

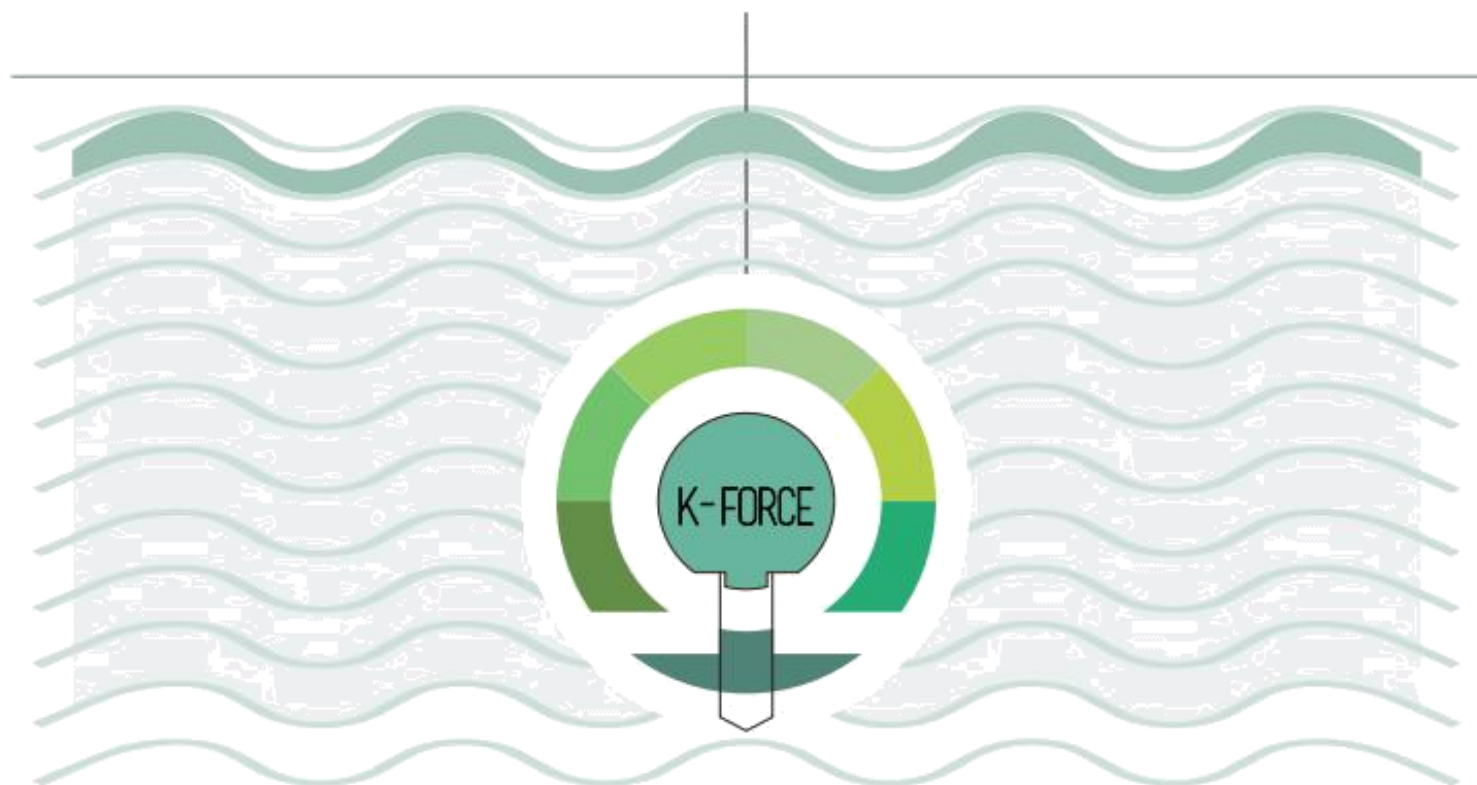
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Knowledge FOr Resilient soCiEty



K - FORCE

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WP6

Report on WBC needs for LLL courses

Deliverable 6.1

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This report is the final outcome of Task 6.1 *Report on WBC needs for LLL courses* of Work package 6 *Implementation of LLL courses*. In-site research and online information will provide data on existing professional capacity in DRM&FSE field in the WBC countries. It defines needs for LLL courses in WBC in cooperation with non-HEI partners according to WBC needs, experiences and target groups' surveys. The report also assesses the needs for improvement in DRM&FSE human resources, competences and skills, according to their experience and contemporary EU trends.

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Introduction

This report is the final outcome of Task 6.1 *Report on WBC needs for LLL courses* of Work package 6 *Implementation of LLL courses*. In-site research and online information will provide data on existing professional capacity in DRM&FSE field in the WBC countries. It defines needs for LLL courses in WBC in cooperation with non-HEI partners according to WBC needs, experiences and target groups' surveys. The report also assesses the needs for improvement in DRM&FSE human resources, competences and skills, according to their experience and contemporary EU trends.

Through a survey detailed understanding of the current LLL practises in the areas of fire safety engineering and disaster and risk management in the countries of the Western Balkan region was obtained. On-site research and online information provided data on existing professionals' capacity. The needs for LLL courses are based on the survey results, and new courses will be designed, aimed to offer contemporary knowledge and skills and to improve the competences of WBC human resources according to EU trends.

1 LLL Survey in WBC

1.1 Survey structure and contents

1.1.1 Introduction and distribution

The survey was undertaken in the form of a structured questionnaire that was aimed at the target groups – employees and experts in the DRM & FSE fields. The questionnaire was distributed to the target groups in the electronic form through Google Forms, which is a free online survey / questionnaire platform by Google.

P10 (UNIZA) created a draft version of the questionnaire in English and discussed with other project partners at the project meeting in Tirana on February 23rd, 2017. During this discussion feedback was collected and incorporated in the questionnaire.

Subsequently the English version was sent to selected WBC partners for translation as follows:

- P1 (UNS) – translation into the Serbian language (used also in Bosnia I Herzegovina);
- P6 (EPOKA) – translation into the Albanian language;
- P11 (UKIM) – translation into the Macedonian language (see section 1.2 for explanation).

1.1.2 Survey structure and questions

As the questionnaire language mutations were identical in their structure and questions, only the English version is present here. The questionnaire consisted of 6 sections, each of which contained a specific set of questions. Conditional logic was implemented in the questionnaire, meaning that based on their response, the survey participants were directed to the relevant question. For example, there was a question on a certificate requirements for the job the participant undertakes. If the answer was yes, then the participant was directed to the section where they would provide information on their certificate. If the answer was no, then the participant would skip that section.

The basic structure of the questionnaire was as follows:

SECTION 1 GENERAL INFORMATION– this section was aimed at the work position the participant holds and contained the following questions and answer possibilities:

Q.1 Email address (mandatory question)

Answer: A valid email address was required from each participant.

Q.2 Please, provide your name (optional question)

Answer: An open-text field.

Q.3 Work position title (mandatory question)

Answer: An open-text field.

Q.4 Select the items which characterise your position (mandatory question)

Answer: Checkboxes– select one or more as appropriate

- ☐ fire safety design of buildings
- ☐ fire safety audits
- ☐ review of design submissions
- ☐ risk analysis and management
- ☐ health and safety
- ☐ civil protection
- ☐ emergency preparedness planning
- ☐ fire risk assessment
- ☐ economic risk assessment

Q.5 Generally speaking, your position belongs to the field of: (mandatory question)

Answer: Multiple-choice – select only one option

- Disaster & Risk Management
- Fire Safety Engineering
- Other:

Q.6 Are you a practitioner (private company or self-employed) or a government / public sector

employee? (mandatory question)

Answer: Multiple-choice – select only one option

- ☐ Practitioner / private sector employee
- ☐ Government / public sector employee
- ☐ Other:

Q.7 What degree you possess? (mandatory question)

Answer: Multiple-choice – select only one option

- ☐ No degree
- ☐ Bachelor or equivalent (BSc)
- ☐ Masters or equivalent (MSc)
- ☐ Doctoral or equivalent (Ph.D.)
- ☐ Other:

Q.8 How many of experience you have in this position? (mandatory question)

Answer: Multiple-choice – select only one option

- ☐ 0-1
- ☐ 2-5
- ☐ 6-10
- ☐ 11 +

Q.9 Is there a certificate required by law to undertake your job? (mandatory question)

Answer: Multiple-choice – select only one option

- ☐ Yes (go to question 11)
- ☐ No (go to question 10)

SECTION 2 CURRENT LEARNING / TRAINING SCHEME – The purpose of this section was to gather information if a current learning / training scheme is in place (if Q.9 was answered No).

Q.10 Is there an existing learning / training scheme relating to your field / job? (mandatory question)

Answer: Multiple-choice – select only one option

- ☐ Yes (go to question 15)
- ☐ No (go to question 27)

SECTION 3 CERTIFICATE INFO – The purpose of this section was to gather information on the certificate required to undertake the participant's work (if Q.10 was answered Yes).

Q.11 Who is the issuing authority for the certificate? (mandatory question)

Answer: Multiple-choice – select only one option

- ☐ Government agency (e.g. Ministry of Construction or Interior)
- ☐ Professional association
- ☐ Private certification company
- ☐ Other:

Q.12 Is there a requirement for formal education / training in order to start your certification process? (mandatory question)

Answer: Multiple-choice – select only one option

- ☐ Yes
- ☐ No

Q.13 Is there a need to renew your certificate periodically? (mandatory question)

Answer: Multiple-choice – select only one option

- ☐ Yes
- ☐ No

Q.14 Is formal learning / training or a form of lifelong learning (e.g. obtaining credits for attending activities) mandatory for certificate renewal? (mandatory question)

Answer: Multiple-choice – select only one option

- ☐ Yes (go to question 15)
- ☐ No (go to question 27)

SECTION 4 CURRENT LLL SYSTEM IN YOUR FIELD – The purpose of this section was to gather information on the existing LLL system relevant to / required for undertaking the participant's work (if Q.10 or Q.14 was answered Yes).

