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PROTECTION – ECHO

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KnowRISK

Know your city, Reduce selSmic risK through nonstructural elements

Prevention and preparedness projects in civil protection and marine pollution. Prevention Priorities

Deliverable Report

Deliverable D3 – On-going Social Impact Assessment report

Task D – Going into target-communities

Deliverable/Task Leader: LNEC & INGV/ LNEC & IST

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	Dissemination Level	
PU	Public	X
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

Preface

This report contains guidelines for formatting a KnowRISK Deliverable Report using *Word*.

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1.DESCRIPTION OF THE DELIVERABLE

1.1 Introduction

This deliverable was planned to present the design, implementation and testing of an assessment tool. This was included in the April 2017 draft version. However in its final version we have merged the two deliverable D3 and E5 in order to provide a thorough perspective concerning the building and the performance of the KnowRISK tool to assess efficacy of risk communication campaigns. Here we include (1) the common questionnaire implemented by KnowRISK that is linked to the project portal (2) the questionnaire (on-line in Italian https://docs.google.com/forms/d/1cCInin48zT3mLMRzLzb01qhK7rT2ouIz9Cb0lI0cf Ow/edit#responses) and (3) the LisQ. The common questionnaire presented in this document be can also found https://docs.google.com/forms/d/1D4vz3qkXnj8dVBZqOUcpglfVmQRAJdNnVfn5w 8i1n58/edit?ts=58c3e74f English and in https://docs.google.com/a/ingv.it/forms/d/1eOcApQ0bZPGSKUxrscXd8a5LlZcVob 4dzM92R-r5PVA/edit#responses in Italian. The Icelandic version of the common questionnaire had small differences with respect the English and the Italian ones. These differences are related to peculiarity of Iceland and are discussed in the De-E5 deliverable.

KnowRisk Common Questionnaire

This survey aims to find out what you feel and know about earthquakes. It is a vital part of reducing earthquake risk at home and school. Your opinion is important and can help make you and others safer.



About you

1.	Age
2.	Gender Mark only one oval.
	male female
	prefer not to say
3.	Municipality / Post Code where you live

4. What is the strongest earthquake you have experienced Mark only one oval.
not felt
weak (felt light trembling)
fairly strong (windows rattle but no damage)
strong (vibration, objects topple)
damaging (building suffer damage)
destructive (buildings collapse)
Your home
5. Construction home
Mark only one oval.
masonry
reinforced concrete
other
don't know
6. Age home
Mark only one oval.
before 1919
1919-1960
1961-1985
after 1985
don't know
7. Floors home
Mark only one oval.
1
2-5
more than 5
don't know
8. Maintenance home Mark only one oval.
good
poor don't know

9.	Building code home Mark only one oval.
	built to building code
	not built to building code
	don't know
Нс	ow earthquake resistant is your home?
10.	Mark only one oval.
	1 2 3 4 5
	unsafe
\ A / '	hat wayld hampen in your bares if the see sees
	hat would happen in your home if there was an rthquake?
Ca	i iiquake :
11.	Mark only one oval.
	1 2 3 4 5
	nothing would fall things would fall
12	Mark only one oval.
12.	wark only one oval.
	1 2 3 4 5
	no damage to ceiling collapses
13.	Mark only one oval.
	1 2 3 4 5
	no damage to windows windows break
Yo	ur school
11	Construction school
14.	Mark only one oval.
	masonry
	reinforced concrete
	other
	don't know

	Mark only one oval.
	1 2 3 4 5
	unsafe safe
	nat would happen in your school if there was an rthquake?
7.	Mark only one oval.
	1 2 3 4 5
	nothing would fall things would fall
3.	Mark only one oval.
	1 2 3 4 5
	no damage to ceiling Collapses
€.	Mark only one oval.
	1 2 3 4 5

15. Maintenance school

1 2 3 4 5
never worry worry a lot
Mark only one oval.
1 2 3 4 5
don't fear at all fear a great deal
ow would you describe an earthquake in your home area?
Mark only one oval.
1 2 3 4 5
unlikely likely
Mark only one oval.
1 2 3 4 5
weak strong
Mark only one oval.
1 2 3 4 5
small large
Mark only one oval.
1 2 3 4 5
harmless dangerous
Mark only one oval.
1 2 3 4 5
low risk high risk

