



**EFFECTIVE STRATEGIES, TOOLS AND ACTIONS
IMPLEMENTED BY THE REGION'S EMERGENCY
AND SECURITY SERVICES TO PREVENT AND
REDUCE INAPPROPRIATE USE OF THE SINGLE
EMERGENCY NUMBER**

DOCUMENT OF EXPERIENCES NO. 3

STG/ESS/INF.19/23

**Effective Strategies,
Tools and Actions Implemented
by the Region's Emergency
and Security Services
to Prevent and Reduce
Inappropriate Use of the Single
Emergency Number**

DOCUMENT OF
EXPERIENCES NO. 3
STG/ESS/INF.19/23



OAS CATALOGING-IN-PUBLICATION DATA

Organization of American States, Secretariat for Multidimensional Security. Department of Public Security.

Effective Strategies, Tools, and Actions Implemented by the Region's Emergency and Security Services to Prevent and Reduce Inappropriate Use of the Single Emergency Number [Prepared by the Department of Public Security of the Organization of American States].

v. ; cm. (OAS. Official records; OEA/Ser.D/XXV.33)

ISBN 978-0-8270-7699-0

1 Emergency communication systems--Public Safety. 2. Telephone--Emergency reporting systems. 3. Public Safety--Emergency management. I. Title. II. Experience Document No.3 III. GTS/SES/INF.19/23. IV. Subsidiary Technical Working Group on Emergency and Security Systems. V. Series.

Cover photo credit: Call Handling, PSAP North. 9-1-1 9-1-1 National Emergency and Security Response System, Dominican Republic.

OEA/Ser.D/XXV.33

ABOUT THE OAS

The Organization of American States (OAS) is the region's principal political forum bringing together all the independent nations of the Western Hemisphere to jointly promote democracy, strengthen human rights, foster peace, security and cooperation, and advance common interests. Since its inception, the primary objectives of the OAS have been to prevent conflict, provide political stability, and foster social inclusion and prosperity in the region through dialogue and collective actions such as cooperation and mediation.

Copyright © (2023) General Secretariat of the Organization of American States (GS/OAS).

This work is licensed under a Creative Commons IGO 3.0 Attribution-NonCommercial-NoDerivatives (CC-IGO 3.0 BY-NC-ND) license (<http://creativecommons.org/licenses/by-nc-nd/3.0/igo/legalcode>) and may be reproduced for any non-commercial use with attribution to the GS/OAS. Derivative works are not allowed.

Any dispute relating to the use of GS/OAS works that cannot be settled amicably shall be submitted to arbitration in pursuant to the Arbitration Rules of the United Nations Commission on International Trade Law (UNCITRAL). This CC-IGO license does not constitute authority to use the GS/OAS name for any purpose other than the respective acknowledgment or to use the Organization of American States (OAS) logo, which require an additional license agreement. It should be noted that the URL includes additional terms and conditions of this license.

This Document of Experiences No. 3 was produced with contributions by:



911 System and Monitoring Center of the Province of Jujuy, Argentina

Fabio E. Aracena



911 Coordinated Emergency System of the Province of Salta, Argentina

Vicente Ceballos, Director
Andrea Silvestri, Chief, Public Demand



9-1-1 Emergency System of Costa Rica

Elena Amuy Jiménez, Director
Marvin Vargas Alpízar (Citizen Service Process)
Marvin Palma Siles (Operations)



ECU 911 Integrated Security Service of Ecuador

Bolívar Tello Astudillo, General Manager
Marco Garnica Montenegro (Doctrine Area)
Gary Almeida (Regulatory)
Carlos López (Operations Area)
Andrea Aguirre (Data Analysis)
Juan Carlos Fonseca Moncada (Interagency Coordination Area)
Carla Maya (Interagency Coordination Area)



911 National Emergency System of Honduras

Fernando Ferrera, Deputy National Director



National Information Center of Mexico

David Perez Esparza, Head
Oscar Laguna, Area Deputy Director



9-1-1 National Emergency System of Panama

Omar Smith Gallardo, Director
Adonis Alvey



911 National Emergency System of Paraguay

Liliana Díaz, General Manager



9-1-1 National Emergency and Security Response System of the Dominican Republic

Colonel Randolph Rijo
Gómez, ERD, Executive Director
Luis Ferrand, Director of Operations
Martín Santana,
Director of Information and Communication Technologies
Lourdes Florentino,
Director of Planning and Development
Alma Vargas, Director of Data Processing, Analysis, and Information Management
Tammy Ramirez,
Emergency Reception Manager
Teresa Garcés, Quality Management Manager
Agustín Jiménez,
Institutional Development Manager



St. Vincent and the Grenadines Royal Police Force

Olson Rodney, Inspector of Police

Document prepared and edited by Karen Bozicovich, Chief, Information and Knowledge Section, Department of Public Security

Layout and graphic design by Fernanda Cozzi

Secretariat for Multidimensional Security, Department of Public Security, Effective Strategies, Tools, and Actions Implemented by the Region's Emergency and Security Services to Prevent and Reduce Inappropriate Use of the Single Emergency Number

ISBN 978-0-8270-7699-0

CONTENTS

I.	INTRODUCTION	14
II.	REGIONAL OVERVIEW	16
	2.1 Protocols and procedures	16
	2.2 Call management	18
	2.3 Data and statistics	21
	2.4 Quality control	24
	2.5 Sanctions	26
	2.6 Prevention policy cycle	30
III.	OVERVIEW BY COUNTRY	35
	3.1 ARGENTINA > JUJUY 911 MONITORING CENTER AND SYSTEM	35
	3.1.1 <i>Protocols and procedures</i>	35
	3.1.2 <i>Call management</i>	35
	3.1.3 <i>Data and statistics</i>	36
	3.1.4 <i>Quality control</i>	36
	3.1.5 <i>Sanctions</i>	36
	3.1.6 <i>Prevention policy cycle</i>	37
	3.2. ARGENTINA > SALTA 911 COORDINATED EMERGENCY SYSTEM	37
	3.2.1 <i>Protocols and procedures</i>	37
	3.2.2 <i>Call management</i>	38
	3.2.3 <i>Data and statistics</i>	39
	3.2.4 <i>Quality control</i>	39
	3.2.5 <i>Sanctions</i>	39
	3.2.6 <i>Prevention policy cycle</i>	40
	3.3. COSTA RICA > 9-1-1 EMERGENCY SYSTEM	40
	3.3.1 <i>Protocols and procedures</i>	40
	3.3.2 <i>Call management</i>	41
	3.3.3 <i>Data and statistics</i>	42
	3.3.4 <i>Quality control</i>	42
	3.3.5 <i>Sanctions</i>	42
	3.3.6 <i>Prevention policy cycle</i>	43

3.4. ECUADOR > ECU 911 INTEGRATED SECURITY SERVICE	44
3.4.1 <i>Protocols and procedures</i>	44
3.4.2 <i>Call management</i>	46
3.4.3 <i>Data and statistics</i>	46
3.4.4 <i>Quality control</i>	47
3.4.5 <i>Sanctions</i>	47
3.4.6 <i>Prevention policy cycle</i>	49
3.5 HONDURAS > 911 NATIONAL EMERGENCY SYSTEM	51
3.5.1 <i>Protocols and procedures</i>	51
3.5.2 <i>Call management</i>	52
3.5.3 <i>Data and statistics</i>	52
3.5.4 <i>Quality control</i>	53
3.5.5 <i>Sanctions</i>	53
3.5.6 <i>Prevention policy cycle</i>	53
3.6 MEXICO > 9-1-1 EMERGENCY SERVICE	55
3.6.1 <i>Protocols and procedures</i>	55
3.6.2 <i>Call management</i>	56
3.6.3 <i>Data and statistics</i>	56
3.6.4 <i>Quality control</i>	57
3.6.5 <i>Sanctions</i>	57
3.6.6 <i>Prevention policy cycle</i>	57
3.7 PANAMA > 9-1-1 NATIONAL EMERGENCY SYSTEM	58
3.7.1 <i>Protocols and procedures</i>	58
3.7.2 <i>Call management</i>	59
3.7.3 <i>Data and statistics</i>	60
3.7.4 <i>Quality control</i>	60
3.7.5 <i>Sanctions</i>	60
3.7.6 <i>Prevention policy cycle</i>	60
3.8 PARAGUAY > 911 NATIONAL EMERGENCY SYSTEM	61
3.8.1 <i>Protocols and procedures</i>	61
3.8.2 <i>Call management</i>	63
3.8.3 <i>Data and statistics</i>	64
3.8.4 <i>Quality control</i>	64
3.8.5 <i>Sanctions</i>	64
3.8.6 <i>Prevention policy cycle</i>	65

3.9 DOMINICAN REPUBLIC > 9-1-1 NATIONAL EMERGENCY AND SECURITY RESPONSE SYSTEM

	66
<i>3.9.1 Protocols and procedures</i>	68
<i>3.9.2 Call management</i>	69
<i>3.9.3 Data and statistics</i>	69
<i>3.9.4 Quality control</i>	69
<i>3.9.5 Sanctions</i>	69
<i>3.9.6 Prevention policy cycle</i>	70

3.10 SAINT VINCENT AND THE GRENADINES > ROYAL POLICE FORCE

	72
<i>3.10.1 Protocols and procedures</i>	72
<i>3.10.2 Call management</i>	72
<i>3.10.3 Data and statistics</i>	73
<i>3.10.4 Quality control</i>	73
<i>3.10.5 Sanctions</i>	73
<i>3.10.6 Prevention, reduction and lessons learned</i>	73

COMPARISON TABLES

Comparison table 1: Protocols and procedures	17
Comparison table 2: Handling of inappropriate calls	20
Comparison table 3: Data and statistics on inappropriate calls	23
Comparison table 4: Quality control on inappropriate calls	25
Comparison table 5: Sanctions for inappropriate use of the single emergency number	28
Comparison table 6: Strategies for the prevention and reduction of inappropriate calls	33

FIGURES

Figure 1: Types of justification for storage periods	19
Figure 2: Formula used by SE 9-1-1 of Costa Rica to estimate average annual cost of inappropriate calls	42
Figure 3: Appropriate and inappropriate calls, according to SIS ECU 911	45
Figure 4: Categories and subcategories of inappropriate calls, according to SIS ECU 911	45
Figure 5: ABC methodology for calculating estimated cost of inappropriate calls	47
Figure 6: Key areas of Mexico's SE 9-1-1 Strategy	55
Figure 7: Types of nuisance calls defined by the 9-1-1 National Emergency Assistance and Security System of the Dominican Republic	67

GRAPHS

Graph 1: Storage period justifications	50
Graph 2: Number of systems by percentage of inappropriate calls	21
Graph 3: Quality control measures by number of systems using them	24

Graph 4:	
Number of mentions by type of impact	30
Graph 5:	
Number of strategies by type	31
Graph 6:	
Number of strategies by duration (in months) and type	31

TABLES

Table 1:	
Images used in advertising campaigns implemented by SIS ECU 911	50
Table 2:	
Images used in advertising campaigns implemented by the Dominican Republic's 9-1-1 National System of Emergency and Security Response	71



Note on the use of inclusive language -in the Spanish version-: The use of terms such as “operator”, “dispatcher”, “supervisor”, “user” and other nouns and articles in masculine, does not intend to be exclusionary or discriminatory, but rather seeks to facilitate the reading of the document.

Effective Strategies, Tools, and Actions Implemented by the Region's Emergency and Security Services (or similar agencies) to Prevent and Reduce Inappropriate Use of the Single Emergency Number

INTRODUCTION

In emergency situations due to natural phenomena, accidents, medical emergencies, crime, or violence that endanger people's physical integrity, life, and property, the public expects an immediate, efficient, and appropriate response from the State. One of the first and main means used by the public to contact and seek assistance in such situations is the single emergency number. However, one of the main obstacles to timely response and assistance in emergency situations is the large number of inappropriate calls¹ received every day by emergency and security systems in the region.

The inappropriate use of the single emergency number hampers effective and efficient provision of emergency services. Moreover, the unnecessary dispatch of resources results in considerable economic costs to emergency and security systems. It also takes an emotional and physical toll on telecommunicators (operators and dispatchers) and first responders. Consequently, it is of the utmost importance to prevent, mitigate, and sanction the inappropriate use of emergency services in each country.

The region's emergency and security systems are aware of the problem they face and the multiple challenges in addressing it. Given the cross-cutting nature of the topic, during the First Meeting of the Subsidiary Technical Working Group on Emergency and Security Systems, held virtually on May 6 and 7, 2021, a panel discussion was organized on measures and actions to reduce inappropriate use of the emergency number.²

In addition to the exchanges that took place during the above panel, the systems participating in the first meeting included a specific recommendation on the subject in the recommendations' document adopted as a result of the meeting. Thus, recommendation number 3 urges *“OAS member states to adopt regulations, strategies, lines of action, and procedures—in keeping with each country's laws—to curb inappropriate use of emergency numbers,*

1 Inappropriate calls can be of different types: false, abandoned, hang-ups, misplaced/wrong calls, or prank calls. For a more detailed description of each of them, please see p. 81, Section 3.3.2.5 of the Guide for the Establishment and Strengthening of National Emergency and Security Systems. The Guide is available in this link <https://portal.educoas.org/sites/default/files/nw/wg/docs/ESS-Guide.pdf>

2 Panel discussion 3 was held on May 7, 2021. It was moderated by Cristina Lumbreras, Technical Director of EENA, with the participation of Gary Almeida Brito, National Emergency Regulatory Director, SIS ECU 911; Marvin Palma Siles, Operations Coordinator, 911 Emergency System of Costa Rica; and Omar Smith, Director of Panama's 911 National Emergency System. For more information on the meeting and Panel discussion 3, please visit the Emergency and Security Systems Virtual Community at <https://portal.educoas.org/es/redes/oeadsp/comunidades/1ra-reuni-n-gts-ses-6-7-mayo-2021-1st-stg-ess-meeting-may-6-7-2021>

as well as to share measures and actions with other emergency and security systems in the region that have had positive results in connection with this issue.”