Q.15 Is the LLL course scheme mandatory or voluntary? (mandatory question)

Answer: Multiple-choice – select only one option

- ☐ Mandatory
- ☐ Voluntary

Q.16 Who runs the LLL courses? (mandatory question)

Answer: Multiple-choice – select only one option

- ☐ Government agency
- ☐ Professional association
- ☐ Higher education institution - University
- ☐ Other education institution
- ☐ Private company
- ☐ Other:

5 sets of two questions follow to gather details on the existing scheme if consisting of more than one LLL course.

Q.17 Provide official title of the LLL course (mandatory question)

Answer: An open-text field.

Q.18 Indicate the ratio of theoretical vs. practice content of the LLL course (mandatory question)

Answer: Select on a scale from 1 to 10

1 – Entirely practical (e.g. field exercises, physical training, practical design, simulated situations)

10 – Entirely theoretical (e.g. theoretical lessons, self-study, classroom testing, etc.)

Q.19 Provide official title of the LLL course 2 (optional question)

Answer: An open-text field.

Q.20 Indicate the ratio of theoretical vs. practice content of the LLL course 2 (optional question)

Answer: Select on a scale from 1 to 10

1 – Entirely practical (e.g. field exercises, physical training, practical design, simulated situations)

10 – Entirely theoretical (e.g. theoretical lessons, self-study, classroom testing, etc.)

Q.21 Provide official title of the LLL course 3 (optional question)

Answer: An open-text field.

Q.22 Indicate the ratio of theoretical vs. practice content of the LLL course 3 (optional question)

Answer: Select on a scale from 1 to 10

1 – Entirely practical (e.g. field exercises, physical training, practical design, simulated situations)

10 – Entirely theoretical (e.g. theoretical lessons, self-study, classroom testing, etc.)

Q.23 Provide official title of the LLL course 4 (optional question)

Answer: An open-text field.

Q.24 Indicate the ratio of theoretical vs. practice content of the LLL course 4 (optional question)

Answer: Select on a scale from 1 to 10

1 – Entirely practical (e.g. field exercises, physical training, practical design, simulated situations)

10 – Entirely theoretical (e.g. theoretical lessons, self-study, classroom testing, etc.)

Q.25 Provide official title of the LLL course 5 (optional question)

Answer: An open-text field.

Q.26 Indicate the ratio of theoretical vs. practice content of the LLL course 5 (optional question)

Answer: Select on a scale from 1 to 10

1 – Entirely practical (e.g. field exercises, physical training, practical design, simulated situations)

10 – Entirely theoretical (e.g. theoretical lessons, self-study, classroom testing, etc.)

SECTION 5 FUTURE LLL COURSE SYSTEM – The purpose of this section was to gather opinions, preferences and recommendations on the future LLL system that is to be designed in accordance to the DRM / FSE requirements, practitioner needs and EU trends (if Q.10 or Q.14 was answered No or after Section 4 has been completed).

Q.27 Indicate the ratio of theoretical vs. practice content of the future LLL courses (mandatory question)

Answer: Select on a scale from 1 to 10

1 – Entirely practical (e.g. field exercises, physical training, practical design, simulated situations)

10 – Entirely theoretical (e.g. theoretical lessons, self-study, classroom testing, etc.)

Q.28 The courses should be primarily (mandatory question)

Answer: Select on a scale from 1 to 10

1 – Refresher only

10 – New topics only

Q.29 Your preferred course format is (mandatory question)

Answer: Select on a scale from 1 to 10

1 – Electronic only (no attendance)

10 – Classroom only (full attendance)

Q.30 What topics should be covered to improve your job related knowledge and skills (mandatory question)

Answer: Checkboxes– select one or more as appropriate

- ☐ National design codes
- ☐ Fire safety engineering
- ☐ Computer modelling
- ☐ Risk assessment
- ☐ Data gathering and analysis
- ☐ Natural disasters
- ☐ Man-made disasters (industrial, etc.)
- ☐ Emergency response
- ☐ Economic risk and vulnerability
- ☐ Disaster preparedness
- ☐ International standards in my field
- ☐ Case studies
- ☐ Technical aspects
- ☐ National legislation
- ☐ Other:

SECTION 6 FUTURE LLL COURSE OUTCOME PRIORITIES – The purpose of this section was to gather preferences of the participants relating to expected / required outcomes of the future LLL system, in order to improve their knowledge, expertise and skills (after Section 5 has been completed).

Q.31 Increased theoretical knowledge (mandatory question)

Answer: Select on a scale from 1 to 5

1 – Not important

5 – Very important

Q.32 Improved practical skills (mandatory question)

Answer: Select on a scale from 1 to 5

1 – Not important

5 – Very important

Q.33 Accepted as formal education for periodical re-certification purposes (mandatory question)

Answer: Select on a scale from 1 to 5

1 – Not important

5 – Very important

Q.34 Points (credits) for a national LLL scheme (mandatory question)

Answer: Select on a scale from 1 to 5

1 – Not important

5 – Very important

Q.35 What is your preference on LLL courses scheduling (mandatory question)

Answer: Multiple-choice – select only one option

- ☐ Longer blocks less often (e.g. a week every 12 months)
- ☐ Shorter blocks more often (e.g. a day every 2 months)
- ☐ No preference
- ☐ Other:

Q.36 You would attend the courses (mandatory question)

Answer: Checkboxes– select one or more as appropriate

- ☐ only if they are part of a mandatory scheme
- ☐ even if it is a voluntary scheme
- ☐ only if the course is free of charge

1.2 Surveyed countries

Following the translation the questionnaire was distributed in the following countries in the respective translations:

- Serbia
- Bosnia I Herzegovina
- Albania
- Macedonia*

Due to the slower response, the deadline for questionnaire submission was extended from 31st May 2017 to 31st July 2017, to gather a representative sample of responses.

* Although Macedonia is not a programme country, the representatives of Ss. Cyril and Methodius University (UKIM), Skopje offered to translate and distribute the questionnaire to extend the coverage of the Western Balkan Countries in regards to life-long learning schemes in the field of fire safety engineering and disaster risk management.

2 LLL Survey results

In total, 235 answered questionnaires were collected in the survey. The responses were gathered from the surveyed WBC countries as follows:

- Serbia + Bosnia I Herzegovina – 150 responses (same language version used);
- Albania – 21 responses;
- Macedonia – 64 responses.

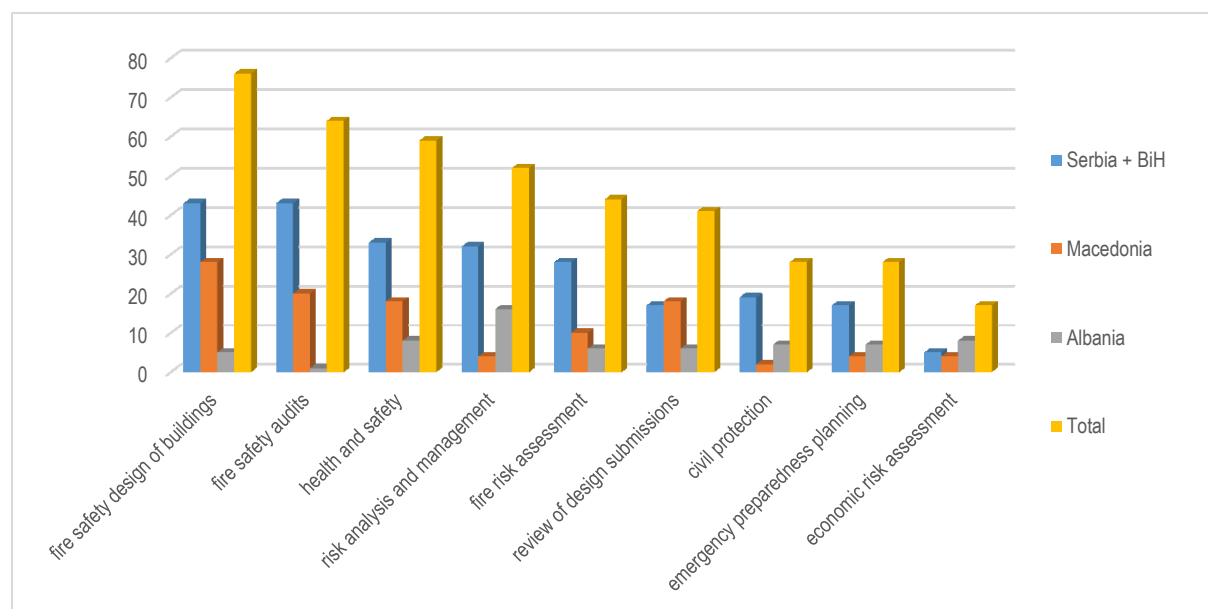
SECTION 1 GENERAL INFORMATION

Q.1 (Email address) and **Q.2** (Please, provide your name) were informational only and their responses have no effect on the survey results.

Q.3 (Work position title) was a mandatory open-text question, hence, the results cannot be easily categorised. The following are the most common occupations of the survey participants: engineer (civil, electrical, structural), designer, architect, fire officer (government), HSE specialist and project manager.

