

# A SOCIO-ECONOMIC IMPACT ASSESSMENT OF THE ZIKA VIRUS IN LATIN AMERICA AND THE CARIBBEAN: with a focus on Brazil, Colombia and Suriname



United Nations Development Programme

**The United Nations Development Programme (UNDP)  
in partnership with the International Federation of Red Cross and Red Crescent Societies (IFRC)**

## **A Socio-economic Impact Assessment of the Zika Virus in Latin America and the Caribbean: with a focus on Brazil, Colombia and Suriname**

April 2017

UNDP partners with people at all levels of society to help build nations that can withstand crisis, and drive and sustain the kind of growth that improves the quality of life for everyone. On the ground in nearly 170 countries and territories, we offer global perspective and local insight to help empower lives and build resilient nations.

Copyright © UNDP 2017

All rights reserved

Published in the United States of America

United Nations Development Programme

One United Nations Plaza, New York, NY 10017, USA

The views, designations and recommendations that are presented in this report do not necessarily reflect the official position of UNDP nor IFRC or its member National Societies.

The authors of this report would like to warmly acknowledge the photographic contributions made by those listed below.

Cover page: © Bruno Abarca | ISGlobal

Inside cover: © Ueslei Marcelino | UNICEF

Page 11: © PAHO | Flickr

Page 17: © Bruno Abarca | ISGlobal

Page 47: © Bruno Abarca | ISGlobal

Page 52: © Ueslei Marcelino | UNICEF

Inside back cover: © Pallavi Yagnik

Macroeconomic charts (section 2.1): © ÁticoGráfico | Shutterstock

**A SOCIO-ECONOMIC  
IMPACT ASSESSMENT OF THE  
ZIKA VIRUS IN LATIN AMERICA  
AND THE CARIBBEAN:  
with a focus on Brazil,  
Colombia and Suriname**

# Acknowledgements

This report is a contribution to the ongoing efforts of governments in Latin America and the Caribbean to design national Zika virus responses. Special thanks are due to the Governments of Brazil, Colombia and Suriname. This report was prepared by a joint team of experts, led by the United Nations Development Programme (UNDP) in partnership with the International Federation of Red Cross and Red Crescent Societies (IFRC) with the collaboration of the Barcelona Institute for Global Health (ISGlobal) and Johns Hopkins University (JHU). This report was conceived and commissioned by UNDP.

Invaluable input was received from the UNDP Regional Hub for Latin America and the Caribbean as well as country offices in Brazil, Colombia and Suriname. Appreciation is extended to the National Red Cross Societies of Brazil, Colombia and Suriname for facilitating the field work and participating in the field research.

Many thanks go out to the policymakers, technical experts, professionals and affected families and communities that participated in the field work undertaken in Brazil, Colombia and Suriname.

## UNDP

Report coordination and lead writers: Pallavi Yagnik, Natalia Linou, Douglas Webb and Ugo Blanco.

Thoughtful insights and contributions were greatly appreciated from Mandeep Dhaliwal, Rebeca Arias, Xavier Hernández Ferre, George Gray Molina, Juana Cooke, Maria Tallarico, Karin Santi, Claudia Vinay, Eugenia López, Roy Small, Pedro Conceicao, Joaquim Roberto da Silva Paiva Fernandes, Didier Trebucq, José Neira, Inka Mattila, J. Bisessar, Armstrong Alexis, Marcela Barrientos, Vanessa Hidalgo, Luciano Milhomem and Carla González.

## IFRC

The IFRC Regional Office for the Americas, through its Zika Operations team, helped coordinate the research and provided technical expertise. IFRC's Global Health and Care Department in Geneva and its Delegation to the United Nations in New York provided valuable review, input and support.

## ISGlobal and JHU

A team coordinated and led by Oriana Ramírez-Rubio (ISGlobal) and Mario Macís (JHU), and comprised of Emilia Simeonova (JHU), Adelaida Sarukhan, Bruno Abarca, Pablo M. de Salazar, Leire Pajín Iraola, and Gonzalo Fanjul (ISGlobal) carried out desk reviews, prepared study protocols, conducted and analysed interviews with key informants, affected communities and families in the selected countries, conducted macroeconomic impact modelling exercises and wrote preliminary drafts.