In line with this recommendation, and as a result of the panel organized within the framework of the first meeting of the STG-ESS, a hemispheric systematization exercise was carried out that comprised two activities.

The first activity consisted of a questionnaire distributed among all the emergency and security systems in the region that belong to the STG-ESS. Responses were received from 10 emergency and security systems (or related agencies).

The second activity involved the organization of a two-part roundtable. The first part focused on the status of the situation and agency responses to inappropriate use of the single emergency number by national and subnational emergency and security systems in Central and South America. The following participated in the first part of the roundtable to share experiences of national systems: the ECU 911 Integrated Security Service of Ecuador, the 9-1-1 Emergency System of Costa Rica, and the Dominican Republic's 9-1-1 National Emergency and Security Response System. With respect to subnational systems, the first part also included presentations from the province of Salta's 9-1-1 Coordinated Emergency System (Argentina), the city of Medellín's Integrated Emergency and Security System (Colombia), and the city of Bogotá's Command, Control, Communications, and Computer Center-C4 (Colombia).

The second part of the roundtable dealt with experiences in North America, including the United States and Canada, through the respective chapters of the National Emergency Number Association (NENA), and the countries of the European Union, through the European Emergency Number Association (EENA). The roundtable culminated with an exchange of views between panelists and participants.

This third working document of the Subsidiary Technical Working Group on Emergency and Security Systems (STG-ESS), chaired by Ecuador through its 911 Integrated Security Service (SIS ECU 911), systematizes the current situation of misuse of the emergency number, looking at multiple aspects: procedural, operational, statistical, quality, administrative-legal, and programmatic (i.e., linked to the public-policy cycle). This last aspect seeks to capture the institutional responses implemented by emergency and security systems to prevent and reduce inappropriate use of the emergency number, taking into account its negative impacts and the challenges faced. The systematization has been organized into six areas of analysis:



PROTOCOLS AND
PROCEDURES



CALL
MANAGEMENT



DATA AND
STATISTICS



QUALITY
CONTROL



SANCTIONS



PREVENTION
POLICY CYCLE

II. REGIONAL OVERVIEW



Protocols and procedures

Of the 10 agencies taking part in this third hemispheric systematization exercise, nine have some type of internal protocol or procedure in place to define and standardize the process for handling inappropriate calls.

Some of these instruments have been recently created and adopted, which is the case with five of the nine agencies that have them. They were reportedly introduced and activated between 2018 and 2022. In the other four cases, the original protocols or guidelines have already undergone adjustments, changes, or adaptations, as reflected in the existing number of versions. Some emergency and safety systems are already in their fourth version of their respective instruments, while others are in their fourteenth edition.

In all nine cases, it is significant that they have developed their own classification system for inappropriate calls. Some systems have as few as two categories while others, at the other extreme, have 13. From a positive perspective, each typology is adapted and responds to the realities of each country; however, this diversity in terms of the number of categories and definitions makes it difficult to obtain a full understanding of the phenomenon and precludes any valid comparison between countries and over time. In that regard, an initial task for the Subsidiary Technical Working Group on Emergency and Security Systems could be to try to establish a common and standardized classification for the entire region, accompanied by definitions agreed upon by all.

Comparison table 1: Protocols and procedures

Country	System	Protocol title	Year	Types of inappropriate calls			Number of categories
				Ownership	Type		
Argentina	Jujuy 911 Monitoring Center and System	Operator Call Handling Protocol	2019	Proprietary	Prank calls Unintentional calls	2	
Argentina	Salta 9-1-1 Coordinated Emergency System	Emergency Call Handling Protocol, False-Mute-Inquiries Calls (version 4)	2020	Proprietary	False calls Mute calls Unintentional calls Inquiry calls	4	
Costa Rica	9-1-1 Emergency System	Emergency Call Handling Protocol	2022 ³	Proprietary	Wrong number calls Improper calls Silent calls Unintentional calls Unregistered calls	5	
Ecuador	SISECU911	Guidelines for handling inappropriate calls (version 4)	2021	Proprietary	Inquiry/information calls, congratulation/complaint, incomplete information Inappropriate calls, no interlocutor Alleged false calls Labor communication	4	
Honduras	9-1-1 National Emergency System	Mute Call Protocol Prank Call Protocol Nuisance Call Protocol	2022	Proprietary	Mute calls Prank or nuisance calls False calls	3	
Mexico	9-1-1 Emergency Service	General 9-1-1 Emergency Call Handling Protocol	2021 ⁴	Proprietary	Prank calls by children Test calls Incomplete calls Mute calls Call transfer Insulting/obscene calls by adults Youth/adult prank calls Other non-emergency calls	8	
Panama	9-1-1 National Emergency System	Call Handling Protocol Call Center Procedure Manual	2020 2022	Proprietary	Mute or silent calls Terminated (hang-up) or misser calls Nuisance calls by minors Nuisance calls by adults Inquiry calls Calls for already reported cases (duplication)	6	
Paraguay	911 National Emergency System	Protocol to notify users who have made non-emergency calls Call handling protocol Call dispatch protocol Non-emergency call action tables Video surveillance protocol	2019 2018	Proprietary	Involuntary calls Non-emergency calls Calls from automatic devices Wrong number calls Inquiry calls Prank calls by minors Mental instability calls Insulting calls Terminated (or hang-up) calls Silent calls Obscene calls Operational calls Inquiry about notification received	13	
Dominican Republic	9-1-1 National Emergency and Security Response System	Emergency Call Handling Procedure (version 13) Emergency Call Handling Guidelines (version 14)	2022 2022	Proprietary	Wrong number calls Nuisance calls Non-emergency calls False emergency calls	4	
Saint Vincent and the Grenadines	Royal Police Force	None	N/A	None	N/A	N/A	

N/A: Not applicable

3. The latest update of the Emergency Call Handling Protocol was released on April 13, 2022.
4. Initially drafted in 2016 and updated in 2021.



2.2 Call management

Having protocols, procedures, and guidelines, as well as classifications that define different types of inappropriate calls, facilitates the handling of such calls by operators.

In addition, the fact that categories of inappropriate calls, together with their respective definitions, can be visualized and displayed on operators' monitors helps to ensure that they are quickly and appropriately classified and recorded. Of the 10 agencies participating in this exercise, eight have this functionality in their respective operating systems.

Among the eight agencies that reported having a technological tool that allows them to identify recurring numbers (i.e., telephone numbers from which inappropriate calls have been made on a recidivist basis), two specified that they keep a digital record of recurring numbers. One system clarified that they have a list of this type in Excel, i.e., not digitalized. Likewise, two other systems mentioned that upon automatically identifying recidivist numbers, the system itself refers them to an Interactive Voice Response (IVR) system.

Of the 10 emergency and security systems, nine save and store inappropriate calls. One does so by law and six do so based on internal regulations, while the remaining two do so based on instructions from other types of instruments.

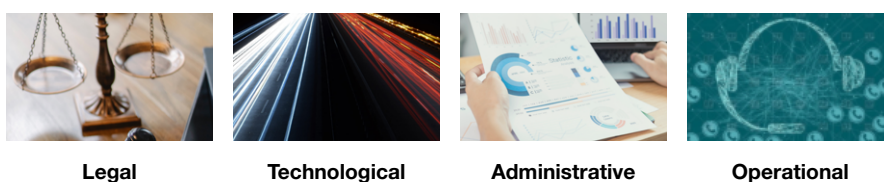
In seven of the nine emergency and security systems that keep a record of inappropriate calls, they are stored as audio and data files. In one system only the data is saved; another saves the audio and data files, as well as the respective tickets.

The length of storage varies by system, as well as by type of format. In the system where only the data of inappropriate calls is saved, storage is for less than one year. There are two systems where the storage period varies by format. In both, data is stored indefinitely while audio files are stored for three months in one case, and for between one and three years in the other. Another system stores both data and audio files indefinitely. In three other systems, inappropriate calls are stored for one to three years, regardless of their format; and in two other systems they are stored for four or more years.

At least four types of justification were put forward for the different timeframes mentioned:

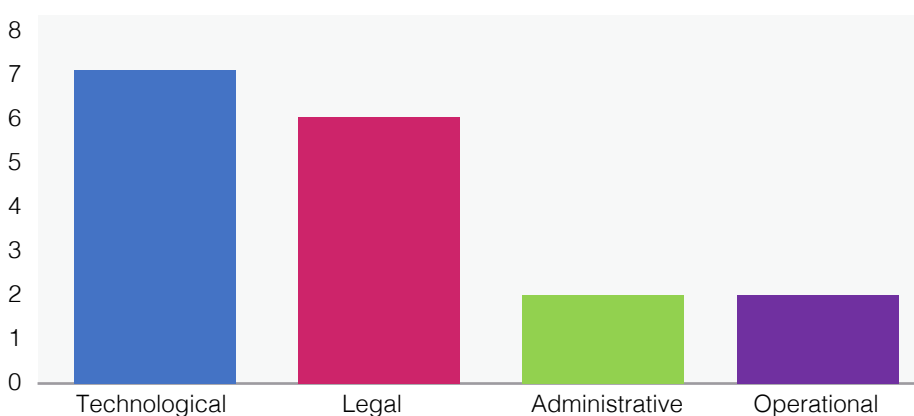
- Legal
- Technological
- Administrative
- Operational

Figure 1: Types of justification for storage periods



The most common justification given for the storage timeframes referred to in the previous paragraphs was technological. This technological justification has to do with how much or how little storage capacity servers have. The second most common justification was legal and associated with the need to make available and release files of inappropriate calls for legal consultations or proceedings. Since the latter tend to be prolonged, the storage periods for improper-call files had to be extended. Administrative and operational justifications were mentioned by two emergency and security systems, respectively.

Graph 1: Storage period justifications



Comparison table 2: Handling of inappropriate calls

Country	System	Mechanism to identify inappropriate calls	Technological tool to identify # of recidivist numbers	On-screen display of categories	Storage			
					Instrument	Format	Term	Justification for term
Argentina	Jujuy 911 Monitoring Center and System	Protocol Classification	Yes (Softphone)	Yes	Internal regulation	Audio Data	1 to 3 years	Technological
Argentina	Salta 9-1-1 Coordinated Emergency System	Protocol Classification	Record of recidivist numbers	Yes	Internal regulation	Audio Data	Permanent	Technological Operational Legal
Costa Rica	9-1-1 Emergency System	Protocol Classification	Yes + IVR ⁵	Yes	Internal regulation	Audio Data	4 years or more	Administrative
Ecuador	SIS ECU 911	Guidelines Classification	No	Yes (via an option in the CAD system ⁶)	Law	Audio Data	1 to 3 years	Legal Technological
Honduras	9-1-1 National Emergency System	Protocol Classification	Yes	No	Internal regulation	Audio Data Ticket	1 to 3 years	Technological
Mexico	9-1-1 Emergency Service	Protocol Classification	Record of recidivist numbers	Yes	Internal regulation	Data	Less than 1 year	Administrative
Panama	9-1-1 National Emergency System	Protocol Manual Classification List of recidivist numbers	No	Yes	Other	Audio Data	3 months Permanent	Technological
Paraguay	911 National Emergency System	Protocol Table of actions Classification	Yes	Yes	Other	Audio Data	4 years or more	Technological Operational Legal
Dominican Republic	9-1-1 National Emergency and Security Response System	Procedure Guidelines Classification	Yes + IVR ⁵	Yes	Internal regulation	Audio Data	1 to 3 years Permanent	Technological Legal
Saint Vincent and the Grenadines	Royal Police Force	No	Caller Id	No	No	N/A	N/A	N/A

N/A: Not applicable

⁵ IVR stands for Interactive Voice Response system.

⁶ CAD stands for Computer Aided Dispatch.

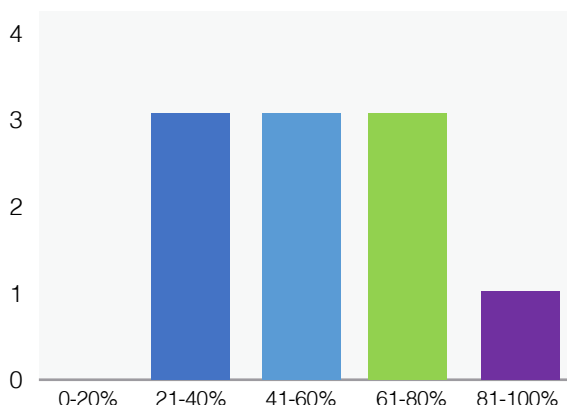


2.3 Data and statistics

Of the total annual calls received by the emergency and security systems, a percentage are classified as appropriate (i.e., emergency calls), for which the service process continues (dispatch of units and assistance at the scene), and another percentage are classified as inappropriate.

Of the 10 emergency and security systems that participated in this systematization exercise, one reported that of the total number of calls, inappropriate calls represented between 81–100%. Three other systems recorded numbers in the 61–80% range for such calls. Three emergency and security systems registered numbers of inappropriate calls in the 41–60% range, while three others registered inappropriate calls of between 21% and 40%, as a proportion of the total. Given the cost and attrition caused by non-emergency calls, the sanctions and prevention measures that emergency and security systems adopt should be aimed at further reducing those rates.