21. Mark only one oval.

	1	2	3	3								
rare) c	ommon				
	nild eart only one	-		at is the	e cha	ance	that y	ou wou	d be ii	njured	l?	
	1		2	3	4		5					
unlike	ly C							likely				
would	nild eart d be a m only one	ess t	o clea		e cha	ance	that tl	nings w	ould g	et dar	naged and	l th
	1		2	3	4		5					
unlike	ly C							likely				
Do yo	edge ou know only one	abou	ıt eartl					n?				
Do you Mark of the How is	ou know	abou oval.	it earth	hquake	es in	your	regio					
Do you Mark of the How is	ou know only one yes no	abou oval.	it earth	hquake	es in	your	regio					
Do you Mark of the How is	yes no much de	abou oval.	it earti	hquake about	es in	your hqua	regio ke risl	<?	at dea	al		
How in Mark of Very li	we know only one yes no much do only one title is the no only one newsp	you oval.	know 2 vay yo	about	earth	your hqual	regio	c? a gre		al		
How in Mark of Very li	yes no much de only one	you oval.	know 2 vay yo	about	earth	your hqual	regio	c? a gre		al —		
How in Mark of Very li	we know only one yes no much do only one ttle is the no only one newsp	you oval.	know 2 vay yo	about 3	earth	your hqual	regio	c? a gre		al		
How in Mark of Very li	ttle is the nonly one newsponty radio	you oval. 1 nain we oval. apers	know 2 vay yo	about 3 ou find	earth	your hqual	regio	c? a gre				

28. Mark only one oval.

J 1.	Mark only one oval.
	yes
	no
	don't know
25	
35.	In your town are new houses being built to resist strong earthquakes Mark only one oval.
	yes
	no
	don't know
36.	Who has the main responsibility for making your home safe
00.	Mark only one oval.
	you and your family
	municipality
	government
	engineers
	don't know
	Other:
37	Have you had any earthquake prevention training?
07.	Mark only one oval.
	yes
	no
38.	How actively did you participate in the training? Mark only one oval.
	1 2 3 4 5
	passively actively
Pr	eventative action
Нс	ow important are the following in reducing non-structural

risk?

unimportant						important
Run out of th		•				
	1	2	3	4	5	
unimportant						important
Lower heavy Mark only one	_	;				
	1	2	3	4	5	
unimportant						important
Mark only one	e oval. 1	2	3	4	5	
unimportant						important
Fix shelves,		ses and	cupboa	ards to	the wall	
Mark only one	e ovai. 1	2	3	4	5	
Mark only one		2	3	4	5	important
	1 rom und			4	5	important
unimportant Move beds fi	1 rom und			4	5	important
unimportant Move beds fi	1 rom und	ler wind	lows			important
unimportant Move beds fi Mark only one	rom und e oval. 1 rehand v	ler wind	lows 3	4	5	important

39. Keep exits clear

Mark only one oval.

		1	2	3	4	5							
Į	unimportant						important						
	Talk to your լ Mark only one		about t	he risk									
		1	2	3	4	5							
ι	unimportant						important						
	What have yo		already	y to red	uce the	risk to	yourself?						
sought information talked to friends													
	talked to	parents	6										
	influence	ed parer	nts to tak	ke action	1								
	nothing												
١	How likely is within the ne Mark only one	xt 6 mo		nily will	take ef	fective p	preventative action to reduce risk						
	1	1 2	2 3	3 4		5							
ı	unlikely					lik	rely						
	What reasons Check all that	_	stop yo	ou and y	our faı	nily taki	ng preventative action in your ho						
	economi	c											
	too diffic	ult to co	nvince p	arents									
	too diffic	ult to ad	lapt build	ding									

All the information you provide is confidential and anonymous. This means it will not be given to anyone outside the KnowRisk team and your name will not be on your answers.



ItaQ: Know Risk Questionnaire

Section 1 - Who are you?

A1. Geographical data:

Region, Province, Municipality of residence

A2. Informative data on the person

Age, Gender, Birth place, Citizenship, Level of education, Working activity, Marital status, Household composition, age of children living in the household.

A3. Informative data of the building

Structural type, Age of construction, N° of floors, Structural context of the building, State of maintenance

Section 2 - Do you feel safe?

B1. If you imagine an earthquake occurring in the area in which you live, how would you describe it? [Comment: perception of Hazard]

	1	2	3	4	5	6	7	
Unexpected								Expected
Weak								Strong
Small								Big
Far away (geographic)								Close (geographic)
Predictable								Unpredictable
Short								Long
Moderate								Aggressive
Slow								Fast
Not Dangerous								Dangerous
Distant (in time)								Near (in time)

B2. Thinking to an earthquake, how well built do you think your house is?

