

# TECHNICAL REPORT

# IEC TR 61010-3-031

First edition  
2003-04

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## **Safety requirements for electrical equipment for measurement, control, and laboratory use –**

### **Part 3-031: Conformity verification report for IEC 61010-031:2002 – Safety requirements for hand-held probe assemblies for electrical test and measurement**

*Règles de sécurité pour appareils électriques  
de mesure, de régulation et de laboratoire –*

*Partie 3-031:  
Rapport de vérification de la conformité  
de la CEI 61010-031:2002 –  
Prescriptions de sécurité pour sondes équipées  
tenues à la main pour mesure et essais électriques*



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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

# SAFETY REQUIREMENTS FOR ELECTRICAL EQUIPMENT FOR MEASUREMENT, CONTROL, AND LABORATORY USE –

## Part 3-031: Conformity verification report for IEC 61010-031:2002 Safety requirements for hand-held probe assemblies for electrical test and measurement

## FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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The main task of IEC technical committees is to prepare International Standards. However, a technical committee may propose the publication of a technical report when it has collected data of a different kind from that which is normally published as an International Standard, for example “state of the art”.

IEC 61010-3-031, which is a technical report, has been prepared by IEC technical committee 66: Safety of measuring, control, and laboratory equipment.

The text of this technical report is based on the following documents:

Enquiry draft	Report on voting
66/276/CDV	66/303/RVC

Full information on the voting for the approval of this technical report can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the IEC/ISO Directives, Part 3.

This report is for use by test houses and other users to assist them with determining and recording verification of conformity of the equipment under test with the requirements of IEC 61010-031:2002.

The protocol for completion of this report is contained in publication IEC 61010-3: 1997.

The IEC sells read-only PDF files as a general rule. In the present instance, and quite exceptionally, to enable the user to fill in the forms, a revisable file is included in a pocket affixed to the back cover of this publication.

This file can also be downloaded from the Web as a PDF file. There is, however, at the end of the document, a revisable file containing the forms. Please use the zip/unzip function.

The committee has decided that the contents of this publication will remain unchanged until 2006. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

<b>Conformity Verification Report</b> <b>IEC 61010-3-031:</b> <b>Safety requirements for electrical equipment for measurement, control, and laboratory use</b> <b>Safety requirements for hand-held PROBE ASSEMBLIES for electrical test and measurement</b>	
Report reference No.....:	
Compiled by (+ signature).....:	
Approved by (+ signature).....:	
Date of issue.....:	
Testing organization.....:	
Address.....:	
Testing location .....	
Applicant.....:	
Address.....:	
Standard.....:	IEC 61010-031:2002
Copyright blank test report.....:	This report has been prepared by IEC TC 66, which retains responsibility for any changes or corrections required.
Test procedure.....:	
Procedure deviation.....:	
Non-standard test method.....:	
Type of item tested.....:	Measurement
Trade mark.....:	
Model/type reference.....:	
Manufacturer.....:	
Rating.....:	
Copy of rating plate:	

Description of equipment function.....:

INSTALLATION/OVERVOLTAGE CATEGORY.....:

POLLUTION DEGREE:

Environmental rating: ☐ Standard ☐ Other (specify):

Equipment mobility: ☐ Hand-held ☐ Fixed

Operating conditions: ☐ Continuous ☐ Short-time ☐ Intermittent

Marked degree of protection to IEC 60529: IP\_\_\_

Accessories and detachable parts included in the evaluation:

Options:

NOTE – "(see Form A.X)" refers to a form appended to the report.







Table 3 – List of components and circuits relied on for safety

Unique component reference or location (including drawing reference if required)	Application/Function	Manufacturer and part number (NOTE 1)	RATING (NOTE 2)	Licence number, file number or other documentary evidence of acceptance	Verdict
NOTE 1 List all manufacturers concerned.					
NOTE 2 Electrical, mechanical, flammability, etc.					

