Asian Nuclear Safety Network (ANSN) Regional Workshop on Radiological Environmental Impact Assessment for Nuclear Installations (24-28 October 2022)

Thursday, October 27, 2022

27

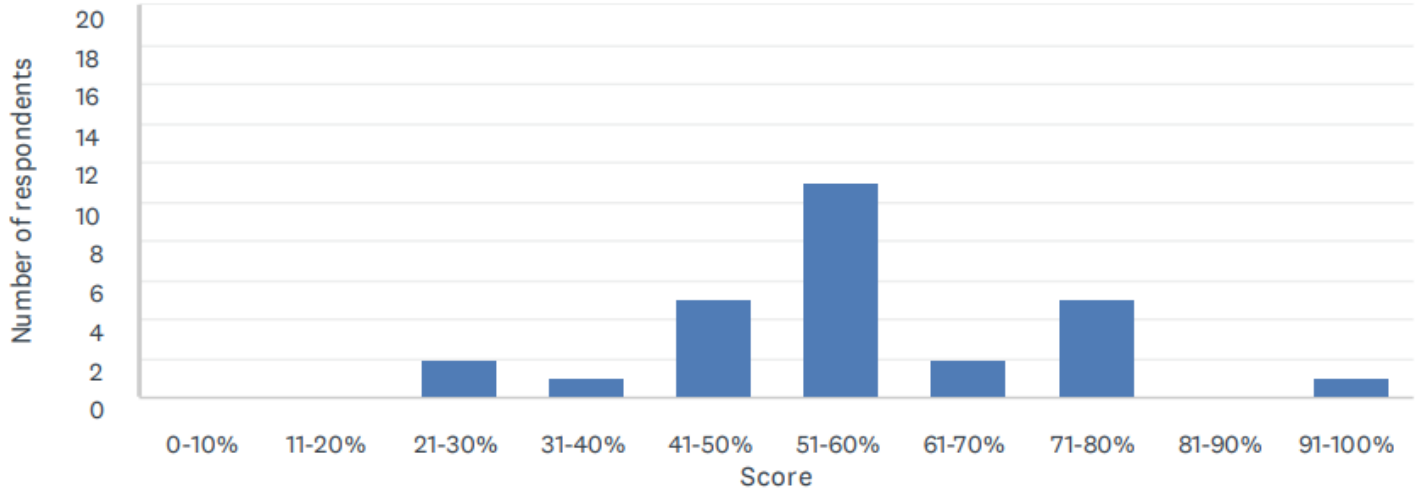
Total Responses

Date Created: Wednesday, October 26, 2022

Complete Responses: 27

AVERAGE SCORE

57% • 8.0/14 PTS



STATISTICS

Lowest Score	Median	Highest Score
21%	57%	93%

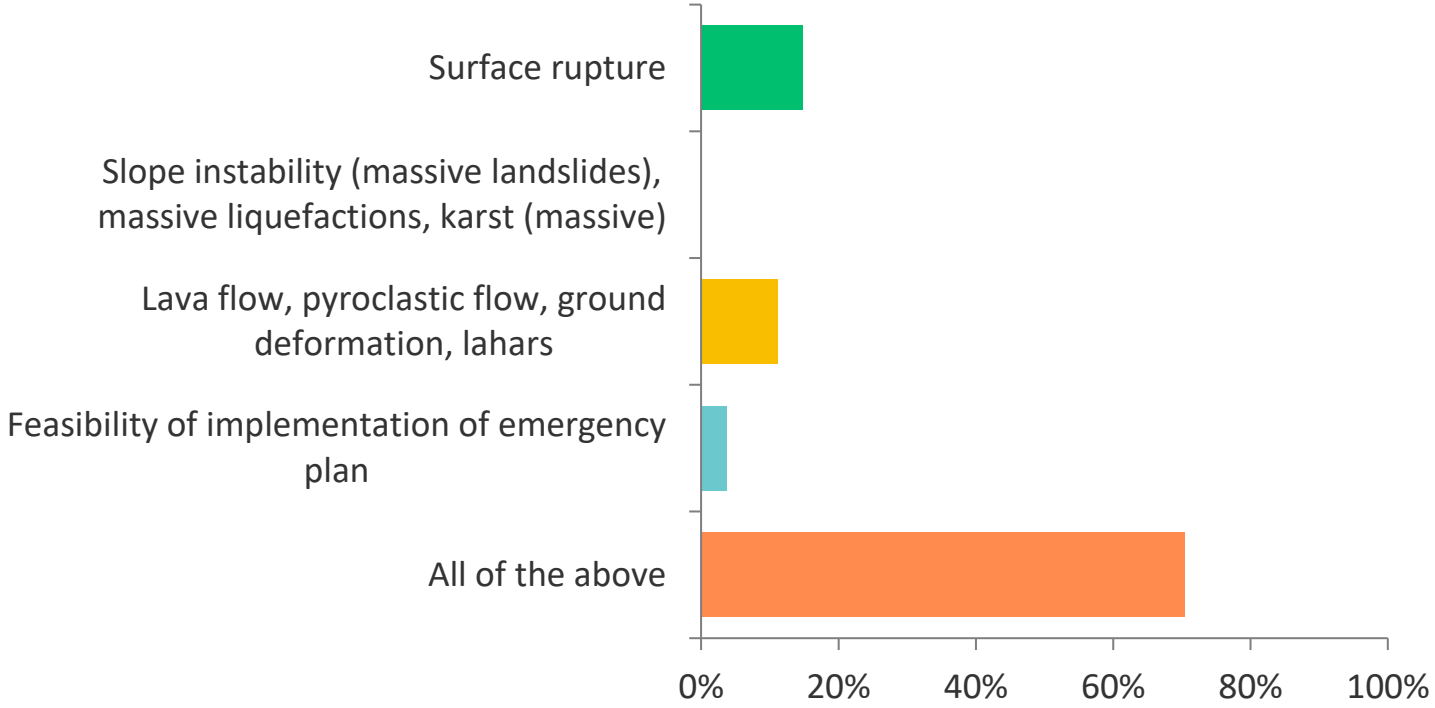
Mean: 57%

Standard Deviation: 15%

QUESTIONS (14)	DIFFICULTY	AVERAGE SCORE
Q3 Which of these is not involved in site evaluation process for nuclear installations?	1	15%
Q15 Which of these statements about the old (existing) safety guide (IAEA NSG 3.2) is not true?	2	19%
Q6 Which of these pathways will have a long-term exposure and impact?	3	22%
Q9 What best describes the Representative Person?	4	44%
Q5 Which of these is not involved in a project work plan for environmental impact assessment for a nuclear installation site?	5	52%
Q7 Which type of atmospheric dispersion model could model dispersion at the global scale?	5	52%
Q11 Which of these is not a parameter that should be determined for radionuclide transport in rivers?	7	59%
Q13 Which of these statements is true about hydrological investigations of surface waters?	7	59%
Q2 Which of these is correct for siting process?	9	63%
Q1 Which of these aspects are exclusionary criteria used in siting process?	10	70%
Q14 What is the main reason for recommending the use a numerical model in assessing the impact of nuclear installations of groundwater systems.	11	78%
Q8 How many years of meteorological data do you need to collect for assessing impact of installation on the environment?	11	78%
Q10 If it is considered that for the site/installation combination that no feasible emergency plan could be developed, what should happen?	13	85%
Q12 Which of these statements is not true about analytical solutions?	14	100%

Q1: Which of these aspects are exclusionary criteria used in siting process?