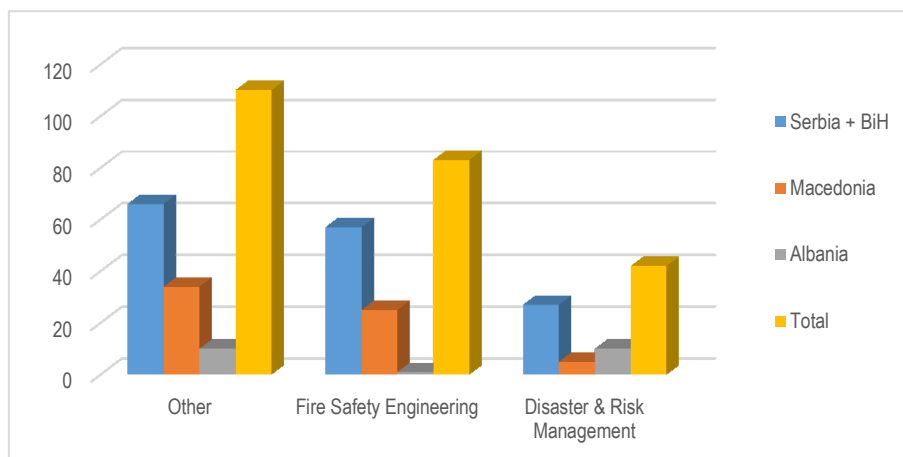
Q.4 Select the items which characterise your position (mandatory question)

Work position feature	Serbia + BiH	Macedonia	Albania	Total
fire safety design of buildings	43	28	5	76
fire safety audits	43	20	1	64
health and safety	33	18	8	59
risk analysis and management	32	4	16	52
fire risk assessment	28	10	6	44
review of design submissions	17	18	6	41
civil protection	19	2	7	28
emergency preparedness planning	17	4	7	28
economic risk assessment	5	4	8	17



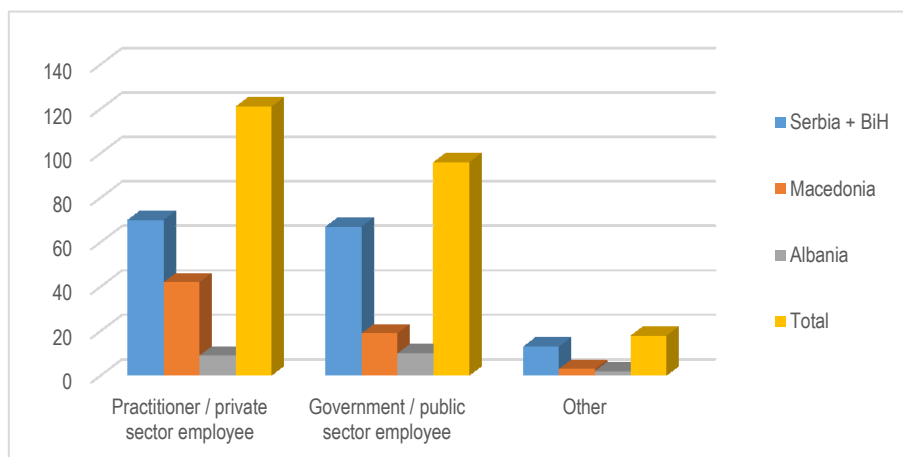
Q.5 Generally speaking, your position belongs to the field of: (mandatory question)

Work position field	Serbia + BiH	Macedonia	Albania	Total
Disaster & Risk Management	27	5	10	42
Fire Safety Engineering	57	25	1	83
Other	66	34	10	110



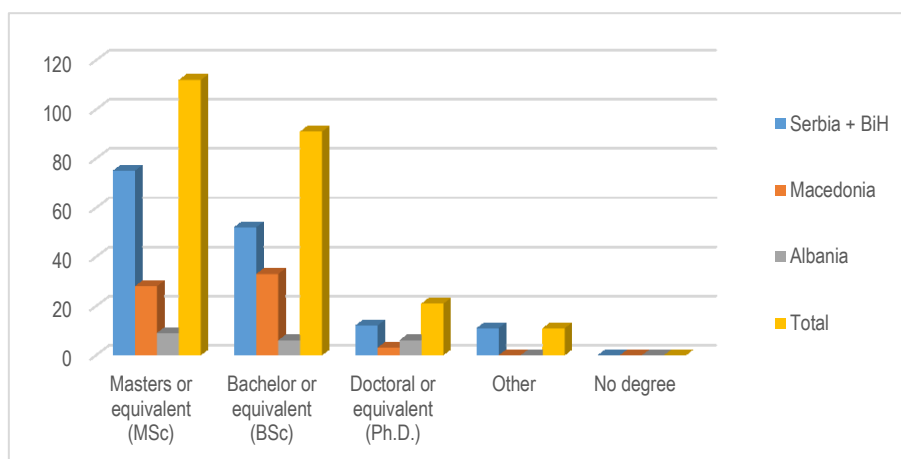
Q.6 Are you a practitioner (private company or self-employed) or a government / public sector employee? (mandatory question)

Sector	Serbia + BiH	Macedonia	Albania	Total
Practitioner / private sector employee	70	42	9	121
Government / public sector employee	67	19	10	96
Other	13	3	2	18



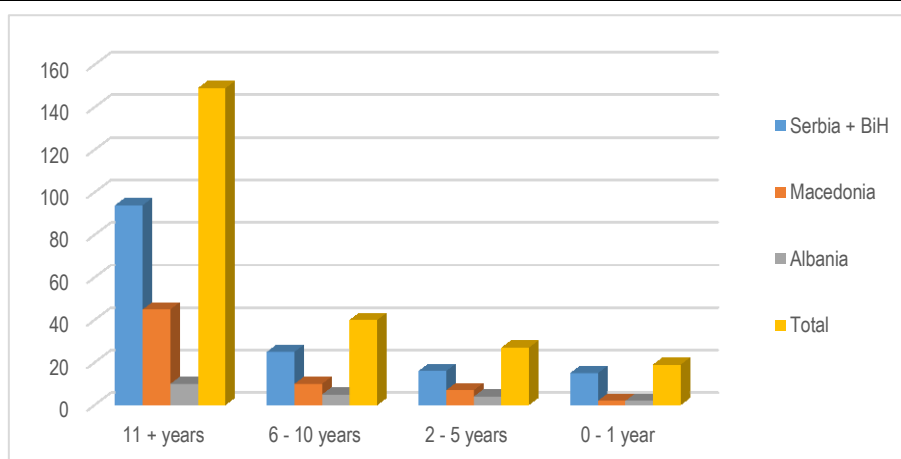
Q.7 What degree you possess? (mandatory question)

Degree	Serbia + BiH	Macedonia	Albania	Total
No degree	0	0	0	0
Bachelor or equivalent (BSc)	52	33	6	91
Masters or equivalent (MSc)	75	28	9	112
Doctoral or equivalent (Ph.D.)	12	3	6	21
Other	11	0	0	11



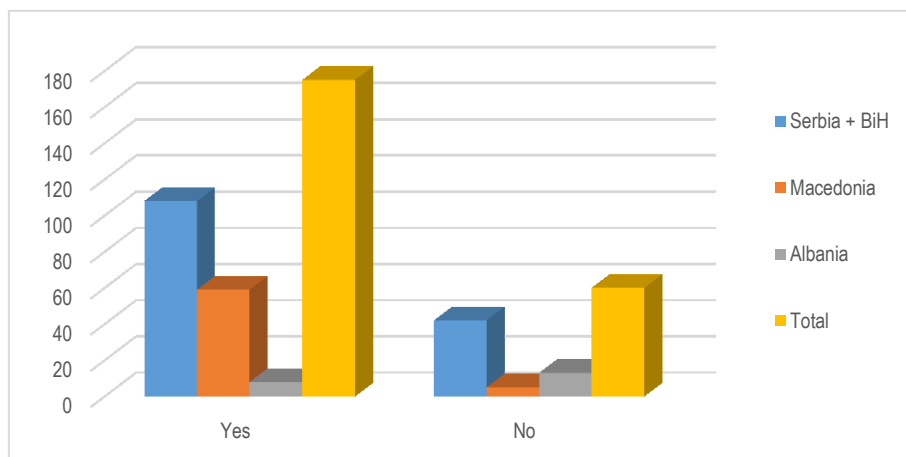
Q.8 How many of experience you have in this position? (mandatory question)

Years of experience	Serbia + BiH	Macedonia	Albania	Total
0 - 1	15	2	2	19
2 - 5	16	7	4	27
6 - 10	25	10	5	40
11 +	94	45	10	149



Q.9 Is there a certificate required by law to undertake your job? (mandatory question; Yes go to question Q.11; No go to question Q.10).

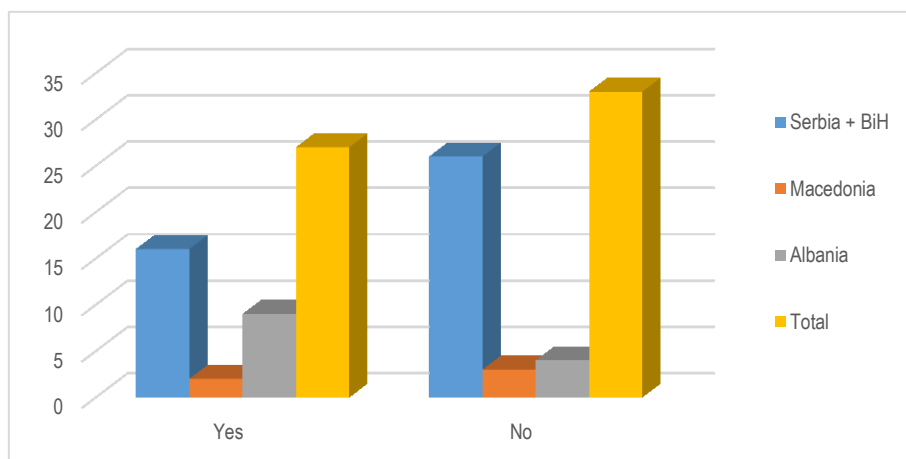
Certificate required	Serbia + BiH	Macedonia	Albania	Total
Yes	108	59	8	175
No	42	5	13	60



