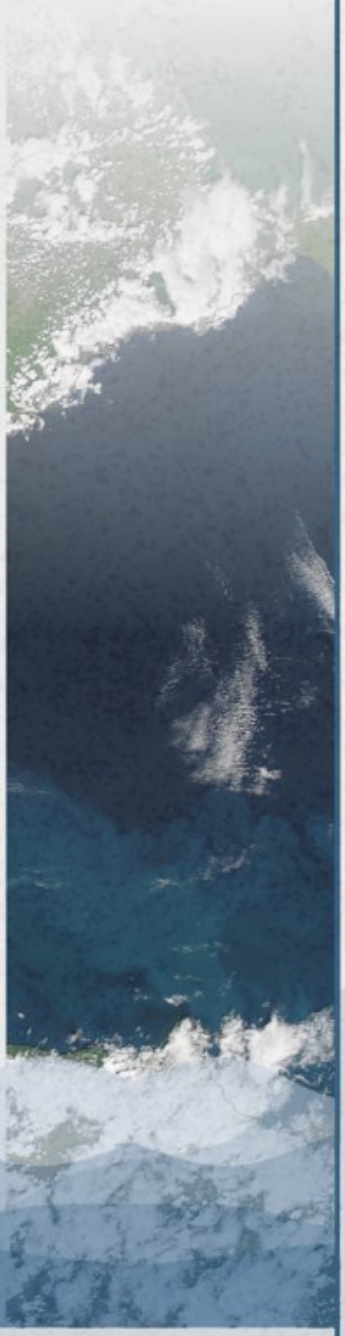
RESPONSE

Building Response Frameworks under existing & new Marine Pollution Challenges in the Black Sea



Milestone 1

Exploring operational preparedness Level

(Assessment lists of success factors and barriers in operational preparedness and response processes in Black Sea countries)

Co-funded by the European Union

The RESPONSE project is funded by the European Union under Grand Agreement no. 101124661. Views and opinions expressed are however those of the beneficiaries only and do not necessarily reflect those of the European Union or European Climate, Infrastructure and Environment Executive Agency (CINEA). Neither the European Union nor the granting authority can be held responsible for them.

DOCUMENT INFORMATION AND VERSION CONTROL

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1	19.04.20124	1st Draft	Oleksandr Laiko	Anastasia Tsavdaridou
2	28.04.2024	2nd Draft	Oleksandr Laiko	Anastasia Tsavdaridou
3	30.04.2024	Final Version	Oleksandr Laiko	

Project background and context

The RESPONSE, supported by the European Union EMFAF, under Grant Agreement no 101124661 has duration of 36 months, starting from 01.10.2023. The project consortium involves six partners from five different countries: Greece, Bulgaria, Romania, Ukraine and Georgia. Five of the participants are based in countries bordering on the Black Sea, and the lead beneficiary, the Aristotle University of Thessaloniki (AUTH), has a long history of working with the region and with members of the consortium. The partnership includes one university, two research institutes and three environmental NGOs: the Black Sea NGO Network (BSNN) regional NGO network based in Varna, Bulgaria; the National Institute of Marine Research and Development (NIMRD), based in Constanta, Romania, leading research institute for the Black Sea; the Institute of Market Problems and Economic-Ecological Research (IMPEER), Odesa, a public institution, part of the National Academy of Sciences of Ukraine; the Black Sea Branch of Ukrainian Environmental Academy of Sciences (BSBUEAS) is Odesa-based NGO with a team of professional researchers; and the Greens Movement of Georgia / Friends of the Earth (GMG/FoE) – Georgia, an NGO, part of the international environmental network. All three beneficiaries from EU Member States have extensive experience in marine pollution projects under the Horizon 2020 and Horizon Europe programmes.

RESPONSE aims to identify and promote the development and establishment of new-generation advanced training schemes and curricula to support early warning, region-wide mechanisms for monitoring natural and man-made disasters. Various training programs, platforms and curriculum have been implemented to monitor marine pollution and ensure knowledge integration and dissemination. Still, training material, best practices, standards and protocols often differ among platforms and programs, hindering progress towards implementing an integrated, transdisciplinary and multidisciplinary marine pollution training system. Peculiar events, such as armed conflicts, create new environmental and societal challenges that call for international, coordinated responses.

RESPONSE acknowledges the importance of deeper understanding of marine ecosystems and river-delta-sea connections, the need for development of harmonized procedures, standards and methodologies in marine monitoring across the Black Sea countries to support healthy and resilient seas and foster integrated marine governance. The sustainable changes that are required for the establishment of efficient, advanced training schemes that would be integrated with the challenges, goals and specificities of the scientific and social context and make the most of the untapped capacity of stakeholders to promote regional awareness in the field.

In view of the background and context described above, the four overarching objectives of RESPONSE are: 1) IDENTIFY and UNDERSTAND the institutional and societal gaps and needs for effective, integrated, transdisciplinary and multidisciplinary marine pollution training systems; 2) DEVELOP effective training programs by assembling, integrating, and improving the most promising approaches and results into a comprehensive framework that consists of a set of methodological training tools, databases, policy recommendations, and background information; 3) SUPPORT the implementation of the EU and Regional Strategies, by developing operational guidelines for effective application, updating, monitoring and management of training programs on marine pollution; 4) EMPOWER marine pollution training, monitoring and mitigation by involving, inspiring and influencing stakeholders through *a broader vision of co-design, co-creation, co-*

establishment, co-implementation and co-assessment of the training programs.

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CONTRIBUTORS

Table 1 Names and roles of contributors to this deliverable.