Answered: 27 Skipped: 0



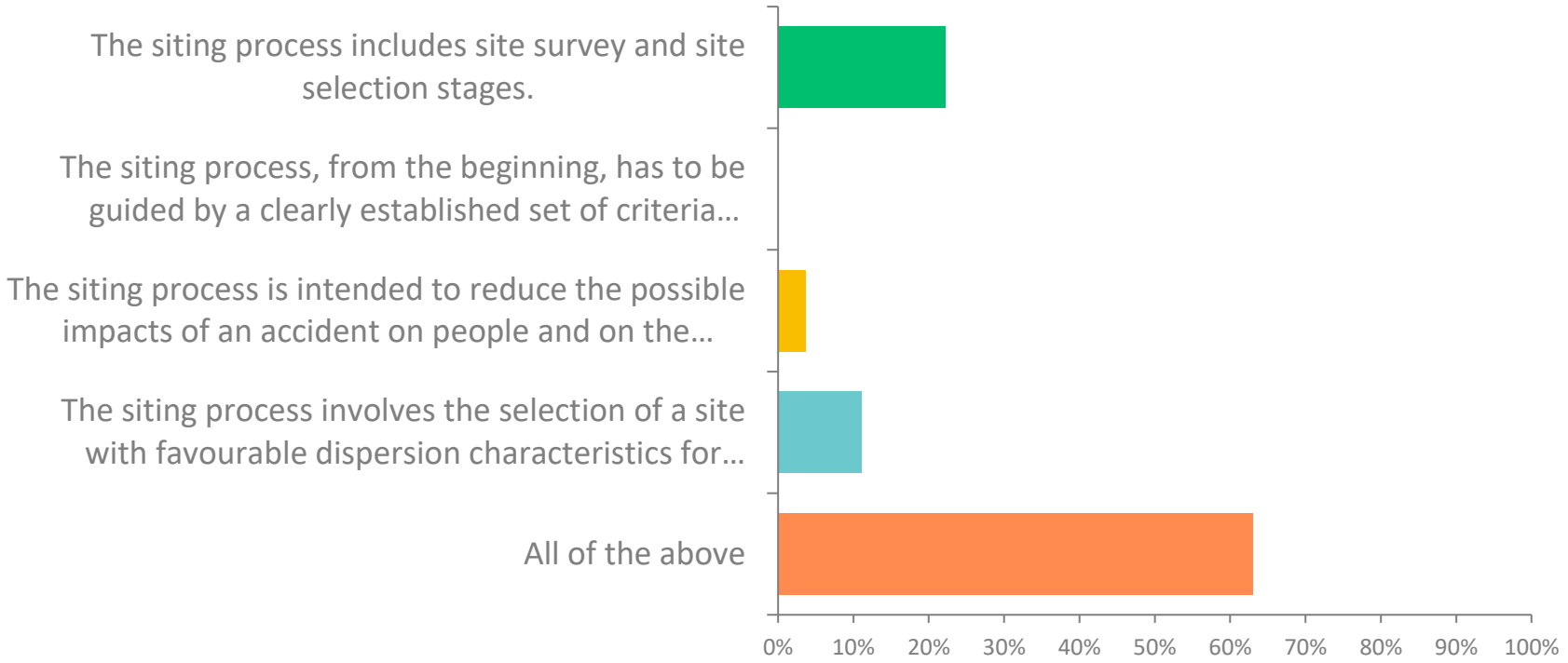
Q1: Which of these aspects are exclusionary criteria used in siting process?

Answered: 27 Skipped: 0

ANSWER CHOICES	RESPONSES	
Surface rupture	14.81%	4
Slope instability (massive landslides), massive liquefactions, karst (massive)	0%	0
Lava flow, pyroclastic flow, ground deformation, lahars	11.11%	3
Feasibility of implementation of emergency plan	3.70%	1
All of the above	70.37%	19
TOTAL		27

Q2: Which of these is correct for siting process?