SECTION 2 CURRENT LEARNING / TRAINING SCHEME (if Q.9 was answered No)

Q.10 Is there an existing learning / training scheme relating to your field / job? (mandatory question; Yes go to question Q.15; No go to question Q.27)

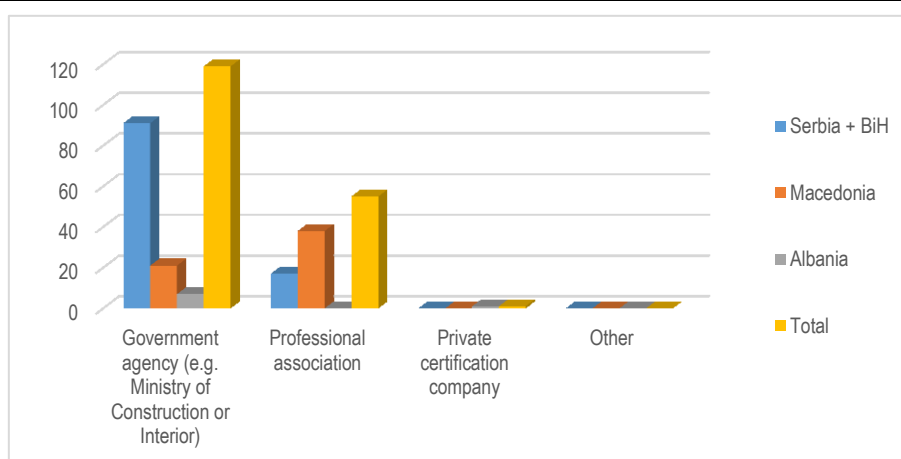
Existing learning scheme	Serbia + BiH	Macedonia	Albania	Total
Yes	16	2	9	27
No	26	3	4	33



SECTION 3 CERTIFICATE INFO (if Q.10 was answered Yes).

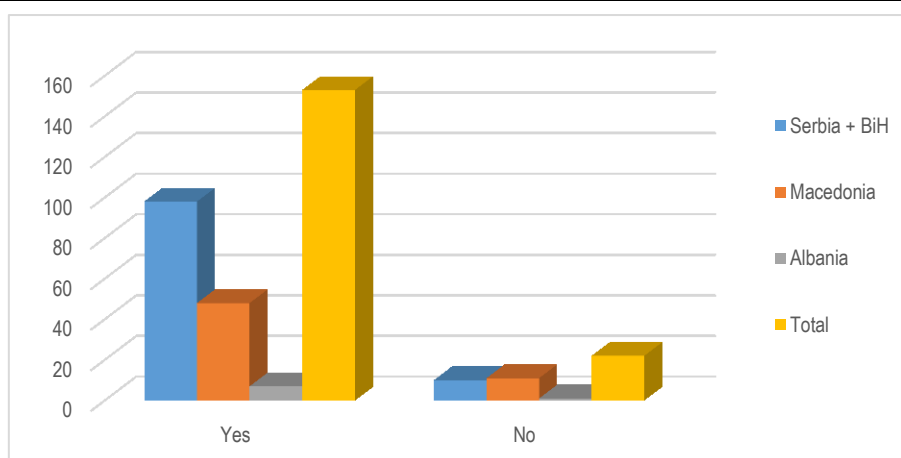
Q.11 (if Q.9 was answered Yes) Who is the issuing authority for the certificate? (mandatory question)

Certificate issuing authority	Serbia + BiH	Macedonia	Albania	Total
Government agency (e.g. Ministry of Construction or Interior)	91	21	7	119
Professional association	17	38	0	55
Private certification company	0	0	1	1
Other	0	0	0	0



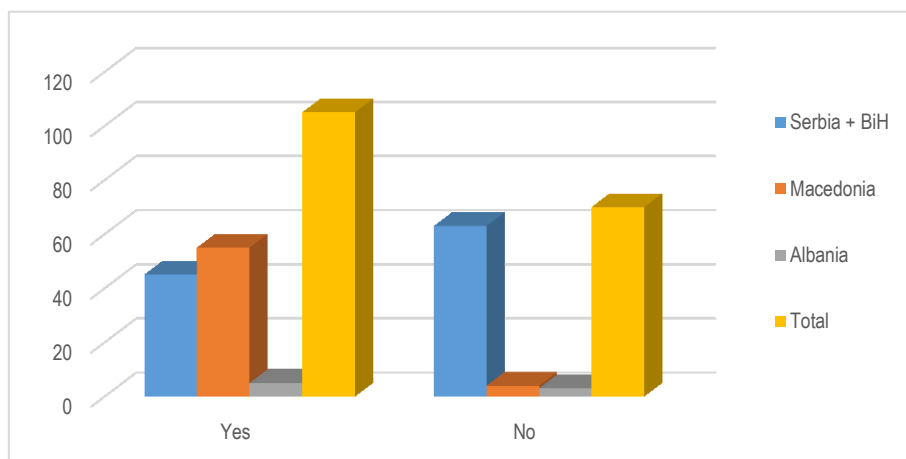
Q.12 Is there a requirement for formal education / training in order to start your certification process? (mandatory question)

Formal education required	Serbia + BiH	Macedonia	Albania	Total
Yes	98	48	7	153
No	10	11	1	22



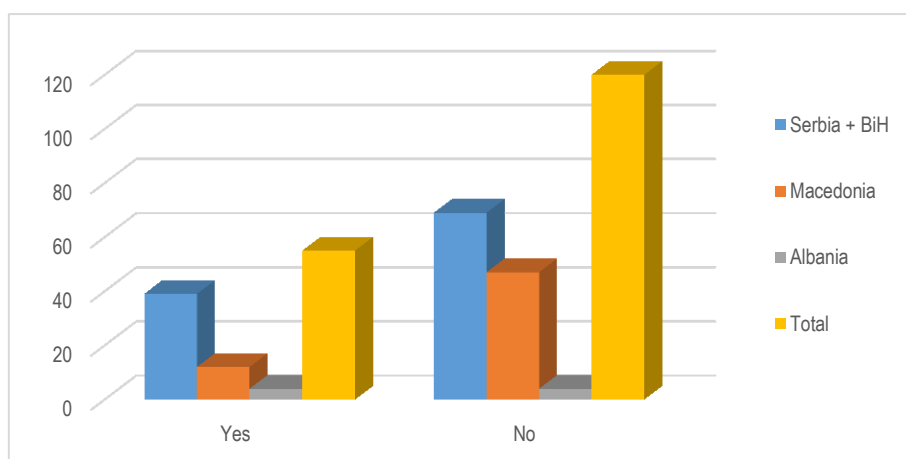
Q.13 Is there a need to renew your certificate periodically? (mandatory question)

Certificate renewal required	Serbia + BiH	Macedonia	Albania	Total
Yes	45	55	5	105
No	63	4	3	70



Q.14 Is formal learning / training or a form of lifelong learning (e.g. obtaining credits for attending activities) mandatory for certificate renewal? (mandatory question; Yes go to question 15; No go to question 27)

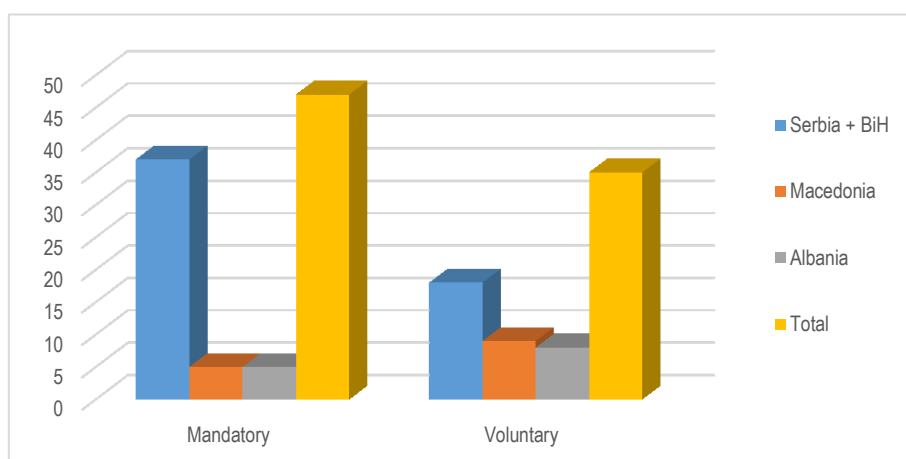
LLL required for certificate renewal	Serbia + BiH	Macedonia	Albania	Total
Yes	39	12	4	55
No	69	47	4	120



SECTION 4 CURRENT LLL SYSTEM IN YOUR COUNTRY (if Q.10 or Q.14 was answered Yes).

