’s claims resolution framework, and highlights the broader need to establish accountability mechanisms to protect human rights to clean water and sanitation, health, life and an effective remedy.

Effective accountability provides a critical deterrent for continued failures to implement effective risk prevention measures. In Haiti, the UN failed to take such measures, even though it was aware of both the sewage management problems and the country’s vulnerability to disease. Holding humanitarian agencies accountable helps ensure that risk management is prioritised, and that vulnerable communities are not harmed further by those who have been sent to assist. **CRJ**

Author



Elizabeth Carthy is a Henigson Human Rights Fellow working with Bureau des Avocats International in Haiti



Cité-Soleil, Haiti: One of the 44 water points rehabilitated by the ICRC. Each person taking water was also issued with purification tablets

Olga Miltcheva | ICRC



The EU was one of the organisations that responded to assist during the cholera epidemic. The UN estimates that eradicating cholera from Haiti through water and sanitation infrastructure will cost \$2.2 (€ 1.9) billion

EC | ECHO | Isabel COELLO

Sources

- David A Sack et al (2004): *Cholera*, The Lancet;
- Noelle Rancourt, (June 2013): Gender and Vulnerability to Cholera in Sierra Leone. *Gender analysis of the 2012 cholera outbreak and an assessment of Oxfam’s response*;
- Deborah Jensen et al (2011): *Cholera in Haiti & Other Caribbean Regions*, 19th Century, Emerging Infectious Diseases Journal;
- Alejandro Cravioto et al (2011): Final Report of the Independent Panel of Experts on the Cholera Outbreak in Haiti;
- Transnational Development Clinic, Yale Law School, *Global Health Justice Partnership* (2013): *Haitienne de Droit de l’Environnement*, *Peacekeeping Without Accountability: The United Nations’ Responsibility for the Haitian Cholera Epidemic*;
- (2012): Haiti cholera death toll nears 7,000, *Medicalxpress.com*;
- *Ministère de la Santé Publique et de la*

- Population* (2016): *Rapport de Cas*;
- *MSF: Mortality Rates during Cholera Epidemic, Haiti, 2010–2011*;
- Joseph A Lewnard, Marina Antillon, Gregg Gonsalves, Alice M. Miller, Albert I Ko, Virginia E Pitzer (2016): *Strategies to Prevent Cholera Introduction during International Personnel Deployments: A Computational Modeling Analysis Based on the 2010 Haiti Outbreak*, *PLoS*;
- *United Nations Secretary General, Letter to Ms. Farha, Mr. Gallon, Mr. Puras and Ms. De Albuquerque from the Secretary General* (November 25, 2014);
- Houston, Stan, Adam Houston (2015): *Screening and Treating UN Peacekeepers to Prevent the Introduction of Artemisinin-Resistant Malaria into Africa*, *PLOS Medicine*;
- *UN Environmental Programme* (2012): *Greening the Blue Helmets: Environment, Natural Resources and Peacekeeping Operations*;

- Joe Sandler Clarke and Ed Pilkington (April 5, 2016): *Leaked UN report faults sanitation at Haiti bases at time of cholera outbreak*, The Guardian, UK;
- *Letter from Pedro Medrano Rojas to Special Rapporteurs Concerning Cholera in Haiti*, (November 25, 2014);
- <https://oios.un.org/page?slug=report>
- *Report of the High-Level Panel on Peace Operations (2015)*, *UN Document A/70/95*;
- *The Future of United Nations Peace Operations: Implementation of the Recommendations of the High-Level Independent Panel on Peace Operations*, *UN, Doc. A/70/357*, 129;
- *Petition for Relief*, November 3, 2011;
- *Letter from Patricia O’Brien, UN Under-Secretary-General for Legal Affairs, to Brian Concannon, Director, Institute for Justice & Democracy in Haiti* (February 21, 2013).