Answered: 27 Skipped: 0



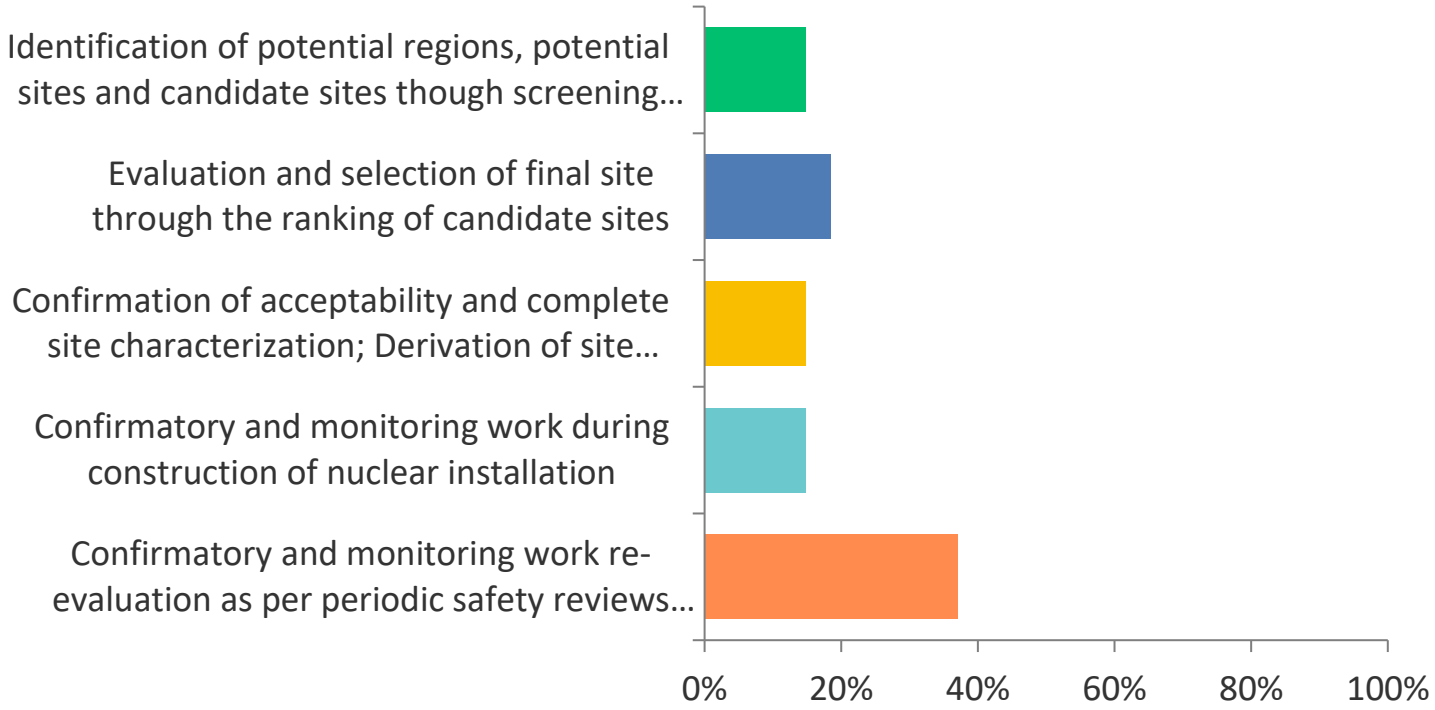
Q2: Which of these is correct for siting process?

Answered: 27 Skipped: 0

ANSWER CHOICES	RESPONSES	
The siting process includes site survey and site selection stages.	22.22%	6
The siting process, from the beginning, has to be guided by a clearly established set of criteria consistent with the relevant regulatory requirements.	0%	0
The siting process is intended to reduce the possible impacts of an accident on people and on the environment.	3.70%	1
The siting process involves the selection of a site with favourable dispersion characteristics for radionuclides in the air, in surface water and subsurface water, and also with a terrain, population distribution and infrastructure that would facilitate the implementation of an emergency plan.	11.11%	3
All of the above	62.96%	17
TOTAL		27

Q3: Which of these is not involved in site evaluation process for nuclear installations?