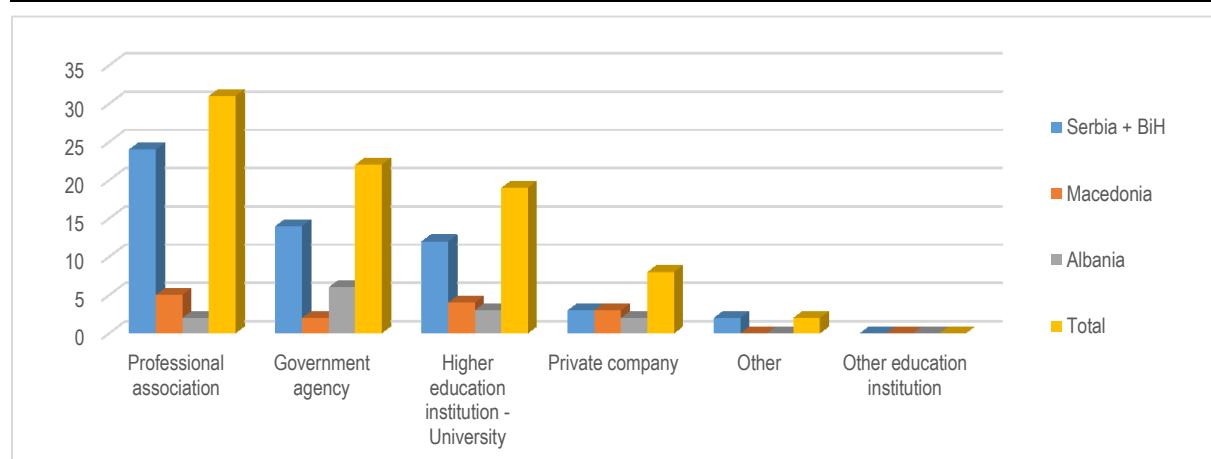
Q.15 Is the LLL course scheme mandatory or voluntary? (mandatory question)

Current LLL scheme	Serbia + BiH	Macedonia	Albania	Total
Mandatory	37	5	5	47
Voluntary	18	9	8	35



Q.16 Who runs the LLL courses? (mandatory question)

LLL course provider	Serbia + BiH	Macedonia	Albania	Total
Government agency	14	2	6	22
Professional association	24	5	2	31
Higher education institution - University	12	4	3	19
Other education institution	0	0	0	0
Private company	3	3	2	8
Other	2	0	0	2



Q.17, 19, 21, 23, 25 Provide official title of the LLL course(s) (mandatory question)

Answer: An open-text field.

The most common courses in the survey were:

- Training program for continuing professional development of the members of the Serbian Chamber of Engineers
- Fire & Rescue services training course
- Fire protection design course and exam
- Occupational health and safety.

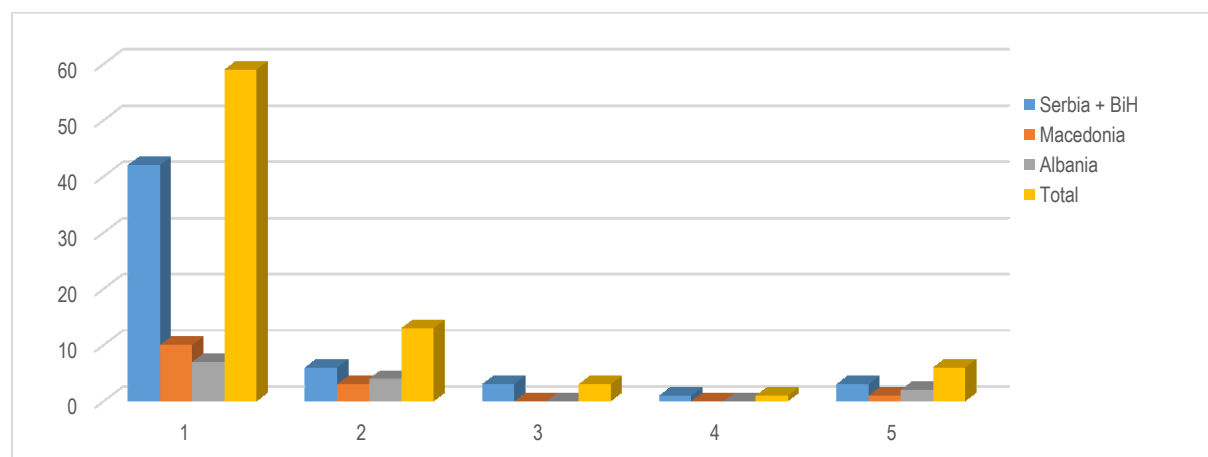
In addition to the above, there were multiple other courses indicated, however, only in isolation and cannot be therefore considered as standard LLL courses for DRM&FSE specialists in WBC.

Q.18, 20, 22, 24, 26 Indicate the ratio of theoretical vs. practice content of the LLL course(s) (mandatory question)

From the above question pairs the following statistics were obtained:

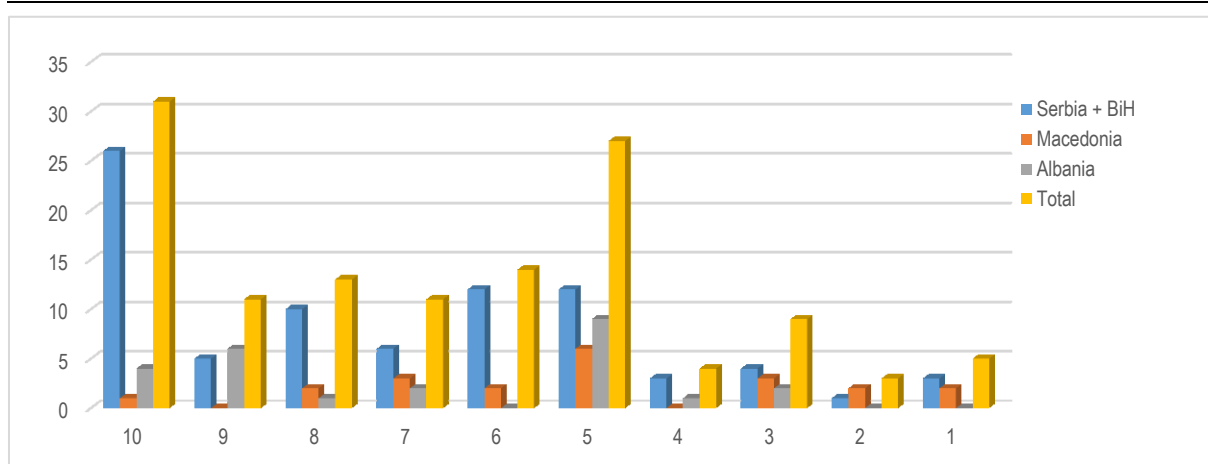
Number of indicated courses in the existing LLL scheme

Number of LLL courses	Serbia + BiH	Macedonia	Albania	Total
1	42	10	7	59
2	6	3	4	13
3	3	0	0	3
4	1	0	0	1
5	3	1	2	6



Theoretical vs. practical content of the courses in the existing LLL scheme

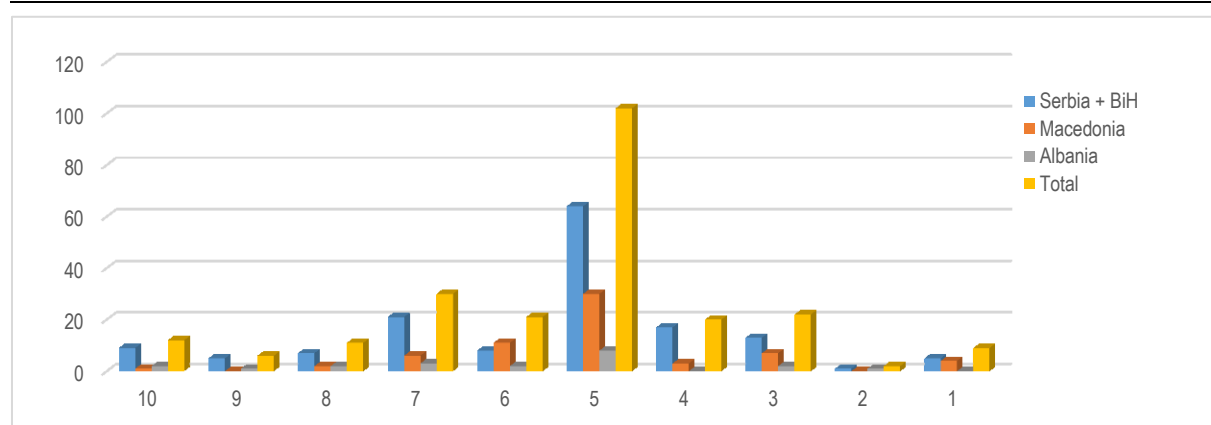
Theoretical vs. practical content – existing	Serbia + BiH	Macedonia	Albania	Total
10 – Entirely theoretical	26	1	4	31
9	5	0	6	11
8	10	2	1	13
7	6	3	2	11
6	12	2	0	14
5	12	6	9	27
4	3	0	1	4
3	4	3	2	9
2	1	2	0	3
1 – Entirely practical	3	2	0	5
AVERAGE	7.2	5.0	6.8	6.7



SECTION 5 FUTURE LLL COURSE SYSTEM (if Q.10 or Q.14 was answered No or after Section 4 has been completed).

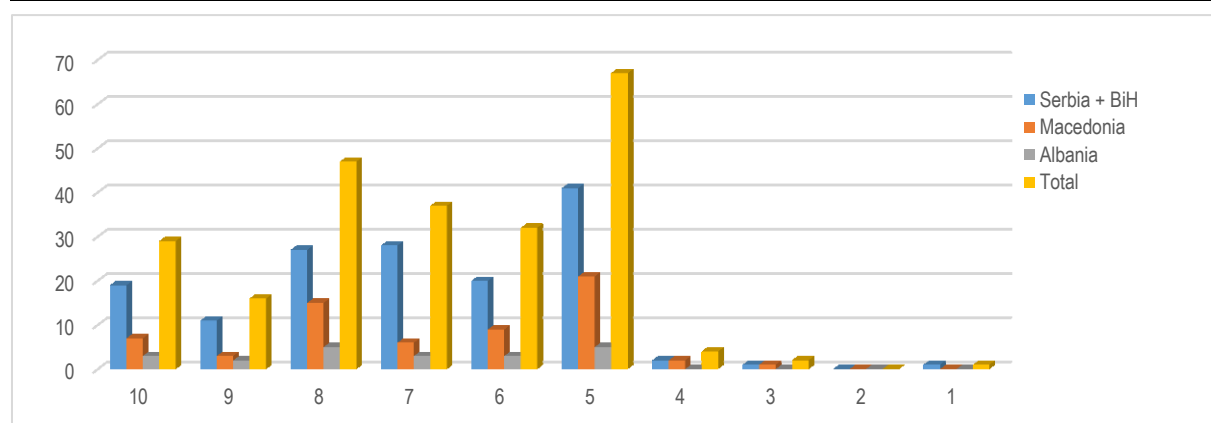
Q.27 Indicate the ratio of theoretical vs. practice content of the future LLL courses (mandatory question)