Name	Affiliation	Milestone Lead	Task Lead
Laiko Oleksandr	Institute of Market and Economic & Ecological research of the National Academy of Sciences of Ukraine" - IMEER NASU, Ukraine	IMEER NASU	AUTH
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Gvilava Mamuka	Greens Movement of Georgia-Friends of the Earth-Georgia - GMG/FoE-GE, Georgia	IMEER NASU	AUTH
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1. Assessment lists of success factors and barriers in operational preparedness and response processes in Bulgaria

The Assessment list of success factors and barriers in operational preparedness and response processes is formed according to the data collected by BLACK SEA NGO NETWORK ASSOCIATION (BSNN).

This Assessment list is formed due to the data obtained as a result of on-line surveys, communications with the stakeholders and as a result of face-to-face meetings conducted with:

- 4 representatives of Universities, colleges, training/education center (BSNN - 1 university, 1 training center of the Ministry of the Interior) ; some more training plans have been reviewed – of the Technical University of Sofia, Academy of the Ministry of the Interior all related to civil defense and emergency response in general terms;
- the Bulgarian Maritime Administration conducts trainings related to the marine environment for operators of vessels under the Bulgarian flag and for the port administrations – drills every 3 months and Exercises once a year;
- 3 Administrations involved in combating pollution and emergencies, involved in training (of their staff) – ministry of the interior, transport ministry; the academy of the ministry of the interior trains the staff of big industrial enterprises – like Lukoil on the Black Sea – with special programmes developed for the staff of the oil refinery; staff of local and regional governments are trained to emergency response;
- 3 Scientific institutes, and others (agencies, laboratories etc.) - marine research institutes, public health administrations, environment agencies, basin directorates are involved in the monitoring and follow up mitigation measures;
- NGOs (involved in specific monitoring and awareness activities – some NGOs like Zeleni Balkani help monitor dolphin mortality on the southern Bulgarian coast) and some others.

The following grades of frequency are used:

Generally (up to Always)	76% - up to 100%
Often	51%- up to 75%
Occasionally	25%-up to 50%
Rarely	Less than 25%

Success factors in operational preparedness and response processes in Bulgaria

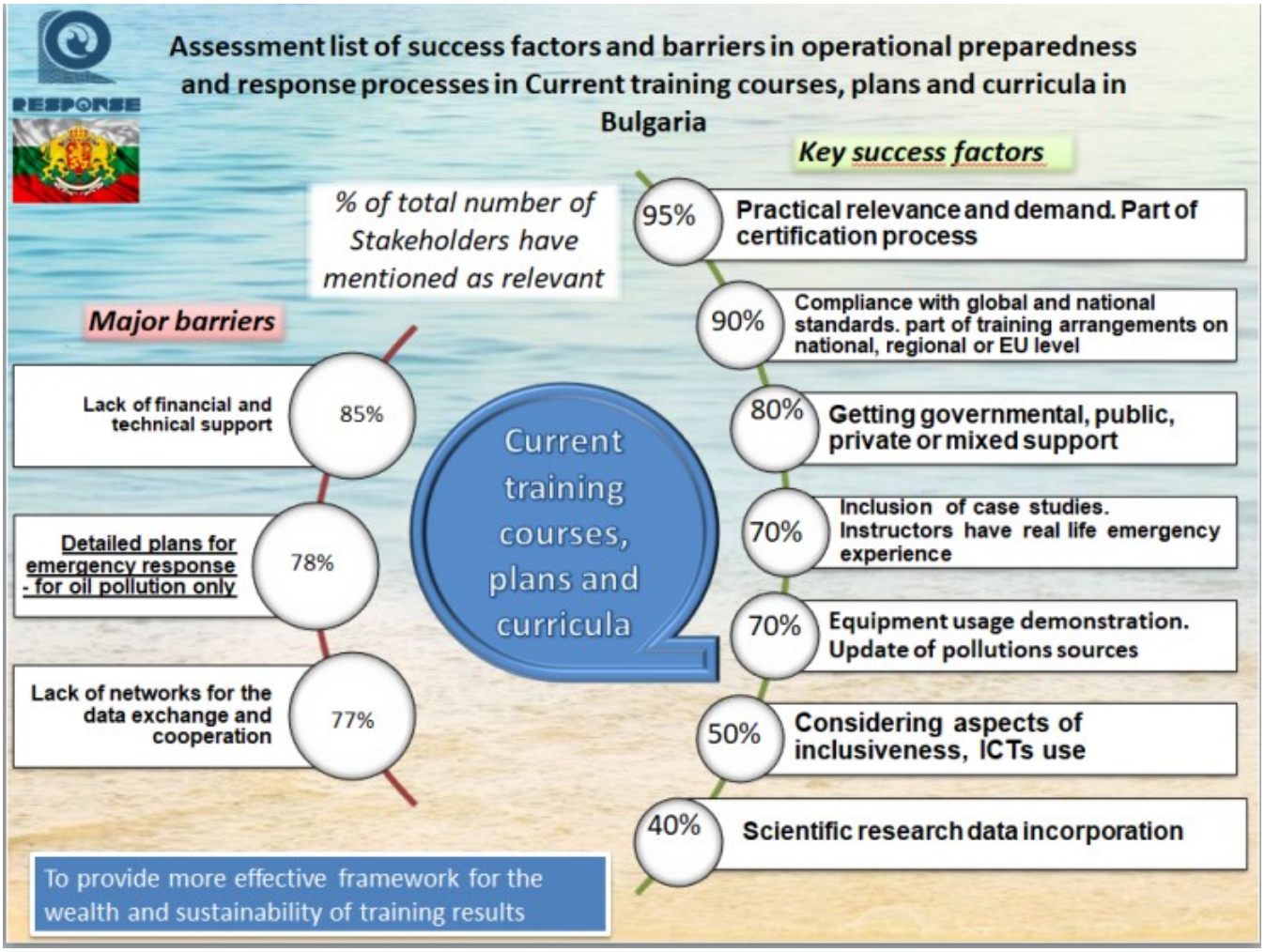
№	Success factors	Frequency of ***mentions among stakeholders' opinions (answers)***	
		Frequency	% of stakeholders that mentioned the factor
1	**Practical relevance and demand** on the training course results, e.g.: - the course is dedicated to preparing of the staff of local and regional administrations and flag state companies and port administrations and some industrial enterprises for emergency response and reactions to marine pollution accidents; - the courses related to MARPOL are part of sailors' certification process; - the course(s) is needed for early warning systems forming by authorities; - the training results of the course are dedicated to preparing of the staff for emergency response and reactions to marine pollution accidents	Generally	90 – 95 %
2	The course **meets global and national standards** in the sphere of marine pollution preparedness and response (i.e. institutionally actual and up-to-date). The course is **part of training arrangements** on national, regional or EU level The course is **related to** a particular form of legal/**regulatory requirements**	Generally	90 – 95 %
3	The institutions providing the course receive governmental, public, private or mixed **support,** including funding support, grants.	Generally	80 %
4	The course includes discussion of **case studies**. The **instructors have experience** of being involved in real life emergency situations of response on marine pollution	Often	70%
5	The course (for professional seamen mostly) provides training on waste recycling models or other innovations and **demonstrates use of equipment.** The course provides **practical emergency and response training** at sea, at training facilities. The course deals with early warning systems and elements of marine pollution preparedness and response	Often	70 %
6	The most relevant types/sources of marine pollution are addressed in the training course	Often	65%