Answered: 27 Skipped: 0



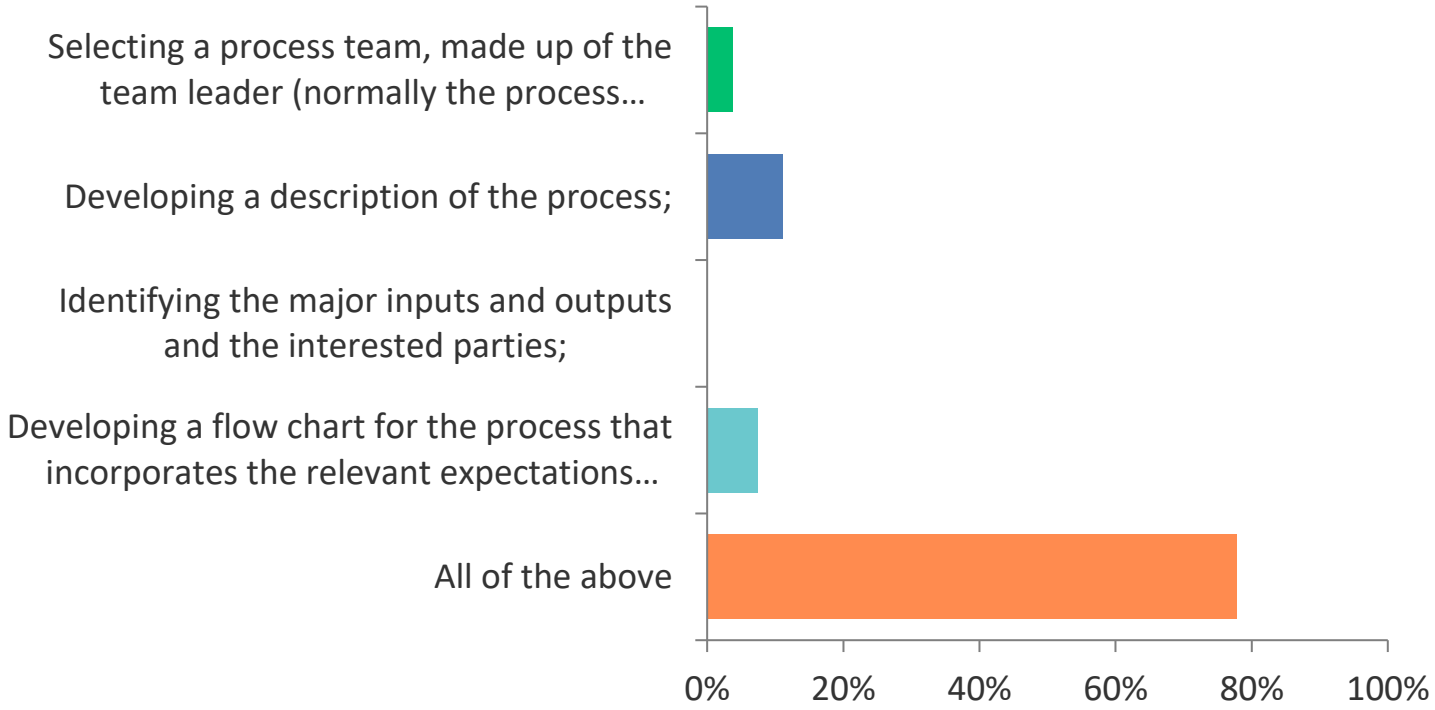
Q3: Which of these is not involved in site evaluation process for nuclear installations?

Answered: 27 Skipped: 0

ANSWER CHOICES	RESPONSES	
Identification of potential regions, potential sites and candidate sites though screening and comparison	14.81%	4
Evaluation and selection of final site through the ranking of candidate sites	18.52%	5
Confirmation of acceptability and complete site characterization; Derivation of site related design basis	14.81%	4
Confirmatory and monitoring work during construction of nuclear installation	14.81%	4
Confirmatory and monitoring work re-evaluation as per periodic safety reviews during operation of nuclear installation	37.04%	10
TOTAL		27

Q4: Which of these is performed in development of a process?