Graph 2: Number of systems by percentage of inappropriate calls



Of the 10 participating emergency and security systems, only three calculate the estimated cost of inappropriate calls. Of these three systems, two provided the annual cost while the third reported the daily cost. The formulas for estimating this cost vary among the three systems. The fact that not all systems calculate this cost, and that those that do use different formulas and criteria, would suggest a second possible line of action within the framework of the Subsidiary Technical Working Group on Emergency and Security Systems (STG-ESS). In other words, work could be done on the development of a technical factsheet specifying the different steps and components for estimating the cost of inappropriate calls to the agency's operation and budget. This technical factsheet could then be adopted by each of the region's emergency and security systems to begin calculating the cost of inappropriate calls based on a common and standardized formula. The possibility of estimating this cost based on a reliable

and validated methodology would help to persuade and convince the authorities of the need to address the problem efficiently and effectively.

Nine of the 10 systems generate some type of report on inappropriate calls. Seven do so in hardcopy and digital format, while in two systems the reports are digital only. It would be interesting to analyze the type of information that those reports provide on inappropriate calls and how that information is structured and presented. Thus, a third line of action within the framework of the STG-ESS could be to establish certain general guidelines for such reporting. Those guidelines could be shared with all emergency and security systems for reference.

Comparison table 3: Data and statistics on inappropriate calls

Country	System	% of inappropriate calls	Average cost (US\$)	Calculation criteria	Reports	
					Generate	Format
Argentina	Jujuy 911 Monitoring Center and System	41-60%	Not calculated	N/A	Yes	Hardcopy Digital
Argentina	Salta 9-1-1 Coordinated Emergency System	21-40%	Not calculated	N/A	Yes	Hardcopy Digital
Costa Rica	9-1-1 Emergency System	21-40%	2,112,913.05 (annual)	(Total budget executed/Number of calls received) x Number of inappropriate calls	Yes	Hardcopy Digital
Ecuador	SIS ECU 911	21-40%	2.24 (per call)	<ul style="list-style-type: none"> • Expenses (utilities, transportation, telecommunications) • Wages and salaries (operational personnel) • Depreciation 	Yes	Digital
Honduras	9-1-1 National Emergency System	81-100%	Not calculated	N/A	Yes	Hardcopy Digital
Mexico	9-1-1 Emergency Service	61-80%	Not calculated	N/A	Yes	Digital
Panama	9-1-1 National Emergency System	61-80%	Not calculated	N/A	Yes	Hardcopy Digital
Paraguay	911 National Emergency System	81-100%	609,544.404 (annual)	Hourly cost of operator's call handling x number of non-emergency call hours	Yes	Hardcopy Digital
Dominican Republic	9-1-1 National Emergency and Security Response System	61-80%	Not calculated	N/A	Yes	Hardcopy Digital
Saint Vincent and the Grenadines	Royal Police Force	41-60%	Not calculated	N/A	No	N/A

N/A: Not applicable



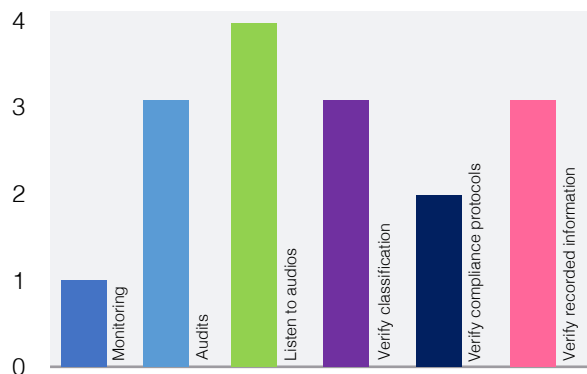
2.4 Quality control

Of the 10 emergency systems that completed the questionnaire, 8 carry out some form of quality control on inappropriate calls.

Emergency and security systems use a combination of tools to perform quality control on inappropriate calls. The most commonly used measures include the following:

- Four systems listen to call audios
- Three systems audit calls
- Three systems verify that the inappropriate calls have been correctly classified
- Three systems verify the information recorded
- Two systems verify that operators have followed the protocols, procedures, or guidelines established for handling such calls
- One performs call monitoring

Graph 3: Quality control measures by number of systems using them



In six of the eight systems that carry out some form of quality control on inappropriate calls, the results are shared internally with other areas, but only in four cases are they shared for the express purpose of generating action plans or measures to try to improve management of such calls and positively impact the operation of the system.

From this regional overview, there seems to be ample margin for systems to make better use and leverage the results of their quality controls to continue improving the management of such calls and, consequently, the operation of the service. This could lead to a possible fourth line of action.

Comparison table 4: Quality control on inappropriate calls

Pais	System	Quality control	Type of control	Reports	
				Shared	Action plans
Argentina	Jujuy 911 Monitoring Center and System	Yes	Call auditing	Yes	Yes
Argentina	Salta 9-1-1 Coordinated Emergency System	Yes	Control of recidivist calls and referral of information to specific agencies for follow-up Monthly monitoring of the indicator	Yes	Yes
Costa Rica	9-1-1 Emergency System	Yes	Monitoring	Yes	No
Ecuador	SIS ECU 911	Yes	Listening to audio Review of information recorded in the system Check whether inappropriate calls were correctly classified	Yes	Yes
Honduras	9-1-1 National Emergency System	Yes	Ticket review Listening to audio Verification of compliance with established processes	No	N/A
Mexico	9-1-1 Emergency Service	Yes	Post-listening Callback	No	N/A
Panama	9-1-1 National Emergency System	No	N/A	N/A	N/A
Paraguay	911 National Emergency System	Yes	Audits Quarterly assessments	Yes	Yes
Dominican Republic	9-1-1 National Emergency and Security Response System	Yes	Case monitoring Listening to audio Check whether inappropriate calls were correctly classified Review of information recorded in the system Verification of compliance with protocols Monthly monitoring of the indicator	Yes	No
Saint Vincent and the Grenadines	Royal Police Force	No	N/A	N/A	N/A

N/A: Not applicable



2.5 Sanctions

Of the 10 emergency and security systems that participated in this hemispheric systematization exercise, eight responded that their respective countries have sanctions in place to punish and deter inappropriate use of the emergency line.

Among these eight systems, in five the sanctions are stipulated in the respective laws establishing the emergency and security systems; in the other three, the sanctions were incorporated in the respective contravention or criminal codes.

In addition, four systems have internal protocols, procedures, or resolutions relating to the application of sanctions.

In all eight countries, those who make inappropriate calls may be subject to criminal sanctions. The other most frequently mentioned type of sanction is financial sanctions. These are contemplated in six countries. Two countries may also apply administrative sanctions.

The three types of sanctions identified—administrative, financial, and criminal—give an idea of gradualism in terms of severity and punishment applied, depending on the type of inappropriate call, the impact and damage caused by the call, and recidivism. This gradualism is observed within each type of sanction, as well as between types of sanctions.

Administrative sanctions entail a suspension of service, which may be partial, total, or permanent, or the result of the user's recidivist behavior.

Financial sanctions vary depending on how the amount of the fine is calculated. As mentioned above, financial sanctions are contemplated in six countries. In two systems, a set amount was established, which has its equivalent in a specific number of liters of fuel. In two other systems, the amount of the fine is calculated in relation to a base or minimum wage (either as a percentage or a multiplication of the minimum value), and in a third system the amount of the fine is obtained from the multiplied value of an individual call. In another of the systems that contemplates the possibility of applying a financial sanction, the range of possible values for such a fine was reported, but the criteria for calculating it were not specified. In a fifth country, the amount of the fine is at the discretion of the judge.

In only two cases emergency and security systems have the legal-administrative authority to collect fines. In one of those cases, there are restrictions on the use of the money received as a fine for inappropriate use of the emergency number. The money may only be used for the following:

- To finance advertising campaigns and other educational activities on the correct use of the system
- To improve communication and liaison systems
- To enhance the facilities and equipment of the system, as well as those of its affiliated agencies

In the second case, there is still no mechanism in place to collect the fine.

Criminal sanctions vary, mainly according to the number of days, months, or years for which the person is deprived of liberty. Prison sentences vary from three days to 12 years.

One of the main lines of action that emerges from this regional overview, the fifth in this document, has to do with the need to set up the necessary mechanisms for the collection of financial sanctions and for the systems to be able to dispose of those funds within each entity's transparency and accountability guidelines.

Comparison table 5: Sanctions for inappropriate use of the single emergency number

Country	System	Sanctions established by law				Internal regulation			Sanctions		
		Title	#	Year	Title	Year	Type	Description	Exceptions		
Argentina	July 911 Monitoring Center and System	Yes	5860	2015	No	N/A	Financial	Fine of US\$4.75 or the equivalent of 1 liter of common fuel	No		
		Yes	7135	2013	No	N/A	Financial	Fine of US\$150 or the equivalent of 200 liters of fuel	No		
Costa Rica	9-1-1 Emergency Systems	Yes	7566	2015	Yes	Procedure for handling emergency reports	Financial	Fine of 25% of base salary of a clerk 1 (US\$212)	Yes		
		Yes			Yes	Administrative fine-collection procedure					
Ecuador	SIS ECU 911	Yes		2014	Yes	Procedure for the management of suspension for inappropriate use and blocking of terminals ⁷	Administrative	Partial, total, and permanent suspension of telephony service	Yes		
		Yes		2015	Yes	Specific agreement for coordination of the suspension ⁸	Criminal	15 to 30 days of imprisonment	Yes		
Honduras	SME9-1-1	Yes	58	2015	No	N/A	Financial	500% of the normal call value for repeat offenders	No		
		No			No	N/A	Criminal	3 to 6 years of imprisonment	N/A		
Panama	SME9-1-1	Yes	120	2019	No	N/A	Financial	US\$100 to US\$10,000	No		
		Yes			No	N/A	Administrative	Suspension of line in cases of recidivism	No		

7 Full name of the procedure: Procedure for the management of service suspension due to inappropriate use of the single emergency line and blocking of advanced mobile service terminals.

8 Full name of the agreement: Specific agreement for the coordination of the suspension of service for subscribers who misuse emergency services.

Comparison table 5: Sanctions for inappropriate use of the single emergency number

Country	System	Sanctions established by law				Internal regulation				Sanctions		
		Title	#	Year	Yes	Title	Yes	Year	Type	Description	Exceptions	
Paraguay	911 National Emergency System	Law Creating the 911 System for the Attention, Dispatch and Follow-up of Emergency Communications	4739	2012	Yes	Non-emergency call reporting protocol	2018	Financial Criminal	At the discretion of judge	Up to 5 years of imprisonment	No	
		Law Establishing the 9-1-1 National Emergency and Security Response System	184	2017	Yes	Procedure for the management of false emergencies	2014	Financial (nuisance calls, obscene calls, silent calls)	1 to 5 times the minimum wage + education	No		
Dominican Republic	9-1-1 National Emergency and Security Response System	Decree Containing the Implementing Rules of Law 184-17	293	2020				Financial	5 to 10 times the minimum wage for adversely affecting the operation of the 9-1-1 System			
								Financial + criminal (false emergencies)	4 to 10 times the minimum wage + 3 to 6 months of imprisonment			
								Financial + criminal (repeated false emergencies)	4 to 10 times the minimum wage + 6 to 12 months of imprisonment			
Saint Vincent and the Grenadines	Royal Police Force		N/A	N/A	No	N/A	N/A	Financial + criminal	10 to 20 times the minimum wage + 1 to 3 months of imprisonment for traffic accident, physical injury, or serious harm during a false emergency			
			N/A	N/A	No	N/A	N/A	N/A	N/A	N/A		

N/A: Not applicable



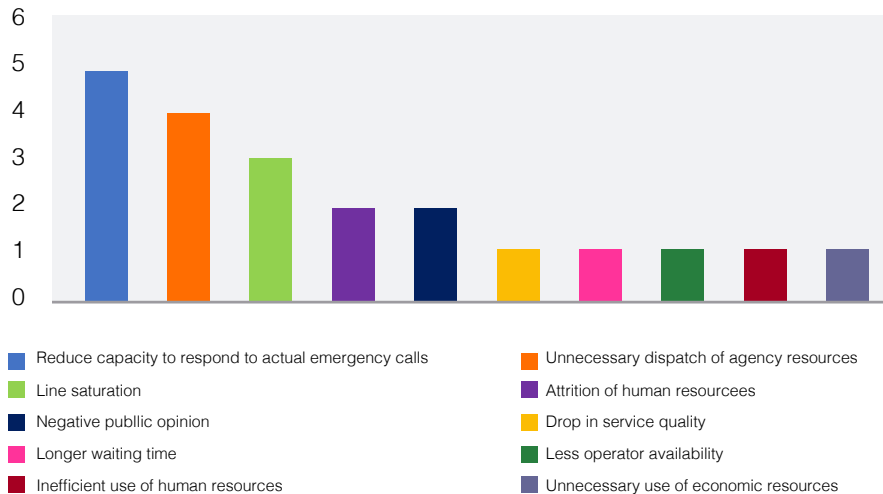
2.6 Prevention policy cycle

The most reported negative impacts generated by the high volume of inappropriate calls included the following:

- Delay, reduced capacity, or inability to respond to real emergency calls (5)
- Unnecessary dispatch of first responder units (4)

Overloading or congestion of the line, due to the high volume of calls, received three mentions. Attrition or adverse impact on human resources was mentioned by two emergency systems. Negative public opinion or perception of the emergency service also received two mentions. Other impacts, including longer waiting times, lower availability of operators, drop in the standard of service, unnecessary and inefficient use of resources (economic and human), were mentioned only once.