№	Success factors	Frequency of ***mentions among stakeholders' opinions (answers)***	
		Frequency	% of stakeholders that mentioned the factor
	The course considers new sources of pollution (such as the armed conflicts) and is revised (updated) systematically		
7	The course **has aspects of inclusiveness** e.g.: - information about the course/training modules/curricula **openly available to the public** on-line; -**free of charge**, availability in both online and physical presence form, **ICT use**, **youth and women involved**, other aspects of inclusiveness	Occasionally	50%
8	The course **incorporates data from scientific research** and monitoring. The course envisages safety provisions, **risk assessment**, uses **forecasting models** that improve response readiness and pollution-risk mitigation The course supports cooperation with other like-minded institutions, courses, programmes, networks of data exchange and actualization. Learning results of the training course have been included in scientific and other types of publications, or reports	Occasionally	40%

Barriers in operational preparedness and response processes in Bulgaria

№	Barriers	Frequency of ***mentions among stakeholders' opinions (answers)***	
		Frequency	% of stakeholders that mentioned the factor
1	**Lack of financial and technical support**, lack of modern **equipment**	Generally	85 %
2	Detailed plans (including response procedures and financial responsibilities) for emergency response to marine pollution are available for oil pollution only, no plans for other pollutants with financial responsibilities are available	Generally	78%
3	There is **lack of networks for the "response readiness"** data exchange, for cooperation with other like-minded institutions, courses, programmes. There is need in common professional data portal that can provide necessary information about standards up-dates and **to gather the community**.	Generally	77 %

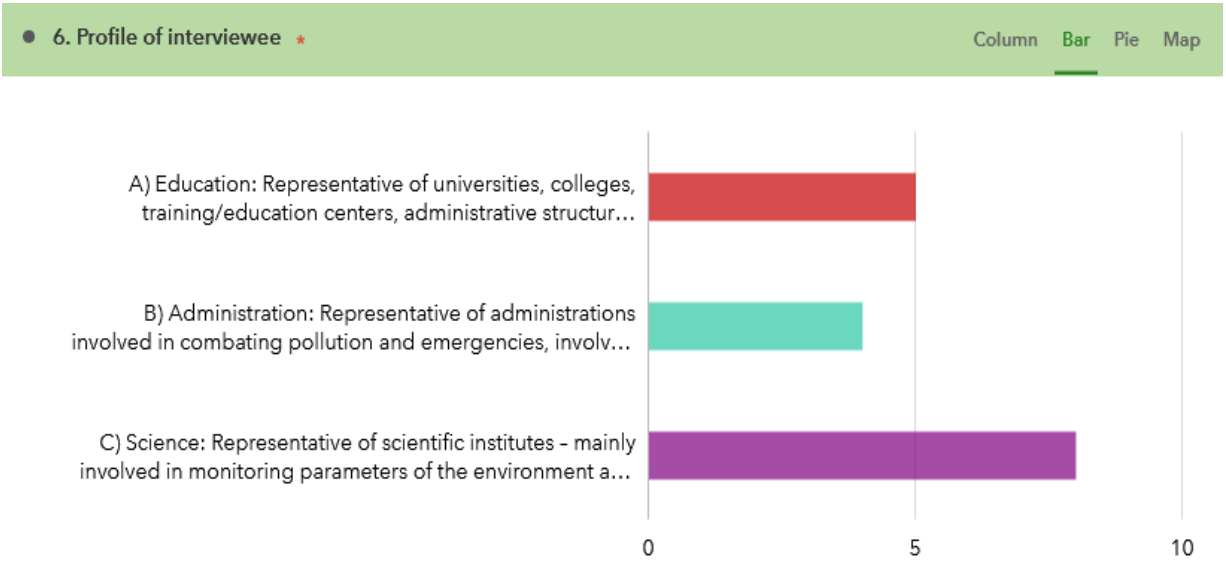
Assessment lists visualization for Bulgaria



2. Assessment lists of success factors and barriers in operational preparedness and response processes in Georgia

This Assessment list is formed due to the data obtained as a result of on-line surveys, communications with the stakeholders and as a result of face-to-face meetings conducted by the Project Partner the Greens Movement of Georgia-Friends of the Earth-Georgia (GMG/FoE-GE) with (see also graph below):

- 5 representatives of universities, colleges, training/education center;
- 4 administrations involved in combating pollution and emergencies, involved in training (of their staff);
- 7 scientific institutes, and others (agencies, laboratories etc.), NGOs (involved in specific monitoring and awareness activities) and some others.