[Comment: perception of Vulnerability]

	1	2	3	4	5	6	7	
Safe								Unsafe
Solid								Fragile
With Legal Standards								Without Legal Standards
Invulnerable								Vulnerable
Strong								Weak
Stable								Unstable

B3. Imaging an earthquake, what could happen inside your house/workplace?

	1	2	3	4	5	6	7	
Not Collapse								Collapse
Lighter objects will fall								Heavier objects will fall
None object will fall								All objects will fall
Ceiling will not fall								Ceiling will fall
Nobody will get hurt								Somebody could get hurt
The books would not fall over my head								The books could fall over my head
Gas piping would not break								Gas piping could break
Emergency exit Will be free								Emergency exit will be blocked
Glass of the windows will break								Glass of the windows will not break
Outside, the cornice will fall								Outside, the eaves will not fall

B4. Imaging an earthquake, how would you describe your community and people in it? [Comment: perception of People and Community]

	1	2	3	4	5	6	7	
Practical								Theoretical
Prepared								Unprepared
Safe								Unsafe
Neighbouring								Distant
Close together								Split
Collaborative								Not collaborative
Interested								Not interested

B5. How would you describe the area where you live? [Comment: perception of Exposure]

	1	2	3	4	5	6	7	
Agrarian								Industrialized
Uninhabited								Inhabited
Modern								Ancient
Poor								Rich
Looked after								Neglected
Organized								Unorganized
Not Visited								Visited

B6. Do you think the earthquake is as an event ...

[Comment: perception of Earthquake as a phenomenon]

	1	2	3	4	5	6	7	
Have never experienced								Have experienced
At low personal risk								At high personal risk
Not Lethal								Lethal
Unknown to science								Known to science
Like a new risk								Like an old risk
That doesn't recall fear								That does recall fear
That you can influence								That you cannot influence
That rarely occurs								That often occurs
Predictable								Unpredictable
That will decrease in the future								That will increase in the future
To which, you don't think								To which, you think
Caused by Fate								Not caused by Fate
As a revenge of nature or a divine punishment								As a natural event
Caused by man								Not caused by man
That you cannot mitigate								That you can mitigate

Section 3 - Are you aware of the risk you take?

- C1. How much do you think you ARE informed on seismic risk in your surrounding?
- C2. Where do you get informed from?
- C3. In your land do you think other hazards be more likely than an earthquake?
- C4. Have you ever participated to other projects or seismic risk reduction campaings?
- C4.1 If yes what were they?
- C4.2. If yes what did you do?

C5.1 An earthquake is small when ...?

Magnitude is	1	2	3	3	4	5	6	7	8	9
Intensity is	I	Ш	III	IV	V	VI	VII	VIII	XI	X

C5.2 An earthquake is small when ...?

	1	2	3	4	5	6	7	
It doesn't cause								It causes damage
damage								
It doesn't cause								It causes deaths
deaths								
Light objects fall								Heavy objects fall
Houses don't crash								Houses crash
It is not scary								It is scary
It often occurs								It rarely occurs
Cornices don't fall								Cornices fall
Windowpanes don't								Windowpanes brake
brake								
Damages can be								Damages can be
prevented with								prevented with very
inexpensive actions								expensive actions

C5.3 If a small earthquake would happen right now where would you feel safer?

Ground floor	intermediate floor	upper floors

C6.1 An earthquake is strong when ...?

Magnitude is	1	2	3		4	5	6	7	8	9
Intensity is	ı	Ш	III	IV	V	VI	VII	VIII	XI	X

C6.2 An earthquake is strong when ...?

	1	2	3	1	5	6	7	
			<u> </u>	4	3	0	1	
It doesn't cause								It causes damage
damage								-
It doesn't cause								It causes deaths
deaths								
Light objects fall								Heavy objects fall
Houses don't crash								Houses crash
It is not scary								It is scary
It often occurs								It rarely occurs
Cornices don't fall								Cornices fall
Windowpanes don't								Windowpanes brake
brake								
Damages can be								Damages can be
prevented with								prevented with very
inexpensive actions								expensive actions

C6.3 If a strong earthquake would happen right now where would you feel safer?

Ground floor intermediate floor	upper floors		
---------------------------------	--------------	--	--

C7 In your opinion how important are the following concepts le in describing risk

	Not important at all	low important	neutral	important	extreemely important
Hazard					
Vulnerability					
Exposure					
Level of hazard					
Risk social					
acceptance					
Risk perception					
Other					

C8 Can you distinguish between structural and non-structural elements?