# Table of Contents

Foreword .....	6
Executive Summary.....	8
<b>1. Background.....</b>	<b>11</b>
<b>1.1 Introduction .....</b>	<b>12</b>
<b>1.2 Methodology .....</b>	<b>13</b>
1.2.1 Data collection and analysis .....	13
1.2.2 Case study countries .....	13
<b>1.3 Development Context in Latin America and the Caribbean.....</b>	<b>14</b>
<b>2. Findings.....</b>	<b>17</b>
<b>2.1 Macroeconomic Impact .....</b>	<b>18</b>
2.1.1 Short-term costs.....	20
2.1.2 Long-term costs.....	29
<b>2.2 Social Impact .....</b>	<b>38</b>
2.2.1 Exacerbating poverty and inequities .....	38
2.2.2 Widening gender inequality.....	40
2.2.3 Increased stigma and challenges to the wellbeing of those affected.....	41
2.2.4 Exposing governance challenges .....	42
<b>2.3 Health System Management .....</b>	<b>43</b>
2.3.1 Surveillance systems .....	43
2.3.2 Prevention interventions .....	44
2.3.3 Clinical protocols .....	44
2.3.4 Coordination and communication .....	45
2.3.5 Private sector responses .....	45
<b>3. Recommendations .....</b>	<b>47</b>
<b>Conclusion .....</b>	<b>52</b>
<b>Annexes.....</b>	<b>54</b>
<b>References.....</b>	<b>92</b>

# List of Boxes, Figures and Tables

## Boxes

Box 1.	Zika and Agenda 2030.....	16
Box 2.	Summary of macroeconomic findings.....	19
Box 3.	Zika's effect on the tourism sector in Suriname is hard to isolate.....	25
Box 4.	Business owner perceptions of the socio-economic impact of Zika in Valledupar, Colombia.....	26

## Figures

Figure 1.	Infected individuals and symptomatic cases (2015–2017) (millions).....	21
Figure 2.	Cost of detecting, diagnosing and treating Zika (2015–2017) (as % of GDP).....	22
Figure 3.	Lost productivity due to missed work.....	23
Figure 4.	Impact on tourism revenues (as % of GDP).....	24
Figure 5.	Total short-term costs of Zika (2015–2017) (in 2015 US\$ millions).....	27
Figure 6.	Total short-term costs of Zika (2015–2017) (as % of GDP).....	28
Figure 7.	Projected number of microcephaly cases (2015–2017).....	29
Figure 8.	Lifetime cost components of microcephaly (in 2015 US\$ millions).....	31
Figure 9.	Lifetime cost of microcephaly (in 2015 US\$ millions).....	32
Figure 10.	Lifetime cost per case of microcephaly (in 2015 US\$ millions).....	33
Figure 11.	Projected number of Guillain-Barré syndrome cases (2015–2017).....	34
Figure 12.	Lifetime cost components of Guillain-Barré syndrome (in 2015 US\$ millions).....	35
Figure 13.	Lifetime cost of Guillain-Barré syndrome (in 2015 US\$ millions).....	36
Figure 14.	Lifetime cost per case of Guillain-Barré syndrome (in 2015 US\$ thousands).....	37

## Tables

Table 1.	Projected number of Zika cases (infections and symptomatic), 2015–2017, by country and scenario .....	62
Table 2.	Cost of diagnosing and treating symptomatic patients .....	64
Table 3.	Value of lost productivity from absenteeism due to Zika .....	66
Table 4.	Projected number of babies with microcephaly and number of Guillain-Barré syndrome cases .....	68
Table 5A.	Per-case lifetime costs of microcephaly .....	70
Table 5B.	Total lifetime costs of microcephaly (table 1 of 3: Baseline Zika) .....	72
	Total lifetime costs of microcephaly (table 2 of 3: Medium Zika) .....	74
	Total lifetime costs of microcephaly (table 3 of 3: High Zika) .....	76
Table 6A.	Per-case lifetime costs of Guillain-Barré syndrome .....	78
Table 6B.	Total lifetime costs of Guillain-Barré syndrome (table 1 of 3: Baseline Zika) .....	80
	Total lifetime costs of Guillain-Barré syndrome (table 2 of 3: Medium Zika) .....	82
	Total lifetime costs of Guillain-Barré syndrome (table 3 of 3: High Zika) .....	84
Table 7.	Direct losses from decreased international tourism revenue .....	86
Table 8.	Total projected costs of the current Zika epidemic .....	88
Table 9.	Total short-term cost per capita .....	90

word

预览已结束，完整报告链接和二维码如下：

[https://www.yunbaogao.cn/report/index/report?reportId=5\\_12200](https://www.yunbaogao.cn/report/index/report?reportId=5_12200)