Cl.	Requirement - Test	Result - Remarks	Verdict
<b>5</b>	<b>MARKING AND DOCUMENTATION</b>		
<b>5.1.1</b>	<b>General</b>		
	Required markings are:		
	- not put on parts which can be removed by an OPERATOR		
	Letter symbols (IEC 60027) used		
	Graphic symbols used		
	symbol 10 used (see 5.4.1)		
<b>5.1.2</b>	<b>Identification</b>		
	PROBE ASSEMBLY and its separate parts are identified by:		
5.1.2a)	Manufacturer's or supplier's name or trademark		
5.1.2b)	For type B & C only:		
	- model number		
	- model name		
	- other means of identification		
	If designed for use only with a specific model of equipment:		
	- clearly identified		
	- specific equipment or model marked on assembly and included in documentation		
<b>5.1.3</b>	<b>Fuses</b>		
	OPERATOR replaceable fuses – PROBE ASSEMBLY marked with all details including:		
	- voltage RATING		
	- breaking capacity		
	If fuse selection for a particular application:		
	- symbol 10 on PROBE ASSEMBLY (see also 5.4.4)		
	- information in documentation		
<b>5.1.4</b>	<b>TERMINALS and operating devices</b>		
	Where necessary for safety, indication of purpose of TERMINALS, connectors and controls marked and sequence of operations		
<b>5.1.5</b>	<b>Parts protected by DOUBLE INSULATION or REINFORCED INSULATION</b>		
	Protected throughout - symbol 7 used		
	Only partially protected - symbol 7 not used		
<b>5.1.6</b>	<b>RATING</b>		
	PROBE ASSEMBLY RATING marked:		
5.1.6a)	For measurements within measurement category I:		
	- RATED voltage-to-earth		
	- symbol 10		

Cl.	Requirement - Test	Result - Remarks	Verdict
5.1.6b)	For measurements within measurement category II, III and IV:		
	- RATED voltage-to-earth		
	- relevant measurement category		
	Markings on PROBE ASSEMBLY:		
	- nature of voltage		
	- voltage RATING of REFERENCE CONNECTOR		
	For type A PROBE ASSEMBLIES only, markings include:		
	- RATED current		
	- maximum RATED circuit -to-earth voltage		
<b>5.2</b>	<b>Warning markings</b>		
	Visible when ready for NORMAL USE		
	Are near or on particular part		
	If necessary marked with symbol 10		
	Statement to isolate or disconnect		
	Information in manual		
	Symbol 9 used if exceeds temperature limits		
<b>5.3</b>	<b>Durability of markings</b>		
	The required markings remain clear and legible in NORMAL USE	(see Form A.3)	
<b>5.4</b>	<b>Documentation</b>		
<b>5.4.1</b>	<b>General</b>		
	PROBE ASSEMBLY is accompanied by documentation which includes:		
5.4.1a)	Technical specification		
5.4.1b)	Instructions for use		
5.4.1c)	Name and address of manufacturer or supplier		
5.4.1d)	Information specified in 5.4.2 to 5.4.4		
	Warning statements and a clear explanation of warning symbols:		
	- provided in the documentation; or		
	- information is marked on the PROBE ASSEMBLY		
<b>5.4.2</b>	<b>RATINGS</b>		
	Documentation includes:		
	- maximum voltage		
	- current RATING		
	- range of design environmental conditions		
<b>5.4.3</b>	<b>Operation</b>		
	Documentation includes instructions for:		
5.4.3a)	- identification of operating controls and their use		