The following grades of frequency are used:

Generally (up to Always)	76% - up to 100%
Often	51%- up to 75%
Occasionally	25%-up to 50%
Rarely	Less than 25%

Success factors in operational preparedness and response processes in Georgia

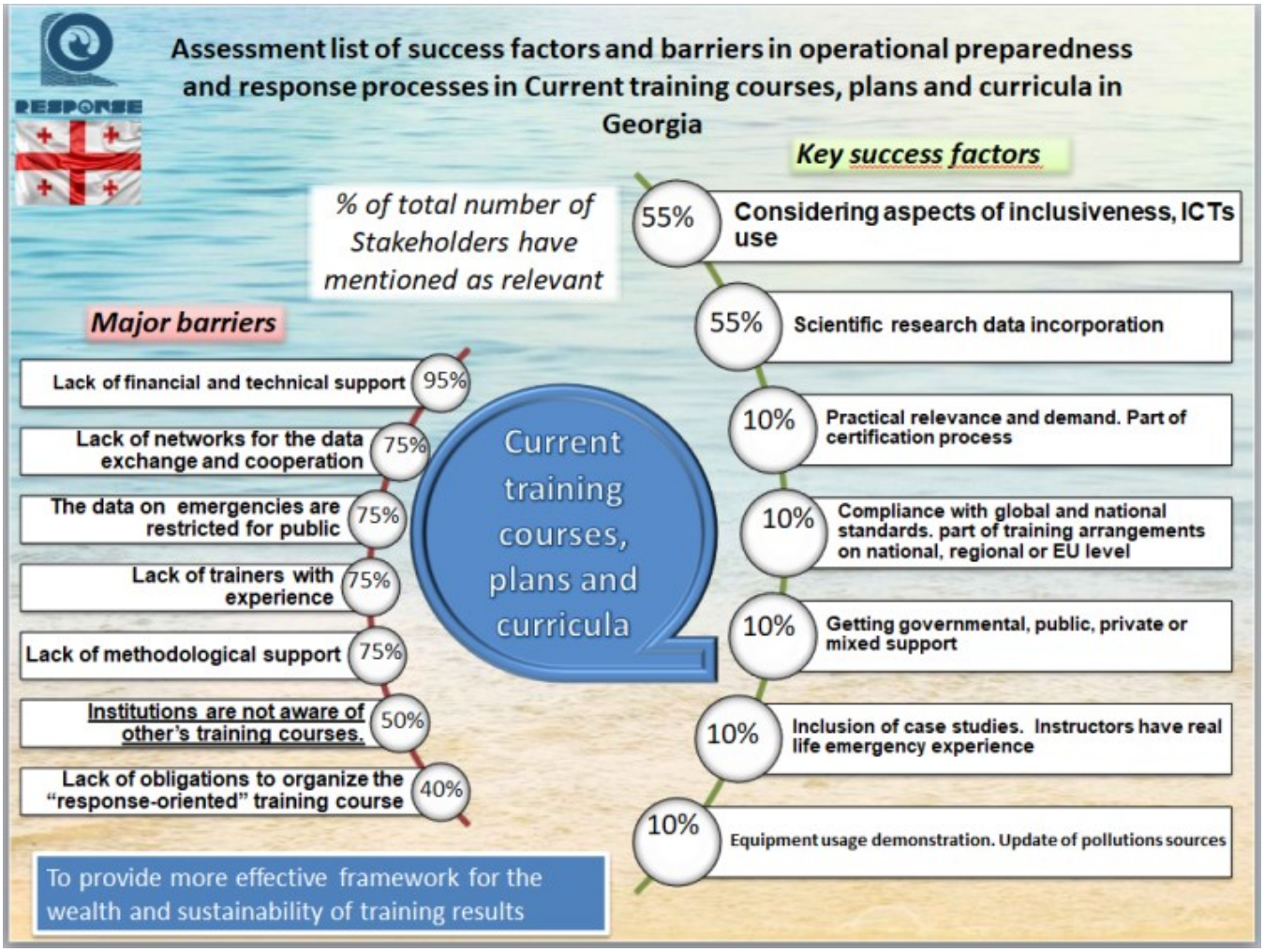
№	Success factors	Frequency of mentions among stakeholders' opinions (answers) in Georgia	
		Frequency	% of stakeholders that mentioned the factor
1	**Practical relevance and demand** on the training course results: The course is dedicated to preparing of the staff for **emergency response** and reactions to marine pollution accidents per **international conventions** and **national plans.** The course is a part of **certification** process.	Rarely	Approx. 10%
2	The course **meets global and national standards** in the sphere of marine pollution preparedness and response, beach litter monitoring. The course is **part of training arrangements** on national and regional level. Regional and nation al drills are conducted. The course is **related to** a particular legal **regulatory requirement** (contingency plans)	Rarely	Approx. 10%
3	The institutions, providing the course **receive** governmental, public, private or mixed **support,** including funding support, grants.	Rarely	Approx. 10%
4	The course includes discussion of **case studies**. The **instructors have experience** of being involved in real life emergency situations of response on marine pollution.	Rarely	Approx. 10%
5	The course provides training and **demonstrates use of equipment.** The course provides **practical emergency and response training** at sea, at training facilities.	Rarely	Approx. 10%
6	The most **relevant types/sources** of marine pollution **are addressed** in the training course. The course addresses marine **biodiversity.**	Occasionally	Approx. 25%
7	The course **has aspects of inclusiveness**: info about course/training modules/curricula **openly available to public** on-line. -Availability in both online and physical presence form, **ICT use**, **youth involved**.	Often	Approx. 55%
8	The course **incorporates data from scientific research** and monitoring. The course envisages safety provisions, **risk assessment**, uses **forecasting models.** The course supports **cooperation** with other **networks** of data exchange. Developed under **regional cooperation**.	Often	Approx. 55%

№	Success factors	Frequency of mentions among stakeholders' opinions (answers) in Georgia	
		Frequency	% of stakeholders that mentioned the factor
	Learning results of the training course have been included in scientific and other types of **publications**, or **project reports**.		