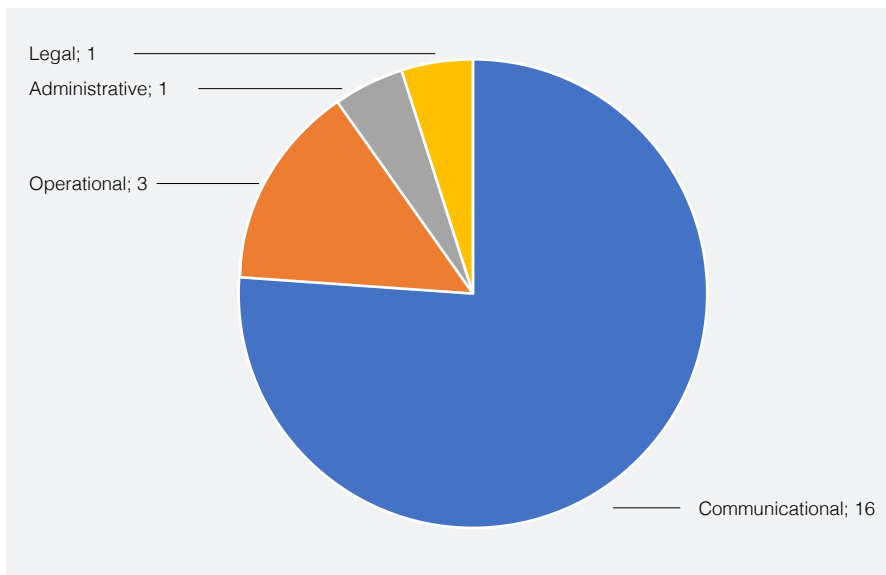
Graph 4: Number of mentions by type of impact



In view of this situation and taking into account the still high proportion of inappropriate calls in relation to the total number of calls received, emergency and security systems have designed strategies and interventions to prevent and eventually reduce inappropriate use of the emergency number.

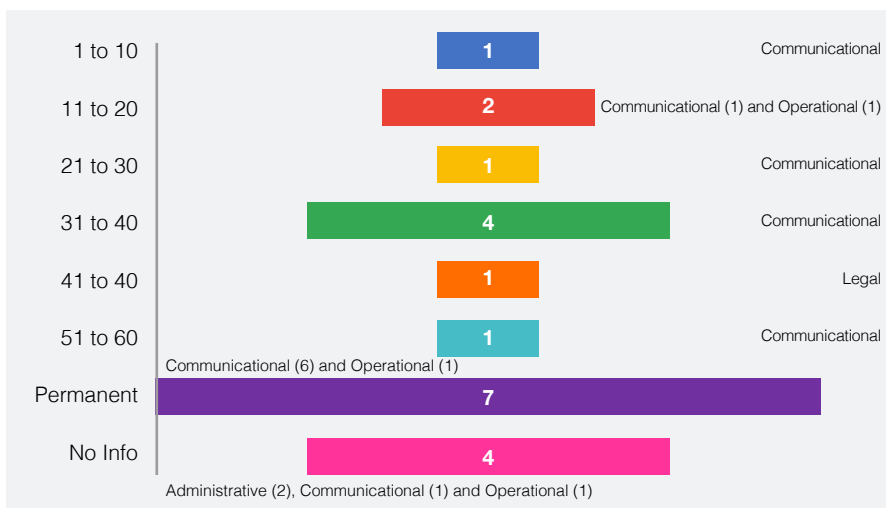
Among the 10 participating systems, eight reported some type of strategy or intervention. A minimum of one and a maximum of five were reported. Among the eight systems, a total of 21 strategies or interventions were reported. Of those, the most frequently mentioned were of a communicational nature.

Graph 5: Number of strategies by type



The duration of the strategies or interventions implemented varies from six months at the low end to 60 months at the upper end. Seven strategies were presented as permanent actions. Among the permanent strategies, six were of a communicational nature and one operational.

Graph 6: Number of strategies by duration (in months) and type



Only seven of the strategies or interventions reported offered some type of outcome indicator. This situation gives rise to a potential sixth line of action. There seems to be a need to strengthen capacities for designing strategies or targeted interventions, including outcome indicators and some type of evaluation that will make it possible to conclude, with some reliable evidence, whether or not the actions carried out are successful.

Among the lessons learned from the implementation of communication strategies and interventions to prevent and reduce inappropriate calls, the following stand out:

- Get the media to join in the efforts of promoting and explaining the correct use of the 911 emergency number, particularly through the use of data and statistics
- Use of real cases of inappropriate calls
- Use of humor seems to be well received by the public
- Directing communication actions at target groups or audiences

It is also necessary to recognize that the possibility of designing and implementing actions that are effective and sustainable over time is constrained by a series of challenges. The main challenge mentioned was the absence or non-application of sanctions; this was followed by lack of public interest and budget constraints.

Comparison table 6: Strategies for the Prevention and Reduction of Inappropriate Calls

Country	System	Impact	Challenges	Strategies			Lessons learned		
				Name	Type	Duration (months)		Indicators	
Argentina	Jujuy 911 Monitoring Center and System	Increased call volume	Lack of public awareness Budget constraints	Advertising campaign	Communicational	N/I	N/I		
	Salta 9-1-1 Coordinated Emergency System	Reduced capacity to respond to real emergency calls	Little media dissemination of the correct use of the number	911 visits	Communicational	Permanent	% of false calls		
		Attrition of human resources Unnecessary dispatch of resources by first responder agencies	Non-application of sanctions	Awareness raising workshops	Communicational	24 months	% error calls	N/I	
Costa Rica	9-1-1 Emergency System	Call overload and decline in service level	Having the necessary budget to create or maintain information campaigns	Advertising campaign	Communicational	6 months	None	Establish performance indicators	
		Adverse impact on personnel Unnecessary dispatch of resources	Lack of resources and coordination difficulties to develop training programs	Text messaging	Communicational	12 months	None	Greater continuity	
Ecuador	ECU 911 Integrated Security Service	Enforcement of sanctions for those who engage in inappropriate use	"We are all ECU" (ECU Somos Todos)	Advertising campaign	Communicational	Permanent	None	Media es receptive to data on misuse of the emergency number	
		Inefficient and unproductive use of the 9-1-1 emergency line	Lack of economic resources for widespread advertising	"Make good use of the 911" (Usa bien el 911)	Communicational	Permanent	Permanent	None	Real cases showcasing inappropriate calls have a greater impact
		Unnecessary use of economic resources	Lack of coverage in remote communities	Top 5 Misuse Calls	Communicational	Permanent	Permanent	None	Use of humor has proved highly popular
Honduras	9-1-1 National Emergency System	Unnecessary mobilization of units	Lack of awareness	Application of sanctions	Legal-administrative	48 months	Number of false calls	Apply economic sanctions according to the type of consequences caused	
		Actual emergencies left unattended	Lack of interest	Children's educational campaign	Communicational	36 months	Number of nuisance calls made by minors	Strategies targeting minors should be more frequent and constant	Capture de attention of and coverage by media outlets

N/A: Not applicable | N/I: No information

Comparison table 6: Strategies for the Prevention and Reduction of Inappropriate Calls

Country	System	Impact	Challenges	Strategies			Lessons learned	
				Name	Type	Duration (months)		
México	9-1-1 Emergency Service	Overloading of telephone lines inability to report an actual emergency	Lack of public awareness	Implemented by individual states			N/A	
		Negative perception of the service	Absence of uniform financial and criminal sanctions	Communication campaign	Communicational	Permanent	N/I	
Panamá	9-1-1 National Emergency System	Increased wait time	Inability to identify malicious numbers	Operational process	Operational	Permanent	N/I	
		Reduced availability of operators Delays in answering incoming calls	Absence of regulations to block numbers					
Paraguay	911 National Emergency System	Unnecessary dispatch of resources	Ineffective awareness campaigns					
		Delays in attending to real emergencies	Effective enforcement of sanctions	Sending messages for inappropriate use	Communicational	34		
		Inefficient use of human resources	Collection of financial sanctions	Advertising spot on the correct use of the system	Communicational	N/I		Reduced number of non-emergency calls and increased number of emergency calls
		Negative perception of the service	Lack of own budget	Develop and approve protocols	Operational	N/I		N/I
				Change of the COPAGO service number from 112 to 125	Operational	12		
República Dominicana	9-1-1 National Emergency and Security Response System	Inefficient use of resources	Lack of public awareness	Reports and outreach to CONATEL	Administrative	N/I		
		Delay in responding to actual emergencies	Deficient implementation of the law and regulations	Communication and community relations model and system	Communicational	36 months		Implementation of the communication program
		Negative impact on the agency's image		Strategic Communication Plan on the Correct Operation and Use of the 9-1-1 System	Communicational	36 months		Implementation of the communication plan
				Campaign "Life is not something to fool around with" (<i>Con la vida no se juega</i>)	Communicational	Permanent		N/I
San Vicente y las Granadinas	Royal Police Force	N/I	Absence of legislation establishing sanctions	N/I	N/I	N/I	N/I	

N/A: Not applicable | N/I: No information

III. OVERVIEW BY COUNTRY

3.1 ARGENTINA > JUJUY 911 MONITORING CENTER AND SYSTEM



3.1.1 Protocols and procedures

In the case of the 911 System and Monitoring Center of the Province of Jujuy, Argentina, inappropriate use of the single emergency number is defined in the Operator Call Handling Protocol, developed in 2019.

Inappropriate calls to the single emergency number are classified into two types:

- **Prank calls**
- **Wrong number calls**

There are at least three criteria used to classify inappropriate calls:

- Criterion 1: Incoherent information from caller
- Criterion 2: Insults
- Criterion 3: Information from caller not indicative of an emergency



3.1.2 Call management

The 911 System and Monitoring Center has the ability to identify inappropriate calls to the single emergency number through its established protocol and classification system. In turn, the computer system used to handle calls includes the categories of inappropriate use of the service which, in turn, are displayed on the operators' monitors. In addition, it has a technological tool (Softphone) to identify repeat callers or telephone numbers from which inappropriate calls have been made in the past.

The 911 System and Monitoring Center keeps the audio and data files on inappropriate calls for one to three years. This storage period was established by internal regulations, based on the limited space available for the storage of such files.



3.1.3 Data and statistics

Inappropriate calls received by the 911 System and Monitoring Center represent between 41 and 60% of the total calls received.

The operating system used by the 911 System and Monitoring Center enables it to extract reports on inappropriate calls in hardcopy and digital format.

The 911 System and Monitoring Center does not calculate the average annual cost of handling inappropriate calls to the single emergency line.



3.1.4 Quality control

The 911 System and Monitoring Center performs quality control through audits of inappropriate calls.

The results of audits are shared with other areas of the System to improve their processing and, thus, the operation of the 911 system.

Within the Center, the results of the audits are used to inform, design, and provide new training for operators. With respect to callers, based on the audits carried out, those who have misused the number are called back to inform or remind them that the 911 number should only be used in emergencies.



3.1.5 Sanctions

The 2015 Contravention Code of the Province of Jujuy (No. 5860) establishes sanctions for inappropriate use of the single emergency number.

There are two types of sanction:

- Financial
- Criminal

Financial sanctions are imposed for false warnings or alarms and inappropriate use of emergency communications. The amount of the financial sanction is US\$4.75, which is calculated based on the cost of 1 liter of common fuel (base unit).

There are three subtypes of criminal sanctions, depending on the seriousness of the violation committed, which, in turn, is reflected in the severity of the punishment. Thus, a minor violation carries nine days of community service.

An intermediate violation involves the payment of five fine units, i.e., the cost of five liters of ordinary fuel. A serious violation is punishable with three days of imprisonment.

No exceptions have been established for the application of sanctions.



3.1.6 Prevention policy cycle

The 911 System and Monitoring Center identified at least three challenges to implementing strategies to reduce inappropriate use of the single emergency number effectively and sustainably:

- Increased call volume
- Lack of public awareness
- Budget constraints

The measures adopted by the 911 System and Monitoring Center to prevent and reduce misuse of the emergency number have been of a communicational nature, based on advertising campaigns and the dissemination of audiovisual and graphic materials.

3.2. ARGENTINA > SALTA 9-1-1 COORDINATED EMERGENCY SYSTEM



3.2.1 Protocols and procedures

The Province of Salta 911 Coordinated Emergency System has an Emergency Call Handling Protocol. False-Mute-Inquiry Calls (fourth edition, 2020).

The Salta 911 Coordinated Emergency System has its own classification system for inappropriate calls made up of four types or categories:

- Category/Type 1: **False calls**
- Category/Type 2: **Mute calls**
- Category/Type 3: **Unintentional calls**
- Category/Type 4: **Inquiry calls**

Once a call is identified as inappropriate, there are five established criteria to classify it by category or type:

- Criterion 1: Calls with expletives, laughter, and when asked if there is an emergency, there is no response, or the response is negative.
- Criterion 2: Calls in which the operator hears no background noises consistent with an emergency but, rather, noise indicative of an accidental activation of a cellular device or no noise or response at all. [**Unintentional calls and mute calls**]
- Criterion 3: Calls requesting information even though there are agencies designated for such inquiries. [**Inquiry calls**]
- Criterion 4: Calls in which there appears to be a real emergency and the appropriate resources are dispatched, but upon arrival at the scene there is no emergency, no person to interview, or no residents at the address provided. [**False call**]
- Criterion 5: Chronic or nuisance callers.



3.2.2 Call management

The Province of Salta 911 Coordinated Emergency System has two mechanisms to identify inappropriate calls: the protocol mentioned in the previous subsection and the classification system with standardized categories. In addition, the categories established to classify inappropriate calls mentioned in the previous subsection appear on the operator's screen. The Salta 911 Coordinated Emergency System also keeps a record of telephone numbers from which inappropriate calls have been repeatedly made. This record facilitates identification and management of numbers that have misused the emergency number in the past.

The Salta 911 Coordinated Emergency System keeps a permanent record of inappropriate calls (both audio and data files). The storage period is established in the System's internal regulations.