Cl.	Requirement - Test	Result - Remarks	Verdict
5.4.3b)	- interconnection to accessories etc		
	- identification of suitable accessories		
	- identification of detachable parts		
	- identification of special materials		
5.4.3c)	- specification of limits		
5.4.3d)	- explanation of symbols used		
5.4.3e)	- replacement of consumable materials		
5.4.3f)	- definition of relevant measurement category (see 5.1.6)		
5.4.3g)	- warning for measurement category 1 assemblies		
	- detailed RATING		
5.4.3h)	- cleaning		
	A statement about protection impairment if used in a manner not specified by the manufacturer		
<b>5.4.4</b>	<b>Maintenance</b>		
	Instructions include:		
	- sufficient preventive maintenance and inspection information		
	- any manufacturer specified parts		
	- RATING and characteristics of fuses		
<b>6</b>	<b>PROTECTION AGAINST ELECTRIC SHOCK</b>	(see Form A4)	
<b>6.1</b>	<b>General</b>		
	Conformity is checked by the determination of 6.2 and 6.3 followed by the tests of 6.4 to 6.7		
<b>6.1.1</b>	<b>Exceptions</b>	(see Form A.5)	
	Permitted to be ACCESSIBLE and HAZARDOUS LIVE:		
	- replaceable by the OPERATOR		
	- PROBE TIPS		
<b>6.2</b>	<b>Determination of ACCESSIBLE parts</b>		
<b>6.2.1</b>	<b>General examination</b>		
<b>6.2.2</b>	<b>Openings for pre-set controls</b>		
<b>6.3</b>	<b>Permissible limits for ACCESSIBLE parts</b>		
<b>6.3.1</b>	<b>Values in NORMAL CONDITION</b>	(see Form A.5)	
<b>6.3.2</b>	<b>Values in SINGLE FAULT CONDITION</b>	(see Form A.6)	
<b>6.4</b>	<b>Insulation requirements for protection against electric shock</b>	(see Form A.9)	
	ACCESSIBLE parts protected by:		
6.4a)	- BASIC INSULATION		
6.4b)	- DOUBLE INSULATION or REINFORCED INSULATION		
6.4c)	- ENCLOSURES or BARRIERS		
6.4d)	- PROTECTIVE IMPEDANCE		
6.4e)	- Impedance		
	CLEARANCE, CREEPAGE DISTANCES and insulation satisfies 6.5 and 6.4.1 to 6.4.4		

Cl.	Requirement - Test	Result - Remarks	Verdict
<b>6.4.1</b>	<b>Connectors</b>		
	Insulation, ACCESSIBLE parts, CLEARANCES and CREEPAGE DISTANCES:		
6.4.1a)	fully mated connections:		
	- insulated by at least BASIC INSULATION		
	- hand-held and interchangeable connectors have DOUBLE INSULATION or REINFORCED INSULATION		
6.4.1b)	Partially mated pass voltage test of 6.6.4 for BASIC INSULATION		
6.4.1c)	Unmated connections:		
	- not ACCESSIBLE with standard test finger		
	- satisfies voltage test of 6.6		
	- meets CLEARANCE and CREEPAGE DISTANCE F for BASIC INSULATION		
<b>6.4.2</b>	<b>Hand-held parts other than connectors</b>		
	Separated from HAZARDOUS LIVE parts by DOUBLE INSULATION or REINFORCED INSULATION	(see Form A.9)	
<b>6.4.3</b>	<b>Cables</b>		
	Correctly RATED for NORMAL USE		
	Conductors separated from hand-held surfaces by insulation based on correct voltage value:		
6.4.3a)	type A		
6.4.3b)	type B		
6.4.3c)	type C		
<b>6.4.4</b>	<b>Probe tips</b>		
	BARRIER fitted		
	CLEARANCE and CREEPAGE DISTANCE satisfy DOUBLE INSULATION or REINFORCED INSULATION		
	If a spring-loaded squeeze probe:		
6.4.4a)	- OPERATOR prevented from touching HAZARDOUS LIVE parts		
6.4.4b)	- CLEARANCE and CREEPAGE DISTANCE increased by 45 mm		
	- Insulated crocodile and similar clips without a BARRIER have tactile indicator		
	- Exposed conductive part of PROBE TIP less than 19 mm		
<b>6.4.5</b>	<b>DOUBLE INSULATION and REINFORCED INSULATION (see 6.5, 6.6 and 6.7.2)</b>	(See Form A.9)	
<b>6.4.6</b>	<b>PROTECTIVE IMPEDANCE</b>	(see Form A.7)	
<b>6.5</b>	<b>CLEARANCES and CREEPAGE DISTANCES</b>	(See Form A.8)	
<b>6.6</b>	<b>Dielectric strength tests</b>	(See Form A.9)	