Barriers in operational preparedness and response processes in Georgia

№	Barriers	Frequency of mentions among stakeholders' opinions (answers) in Georgia	
		Frequency	% of stakeholders that mentioned the factor
1	**Lack of financial and technical support**, lack of modern **equipment**, lack of **trainers.**	Generally (up to Always)	Approx. 95%
2	There is **need of networks for the response capacity**, for cooperation with other institutions, courses, programs.	Often	Approx.75%
3	The **data on** state of the marine environment in case of **emergencies** or pollution from accidents (especially from military pollutions sources) **are restricted for public** use in the training course	Often	Approx.75%
4	**Lack of trainers with experience** of being involved in real life emergency situations of response on marine pollution	Often	Approx.75%
5	**Lack of methodological support and cooperation** in format "authorities-universities-scientific institutions-NGOs"	Often	Approx.75%
6	**Some authorities** engaged in marine pollution control **don't have** institutional responsibility (**obligations**) to organize the "**response-oriented" training course**, or they do not organize it at all.	Occasionally	Approx. 40%
7	Institutions are **not aware** of other's training courses. Vertical and horizontal **integration** missed/needed.	Occasionally	Approx. 50%

Assessment lists visualization for Georgia



3. Assessment lists of success factors and barriers in operational preparedness and response processes in Romania

The Assessment list of success factors and barriers in operational preparedness and response processes in Romania is formed according to the data collected by the Project Partner - National Institute for Marine Research and Development "Grigore Antipa" (INCDM - NIMRD). This Assessment list is formed due to the data obtained as a result of on-line surveys, communications with the stakeholders and as a result of face-to-face meetings conducted with:

- 3 representatives of universities:
  - University of Bucharest;
  - Ovidius University of Constanta;
  - Maritime University of Constanta
- 2 training/education centers:
  - Activetrauning SRL;
  - Ceronav;
- 2 Administrations:
  - Romanian Waters Authorithy ;
  - Romanian Matirime Authority ;
- 2 Scientific institutes:
  - Geoecomar;
  - INCD Danube Delta;
- NGOs involved in combating pollution and emergencies, involved in training (of their staff); , and others (agencies, laboratories etc.), (involved in specific monitoring and awareness activities):
  - Mare Nostrum;
  - Oceanic Club;
  - Prietenii Deltei Dunarii

The following grades of frequency are used:

Generally (up to Always)	76% - up to 100%
Often	51%- up to 75%
Occasionally	25%-up to 50%
Rarely	Less than 25%

Success factors in operational preparedness and response processes in Romania

№	Success factors	Frequency of *mentions among stakeholders' opinions (answers)*	
		Frequency	% of stakeholders that mentioned the factor
1	**Practical relevance and demand** on the training course results, e.g.: - the course is dedicated to preparing of the staff for emergency response and reactions to marine pollution accidents; - the course is a **part of** sailors **certification process**; - the course is needed for early warning systems forming by **authorities**; - the training results of the course is **dedicated to preparing of the staff** for emergency response and reactions to marine pollution accidents	Generally (up to Always)	Approx. 90%
2	The course **meets global and national standards** in the sphere of marine pollution preparedness and response (i.e. institutionally actual and up-to-date). The course is **part of training arrangements** on national, regional or EU level The course is **related to** a particular form of legal/**regulatory requirements**	Generally (up to Always)	Up to 85%
3	The institutions, providing the course **receive** governmental, public, private or mixed **support,** including funding support, grants.	Often	Up to 65%
4	The course includes discussion of **case studies**. The **instructors have experience** of being involved in real life emergency situations of response on marine pollution	Often	Up to 60%
5	The course provides training on waste recycling models or other innovations and **demonstrates use of equipment.** The course provides **practical emergency and response training** at sea, at training facilities. The course deals with early warning systems and elements of marine pollution preparedness and response	Often	Up to 55%
6	The most **relevant types/sources** of marine pollution **are addressed** in the training course The course **considers new sources of pollution** (such as the armed conflicts) and is revised (updated) systematically	Occasionally	Up to 50%
7	The course **has aspects of inclusiveness** e.g.:	Occasionally	Up to 50%