The Salta Emergency System uses at least three types of rationale to justify the storage period:

- Technological: availability of server space.
- Legal: resolving legal cases can be a protracted process and judicial consultations are conducted up to three years after the fact.
- Operational: to support the work of operations personnel.



3.2.3 Data and statistics

Inappropriate calls account for between 21 and 40% of total calls received by the Salta 911 Coordinated Emergency System.

The computer system can extract reports on calls identified as inappropriate in hardcopy and digital format.

So far, SE 911 (for its Spanish acronym) does not calculate the average annual cost of handling inappropriate calls to the single emergency number.



3.2.4 Quality control

The Salta 911 Coordinated Emergency System keeps track of repeat calls made by chronic callers and, as necessary, refers the information to mental health agencies for follow-up.

The results of quality control are shared with other areas to establish action plans to help improve management of misuse calls and, in this way, contribute to the efficiency of the system.



3.2.5 Sanctions

The 2013 Contravention Code of the Province of Salta (Law No. 7135) establishes sanctions for misuse of the single emergency line. The Code establishes two types of sanctions:

- Financial
- Criminal

The financial penalty involves the payment of a fine of US\$150 or the equivalent of 200 liters of fuel. However, it is not being implemented at present. The criminal sanction is applied to those who call the Salta 911 Coordinated Emergency System for the purpose of mockery, pranks, or jokes. It entails the deprivation of liberty of the misuser for 20 days. There is no exception established to avoid the application of sanctions.



3.2.6 Prevention policy cycle

The Salta 911 Coordinated Emergency System has identified at least three types of impact caused by inappropriate calls:

- Reduced capacity to respond to actual emergency calls
- Attrition of human resources
- Unnecessary dispatch of first-responder agency resources

Recognizing the multiple impact of the problem, the Salta 911 System implemented two communication strategies:

- 911 visits
- Awareness raising workshops

The first communication strategy is carried out on an ongoing basis, while awareness-raising workshops were implemented during 2021 and 2022. In both cases, two outcome indicators were established to gauge the success of the intervention:

- % of false calls
- % of unintentional calls

At least three lessons were learned from the experience of the Salta 911 Coordinated Emergency System in dealing with this problem:

- It is not enough simply to define sanctions; it is necessary to establish the necessary means to enforce them
- It is necessary to estimate the cost of handling such calls
- It is necessary to have permanent legal advice and support

3.3. COSTA RICA > 9-1-1 EMERGENCY SYSTEM



3.3.1 Protocols and procedures

In Costa Rica, inappropriate use of the emergency service is defined by the Law Creating the 911 Emergency System (No. 7566 of December 18, 1995) and in the Emergency call handling protocol, which was last updated on April 13, 2022.

Inappropriate calls are those that are inconsistent with the report of an emergency and may be classified into five types:

- **Misdialed or wrong number**
- **Improper**
- **Silent**
- **Unintentional**
- **Unregistered**

This typology was developed by the Costa Rica 9-1-1 Emergency System. The Costa Rica 9-1-1 system also established relevant criteria to properly classify the types of inappropriate calls they receive:

- **Misdialed or wrong number call:** The caller admits to misdialing or the operator determines that the situation reported is not consistent with any event attended by the 9-1-1 Emergency System. The call can be terminated by the caller or the operator.
- **Improper call:** Obscene, malicious, insulting calls with no attention given to an incident. This type also includes calls reporting a false incident that is detected by the operator, and repetitive calls by callers who do not speak or only make noises.
- **Silent call:** Calls where there is no sound on the line. The call can be terminated by the caller or the operator.
- **Unintentional call:** These are all calls where there is no interaction between the caller and the operator, and no data can be obtained to justify the creation of an incident. This is the classification to be used when it is not possible to classify the call as erroneous, inappropriate, or mute.



3.3.2 Call management

Costa Rica's 9-1-1 Emergency System has a protocol and its own classification system to facilitate the identification of inappropriate calls. It also has a technological tool that allows it to identify telephone numbers from which inappropriate calls have been made to the single emergency number in the past. Once these numbers are identified as “nuisance” or as not having a valid SIM card, they are forwarded to an interactive voice system, without interaction with an operator.

Calls that are handled by an operator and identified as inappropriate, are classified in the operating system based on the categories presented above and are terminated.

Inappropriate calls are stored (both audio and data files) for a minimum of four years. This storage period was established by internal regulations, based on administrative grounds.



3.3.3 Data and statistics

In 2021, inappropriate calls accounted for between 21 and 40% (36% specifically) of total calls received by the Costa Rica 9-1-1 Emergency System.

The computer system can extract reports on inappropriate calls in hardcopy and digital format.

The average annual cost of inappropriate calls in 2021 was US\$2,112,913.05. The formula for estimating the average annual cost is as follows: (Total budget executed/Number of calls received) x Number of inappropriate calls.

Figure 2: Formula used by SE 9-1-1 of Costa Rica to estimate average annual cost of inappropriate calls

$$\left[\frac{\text{Total budget executed}}{\text{Number of calls received}} \right] \times \text{Number of inappropriate calls}$$



3.3.4 Quality control

Costa Rica's 9-1-1 Emergency System monitors calls classified as inappropriate on a daily basis. Of the total monitoring, at least 35% must be inappropriate calls. In particular, calls that have been classified as inappropriate are monitored to determine which ones will be subject to a fine.

The results of quality control are shared with other areas of Costa Rica's 9-1-1 System, but not necessarily to establish action plans to mitigate inappropriate calls.



3.3.5 Sanctions

The 1995 Law Creating the 9-1-1 Emergency System (No. 7566) established sanctions for inappropriate use of the service. In addition, it has two internal protocols to regulate and punish misuse of the single emergency number:

- Emergency report handling procedure (PR-OP-01)
- Administrative fine collection procedure (P-RI-001)

Article 17 of the Law Creating the 9-1-1 Emergency System establishes an administrative fine equivalent to 25% of the base salary of a clerk.⁹ Each inappropriate call or report made within a single month using the same telecommunications service will be fined an additional 5% of a base salary. The fine shall be applied to the telecommunications service subscriber. However, inappropriate calls or reports made by persons with mental disabilities, regardless of age, are excluded from the application of the aforementioned fines.

The 9-1-1 Emergency System has the power to collect administrative fines for inappropriate use but cannot freely dispose of the money. The amount collected can only be used to finance advertising campaigns and other educational activities on the correct use of the single emergency number. It may also be invested in improvements to communication and liaison systems with first responder and specialized agencies¹⁰, as well as in the agency's own facilities and equipment, and those of affiliated agencies directly involved in handling emergency calls and reports.

At the time of preparing and approving the regular budget, the 9-1-1 Emergency System Coordinating Commission¹¹ analyzes and evaluates projects presented by member agencies and selects those to include for funding. The agencies whose projects have been selected will receive the necessary funds on a grant basis.



3.3.6 Prevention policy cycle

The Costa Rica 9-1-1 Emergency System has identified at least three adverse impacts caused by inappropriate calls:

- Call overload with a resulting drop in service levels
- Adverse impact on personnel due to the psychological attrition caused by such calls
- Unnecessary dispatch of agency resources

9 Article 2 of Law No. 7337 (1993) Creating Base Salary Concept for Special Offenses in the Criminal Code defines the base salary of a clerk 1 and how it should be applied.

10 The Fire Department, the Costa Rican Red Cross, the Costa Rican Social Security Fund (CCSS), municipalities throughout the country, the National Emergency Commission, the National Children's Trust (PANI), and the National Women's Institute (INaMu), among others.

11 The Coordinating Commission comprises a high-level representative directly linked to the area of each agency concerned.

In view of the operational, personnel welfare, and economic impact, the 9-1-1 Emergency System implemented two communication strategies:

- Six-month advertising campaign
- Text messaging for 12 months

In neither case were outcome indicators used to gauge the effectiveness of the strategies implemented.

The following lessons were learned from the implementation of the two strategies:

- It is necessary to establish medium-term outcome indicators
- Communication strategies should be permanent
- Communication strategies should be focused on target audiences

3.4. ECUADOR > ECU 911 INTEGRATED SECURITY SERVICE



3.4.1 Protocols and procedures

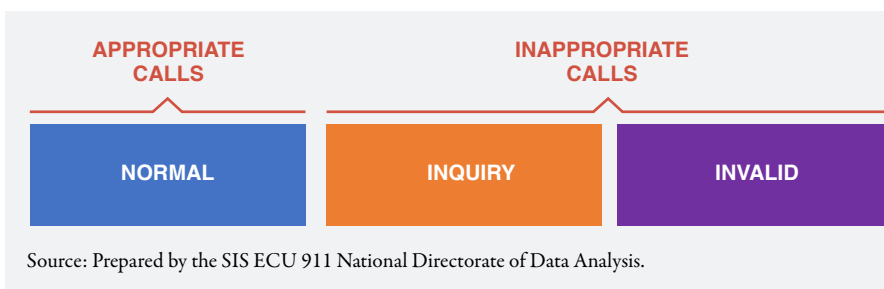
SIS ECU 911 (for its Spanish acronym) has Guidelines for handling inappropriate calls (version 04, 2021). Likewise, the SIS ECU 911 classifies a call as “appropriate” or “inappropriate” depending on the intention with which it was made. Thus, calls that lead to an emergency response are classified as NORMAL, while calls whose purpose is to make an inquiry or to divert the operator from a real emergency situation are classified as INQUIRY or INVALID, respectively. In turn, those two categories of inappropriate calls are disaggregated into subcategories.

Five criteria are used to classify inappropriate calls into different categories and subcategories:

- Criterion 1: Any call handled by 911 that is not an emergency is considered inappropriate or as misuse of the service.
- Criterion 2: Any information that is not related to the services provided by ECU 911 is considered as misuse of the service.
- Criterion 3: Any call received by 911 that involves a misdeal or the intentional provision of malicious information/content or that hinders and involves the unnecessary use of material and human resources of SIS ECU 911; or when the operator is subjected to insults, mockery, jokes, sexual harassment, aggression, and insinuations that undermine the integrity of the service and/or beneficiaries.

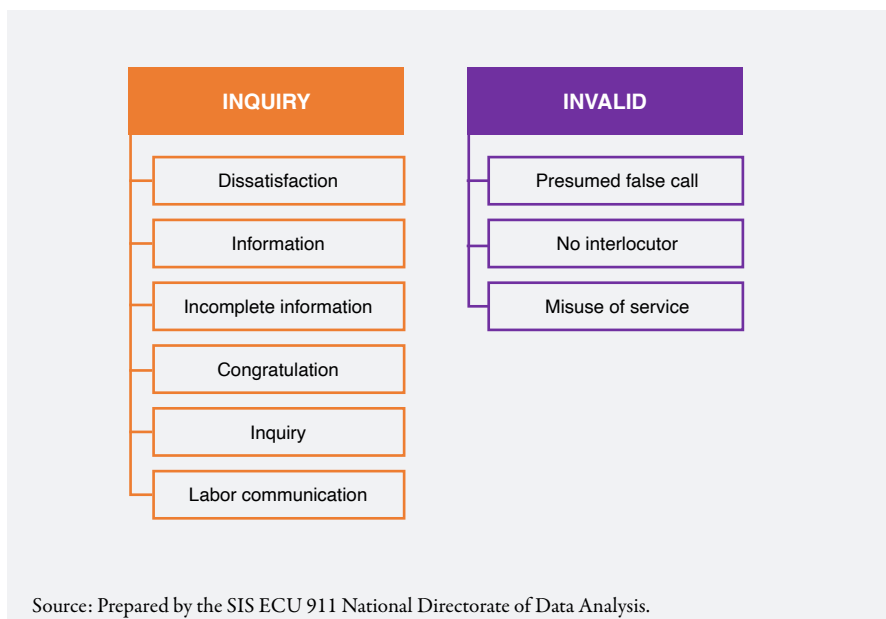
- Criterion 4: Any call received by 911 where there is no response from the caller or interaction with the operator, or ambient noises or sounds that do not suggest the occurrence of an emergency is considered as misuse of the service.
- Criterion 5: Alleged false notification of incidents or emergencies to 911 that lead to the unnecessary dispatch of emergency agency resources, resulting in the inappropriate use of the single emergency number.

Figure 3: Appropriate and inappropriate calls, according to SIS ECU 911



Source: Prepared by the SIS ECU 911 National Directorate of Data Analysis.

Figure 4: Categories and subcategories of inappropriate calls, according to SIS ECU 911



Source: Prepared by the SIS ECU 911 National Directorate of Data Analysis.



3.4.2 Call management

SIS ECU 911 facilitates the classification of inappropriate calls using the adopted guidelines, typology, and the Computer Aided Dispatch (CAD) system. The categories of inappropriate calls are displayed on the operators' monitors so that they can select the one that matches each individual situation of misuse. However, it does not have a technological tool that promptly recognizes numbers from which inappropriate calls have been made to the single emergency number in the past.

According to the law, SIS ECU 911 must keep inappropriate calls (both audio and data files) for one to three years. In addition to the legal justification for the storage of files, there is also a technological one based on the storage capacity of servers.