Cl.	Requirement - Test	Result - Remarks	Verdict
<b>6.7</b>	<b>Constructional requirements for protection against electric shock</b>		
<b>6.7.1</b>	<b>General</b>		
	If failure could cause a HAZARD:		
6.7.1a)	- Security of wiring		
6.7.1b)	- Screws securing removable covers		
6.7.1c)	- Accidental loosening		
	Not used as insulation:		
	1) Easily damaged materials		
	2) Non-impregnated hygroscopic materials		
<b>6.7.2</b>	<b>ENCLOSURES OF PROBE ASSEMBLIES with DOUBLE INSULATION or REINFORCED INSULATION</b>		
	ENCLOSURE surrounds all applicable metal parts		
	Protection for metal ENCLOSURES or parts by:		
6.7.2a)	- an insulating coating or BARRIER on the inside; or		
6.7.2b)	- CLEARANCES and CREEPAGE DISTANCES cannot be reduced by loosening of parts or wires	(See Form A.8)	
<b>6.7.3</b>	<b>Corona and partial discharge</b>		
	No corona or partial discharge	Under consideration	
<b>6.7.4</b>	<b>Cable attachment</b>		
	No HAZARD caused		
	Strain relief not dependent on solder alone		
	Insulation mechanically secured		
<b>7</b>	<b>PROTECTION AGAINST MECHANICAL HAZARDS</b>		
	No HAZARD during NORMAL USE		
<b>8</b>	<b>MECHANICAL RESISTANCE TO SHOCK AND IMPACT</b>		
	After the tests of 8.1 to 8.3:		
	- Voltage tests of 6.6	(see Form A.9)	
	- Inspections:		
8 a)	- HAZARDOUS LIVE parts not accessible		
8, b)	- ENCLOSURE shows no cracks (Hazard)		
8.c)	- CLEARANCES not less than their permitted values	(see Form A.8)	
8.d)	- BARRIERS not damaged or loosened		
8.e)	- no damage which could cause spread of fire		



Cl.	Requirement - Test	Result - Remarks	Verdict
<b>9</b>	<b>TEMPERATURE LIMITS AND PROTECTION AGAINST THE SPREAD OF FIRE</b>		
<b>9.1</b>	<b>General</b>		
	Easily touched surfaces within the limits	(see Form A.11)	
	Heated surfaces necessary for functional reasons exceeding specified values:		
	Are recognizable as such by appearance or function; or		
	Are marked with symbol 13		
	Test in SINGLE FAULT CONDITION of 4.4		
<b>10</b>	<b>RESISTANCE TO HEAT</b>		
<b>10.1</b>	<b>Integrity of CLEARANCE and CREEPAGE DISTANCES</b>	(See Forms A.8 and A.11)	
<b>10.2</b>	<b>Resistance to elevated temperatures</b>	(See Forms A.11)	
	After treatment:		
	Tests of 8.1, 8.2 and 8.2	(See Form A.8)	
	In case of doubt, tests of 6.6 (without humidity preconditioning)	(See Form A.9)	
	CLEARANCES and CREEPAGE DISTANCES not reduced	(See Form A.8)	
<b>11</b>	<b>PROTECTION AGAINST HAZARDS FROM FLUIDS</b>		
<b>11.1</b>	<b>General</b>		
<b>11.2</b>	<b>Cleaning</b>	(See Form A.10)	
<b>11.3</b>	<b>Specially protected PROBE ASSEMBLIES</b>	(See Form A.10)	
<b>12</b>	<b>COMPONENTS</b>		
<b>12.1</b>	<b>General</b>		
	Where safety is involved, components meet relevant requirements	(See Table 3)	
<b>12.2</b>	<b>Fuses</b>		
	Voltage RATING greater or equal to maximum RATED voltage; and		
	Appropriate breaking capacity and current RATING for intended application		
<b>12.3</b>	<b>HIGH INTEGRITY components</b>		
	Used in applicable positions	(See Table 3)	
	Conforms with IEC publications		
	Not a single electronic device		
<b>12.3.1</b>	<b>Resistors used in PROTECTIVE IMPEDANCE</b>		
	HIGH INTEGRITY resistor or assembly meets the following requirements:		
12.3.1a)	- withstands twice the dissipation at maximum RATED voltage		
12.3.1b)	- withstands twice the maximum RATED voltage for at least 1 s		
12.3.1c)	- value of CLEARANCE at least for DOUBLE INSULATION at maximum RATED voltage		