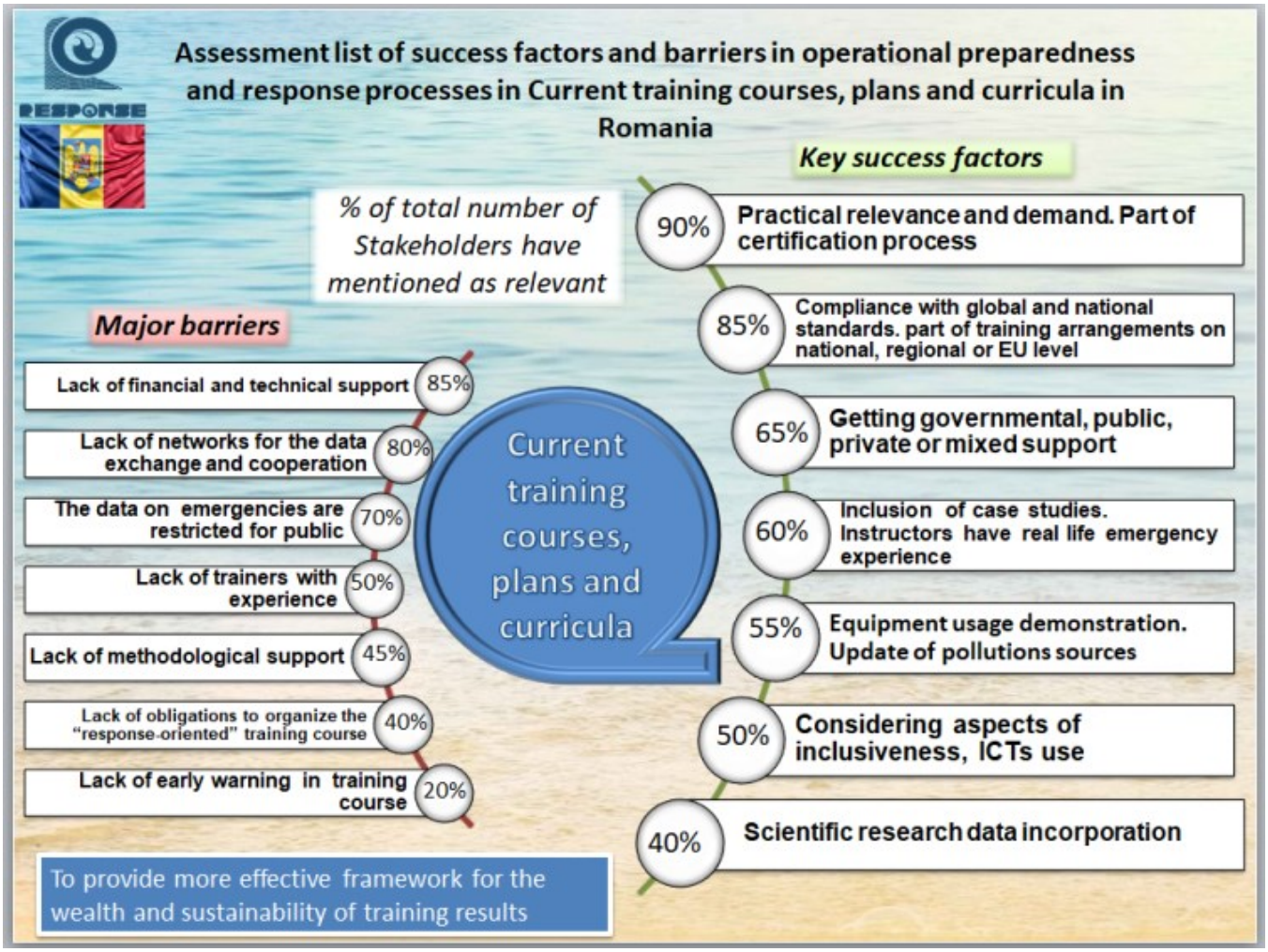
№	Success factors	Frequency of ***mentions among stakeholders' opinions (answers)***	
		Frequency	% of stakeholders that mentioned the factor
	- information about the course/training modules/curricula **openly available to the public** on-line; -**free of charge**, availability in both online and physical presence form, **ICT use**, **youth and women involved**, other aspects of inclusiveness		
8	The course **incorporates data from scientific research** and monitoring. The course envisages safety provisions, **risk assessment**, uses **forecasting models** that improve response readiness and pollution-risk mitigation The course supports cooperation with other like-minded institutions, courses, programmes, networks of data exchange and actualization. Learning results of the training course have been included in scientific and other types of publications, or reports	Occasionally	Up to 40%

Barriers in operational preparedness and response processes in Romania

№	Barriers	Frequency of ***mentions among stakeholders' opinions (answers)***	
		Frequency	% of stakeholders that mentioned the factor
1	**Lack of financial and technical support**, lack of modern **equipment**	Generally (up to Always)	Approx. 85%
2	There is **lack of networks for the "response readiness"** data exchange, for cooperation with other like-minded institutions, courses, programmes. There is need in common professional data portal that can provide necessary information about standards up-dates and **to gather the community**.	Often	Up to 80%
3	The **data on** state of the marine environment in case of **emergencies** or pollution from accidents (especially from military pollutions sources) **are restricted for public** use in the training course	Often	Up to 70%
4	**Lack of trainers with experience** of being involved in real life emergency situations of response on marine pollution	Occasionally	Up to 50%

№	Barriers	Frequency of ***mentions among stakeholders' opinions (answers)***	
		Frequency	% of stakeholders that mentioned the factor
5	**Lack of methodological support and cooperation** in format "authorities-universities-scientific institutions-NGOs"	Occasionally	Up to 45%
6	**Some authorities** engaged in marine pollution control **don't have** institutional responsibility (**obligations**) to organize the "**response-oriented" training course**. They organize it ocassionaly	Occasionally	Up to 40%
7	**Some of the courses** are **oriented** rather **on** marine pollution accidents **influence mitigation then on early warning** and prediction of marine pollutions	Rarely	Less than 20%

Assessment lists visualization for Romania



4. Assessment lists of success factors and barriers in operational preparedness and response processes in Ukraine

The Assessment list of success factors and barriers in operational preparedness and response processes is formed according to the data collected by 2 Ukrainian Project Partners: State Organization "Institute of Market and Economic & Ecological research of the National Academy of Sciences of Ukraine" (IMEER NASU) and Black Sea Branch of Ukrainian Environment Academy of Sciences(BSB UEAS). The data are obtained as a result of on-line surveys, communications with the stakeholders and as a result of face-to-face meetings conducted with:

- 4 representatives of Universities, colleges, training/education center;
- 3 Administrations involved in combating pollution and emergencies, involved in training (of their staff);
- 3 Scientific institutes, and others (agencies, laboratories etc.);
- NGOs (involved in specific monitoring and awareness activities) and some others.