3.4.3 Data and statistics

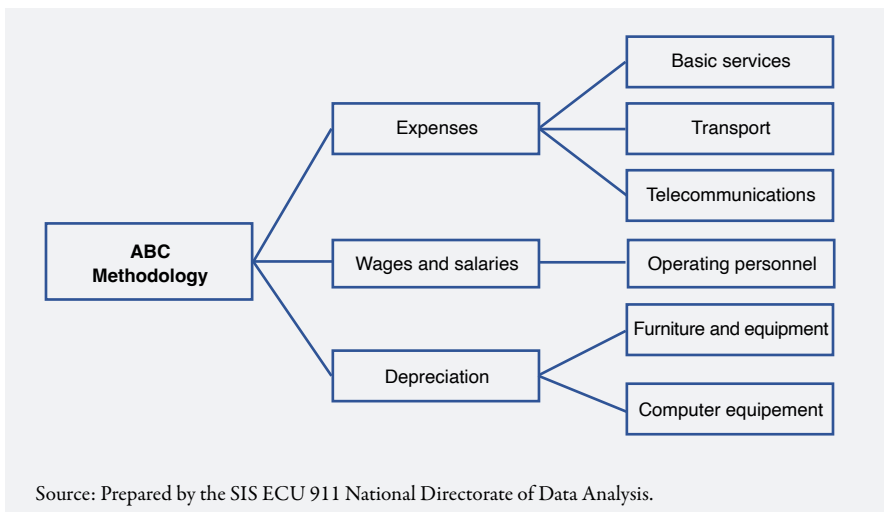
Regarding the total number of calls that the SIS ECU 911 received in 2021, between 21 and 40% were inappropriate. The computer system used by SIS ECU 911 enables it to extract digital reports on calls identified as inappropriate.

The average daily cost of handling inappropriate calls to the single emergency number borne by SIS ECU 911 is US\$2.24 per call.

SIS ECU 911 uses a proprietary methodology to calculate the average cost of inappropriate calls to the single emergency number based on three criteria:

- Criterion 1: Expenses
- Criterion 2: Wages and salaries
- Criterion 3: Depreciation

Figure 5: ABC methodology for calculating estimated cost of inappropriate calls



3.4.4 Quality control

SIS ECU 911 performs quality control of calls identified as inappropriate use of the single emergency number by listening to audio and reviewing information recorded in the system. This control checkpoint is used to verify if calls recorded and saved as inappropriate use of the single emergency number were correctly classified and catalogued.

Within a logic of continuous quality improvement, the results of quality control are shared with other SIS ECU 911 areas to develop action plans aimed at making the handling of such calls more efficient and agile.



3.4.5 Sanctions

In Ecuador there are two laws establishing sanctions for misuse of the single emergency number:

- Comprehensive Organic Criminal Code (2014)
- Organic Telecommunications Law (2015)

In addition, in 2021, the Telecommunications Regulation and Control Agency established the Technical Standard for the Provision of Telecommunications Services in Emergencies (No 0393).

Within this framework, SIS ECU 911 operates with two internal instruments:

- Procedure for the management of service suspension due to inappropriate use of the single emergency line and blocking of advanced mobile service terminals.
- Specific agreement for the coordination of service suspension for subscribers who misuse emergency services.

The establishment of sanctions depends on the type and degree of adverse impacts that inappropriate calls generate. In that regard, two levels have been defined:

- Mild impact: Calls not related to the response or management of emergency situations and that do not involve the dispatch of resources.
- Serious impact: Calls reporting false events that result in the unnecessary dispatch of resources or the recurrence of a mild adverse impact.

Two types of sanction were established depending on the impact:

- Administrative
- Criminal

The administrative sanction involves service suspension. In turn, there are three types of suspension:

- Short term: Partial service suspension, resulting in the inability to make calls or send SMS messages for one month; however, the punished subscriber will still be able to receive calls and SMS messages. Once the term expires, the sanction is lifted. This type of administrative sanction is applied in the case of a minor impact.
- Long term: Total service suspension for 6 months in the case of advanced mobile service (AMS) through the mobile virtual network operator (MVNO). The device's International Mobile Equipment Identity (IMEI) number is included in the blacklist database. The punished subscriber will be denied number portability between network operators. Once the term has expired, the penalty is lifted. This type of administrative penalty is applied in case of serious impact.
- Permanent: This type of suspension is applied in three cases:
 - ▶ Recidivism in causing serious impact within one year.
 - ▶ When after serving a long-term suspension, the subscriber causes a mild impact within one year.
 - ▶ The subscriber has caused a mild impact and it is followed by a serious impact within a year of the mild impact.

There are five situations exempt from the application of sanctions:

- First-responders coordinating resources¹²
- Persons with disabilities and older adults
- Verified interconnection problems
- Theft of cellular equipment
- Verifiable fault on the terminal line



3.4.6 Prevention policy cycle

The SIS ECU 911 identified three specific problems, challenges, or obstacles that hinder the possibility of effectively and sustainably reducing misuse of the single emergency number:

- Difficulties in enforcing the law and imposing sanctions on people for misuse of the 9-1-1 number
- Lack of financial resources for mass dissemination of advertising campaigns to prevent misuse
- Lack of telephone and telecommunications coverage, particularly in remote communities

In the five-year period from 2017 to 2021, SIS ECU 911 designed and implemented three strategies to prevent and reduce the number of inappropriate calls:

- We are all ECU (ECU *Somos Todos*)
- Make good use of the 911 (*Usa Bien el 911*)
- TOP 5 of Misuse Calls (*Top 5 de Llamadas Mal Intencionadas*)

12 This occurs in situations where, due to lack of trunked communication equipment coverage and interconnection problems, 911 is used by first responders to coordinate resources.

Table 1: Images Used in Advertising Campaigns Implemented by SIS ECU 911



Image used for the #ECU911SomosTodos campaign.



Image used by ECU 911 Portoviejo as part of the "Make good use of the 911" campaign launched on Twitter.



The objective of the #ECU911SomosTodos campaign was to explain how to report a 9-1-1 emergency using illustrations of good and bad behavior. The graphic material depicts an angel that offers recommendations on what to do when calling 911 and a devil that demonstrates what not to do.

The three strategies implemented by SIS ECU 911 are communicational and permanent.

As a result of its implementation, SIS ECU 911 has learned three lessons:

- Disseminate real cases of inappropriate use because they generate greater interest and impact among users.
- Use data and statistics to show the number of malicious calls. This is very well received by the media.
- Incorporate humor in messages, as it achieves a greater degree of public interest and acceptance.

3.5 HONDURAS > 911 NATIONAL EMERGENCY SYSTEM¹³



3.5.1 Protocols and procedures

The 9-1-1 National Emergency System (SNE 9-1-1, for its Spanish acronym) has three protocols that define inappropriate use of the single emergency number and establish the steps to follow when dealing with three types of inappropriate calls:

- Protocol to deal with mute calls
- Protocol to deal with prank calls
- Protocol to deal with nuisance calls

The standardization of definitions and the protocolization of processes was completed in June 2022.

The three processes also reflect the typology developed by SNE 9-1-1 in Honduras. Inappropriate calls can be classified into three types or categories:

- **Mute calls**
- **Prank or nuisance calls**
- **False calls**

Each of these types is accompanied by its respective criteria to facilitate the classification of inappropriate calls.

Mute calls are those in which the operator answers, but the call is terminated, or the operator receives no reply from the caller. There is no interaction between the caller and the operator. In such cases, the operator fills out the corresponding form, mentioning the established protocol and terminates the call after registering it in the operating system.

In **prank or nuisance calls**, the operator answers and receives incongruous or confusing information or converses with the caller who makes uncomfortable or inappropriate comments. In such cases, the operator completes the corresponding form, referencing the established protocol and terminates the call after registering it in the operating system.

¹³ The Honduras 911 National Emergency System completed and submitted the questionnaire with the baseline information that was used to draft section 3.5. However, the contents of this section were not reviewed or validated by SNE 9-1-1 of Honduras.

False calls are those in which the operator answers and receives false information from the caller and resources are inappropriately dispatched. In such cases, the relevant form is filled out, referencing the established protocol, and the call is terminated after being registered in the operating system.



3.5.2 Call management

The Honduras 9-1-1 National Emergency System has the three processes and the classification system mentioned in the previous subsection to facilitate the identification of inappropriate calls. However, the operating system does not display the classification categories on the screens to facilitate its recording by operators. The system does have a technological tool to identify repeat callers or telephone numbers from which inappropriate calls have been made in the past.

SNE 9-1-1 keeps inappropriate calls (in audio and data format) as well as the records of tickets created, in physical and digital form. The storage period is between one and three years and was established by internal regulations.

According to Article 10 of the Law of the 9-1-1 National Emergency System (No. 58), SNE 9-1-1 must keep the electronic or physical records generated for each incident or emergency responded, including all information, audio and video recordings, data, and other evidence produced during the handling of an emergency. All such material must be made available to investigative bodies or competent judges on request.

The technological justification for the storage period established is the limited space availability of servers.



3.5.3 Data and statistics

In 2021, calls for misuse of the service represented between 81 and 100% of the total calls received.

The operating system can extract reports on inappropriate calls in hardcopy and digital format.

SNE 9-1-1 lacks a methodology or formula for calculating or estimating the average cost of handling inappropriate calls.



3.5.4 Quality control

The quality control of calls classified as misuse of the system has three steps:

- Detailed review of the ticket under which the mute, prank, or nuisance call was logged
- Listening to the audio
- Verification of the operator's behavior in accordance with established call handling processes

The results of the quality control of inappropriate calls to the single emergency number are not shared with other SNE 9-1-1 areas.



3.5.5 Sanctions

Law No. 58-2015 of the 9-1-1 National Emergency System establishes sanctions for inappropriate use of the single emergency number.

The Law establishes two types of sanctions:

- Financial
- Criminal

The first type of sanction (i.e., financial) is governed by Article 20 of Law No. 58 and is applied once the falsehood of the call has been confirmed. The financial sanction levied on the caller is the equivalent of 500% of the normal value of the call. Recidivism is punishable by a fine equivalent to twice the amounts indicated above. The service providers (CLARO, TIGO and HONDUTEL) are required to hand over to the country's General Treasury any proceeds resulting from fine collection.

Article 21 of the same Law stipulates criminal sanctions for those who engage in the crime of false communication or call. This crime involves using the services of the 9-1-1 National Emergency System or other public emergency services under false pretenses by reporting non-existent incidents or false emergencies. This offense is punishable by imprisonment of three to six years.



3.5.6 Prevention policy cycle

The 9-1-1 National Emergency System of Honduras identified at least two consequences of inappropriate use of the single emergency number:

- The dispatch of units results in an unnecessary cost and improper use of resources.
- Addressing false emergencies prevent real emergencies from being dealt with, impacting the level and quality of service offered.

The SNE also faces three challenges in reducing the inappropriate use emergencies service in a substantial and sustainable manner:

- Lack of public awareness about the correct use of the 911 number
- Lack of public interest
- Inappropriate use of the emergency number by specific groups: minors and people under the influence of alcohol

In response to this scenario, SNE 9-1-1 implemented three strategies: one was legal-administrative and the other two were communicational. The former involved the application of sanctions for a period of 48 months. The outcome indicator used to measure the success of the strategy was the number of false calls received. In terms of communication strategies, one of them was the design and implementation of a children's educational campaign. This strategy was implemented over the course of 36 months; the outcome indicator used was the number of nuisance calls made by minors. The second communication strategy was a 60-month socialization campaign on the correct use of the emergency number. The indicator used for this communication campaign was "empowerment of the line."

SNE 9-1-1 learned three lessons from the implementation of these three strategies:

- Small fines lack sufficient impact. Therefore, the implementation of economic sanctions should be more specific and targeted, dependent on the type of consequences generated by false calls.
- The strategy targeting minors had a positive impact in terms of reducing nuisance calls. Consequently, strategies targeting specific groups should be more frequent and constant.
- The media should be considered strategic allies in communication interventions because they have the capacity to disseminate the importance of the services provided by the SNE and how the system works on a massive and at a nationwide scale.

3.6 MEXICO > 9-1-1 EMERGENCY SERVICE

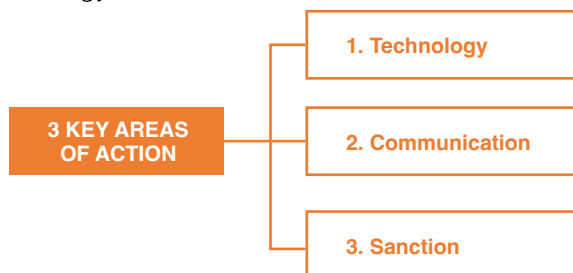


3.6.1 Protocols and procedures

The 9-1-1 Emergency Service (SE 9-1-1, for its Spanish acronym) has a General 9-1-1 Emergency Call Handling Protocol that was developed in 2016 and updated in 2021. The Protocol defines the procedure to be followed by operators when they detect inappropriate use of the single emergency number.

In addition, a Strategy was developed to prevent, mitigate, and punish the inappropriate use of the 9-1-1 single emergency number. This Strategy was developed in 2022 and shared with all Mexican states for implementation. It includes three key areas of action to reduce inappropriate calls: (1) Technology; (2) Communication; (3) Sanctions.

Figure 6: Key areas of Mexico's SE 9-1-1 Strategy



The 9-1-1 Emergency Service has its own typology of inappropriate use of the single emergency number that was defined in the National Catalog of Emergency Incidents. The typology has eight categories:

- **Prank calls by children:** These are calls in which the operator detects elements such as laughter, hesitation or contradictions in the information provided by the minor and, noting that it is not an emergency call, proceeds to classify it as such without activating the services of the various emergency agencies.
- **Test calls:** Calls made, generally by supervisors of the operation or dispatch areas of emergency call centers, to evaluate the operation of the line and the handling of the call.
- **Incomplete calls:** Calls in which the communication is interrupted, or the caller does not provide all the data for assistance to be provided. Justification must be provided for not having the minimum data required for the dispatch of resources/units.
- **Mute calls:** Calls in which the operator does not receive any request for help and the caller hangs up without uttering any words, sounds or signals.