Summary of SINGLE FAULT CONDITIONS applied (4.4.2) (see Form A.2 for details of tests)			Form A.1	Verdict
Subclause	Title	Does not apply	Carried out	Comments
4.4.2.1	PROBE ASSEMBLIES or parts for short-term or intermittent operation			
4.4.2.2	Outputs			
4.4.2.3	Insulation between circuits and parts			
4.4.2.4	Components			
List below all SINGLE FAULT CONDITIONS not covered by 4.4.2.1 to 4.4.2.4				

Clause	Requirement - Test	Form A.2	Verdict
4.4	Testing in SINGLE FAULT CONDITION – Results		

Test subclause	Fault No.	Fault description	Td 4.4.3 (note 1)	How was test terminated Comments	Meets 4.4.4

1) Td = Test duration in h:min:s  
 Record dielectric strength test on Form A.10 and temperature tests on Form A.14.  
 Record in the comments column for each test whether carried out during or after SINGLE FAULT CONDITION.

Tested by: \_\_\_\_\_ Date: \_\_\_\_\_ Test equipment No. (Table 2): \_\_\_\_\_

Clause	Requirement - Test	Form A.3	Verdict		
5.3	Durability of markings				
Marking method (see note)		Agent			
1)		A Water			
2)		B Isopropyl alcohol			
3)		C (specify agent)			
4)		D (specify agent)			
5)		E (specify agent)			
NOTE – Where applicable include print method, label material, ink or paint type, fixing method, adhesive and surface to which marking is fixed.					
Marking location		Marking method (see above)			
Identification (5.1.2)					
Fuses (5.1.3)					
TERMINALS and operating devices (5.1.4)					
Parts protected by DOUBLE INSULATION or REINFORCED INSULATION (5.1.5)					
RATING (5.1.6)					
Warning marking (5.2)					
Method	Test agent	Remains legible Verdict	Label loose Verdict	Curled edges Verdict	Comments

Tested by: \_\_\_\_\_ Date: \_\_\_\_\_ Test equipment No. (Table 2): \_\_\_\_\_

Clause	Requirement - Test	Form A.4	Verdict						
6	Protection against electric shock - Block diagram of system								
Pollution degree .... :			Installation category (overvoltage category) .:						
Location or description	Insulation type (note 1)	Maximum working voltage (note 2)	CREEPAGE DISTANCE (note 3)				CLEARANCE (note 3)	Test voltage	Comments
			PWB mm	CTI	Other mm	CTI	mm	(note 2) V	
NOTE 1 – Type of insulation:  BI = BASIC INSULATION  DI = DOUBLE INSULATION PI = PROTECTIVE IMPEDANCE RI = Reinforced INSULATION SI = Supplementary INSULATION		NOTE 2 - Types of voltage  Peak impulse test voltage (pulse)  r.m.s. d.c. peak		NOTE 3 - INSTALLATION CATEGORIES (OVERVOLTAGE CATEGORIES) or POLLUTION DEGREES which differ from these should be shown under "Comments".					
Supplementary Information:									

Tested by: \_\_\_\_\_ Date: \_\_\_\_\_ Test equipment No. (Table 2): \_\_\_\_\_



Clause	Requirement - Test Form A.6	Verdict
6.3.2	Values in SINGLE FAULT CONDITION	

Acceptable parts	Subclause and fault No. (see form A.2)	Voltage			Current			Capacitance $\mu\text{F}$	Comments
		V r.m.s.	V peak	V d.c.	Test circuit A1/A2/A3/A4	mA r.m.s.	mA peak	mA d.c.	