The following grades of frequency are used:

Generally (up to Always)	76% - up to 100%
Often	51%- up to 75%
Occasionally	25%-up to 50%
Rarely	Less than 25%

Success factors in operational preparedness and response processes in Ukraine

№	Success factors	Frequency of ***mentions among stakeholders' opinions (answers)***	
		Frequency	% of stakeholders that mentioned the factor
1	**Practical relevance and demand** on the training course results, e.g.: - the course is dedicated to preparing of the staff for emergency response and reactions to marine pollution accidents; - the course is a **part of** sailors **certification process**; - the course is needed for early warning systems forming by **authorities**; - the training results of the course is **dedicated to preparing of the staff** for emergency response and reactions to marine pollution accidents	Generally (up to Always)	Approx. 95%
2	The course **meets global and national standards** in the sphere of marine pollution preparedness and response (i.e. institutionally actual and up-to-date). The course is **part of training arrangements** on national, regional or EU level The course is **related to** a particular form of legal/**regulatory requirements**	Generally (up to Always)	Up to 80%
3	The institutions, providing the course **receive** governmental, public, private or mixed **support,** including funding support, grants.	Often	Up to 70%
4	The course includes discussion of **case studies**. The **instructors have experience** of being involved in real life emergency situations of response on marine pollution	Often	Up to 60%
5	The course provides training on waste recycling models or other innovations and **demonstrates use of equipment.** The course provides **practical emergency and response training** at sea, at training facilities. The course deals with early warning systems and elements of marine pollution preparedness and response	Often	Up to 60%
6	The most relevant types/sources of marine pollution are addressed in the training course The course considers new sources of pollution (such as the armed conflicts) and is revised (updated) systematically	Often	Up to 60%
7	The course **has aspects of inclusiveness** e.g.: - information about the course/training modules/curricula **openly available to the public** on-line;	Occasionally	Up to 50%

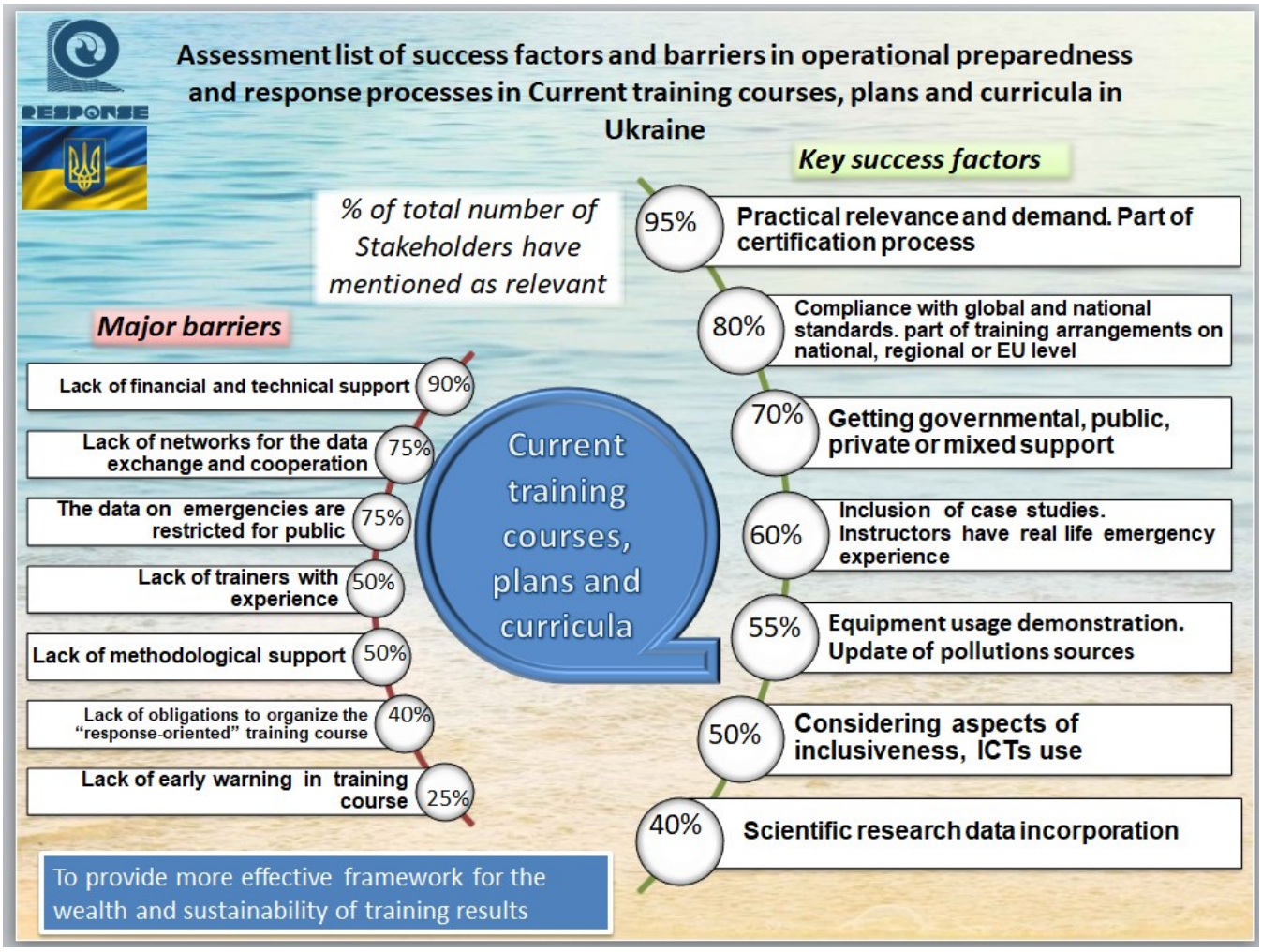
№	Success factors	Frequency of ***mentions among stakeholders' opinions (answers)***	
		Frequency	% of stakeholders that mentioned the factor
	-**free of charge**, availability in both online and physical presence form, **ICT use**, **youth and women involved**, other aspects of inclusiveness		
8	The course **incorporates data from scientific research** and monitoring. The course envisages safety provisions, **risk assessment**, uses **forecasting models** that improve response readiness and pollution-risk mitigation The course supports cooperation with other like-minded institutions, courses, programmes, networks of data exchange and actualization. Learning results of the training course have been included in scientific and other types of publications, or reports	Occasionally	Up to 50%