Answered: 27 Skipped: 0



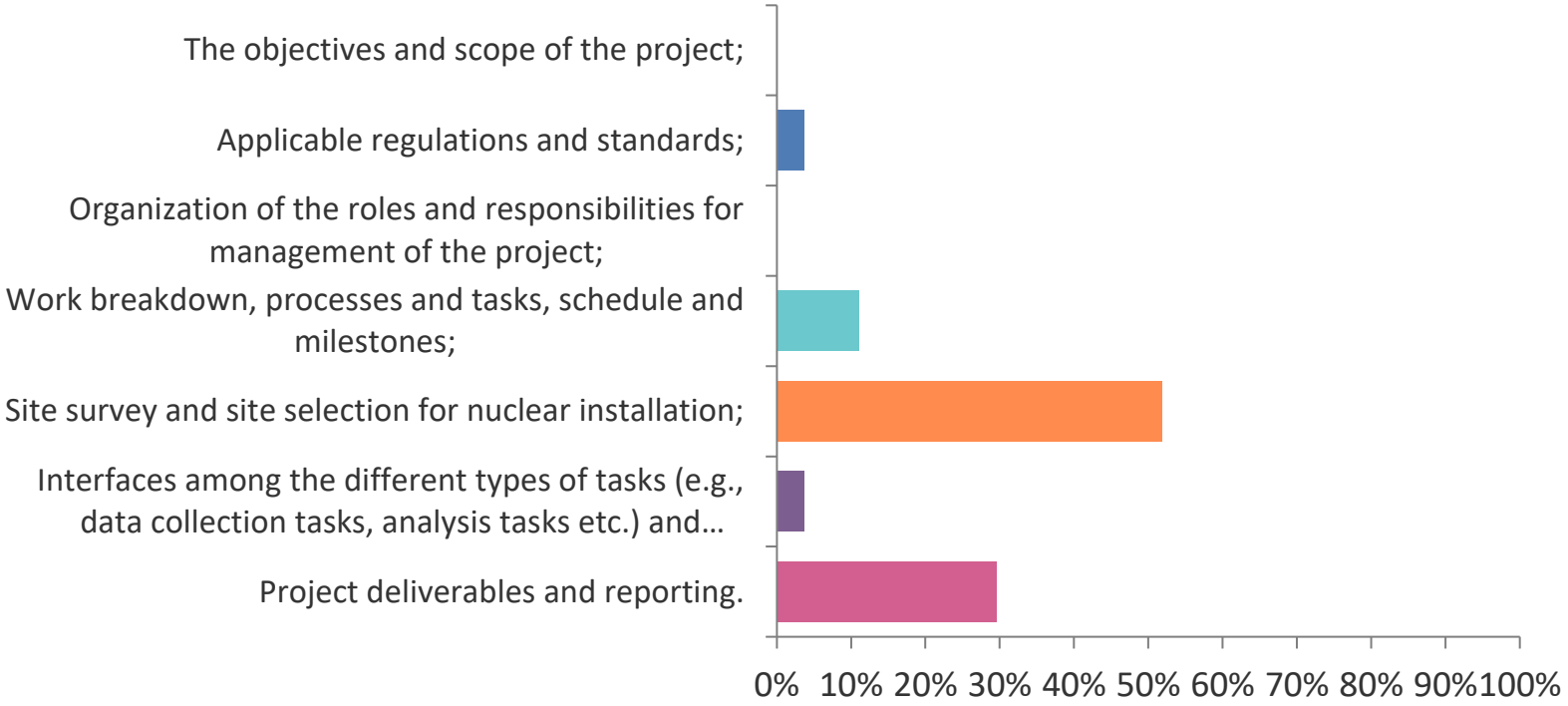
Q4: Which of these is performed in development of a process?

Answered: 27 Skipped: 0

ANSWER CHOICES	RESPONSES	
Selecting a process team, made up of the team leader (normally the process owner), the team itself (representatives from the departments that are affected) and a facilitator;	3.70%	1
Developing a description of the process;	11.11%	3
Identifying the major inputs and outputs and the interested parties;	0%	0
Developing a flow chart for the process that incorporates the relevant expectations and identifies related documentation.	7.41%	2
All of the above	77.78%	21
TOTAL		27

Q5: Which of these is not involved in a project work plan for environmental impact assessment for a nuclear installation site?