Theoretical vs. practical content – future	Serbia + BiH	Macedonia	Albania	Total
10 – Entirely theoretical	9	1	2	12
9	5	0	1	6
8	7	2	2	11
7	21	6	3	30
6	8	11	2	21
5	64	30	8	102
4	17	3	0	20
3	13	7	2	22
2	1	0	1	2
1 – Entirely practical	5	4	0	9
AVERAGE	5.5	5.0	6.0	5.4



Q.28 The courses should be primarily (mandatory question)

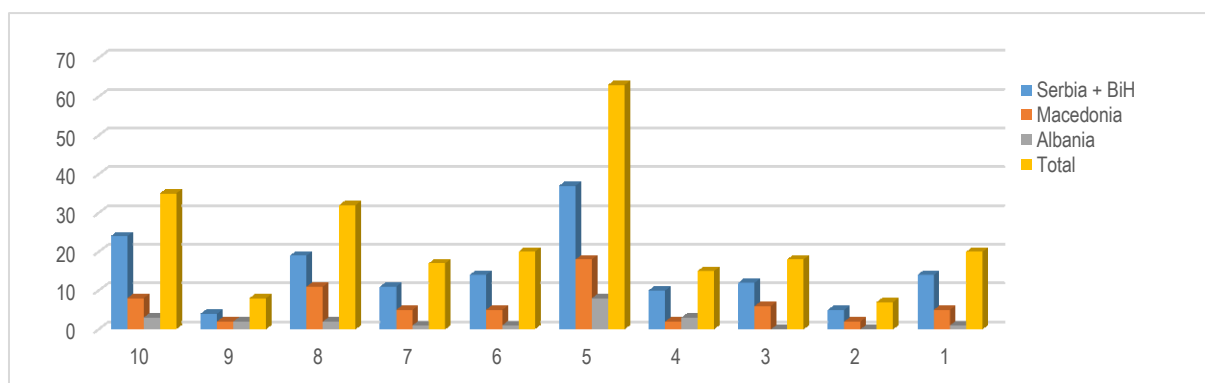
New topics vs. refresher – future	Serbia + BiH	Macedonia	Albania	Total
10 – New topics only	19	7	3	29
9	11	3	2	16
8	27	15	5	47
7	28	6	3	37
6	20	9	3	32
5	41	21	5	67
4	2	2	0	4
3	1	1	0	2
2	0	0	0	0
1 – Refresher only	1	0	0	1
AVERAGE	6.9	6.7	7.2	6.9



Q.29 Your preferred course format is (mandatory question)

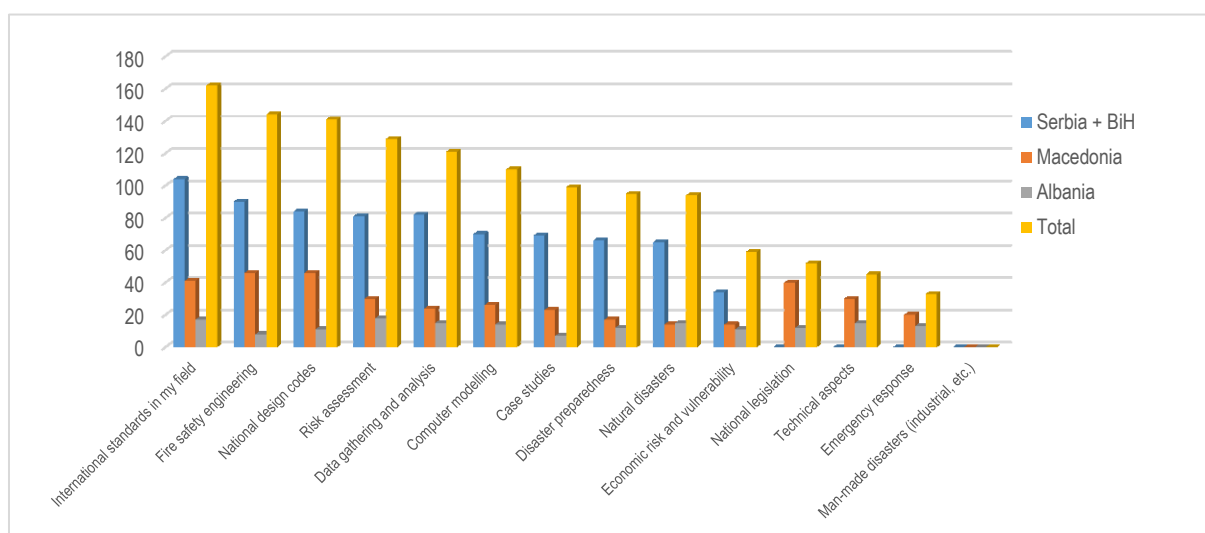
Course attendance format	Serbia + BiH	Macedonia	Albania	Total
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10 – Classroom only (full attendance)	24	8	3	35
9	4	2	2	8
8	19	11	2	32
7	11	5	1	17
6	14	5	1	20
5	37	18	8	63
4	10	2	3	15
3	12	6	0	18
2	5	2	0	7
1 – Electronic only (no attendance)	14	5	1	20
AVERAGE	5.8	5.9	6.2	5.9



Q.30 What topics should be covered to improve your job related knowledge and skills (mandatory question)

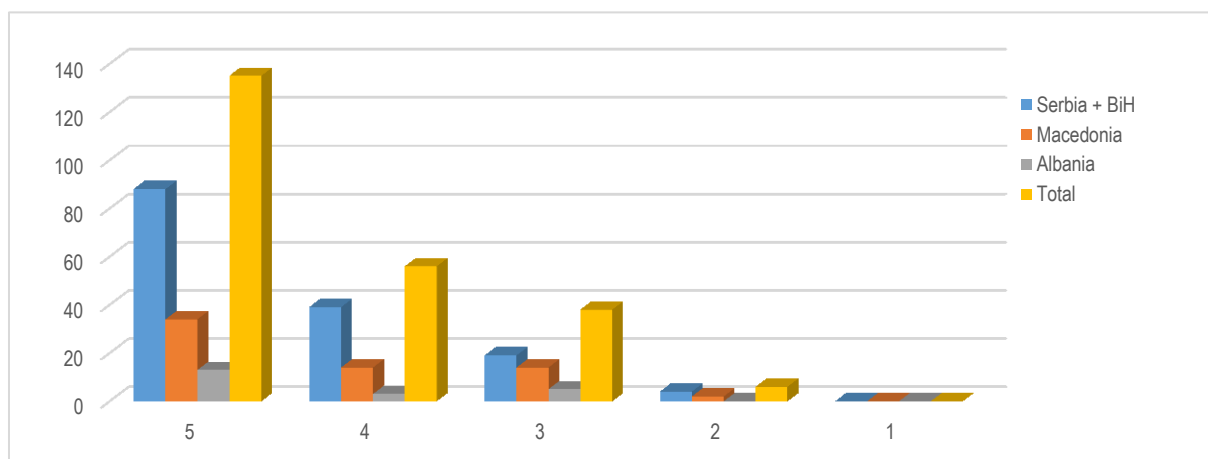
Desired topic	Serbia + BiH	Macedonia	Albania	Total
International standards in my field	104	41	17	162
Fire safety engineering	90	46	8	144
National design codes	84	46	11	141
Risk assessment	81	30	18	129
Data gathering and analysis	82	24	15	121
Computer modelling	70	26	14	110
Case studies	69	23	7	99
Disaster preparedness	66	17	12	95
Natural disasters	65	14	15	94
Economic risk and vulnerability	34	14	11	59
National legislation	0	40	12	52
Technical aspects	0	30	15	45
Emergency response	0	20	13	33
Man-made disasters (industrial, etc.)	0	0	0	0



SECTION 6 FUTURE LLL COURSE OUTCOME PRIORITIES – (after Section 5 has been completed).

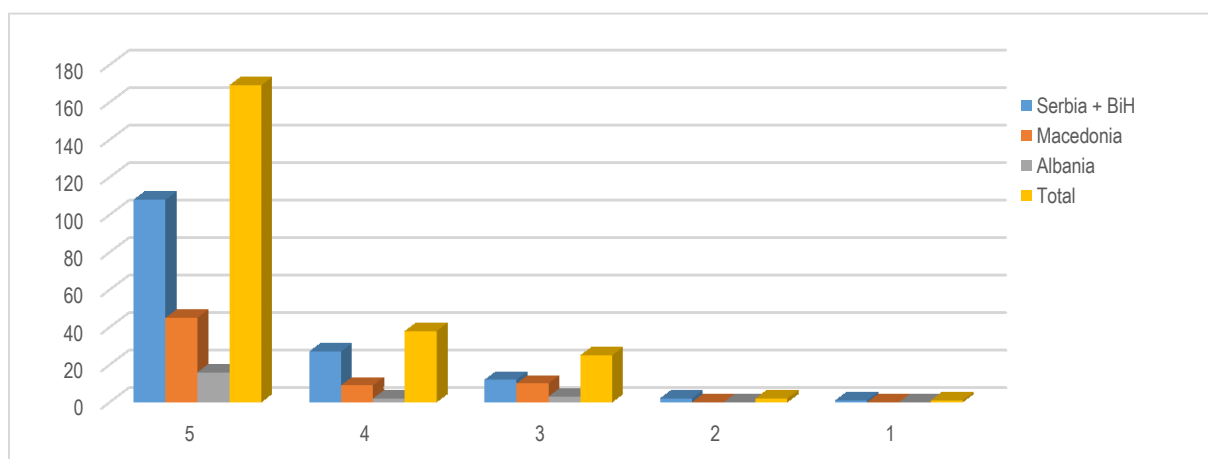
Q.31 Increased theoretical knowledge (mandatory question)