- **Call transfer:** Calls that, due to their origin or need, are forwarded to another department to provide assistance.
- **Insulting/obscene calls by adults:** Calls in which the caller insults the operator using obscene words and does not report any situation of distress.
- **Youth/adult prank calls:** These are calls in which the operator detects elements such as laughter, hesitation, or contradictions in the information provided by the caller and, noting that it is not an emergency call, proceeds to classify it as such without activating the services of the various emergency agencies.
- **Other non-emergency calls:** Calls in which the caller makes some type of inquiry without requesting emergency assistance.



3.6.2 Call management

The 9-1-1 Emergency Service has a protocol and a classification system (presented in the previous subsection), to facilitate the identification by operators of inappropriate calls in a standardized and uniform manner.

At the same time, the categories of inappropriate calls have been incorporated into the Computer Aided Dispatch (CAD) to facilitate operators' identification and classification of inappropriate calls to the 9-1-1 number.

Additionally, it has a technological mechanism that allows the uploading of telephone numbers from which inappropriate calls have been made in the past, so that they can be easily identified in the event of a recurrence.

SE 9-1-1 stores inappropriate call data for less than one year. The storage period was established by internal regulations, under administrative arguments, based on the Strategy to prevent, mitigate, and sanction inappropriate calls to the 9-1-1 single emergency number.

The Strategy also sets out what to do when an inappropriate call is received. The switchboard has a "blacklist" of numbers from which inappropriate calls are often made. If a call is received from a blacklisted number, the switch transfers the call to the end of the call waiting list. After the fifth inappropriate call, a call should be made to the telephone number from which those types of calls are being made.



3.6.3 Data and statistics

With respect to the total number of calls received by the 9-1-1 Emergency Service, between 61 and 80 % are inappropriate.

The SE 9-1-1 computer system can extract digital reports on calls identified as inappropriate use of the service.

SE 9-1-1 currently does not have a methodology for calculating or estimating the average annual or individual cost of inappropriate calls.



3.6.4 Quality control

Within the framework of SE 9-1-1, quality control of calls identified as inappropriate use of the single emergency number is done by post-listening. Also, after the fifth inappropriate call, the number from which the calls are being made is called back.

These two tools are used by Emergency Call Centers (CALLES, for its Spanish acronym) and/or the the Command, Control, Communications and Computer Centers (C4/C5 or equivalent) in each state. Once the handling of inappropriate calls has been evaluated, each CALLE, C4/C5, or equivalent designs plans that help to enhance their handling and, therefore, 9-1-1 operations.



3.6.5 Sanctions

In Mexico, there are no federal laws or agency regulations governing and sanctioning inappropriate use of the single emergency number. However, the need to include criminal sanctions in criminal codes at the federal and state level has been acknowledged. Some states classify inappropriate use of the service as an administrative offense or a crime.

In the absence of laws and internal regulations, there is a Strategy to prevent, mitigate and sanction inappropriate calls to the 9-1-1 single emergency number. The Strategy sets out the steps and actions to be taken upon receipt of an inappropriate call. [See subsection 3.6.2 on Call management].



3.6.6 Prevention policy cycle

SE 9-1-1 identified three impacts caused by inappropriate use of the single emergency number:

- Overloading of telephone lines
- Inability to contact the 9-1-1 Emergency Service to report an actual emergency
- Negative public opinion of the service's credibility

SE 9-1-1 identified two main challenges in achieving an effective and sustainable decrease in inappropriate calls:

- Promote a culture shift to enable greater public awareness of the importance of proper use of the service and the impact of its misuse
- Homogenize financial and criminal sanctions

Interventions to prevent and reduce the number of inappropriate calls are implemented by each state.

3.7 PANAMA > 9-1-1 NATIONAL EMERGENCY SYSTEM



3.7.1 Protocols and procedures

The 9-1-1 National Emergency System (SNE 9-1-1, for its Spanish acronym) has a protocol and a procedure that define inappropriate use of the single emergency number:

- Call Handling Protocol (2020)
- Call Center Procedure Manual (2022)

SNE 9-1-1 has its own typology for classifying inappropriate use of the single emergency number. The typology has six categories:

- **Mute or silent call**
- **Terminated (hang-up) or missed calls**
- **Nuisance calls (minors)**
- **Nuisance calls (adults)**
- **Inquiry calls**
- **Calls for already reported cases (duplication)**

In turn, SNE 9-1-1 has established six criteria to facilitate the identification and classification of inappropriate calls:

- Criterion 1: Calls in which the caller does not answer after 12 seconds are classified as **mute or silent calls**.
- Criterion 2: Calls in which the caller hangs up before the protocol is initiated are classified as **terminated or missed calls**.

- Criterion 3: Calls where the operator identifies that a minor calling acts in an offensive or insulting way, laughs, or makes a joke are classified as **nuisance calls by minors**.
- Criterion 4: Calls where the operator identifies that an adult calling acts in an offensive or insulting way, laughs, or makes a joke are classified as **nuisance calls by adults**.
- Criterion 5: Calls where the caller contacts the 9-1-1 Service to request information that is not emergency-related is classified as an **inquiry call**.
- Criterion 6: Multiple calls received about the same incident. The case is created with the first call and the subsequent calls are used to obtain additional information. In the system they are registered as: “BLIA calls¹⁴ – case already reported.”



3.7.2 Call management

SNE 9-1-1 has a protocol, a manual and a classification system to facilitate the identification and categorization of inappropriate calls. In turn, the categories of inappropriate calls, which are part of the classification system, can be displayed on operators' screens.

In addition, operators keep a list in an Excel document of telephone numbers from which inappropriate calls to the emergency number have been repeatedly made. Operators can use that list to identify potential inappropriate calls.¹⁵

In the case of the Pre-hospital Emergency Management System (*Sistema Único de Manejo de Emergencias Prehospitalarias* – SUME), one of the agencies linked to SNE 9-1-1, it has a mechanism by which the order of calls can be changed to prioritize unrecognized numbers and relegate calls from telephone numbers from which inappropriate calls have been made in the past. This change in the order of calls is made under the assumption that calls from unrecognized telephone numbers are more likely to be calls reporting real emergencies. However, this technological tool (*Quantic Smart*) is not available at the SNE 9-1-1 level.

SNE 9-1-1 stores inappropriate calls. Audios and data files are stored, but the storage periods vary. Audio files are stored for three months, while data files are stored permanently in S/Portal. The period of time established for keeping the audios was based on technological reasons due to limited server space.

¹⁴ The Spanish acronym BLIA comes from the first letters of the following words: Broma (joke), Lost, Información (inquiry) and Agradecimiento (thank you).

¹⁵ This list is informally known internally as the “blacklist.”



3.7.3 Data and statistics

Of the total number of calls received by Panama's 9-1-1 National Emergency System, between 61 and 80% are classified as inappropriate.

The SNE 9-1-1 operating system can extract reports in hardcopy and digital format specifically on the number of calls made from a number identified as unproductive.

At present, SNE 9-1-1 does not have a methodology or a formula for calculating or estimating the annual or individual cost of inappropriate calls.



3.7.4 Quality control

At present, SNE 9-1-1 does not perform any quality control on calls identified and classified as inappropriate.



3.7.5 Sanctions

Law No. 120 of 2019, creating the 9-1-1 National Emergency System, regulates and sanctions the misuse of the single emergency number. The Law establishes two types of sanctions:

- Financial
- Administrative

Article 26 of Law No. 120 establishes a fine of between US\$100 and US\$10,000. The administrative sanction implies the suspension of the telephone number in cases of recidivism, without prejudice to the enforcement of other penalties. The Law does not specify the length of the suspension.

SNE 9-1-1 has the legal-administrative power to collect financial sanctions, but a fine collection mechanism has not been developed yet.



3.7.6 Prevention policy cycle

SNE 9-1-1 identified several negative impacts from the inappropriate use of the emergency number:

- Misuse of the emergency number increases the time calls wait in line to be answered.

- Handling of inappropriate calls means less availability of operators to handle genuine emergency calls in a timely manner.
- This, in turn, increases the response time for real emergency calls.
- Another negative impact is the unnecessary dispatch of resources to non-existent or false emergencies.

SNE 9-1-1 has a permanent communication and operational strategy. The operational strategy is focused on reducing the time to identify inappropriate calls. As soon as the operator detects a “blacklisted” number or classifies a call as nuisance or insulting, they end it with the expression: “unproductive call.”

SNE 9-1-1 recognizes the need to digitize the Excel list containing the telephone numbers from which inappropriate calls have been made. Automatic Number Identification (ANI) should be able to automatically identify malicious numbers. Another possible line of action considered by SNE 9-1-1 is to develop a regulation that would block telephone numbers from which inappropriate calls have been repeatedly made.

3.8 PARAGUAY > 911 NATIONAL EMERGENCY SYSTEM¹⁶



3.8.1 Protocols and procedures

The Paraguayan National Police adopted two resolutions to deal with inappropriate use of the single emergency line:

- Resolution No. 308 of March 22, 2019, adopted the protocols for call reception, call dispatch, the non-emergency call action table, and video surveillance.
- Resolution No. 1071 of November 27, 2018, adopted the protocol for notifying numbers generating non-emergency calls.

The 911 National Emergency System, within the orbit of the National Police of Paraguay, has developed its own typology of inappropriate calls with 13 types or categories:

- **Involuntary calls**
- **Non-emergency calls**
- **Calls from automatic devices**

¹⁶ Paraguay's 911 National Emergency System completed and submitted the initial questionnaire with the baseline information that was used to draft section 3.8. However, the contents of the section were not reviewed or validated by SNE 911 of Paraguay.

- **Wrong number calls**
- **Inquiry calls**
- **Prank calls made by minors**
- **Mental instability calls**
- **Insulting calls**
- **Terminated (or hang-up) calls**
- **Silent calls**
- **Obscene calls**
- **Operational calls**
- **Inquiries about message received**

Each type of inappropriate call is accompanied by a criterion to facilitate and standardize its identification and classification.

Involuntary calls are those made unintentionally, even with the keypad locked. These are, for example, calls that are made on their own, from a pocket or purse, or in any other situation beyond the person's control.

Calls are classified as non-emergency when the caller reports what he or she thinks is an emergency, when in fact, according to protocol, it is not. An example of such a call is when someone calls to report that they have lost their house keys. This situation may be an emergency for the individual, but not necessarily for the 911 National Emergency System.

Calls from automatic devices are those made by malfunctioning alarm systems, security buttons, and security equipment.

Wrong number calls are classified as such when a person dials the emergency number accidentally. Such instances occur when the caller tries to dial a number similar to 911, such as 112 for the Paraguayan Communications Company (COPACO, for its Spanish acronym) or *111 for Customer Service.

Inquiry calls are those in which the caller initiates contact with the emergency services operator to ask questions and request administrative information.

Prank calls by minors occur when one or more children or adolescents call 911 as a game, to make jokes, or to proffer insults.

Mental instability calls are those made by people with suspected mental health problems who contact the system to report an event or situation, to make up a story based on unreal situations, or simply to have a conversation.

Calls are classified as **insulting** when the caller contacts the emergency service to make abusive or harmful comments with no intention of reporting an emergency.

Terminated (or hang-up) calls occur when the caller contacts the emergency service but hangs up upon being answered.

A call is classified as **silent** when the caller contacts the emergency service and upon being answered by the operator, the person remains silent and does not respond. (It is necessary to point out that calls of this type may be emergency situations and that the person remains silent because if they speak, their life and physical integrity could be in danger.)

Obscene calls are classified as such when the caller contacts the 911 System and makes inappropriate remarks, using lewd language.

Operational calls are those where police or officials from other agencies of the 911 National Emergency System use the line while monitoring an event in order to coordinate the assistance of other services.

Inquiry about message received is a category used to record cases in which the caller has received a message from the 911 System to remind the person about the correct use of the emergency number but, nevertheless, he or she uses the 911 again for non-emergency situations, such as to request information.



3.8.2 Call management

The 911 National Emergency System has a call handling protocol and a classification system to facilitate the identification of inappropriate calls. The operating system used by Paraguay's 911 displays the categories of inappropriate use on operators' screens. This facilitates their correct and prompt classification. Once calls have been classified as inappropriate, the 911 System has a table of actions to ensure they are handled in a common and standardized way. Paraguay's 911 System also has a technological tool that allows operators to identify callers or telephone numbers that have misused the emergency number in the past.

Additionally, based on the protocol for notifying numbers generating non-emergency calls, callers who have misused the number receive a warning through text message (SMS).

Paraguay's 911 System stores inappropriate calls as audio files, together with their respective data. The storage period is four years or more. There are at least three types of reasons that justify the storage period established:

- Technological
- Operational
- Legal

Since inception, the National 911 Emergency System was designed with servers to provide plenty of storage capacity. That is the technological justification for the storage period that has been established.

As regards the operational rationale, inappropriate calls are stored for four years or more in order to allow sufficient time to make operational inquiries.

As for the legal justification, Article 11 of Law No. 4739/12 creating the 911 National Emergency System provides that the Director of the Security and Emergency Center shall provide the information stored in its records only by order of a competent judge. To meet that requirement and given the time span of investigative and judicial processes, it was decided that records should be kept for a minimum of four years.



3.8.3 Data and statistics

Inappropriate calls account for between 81 and 100% of the total number of calls received by the 911 National Emergency System.

The 911 computer system can extract reports on inappropriate calls in hardcopy and digital format.

The average annual cost of handling inappropriate calls is US\$609,544.40. This amount is calculated based on the cost per hour of an operator multiplied by the number of non-emergency call hours.



3.8.4 Quality control

Quality control of inappropriate calls is done by means of call audits. In addition, quarterly assessments are carried out on such calls. These quality-control checks are documented, and the reports are shared with other areas of the 911 National Emergency System in order to establish action plans to improve, among other aspects, the handling of such calls.