Tested by: \_\_\_\_\_ Date: \_\_\_\_\_ Test equipment No. (Table 2): \_\_\_\_\_

**Form A.7**

Clause	Requirement - Test	Verdict
	<b>F</b>	
<b>6.4.6</b>	<b>PROTECTIVE IMPEDANCE</b>	

<b>A HIGH INTEGRITY single component</b>		
Component	Location	Comments

Tested by: \_\_\_\_\_ Date: \_\_\_\_\_ Test equipment No. (Table 2): \_\_\_\_\_

<b>A combination of components</b>		
Component	Location	Comments

Tested by: \_\_\_\_\_ Date: \_\_\_\_\_ Test equipment No. (Table 2): \_\_\_\_\_

<b>A combination of BASIC INSULATION and a current or voltage limiting device</b>		
Component	Location	Comments

Tested by: \_\_\_\_\_ Date: \_\_\_\_\_ Test equipment No. (Table 2): \_\_\_\_\_



[illegible]

Tested by: \_\_\_\_\_ Date: \_\_\_\_\_ Test equipment No. (Table 2): \_\_\_\_\_



Clause	Requirement - Test	Form A.10	Verdict
8	Mechanical resistance to shock and impact		
11	Protection against hazards from fluids		

Voltage tests can be carried out once after performing the tests of clause 8 and clause 11. However, if voltage tests are carried out separately after each set of tests, two forms can be used.

Location (see form A.4)	Clause 8 tests			Clause 11 tests		Working voltage (note) V	Test voltage (note) V	Verdict Pass/ Fail	Comments
	Rigidity (8.1)	Drop Hand- held (8. 2)	Impact swing (8.3)	Cleaning (11.2)	Specially protected (11.3)				

NOTE – Use r.m.s., d.c. or peak to indicate the used test voltage.

Tested by: \_\_\_\_\_ Date: \_\_\_\_\_ Test equipment No. (Table 2) \_\_\_\_\_





## Standards Survey

The IEC would like to offer you the best quality standards possible. To make sure that we continue to meet your needs, your feedback is essential. Would you please take a minute to answer the questions overleaf and fax them to us at +41 22 919 03 00 or mail them to the address below. Thank you!

Customer Service Centre (CSC)

**International Electrotechnical Commission**

3, rue de Varembé

1211 Genève 20

Switzerland

or

Fax to: **IEC/CSC** at +41 22 919 03 00

Thank you for your contribution to the standards-making process.

**A Prioritaire**

Nicht frankieren  
Ne pas affranchir



Non affrancare  
No stamp required

**RÉPONSE PAYÉE**

**SUISSE**

Customer Service Centre (CSC)

**International Electrotechnical Commission**

3, rue de Varembé

1211 GENEVA 20

Switzerland



**Q1** Please report on **ONE STANDARD** and **ONE STANDARD ONLY**. Enter the exact number of the standard: (e.g. 60601-1-1)

.....

**Q2** Please tell us in what capacity(ies) you bought the standard (tick all that apply). I am the/a:

- purchasing agent ☐  
 librarian ☐  
 researcher ☐  
 design engineer ☐  
 safety engineer ☐  
 testing engineer ☐  
 marketing specialist ☐  
 other.....

**Q3** I work for/in/as a:  
(tick all that apply)

- manufacturing ☐  
 consultant ☐  
 government ☐  
 test/certification facility ☐  
 public utility ☐  
 education ☐  
 military ☐  
 other.....

**Q4** This standard will be used for:  
(tick all that apply)

- general reference ☐  
 product research ☐  
 product design/development ☐  
 specifications ☐  
 tenders ☐  
 quality assessment ☐  
 certification ☐  
 technical documentation ☐  
 thesis ☐  
 manufacturing ☐  
 other.....

**Q5** This standard meets my needs:  
(tick one)

- not at all ☐  
 nearly ☐  
 fairly well ☐  
 exactly ☐

**Q6** If you ticked NOT AT ALL in Question 5 the reason is: (tick all that apply)

- standard is out of date ☐  
 standard is incomplete ☐  
 standard is too academic ☐  
 standard is too superficial ☐  
 title is misleading ☐  
 I made the wrong choice ☐  
 other .....

**Q7** Please assess the standard in the following categories, using the numbers:

- (1) unacceptable,  
 (2) below average,  
 (3) average,  
 (4) above average,  
 (5) exceptional,  
 (6) not applicable

- timeliness.....  
 quality of writing.....  
 technical contents.....  
 logic of arrangement of contents .....  
 tables, charts, graphs, figures.....  
 other .....

**Q8** I read/use the: (tick one)

- French text only ☐  
 English text only ☐  
 both English and French texts ☐

**Q9** Please share any comment on any aspect of the IEC that you would like us to know:

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