Increased theoretical knowledge	Serbia + BiH	Macedonia	Albania	Total
5 – Very important	88	34	13	135
4	39	14	3	56
3	19	14	5	38
2	4	2	0	6
1 – Not important	0	0	0	0
AVERAGE	4.4	4.3	4.4	4.4



Q.32 Improved practical skills (mandatory question)

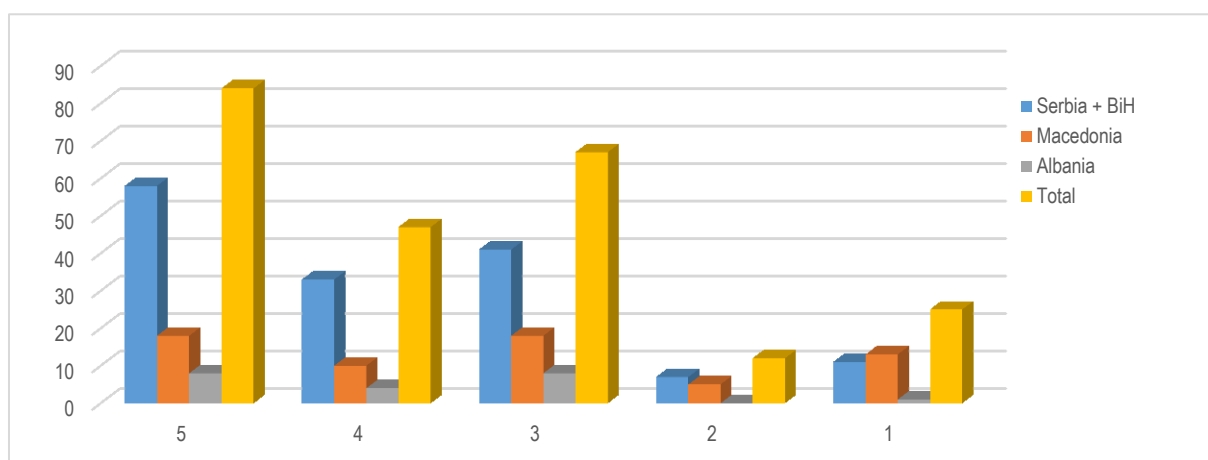
Improved practical skills	Serbia + BiH	Macedonia	Albania	Total
5 – Very important	108	45	16	169
4	27	9	2	38
3	12	10	3	25
2	2	0	0	2
1 – Not important	1	0	0	1
AVERAGE	4.6	4.5	4.6	4.6



Q.33 Accepted as formal education for periodical re-certification purposes (mandatory question)

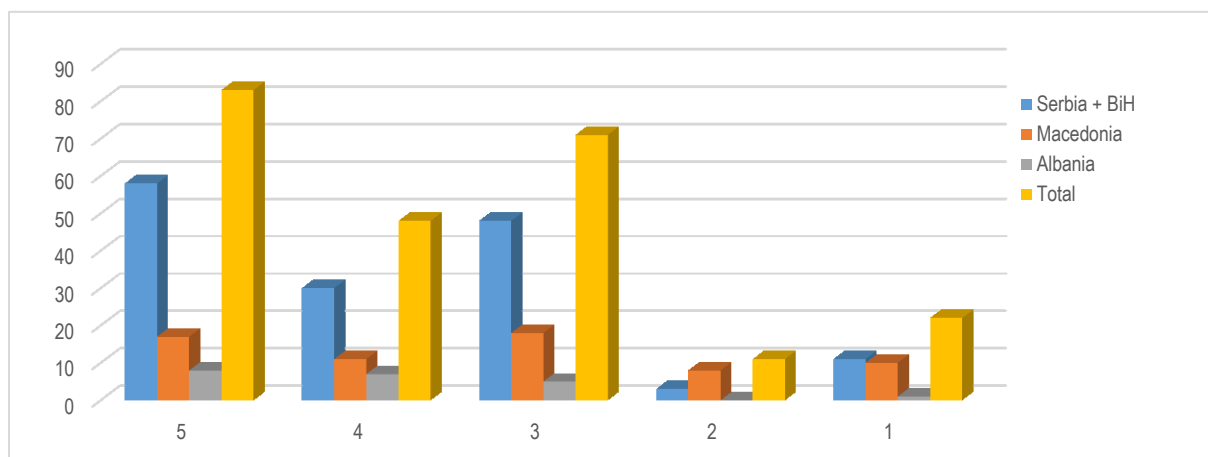
Accepted as formal education	Serbia + BiH	Macedonia	Albania	Total
5 – Very important	58	18	8	84
4	33	10	4	47

3	41	18	8	67
2	7	5	0	12
1 – Not important	11	13	1	25
AVERAGE	3.8	3.2	3.9	3.7



Q.34 Points (credits) for a national LLL scheme (mandatory question)

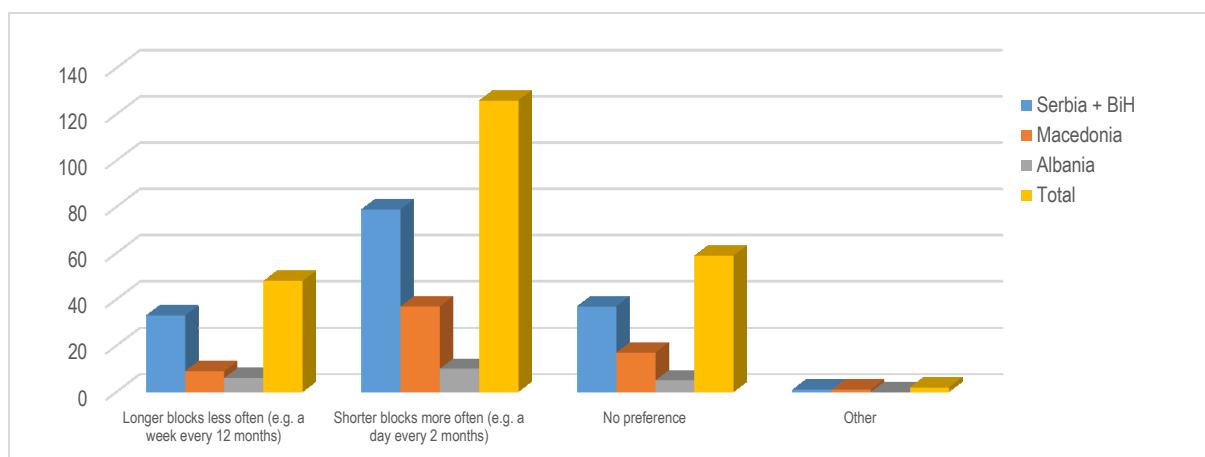
Points (credits) for a national LLL scheme	Serbia + BiH	Macedonia	Albania	Total
5 – Very important	58	17	8	83
4	30	11	7	48
3	48	18	5	71
2	3	8	0	11
1 – Not important	11	10	1	22
AVERAGE	3.8	3.3	4.0	3.7



Q.35 What is your preference on LLL courses scheduling (mandatory question)

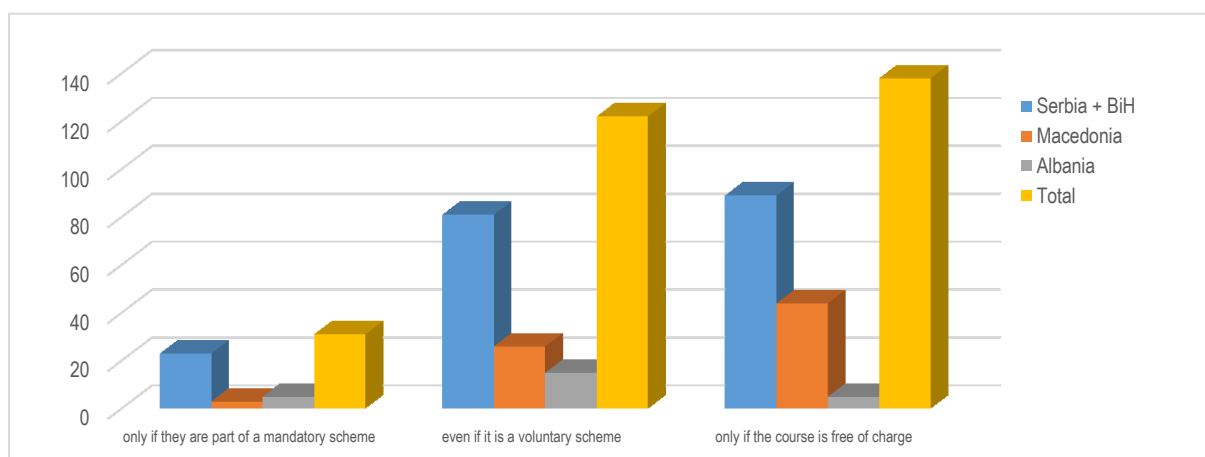
Scheduling preference	Serbia + BiH	Macedonia	Albania	Total
Longer blocks less often (e.g. a week every 12 months)	33	9	6	48
Shorter blocks more often (e.g. a day every 2 months)	79	37	10	126

No preference	37	17	5	59
Other	1	1	0	2



Q.36 You would attend the courses (mandatory question)

Attendance preference	Serbia + BiH	Macedonia	Albania	Total
only if they are part of a mandatory scheme	23	3	5	31
even if it is a voluntary scheme	81	26	15	122
only if the course is free of charge	89	44	5	138



3 Survey results analysis

SECTION 1 GENERAL INFORMATION

The results (235 responses in total) indicate that the most common professions dealing with DRM&FSE are engineering and design followed by health & safety specialists and government employed fire officers (Q.3). This is in line with work position features (duties) where the most common were fire safety design (76) and audits (64), followed by health & safety (59). The DRM job features were less prominent in the surveyed groups, approximately 50% of the FSE ones; risk analysis and management (52) civil protection (28), emergency preparedness planning (29) (Q.4). This can be attributed to the fact that there is more people involved in building design and construction than in civil protection and emergency preparedness planning. Nonetheless, the largest group of respondents indicated that their job was in the Other category (110), rather than in FSE (83) or DRM (42) (Q.5). An explanation to this is most likely that there are engineering and design positions that involve features of FSE or DRM but are not limited to them, such as structural, civil, electrical etc. engineers, architects and other professions (Q.3).