Answered: 27 Skipped: 0



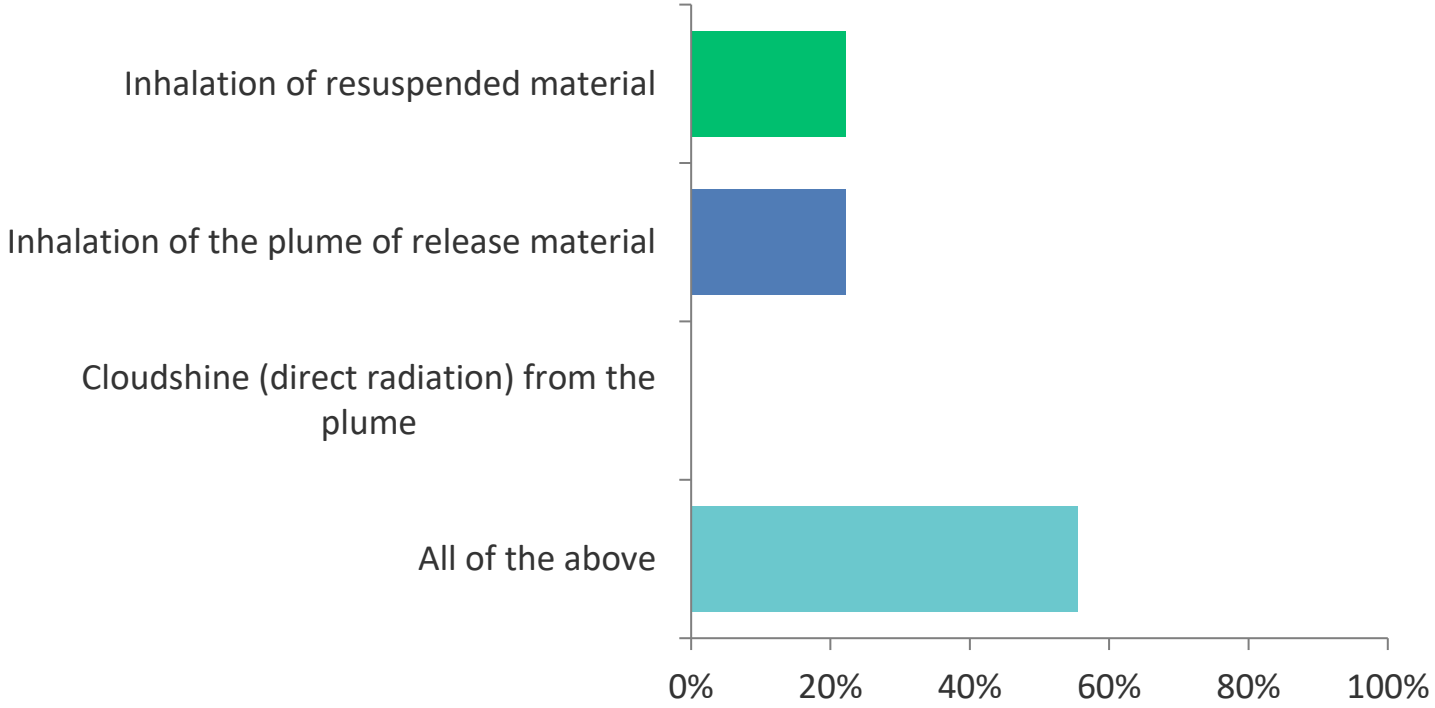
Q5: Which of these is not involved in a project work plan for environmental impact assessment for a nuclear installation site?

Answered: 27 Skipped: 0

ANSWER CHOICES	RESPONSES	
The objectives and scope of the project;	0%	0
Applicable regulations and standards;	3.70%	1
Organization of the roles and responsibilities for management of the project;	0%	0
Work breakdown, processes and tasks, schedule and milestones;	11.11%	3
Site survey and site selection for nuclear installation;	51.85%	14
Interfaces among the different types of tasks (e.g., data collection tasks, analysis tasks etc.) and disciplines involved, especially the various specialists required for the different aspects of site characteristics and evaluation of radiation risks to the public and the environment with all necessary inputs and outputs;	3.70%	1
Project deliverables and reporting.	29.63%	8
TOTAL		27

Q6: Which of these pathways will have a long-term exposure and impact?