Barriers in operational preparedness and response processes in Ukraine

№	Barriers	Frequency of ***mentions among stakeholders' opinions (answers)***	
		Frequency	% of stakeholders that mentioned the factor
1	**Lack of financial and technical support**, lack of modern **equipment**	Generally (up to Always)	Approx. 90%
2	There is **lack of networks for the "response readiness"** data exchange, for cooperation with other like-minded institutions, courses, programmes. There is need in common professional data portal that can provide necessary information about standards up-dates and **to gather the community**.	Often	Up to 75%
3	The **data on** state of the marine environment in case of **emergencies** or pollution from accidents (especially from military pollutions sources) **are restricted for public** use in the training course	Often	Up to 75%
4	**Lack of trainers with experience** of being involved in real life emergency situations of response on marine pollution	Occasionally	Up to 50%
5	**Lack of methodological support and cooperation** in format "authorities-universities-scientific institutions-NGOs"	Occasionally	Up to 50%
6	**Some authorities** engaged in marine pollution control **don't have** institutional responsibility (**obligations**) to organize the	Occasionally	Up to 40%

№	Barriers	Frequency of ***mentions among stakeholders' opinions (answers)***	
		Frequency	% of stakeholders that mentioned the factor
	"**response-oriented" training course**. They organize it occasionally		
7	**Some of the courses** are **oriented** rather **on** marine pollution accidents **influence mitigation than on early warning** and prediction of marine pollutions	Rarely	Less than 25%

Assessment lists visualization for Ukraine



5. Synthesis

The Assessment lists data on success factors and barriers in operational preparedness and response processes were analyzed by Ukrainian Project Partner State Organization "Institute of Market and Economic & Ecological research of the National Academy of Sciences of Ukraine" (IMEER NASU) and the following summarizing table with ranks is proposed:

The Assessment lists summarizing and ranks success of factors and barriers in operational preparedness and response processes in Black Sea countries

№	**Success factors** (*Mentioned by Stakeholders)*	**Bulgaria**	**Georgia**	**Romania**	**Ukraine**	**Total average**	**Rating**
		%	%	%	%	%	
1	**Practical relevance and demand** on the training course results, e.g.: - the course is dedicated to preparing of the staff for emergency response and reactions to marine pollution accidents; - the course is a part of sailors' certification process (for inst. related to MARPOL) - the course is needed for early warning systems forming by authorities; - the training results of the course is dedicated to preparing of the staff for emergency response and reactions to marine pollution accidents	93	10	90	95	72	**1**
2	**The course meets global and national standards** in the sphere of marine pollution preparedness and response (i.e. institutionally actual and up-to-date). The course is part of training arrangements on national, regional or EU level The course is related to a particular form of legal/regulatory requirements	93	10	85	80	67	**2**
3	**The institutions, providing the course receive governmental**, public, private or mixed **support**, including funding support, grants.	80	10	65	70	56	**3**
4	**The course includes discussion of case studies**. The instructors have experience of being involved in real life emergency situations of response on marine pollution	70	10	60	60	50	**5**

№	**Success factors** (*Mentioned by Stakeholders)*	**Bulgaria**	**Georgia**	**Romania**	**Ukraine**	**Total average**	**Rating**
		%	%	%	%	%	
5	**The course provides training on waste recycling models** or other innovations and demonstrates use of equipment. The course provides practical emergency and response training at sea, at training facilities. The course deals with early warning systems and elements of marine pollution preparedness and response The most relevant types/sources of marine pollution are addressed in the training course The course considers new sources of pollution (such as the armed conflicts) and is revised (updated) systematically	70	10	55	60	49	**6**
6	**The most relevant types/sources of marine pollution are addressed in the training course** The course considers new sources of pollution (such as the armed conflicts) and is revised (updated) systematically	65	10	50	60	46	**7**
7	**The course has aspects of inclusiveness** e.g.: - information about the course/training modules/curricula openly available to the public on-line; -free of charge, availability in both online and physical presence form, ICT use, youth and women involved, other aspects of inclusiveness	50	55	50	50	51	**4**
8	**The course incorporates data from scientific research and monitoring.** The course envisages safety provisions, risk assessment, uses forecasting models that improve response readiness and pollution-risk mitigation The course supports cooperation with other like-minded institutions, courses, programmes, networks of data exchange and actualization. Learning results of the training course have been included in scientific and other types of publications, or reports	40	55	40	40	44	**8**

№	Barriers (*Mentioned by Stakeholders)*	Bulgaria	Georgia	Romania	Ukraine	Total average	Rating
		%	%	%	%	%	
1	**Lack of financial and technical support**, lack of modern **equipment**	85	95	85	90	89	**1**
2	**There is lack of networks for the "response readiness"** data exchange, for cooperation with other like-minded institutions, courses, programmes. **Institutions are not aware of other's training courses**. There is need in common professional data portal that can provide necessary information about standards up-dates and to gather the community	77	75	80	75	77	**2**
3	**The data on state** of the marine environment **in case of emergencies or pollution from accidents** (especially from military pollutions sources) **are restricted for public use** in the training course	0	75	70	75	55	**3**
4	**Lack of trainers with experience** of being involved in real life emergency situations of response on marine pollution	0	75	50	50	44	**4**
5	**Lack of methodological support** and cooperation in format "authorities-universities-scientific institutions-NGOs"	0	75	45	50	43	**5**
6	**Some authorities** engaged in marine pollution control **don't have institutional responsibility** (obligations) to organize the "response-oriented" training course. They organize it occasionally	0	40	40	40	30	**7**
7	**Some of the courses are highly specified**, i.e.: **adress to specific types of polution (e.g. oil polution only**); oriented rather on marine pollution accidents influence mitigation than on early warning and prediction of marine pollutions	78	0	20	40	35	**6**

Assessment lists visualization for Black Sea countries - Synthesis