3.8.5 Sanctions

Law No. 4739 of 2012, Creating the 911 System for the Response, Dispatch and Monitoring of Emergency Communications, establishes a series of sanctions for inappropriate use of the single emergency number.

Article 13 of Law No. 4739 provides that callers who have requested the services of the 911 System for purposes other than those established among its functions, under false pretenses, or to report non-existent facts that result in the dispatch and expenditure of resources, may be subject to a fine or a prison sentence of up to 5 years. The amount of the fine is at the discretion of the judge.

In terms of sanctions, the Law is complemented by two resolutions issued by the National Police of Paraguay. Resolution No. 308 of March 22, 2019, adopted the protocols for call handling, call dispatch, the non-emergency call action table, and video surveillance. In particular, Annex C of this Resolution refers to sanctions for inappropriate use of the single emergency number.

The second Resolution, No. 1071 of November 27, 2018, adopted the protocol for notifying numbers generating non-emergency calls.

At present, the 911 System lacks the legal-administrative authority to collect financial sanctions. The General Directorate of the 911 System has submitted a proposal to amend Law No. 4739/2012 so that the 911 System can manage and dispose of its own resources, including those resulting from the collection of fines due to the inappropriate use of the system.

The Law does not establish exceptions to the enforcement of established sanctions.



3.8.6 Prevention policy cycle

The 911 National Emergency System identified three impacts derived from the inappropriate use of the single emergency number:

- Delays in attending to real emergencies
- Inefficient use of resources (including human resources)
- Negative public perception due to a lack of or delayed response and dispatch of units by the system

Faced with the negative consequences caused by misuse of the 911 number, the Emergency System implemented at least five interventions during the five years between 2017 and 2021.

Two of these interventions may be categorized as communicational. They involved sending messages to callers misusing the 911 number and the publication of advertising spots on the correct use of the system.

Two other strategies were operational. One of them involved changing the telephone number of the Paraguayan Communications Company (COPACO) from 112 to 125. That number is used for inquiries or to request information. The second operational strategy was to develop and approve protocols for

handling such calls, not only for the 911 System, but also for the response agencies attached to it.

The fifth intervention was administrative, and it involved presenting reports and coordinating with the National Telecommunications Commission (CONATEL) on this issue.

At least two lessons have been learned from these experiences:

- One concerns the quality-control protocol. Such instruments are key to identifying weaknesses and then adopting effective measures and actions to address them.
- The other has to do with call handling and dispatch protocols. They allowed for the establishment and harmonization of objective criteria for the classification of calls and adopting standardized processes to deal with each type of call. That, in turn, made it possible to optimize service times.

Three of the main obstacles identified by the 911 Emergency System to reduce inappropriate calls effectively and sustainably are:

- The possibility of introducing enforceable and clearly differentiated sanctions.
- The need for a fine-collection mechanism.
- The ability of the 911 System to dispose of its own resources, through the national general budget, and the budgets of each affiliated emergency-response agency.

3.9 DOMINICAN REPUBLIC > 9-1-1 NATIONAL EMERGENCY AND SECURITY RESPONSE SYSTEM



3.9.1 Protocols and procedures

The 9-1-1 National Emergency and Security Response System has two internal instruments that define inappropriate use of the single emergency number and how to proceed when receiving such calls:

- Emergency Call Handling Procedure (PR-DOP-REC-01). The first version of the Procedure was released on June 1, 2014. The Procedure is currently in its 13th version. This latest version was released on August 9, 2022.

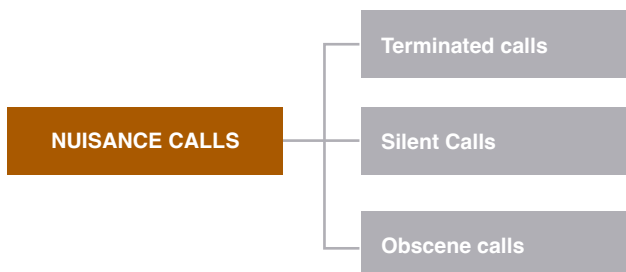
- Emergency Call Handling Guidelines (IN-DOP-REC-01). The release date of the first version of the Guidelines was November 26, 2018. The most recent version is number 14 and it was released on September 28, 2022.

In turn, the 9-1-1 National Emergency and Security Response System of the Dominican Republic has its own classification system for inappropriate or unproductive calls, which consist of four types:

- **Wrong number calls**
- **Nuisance calls**
- **Non-emergency calls**
- **False emergency calls**

Additionally, there are three subtypes of nuisance calls: **terminated (or hang-up) calls, silent calls, and obscene calls.**

Figure 7: Types of nuisance calls defined by the 9-1-1 National Emergency and Security Response System of the Dominican Republic



The 9-1-1 National Emergency and Security Response System also came up with criteria for the classification of unproductive calls with a view to their diligent and standardized identification:

- **Wrong number call:** Calls made to 9-1-1 in error without the express intention of the caller.
- **Nuisance call:** Calls received by the 9-1-1 System that are not for the purpose of reporting an actual emergency or situation, including calls in which the caller hangs up, remains silent, or delivers taunts or insults.
 - ▶ **Silent call:** Calls answered by the operator in which no voice is heard or there is no reply, and, after having complied with the service protocol and 11 seconds have passed, only ambient noise is heard.

- ▶ **Terminated (or hang-up) call:** Malicious or accidental calls made to 9-1-1 that are interrupted or terminated when answered by the operator.
- ▶ **Obscene call:** Calls to the 9-1-1 System in which the caller expresses himself or herself in an inappropriate manner, using foul or indecent language.
- **Non-emergency call:** Calls describing a non-emergency situation, which, though important or urgent, must be addressed through other response channels.
- **False emergency:** Calls received by the 9-1-1 System in which a supposed emergency is reported, and response units are dispatched, only to find out that it was not a genuine emergency.



3.9.2 Call management

The 9-1-1 National Emergency and Security Response System has three mechanisms to facilitate the identification of inappropriate calls: a procedure, an instruction manual (guidelines), and a classification system (mentioned in the previous subsection), which facilitate the identification of the situation while interacting with the caller. These mechanisms could be characterized as procedural.

In terms of technology, the 9-1-1 System of the Dominican Republic has an operating system that displays the categories of inappropriate use on operators' screens. This also facilitates the standardized classification of inappropriate calls. In addition, it is possible to identify numbers from which the single emergency number has been repeatedly misused. Once identified, they are transferred to an Interactive Voice Response (IVR) system so that they can be dealt with without obstructing the handling of real emergency calls.

The 9-1-1 System stores inappropriate calls in audio format together with their respective data. Audios are stored for one to three years; data is stored permanently. Both terms have been established in internal regulations. The time limit for saving audios has a technological justification based on the storage capacity of the servers. The data is stored permanently because by law it can be used as evidence in court proceedings involving misuse of the emergency number.



3.9.3 Data and statistics

Of the total number of calls received in 2021 by the Dominican Republic's 9-1-1 National Emergency and Security Response System, between 61 and 80% were inappropriate calls.

The 9-1-1 operating system can extract reports on inappropriate calls. These reports are available in hardcopy and digital format.

Currently, the 9-1-1 System does not have a methodology or formula for calculating the average annual, daily, or individual cost of handling inappropriate calls to the single emergency number.



3.9.4 Quality control

There are two main steps to the quality control process conducted by the 9-1-1 Emergency System of the Dominican Republic. First, based on call monitoring, information recorded in the computer system, and listening to audio recordings, the quality control team verifies that the calls classified as nuisance, non-emergency, and false emergencies have been correctly catalogued. Then, it also verifies whether the established protocols for handling such calls have been correctly followed. If the quality monitor detects a deviation or irregularity, either in the classification of calls, or in compliance with protocols, they prepare a report as soon as possible and submit it to the call reception area. The necessary corrective actions are introduced in the call reception area and feedback is provided to operators.

The results of quality control are shared with the other 9-1-1 system areas to establish action plans to help improve management of inappropriate calls and, in this way, streamline the service and make it more efficient.



3.9.5 Sanctions

Law No. 184-17 establishing the Dominican Republic's 9-1-1 National Emergency and Security Response System and Decree No. 293-20 governing the application of Law No. 184-17, include sanctions for inappropriate use of the single emergency number.

Under this legal framework financial (fines), civil, and criminal sanctions can be applied in the Dominican Republic. The type and severity of the sanction applied is subject to the level of negative impact caused by the inappropriate call.

Based on Article 44 of Law No. 184-17, anyone who makes annoying, obscene, or silent calls, interferes with or intercept communications, or impairs the proper functioning of the 9-1-1 System will be liable to fines of between one and five times the public-sector minimum wage and be required to attend educational classes on the 9-1-1 National Emergency and Security Response System. Recidivism is punishable by double the original sanction.

According to Article 46, adversely affecting 9-1-1 services is punishable with fines of five to ten minimum public-sector salaries. Adverse impact is defined as fraudulent use or non-emergency use and harm to or interference with communication networks and equipment.

Article 47 punishes false emergency calls. In such cases, the sanction is a fine of four to ten times the public-sector minimum wage and imprisonment of three to six months. Recidivism within six months of the first false call is punishable with the same fine range and a longer term of imprisonment (six months to one year).

Another sanction linked to false emergency calls is stipulated in Article 48 and is aimed at those cases in which units are involved in traffic accidents and cause physical injuries or serious damage to 9-1-1 System personnel or equipment. In such cases, the person making the false call may be liable to a fine of 10 to 20 times the public-sector minimum wage and a prison term of one to three years.

Despite multiple fines established by Law, the 9-1-1 National Emergency and Security Response System lacks the legal-administrative authority to collect the money. On the other hand, the Law does not establish any type of exception to the application of sanctions.



3.9.6 Prevention policy cycle

The 9-1-1 National Emergency and Security Response System of the Dominican Republic identified at least three negative consequences arising from inappropriate use of the emergency number:

1. Inefficient use of economic, material, human, technological, logistical, and other resources.
2. Delays in attending to real emergencies, particularly at peak hours, as resources are being inappropriately used.
3. Negative impact on the agency's reputation, due to delays in responding to real emergencies by allocating resources to false emergencies or nuisance calls.

Between 2017 and 2021, a communications strategy was implemented to raise awareness of the functionalities and use of the 9-1-1 System, as well as to prevent and reduce the number of inappropriate calls. The strategy involved

the implementation of a communication model and system, and community relations. The strategy lasted 36 months with “program completion” proposed as the outcome indicator. As a result, the establishment of a permanent communication campaign was stipulated and the need to adopt specific strategies for the correct operation and use of the system was recognized.

Therefore, within the framework of the 9-1-1 System’s Institutional Strategic Plan for the period 2022-2024, a Strategic Communication Plan on the Correct Operation and Use of the 9-1-1 System was established. The purpose of this Plan is to educate and raise public awareness on the correct use and operation of the system. This Plan lasts 36 months, during which some activities will be carried out on a recurring basis.

Table 2: Images used in publicity campaigns implemented by the 9-1-1 National Emergency and Security Response System

	
<p>Image used in the campaign to prevent inappropriate use of the system. It was posted on Instagram and Twitter.</p>	<p>Image used in the campaign to raise public awareness about the difference between an emergency and an urgent situation. It was posted on Instagram and Twitter.</p>
	
<p>Image used in the campaign to prevent inappropriate use of the system. It was posted on Instagram and Twitter.</p>	<p>Image used in the campaign “Life is not something to fool around with” (Con la vida no se juega). This campaign was implemented in conjunction with the National Health Service. It was posted on Instagram and Twitter.</p>

The two main challenges or obstacles that the 9-1-1 National Emergency and Security Response System of the Dominican Republic has identified to reduce misuse of the single emergency number effectively and sustainably are:

- Lack of public awareness of the negative impact that this type of call generates in terms of resources, unnecessary dispatch of units, and attrition on operators, dispatchers, and first responders.
- Deficient implementation of the Law and the Implementing Rules.

3.10 SAINT VINCENT AND THE GRENADINES > ROYAL POLICE FORCE



3.10.1 Protocols and procedures

The Saint Vincent and the Grenadines Royal Police Force has no internal protocol or procedure defining inappropriate use of the emergency number. It also lacks a typology for the standard classification of the different types of inappropriate calls it receives.

Despite the lack of these instruments, the Saint Vincent and the Grenadines Royal Police Force has established three criteria for identifying inappropriate calls:

1. Tone of caller's voice and background noise
2. The duration and contents of the call
3. User behavior during the call

3.10.2 Call management



The Saint Vincent and the Grenadines Royal Police Force does not have any mechanism to promptly identify inappropriate calls, but it does have a technological tool that allows it to identify numbers or callers who have misused the emergency line in the past. The reported tool is Caller ID.

The Royal Police Force does not save or store inappropriate calls in any format.



3.10.3 Data and statistics

Of the total number of calls received, between 41 and 60% can be considered inappropriate.

No reports are produced based on the analysis of inappropriate calls received. There is also no methodology or procedure for estimating the average annual, daily, or individual cost of inappropriate calls to the emergency number.



3.10.4 Quality control

The Saint Vincent and the Grenadines Royal Police Force does not have a quality control system to evaluate calls classified as inappropriate. Such monitoring would serve not only to verify whether the calls were correctly classified but also to corroborate that they had been properly handled in line with the protocols and procedures established by the entity.



3.10.5 Sanctions

Saint Vincent and the Grenadines has no law establishing sanctions for inappropriate use of the emergency line. Furthermore, the Royal Police Force does not have internal regulations to sanction or manage sanctions for inappropriate use.



3.10.6 Prevention policy cycle

Among the greatest challenges that Saint Vincent and the Grenadines faces in effectively and sustainably reducing this problem is the lack of legislation to sanction those who misuse the emergency number.



OAS

DPS



ISBN 978-0-8270-7699-0