Ceiling	 structural 	non- structural
foundation	structural	non- structural
Roof	 structural 	non- structural
Load-bearing wall	structural	non- structural
Partition walls	 structural 	non- structural
Beams	 structural 	non- structural
Shelves	 structural 	non- structural
Bookcases	structural	non- structural
Cornices and gutters	 structural 	non- structural

C9 In your opinion what kind of damage would cause non-structural elements?

death	not at all	less likely	I don't know	likely	certainly
low injuries	not at all	less likely	I don't know	likely	certainly
heavy injuries	not at all	less likely	l don't know	likely	certainly
fear	not at all	less likely	l don't know	likely	certainly
mess	not at all	less likely	l don't know	likely	certainly

Section 4 -What would you do?

D1 Whould you take preventive measures against a small earthquake? [Yer No, I don't know]

If yes, what?

Measures	Yes	No	I don't know
Strengthen ceilings			
Strengthen foundations			
Strengthen roof			
Strengthen load-bearing wall			
Strengthen partition walls			
Strengthen beams			
Secure bookcases			
Putting heavy objects at the top			
Putting heavy objects down			
Strengthen cornices			
Other			

- **D2.** What kind of difficulties would you encounter in adopting these preventive measures? (Economics, it would be hard to convince my household, It would take too much time, It would be too difficult, I think they would be useful, no problems)
- D3. What would you do if you would not take any preventive measure at all? (Nothing, I don't know, I would get injured, I would die, Other)
- D4. In your opinion, what should be done to protec from small earthquakes? (retrofit, anchor furnitures and bookshelves, keep you house tidy, rehinforce foundation, get rid of partition walls, others)
- D5. What would you need to be convinced to adopt preventive measures? (financial incentives, tax relief, if I see that others are doing it, talk to experts, attendance to an information campaign, other)

Section 5 - KnowRisk did you like these initiatives?

[Indicator L] Solo ex-post

E1. did you like information initiatives you attended within the KnowRisk project?

1	2	4	6	7
Not at all	a little	neutral	yes	a lot

E2. What did you like? (list...)

E3. How much did you feel active?

1	2	3	4	5
not at all	a little	neutral	yes	a lot

KnowRISK questionnaire: LisQ



Questionnaire | High School Rainha Dona Leonor

This questionnaire aims to find out your opinion on seismic risk. Your opinion is very important for us in order to think about forms of protection when these phenomena occur.

Read the questions carefully and answer in agreement to what you think and feel. It is important that you know that there are NO RIGHT OR WRONG QUESTIONS. IT IS YOUR OPINION THAT MATTERS. If you don't know how to answer to some of the questions do not hesitate to answer "I don't know".

This questionnaire is anonymous and confidential.

Thank you for your collaboration!

WHAT RISKS DO WE TA	AKE?						
1. To begin, we would like to know if you ever felt an earthquake.							
Yes	No 🗌						
2. If your answer was YES, tell us how was it?							
3. Do you know if, in the past, there were earthquakes in Portugal that ca	aused destruction of buildings?						
Yes No I don't know/don't reme	mber 🗌						
4. If your answer was YES, tell us what do you know about those events' (Ex: where did it happened, what damages did it caused)	?						

5. Do you usually receive information or hear about earthquakes that occurred or may occur in Lisbon?							
Never received information or heard about earthquakes in Lisbon							
It is rare to receive information and hear about earthquakes in Lisbon							
Now and then I receive informat	ion and hear ak	oout earthquak	es in Lisbon				
It is frequent to receive informat	ion and hear at	oout earthquak	ces in Lisbon				
	Ιd	on't know/don	i't remember				
6. Do you think there is anything pedamages?	ople can do to	protect thems	elves and to minimiz	e earthquake			
Yes 🗌							
No 🗌	I don't know/d	don't remembe	er 🗌				
7. If your answer was YES, can you							
	Never	Rarely	Now and then	A lot			
in which you think ?							
that worries you?							
that causes you fear ?							

9. How do you evaluate the possibility of an earthquake							
		Will not happen	It is linlikav		t is likely	lt is very likely	I don't know
in Lis	bon?						
in other Portuguese re	gion?						
10. If an earthquake occurred in Lisbon, how do you imagine it? [Point out the number that best fits your opinion]							
Weak	1	2	3	4	5	Strong	
Armless to me	1	2	3	4	5	Aggressive to	me
11. Do you know if it is or n	ot possib	le to build l	houses that ca	an resi	st strong e	arthquakes?	
It is possible							
It is not possible				l don't	know 🗌		
12. If your answer was IT IS POSSIBLE, do you think that is being done in the houses built today in Lisbon?							
Never Sometimes Always				l don't	know 🗌		