The division among the private (121) and public (96) sector employees seems to be approximately balanced (Q.6) the persons undertaking these kinds of work have mostly a bachelors (91) or masters (112) degree (Q.7). The surveyed groups comprised more experienced participants, most commonly having 6-10 (40) or more than 10 years (149) of experience in their given position (Q.8). An important outcome of the survey is the fact that approx. 75 % of the respondents (175) indicated that there is a certificate required by law for them to be able to undertake their work (Q.9).

SECTION 2 CURRENT LEARNING / TRAINING SCHEME

Out of those participants who responded No to Q.9 (i.e. no certificate required by law to undertake their work – 60), approx. 45 % (27) indicated that there was an existing LLL scheme relating to their work position (Q.10).

SECTION 3 CERTIFICATE INFO

The majority of participants (175 – approx. 75 %) responded that a certificate was required to undertake their work (Q.9). 2/3 (119) of the responses indicated that the certificate was issued by a government agency and 1/3 (55) by a professional association (Q.11). To start the certification process 87,5% of the participants (153) required to attend formal education (Q.12) and 60 % of respondents (105) indicated that periodical renewal of their certificate was required (Q.13), but only 30 % of the respondents (55) indicated that a formal LLL scheme / course attendance was required in the certificate renewal process (Q.14).

SECTION 4 CURRENT LLL SYSTEM IN YOUR COUNTRY

In total, 82 out of 235 respondents indicated that an LLL scheme / course relevant to their work position was in place (answering Yes to either Q.10 or Q.14). Out of these 57 % (47) responses indicated that the LLL scheme / course was mandatory (Q.15). In most cases – 40 % - the LLL scheme / course were run by a professional association (31), followed by government agencies (27 % - 22) and universities (23 % - 19) (Q.16).

As regards the most common LLL courses held, these were (Q.17, 19, 21, 23, 25):

- Training program for continuing professional development of the members of the Serbian Chamber of Engineers
- Fire & Rescue services training course
- Fire protection design course and exam
- Occupational health and safety.

These results show that the LLL courses are focused mainly on the FSE field, although, it this is not entirely representative due to the significant variability of answers to these question.

72 % (59) of the respondents indicated that the current LLL scheme consisted of 1 course, 16 % (13) indicated 2 courses, 4 % (3) indicated 3 courses, 1 % (1) indicated 4 courses and 7 % (6) indicated 5 courses; in total the 82 responses yielded information about 128 courses.

Given the above results, it may be concluded that despite the existing learning and certification schemes, there is currently no structured LLL scheme in place for either the FSE or DRM fields in the WBC countries. The FSE field appears to be covered better than the DRM field, however, there is usually only one course in the learning scheme and the course are more theoretically oriented 51,5 % (66) courses received a score of 7 or higher (10 – entirely theoretical, 1 – entirely practical) and 35 % (45) received a score in the range of 4 to 5 (Q.18, 20, 22, 24, 26).

SECTION 5 FUTURE LLL COURSE SYSTEM

The respondents indicated that the preference, regarding theoretical vs. practical (10 – entirely theoretical, 1 – entirely practical) course, is a balanced approach with option 5 being the most preferred option, accounting for 43 % (102) of all responses (235). After the addition of option 4 (22) and 6 (21) responses the overall preference of a balanced theoretical vs. practical approach is 62 %. (145). The two further options gaining preference were options 3 (9 % – 22) and 7 (12 % – 30). So the overall recommendation regarding the course content would be approx. 50% of theoretical and 50 % of practical topics and activities (Q.27).

On the other hand, the preference of the respondents regarding the content of the course (10 – new topics only, 1 – refresher only) was leaning towards new topics, with 55 % (129) responses belonging to options 7 through 10. Only 1,3 % (3) responses were recorded for options 3 through 1. Approx. 44 % (103) of the responses were recorded for options 4 (4), 5 (67) and 6 (32). So the overall recommendation regarding the course content would be approx. 70% of new topics and 30 % of refresher topics (Q.28).

The attendance preference is more towards classroom attendance vs. online classes (10 – classroom attendance only, 1 – online attendance only), with options 4 (15), 5 (63) and 6 (20) representing 42 % of all responses and options 7 through 10 (92) 39 % of all responses. So the overall recommendation regarding the course attendance format would be approx. 60% of classroom and 40 % of online attendance (Q.29).

When considering the topics to be covered in the LLL scheme the following preferences were indicated:

Desired topic	Total	Respondents interested
International standards in my field	162	69%
Fire safety engineering	144	61%
National design codes	141	60%
Risk assessment	129	55%
Data gathering and analysis	121	51%
Computer modelling	110	47%
Case studies	99	42%
Disaster preparedness	95	40%
Natural disasters	94	40%
Economic risk and vulnerability	59	25%
National legislation	52	22%
Technical aspects	45	19%
Emergency response	33	14%
Man-made disasters (industrial, etc.)	0	0%

Given the results it is recommended that the future LLL scheme is primarily aimed at the topics highlighted in green as the experts and practitioners would mostly benefit from them. If the timeframe and format allows the topics highlighted in orange should be added (Q.30).

SECTION 6 FUTURE LLL COURSE OUTCOME PRIORITIES

As regards the outcome priorities, the respondents indicated that practical skills (Q.32) were most important to them yielding an average score of 4,6, followed by improved theoretical knowledge (Q.31) yielding a similar average score of 4,4 out of 5, where 1 means not important and 5 very important. Slightly lower scores, identically 3,7, were recorded for the acceptance of the LLL courses as part of formal education for recertification purposes (Q.33) and as a source of points / credits towards the national LLL scheme (Q.34). Nonetheless, the responses to Q.32 and Q.33 indicate a higher than average importance of these two aspects of the future LLL system. In this regard, it is important that during the accreditation of the future LLL system formal acceptance and credits are properly addressed to satisfy national requirements in the FSE / DRM fields.

The preferred schedule of the LLL courses is mostly (54 % – 126 responses) shorter blocks more often (e.g. a day every 2 months) followed by no preference (25 % – 59 responses). On the other hand longer blocks less often (e.g. a week every 12 months) were preferred only by 20 % of the respondents (48) and other preferences were only 1 % (2) (Q.35). Hence, it is recommended that these courses are run in shorter blocks more often with aim on the classroom sessions for the more practical topics, complemented by online classes / activities which should be focused more towards the more theoretical topics.

The final question (Q.36) yielded important information on the willingness of the respondents to participate in the future LLL scheme. Only 13 % (31) respondents indicated that they would attend only if the scheme was mandatory, which is a positive sign. On the other hand 52 % (122) would attend even if the scheme was voluntary. However, 59 % (138) of the respondents indicated that they would attend only if the scheme was free of charge. This is an important result, because even if the new LLL scheme starts out free of charge (financed through the K-Force project), subsequently, future funding should be secured in order to support the long-term goal of life-long education of the experts and practitioners in the FSE / DRM fields in the Western Balkan countries.

Conclusion

The purpose of this report was to provide information required for the preparation and implementation of a future LLL scheme in the fields of FSE and DRM for the Western Balkan countries. This report is the outcome of Task 6.1 *Report on WBC needs for LLL courses* of Work package 6 *Implementation of LLL courses*.

5 WBC countries (Serbia, Bosnia & Herzegovina, Albania and Macedonia) were surveyed through an online questionnaire. The questionnaire consisted of 36 questions, the purpose of which was to monitor the existing practice and gather information on the preferences of the practitioners and experts in the FSE / DRM fields. In total, 235 responses were collected during the survey. This information is to be utilized in the preparation and implementation of the future LLL system.

The results indicated that currently the LLL systems cannot be considered as structured systems for the purpose of life-long education of professionals in the FSE / DRM fields. They are usually in the form of individual courses that are not interconnected or part of a scheme. The current trend relates mostly to courses / formal education required for certification and recertification purposes. Since a certificate is usually required to undertake FSE / DRM related positions, a structured and well-defined LLL system will be highly beneficial to maintain high quality of continuing professional education.

The proposed contents and structure based on Sections 5 and 6 of the survey may be summarised as follows:

- theoretical and practical topics should be covered evenly (50% – 50 % of the content);
- 70% of the course contents should be new topics and 30 % of refresher topics;
- the attendance format should be 60% classroom and 40 % of online;
- the topics to be covered are (in the order of preference of respondents in %):
 - International standards in my field 69%
 - Fire safety engineering 61%
 - National design codes 60%
 - Risk assessment 55%
 - Data gathering and analysis 51%
 - Computer modelling 47%
- increased theoretical knowledge and practical skills are very important;
- slightly less important is formal recognition and credits earned through the LLL scheme;
- the LLL courses should run in shorter blocks more often (e.g. a day every 2 months);
- there is significant interest to take part in the future LLL courses, even if it is a voluntary scheme;
- the participants predominantly expressed interest in taking part, only if the courses are free of charge, i.e. post-project funding will be necessary or the scheme should become mandatory for recertification purposes.

The above is an initial set of preferences and recommendations relating to the future LLL system for WBC countries in the fields of FSE and DRM. These results form input and will be expanded further in WP 6.2 *Report on defined LLL outcomes*.