13. What consequences could an earthquake cause in Lisbon and in your neighborhood ?						
a. In Lisbon						
Damage without rele	vance,	building	s would	be able	to stanc	H 🗆
Few damage, just sor	ne build	lings wo	uld colla	apse		
Relevant damage, de	estroying	g a grea	ıt amoun	t of build	dings	
Very high damage , d	estroyin	g parts o	of the cit	у		
I don't know, I can't ii	magine	what kin	d of dan	nage it c	ould ca	use
b. In your neighborhood						
Damage without rele	vance,	building	s would	be able	to stand	d 🗆
Few damage, just sor	ne build	lings wo	uld colla	apse		
Relevant damage, de	estroying	g a grea	ıt amoun	t of build	dings	
Very high damage , d	estroyin	g parts o	of the ne	ighborh	ood	
I don't know, I can't i	magine	what kin	d of dan	nage it c	ould ca	use
14. Now think about your house, can you tell us what you think of it? [Point out the number that best fits your opinion]						
Old	1	2	3	4	5	New
Vulnerable to earthquakes	1	2	3	4	5	Resistant to earthquakes
Degraded	1	2	3	4	5	Well maintained

15. If an earthquake occurred where you live, what kind of damage could it cause to your I	nouse?
No damage, my house would stand still	
Few damage, without great relevance	
Relevant damage, it could damage some parts of the house	
Very high damage, my house could collapse	
I don't know, I can't imagine what kind of damage it could cause	
16. Imagine you were in your room during that earthquake What do you think would hap	ppen around you?

WHAT CAN WE DO TO PROTECT OURSELVES?

Now think about what we can do before and during an earthquake in order to protect ourselves. Read the following questions and remember that it is your opinion that matters. If you don't know how to answer do not hesitate to say "I don't know".

17. Living in Lisbon, do you think you should take precaution Yes No I don't know	ns regarding tl	ne possibility of e	earthquakes?	
18. Why?				
19. During the time between last year (2015) and the present, tell us if you				
	Yes	No	l don't know/don't remember	
searched for information about earthquake protection?				
talked with your parents about earthquake protection?				
tried to influence your parents or relatives to implement protective measures?				
implemented, alone or with relatives, any protective measures?				

20. If you already implemented earthquake protective measures, please identify them.		
21. Bellow you can find some actions that may protect you in the event of an earthqual or heard about any of them.	ke. Tell us if	you knew
	Yes	No
Make sure all the doorways and exits are clear		
Place heavy objects on the bottom shelves of cabinets and bookcases		
Fix cabinets and bookcases to the walls		
Move couches, beds and tables away from windows		
Identify the safest places inside the house		
Keep a water reservation enough for 2 to 3 days		
Keep a canned food reservation enough for 2 to 3 days		
Identify a meeting point location with your parents		
Have a battery radio and flashlight by hand		
Have a first aid kit by hand		
23. How do you evaluate the possibility of you, your parents or other relatives living with implement some protective measures in the near future? Unlikely Not very likely Likely	you, come	to
Very likely I don't know/can't evaluate		

24. Classify each of the following protective measure damages in the event of an earthquake.	es regard	ing their ut	ility on sav	ring lives an	d avoiding
	Useless	Not very useful	Useful	Very useful	l don't know
Make sure all the doorways and exits are clear					
Place heavy objects on the bottom shelves of cabinets and bookcases					
Fix cabinets and bookcases to the walls					
Move couches, beds and tables away from windows					
Identify the safest places inside the house					
Keep a water reservation enough for 2 to 3 days					
Keep a canned food reservation enough for 2 to 3 days					
Identify a meeting point location with your parents					
Have a battery radio and flashlight by hand					
Have a first aid kit by hand					
	and				
Imagine there is a strong earthquake in Lisbon	and you a	ire in your n	ouse water	iing televisio)r1
25. In your opinion, what would be the most appropriate reactions?					
Leave the house immediately and go to the street	: 🔲				
Use the lifts to get to the street faster	. 🗆				
Stay home and keep calm					
Stay home and take refuge under a table					
Stay away from windows, furniture and hanging objects	1 1				
I don't know	′ 🔲				

TELL US A LITTLE ABOUT YOU 26. In what day, month and year were you born? Year Month Day 27. How old are you? 28. Are you a girl? Are you a boy? 29. Where do you live? Street/Neighborhood County Lisbon Which? Other 30. Do you know your parent's profession? Father Mother

IF YOU WOULD LIKE TO LEAVE YOUR OPINION ABOUT THIS QUESTIONNAIRE, PLEASE USE THE LINES BELLOW.

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Thank you!