Answered: 27 Skipped: 0



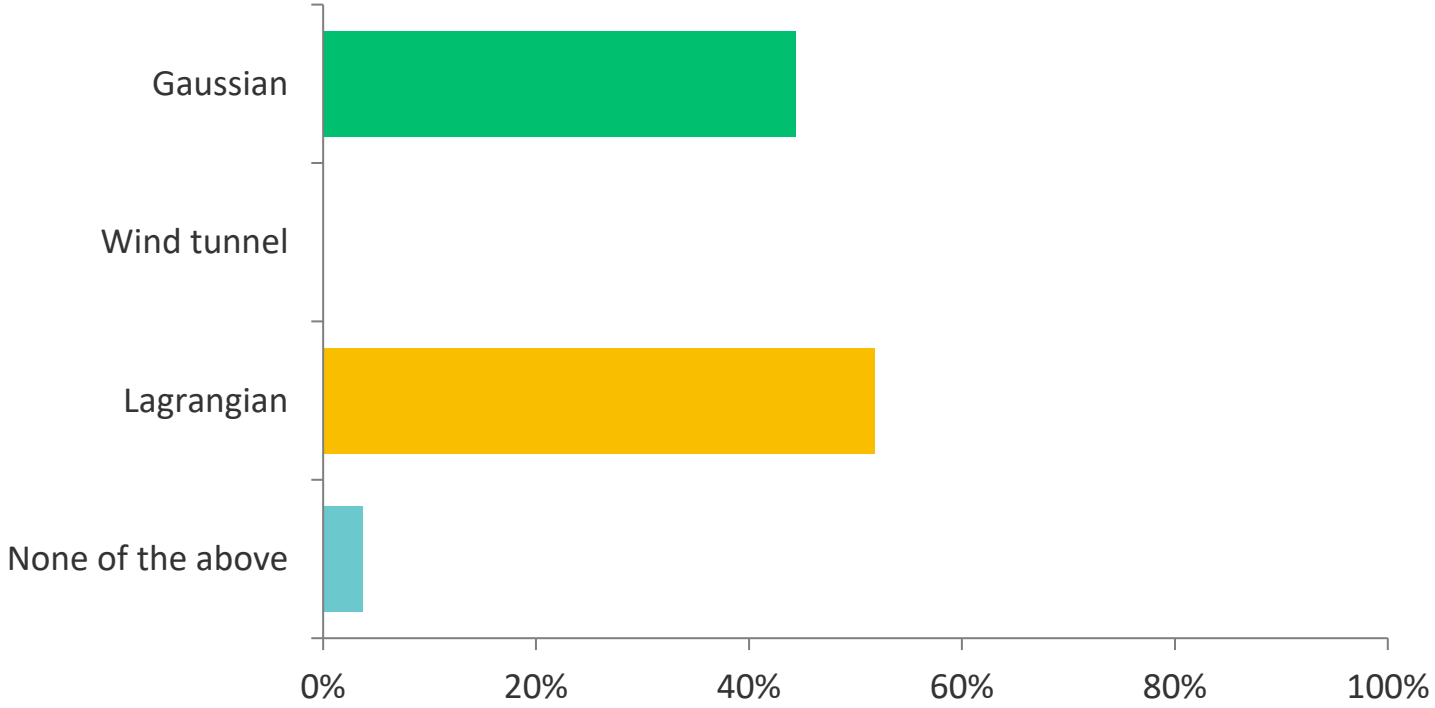
Q6: Which of these pathways will have a long-term exposure and impact?

Answered: 27 Skipped: 0

ANSWER CHOICES	RESPONSES	
Inhalation of resuspended material	22.22%	6
Inhalation of the plume of release material	22.22%	6
Cloudshine (direct radiation) from the plume	0%	0
All of the above	55.56%	15
TOTAL		27

Q7: Which type of atmospheric dispersion model could model dispersion at the global scale?

Answered: 27 Skipped: 0



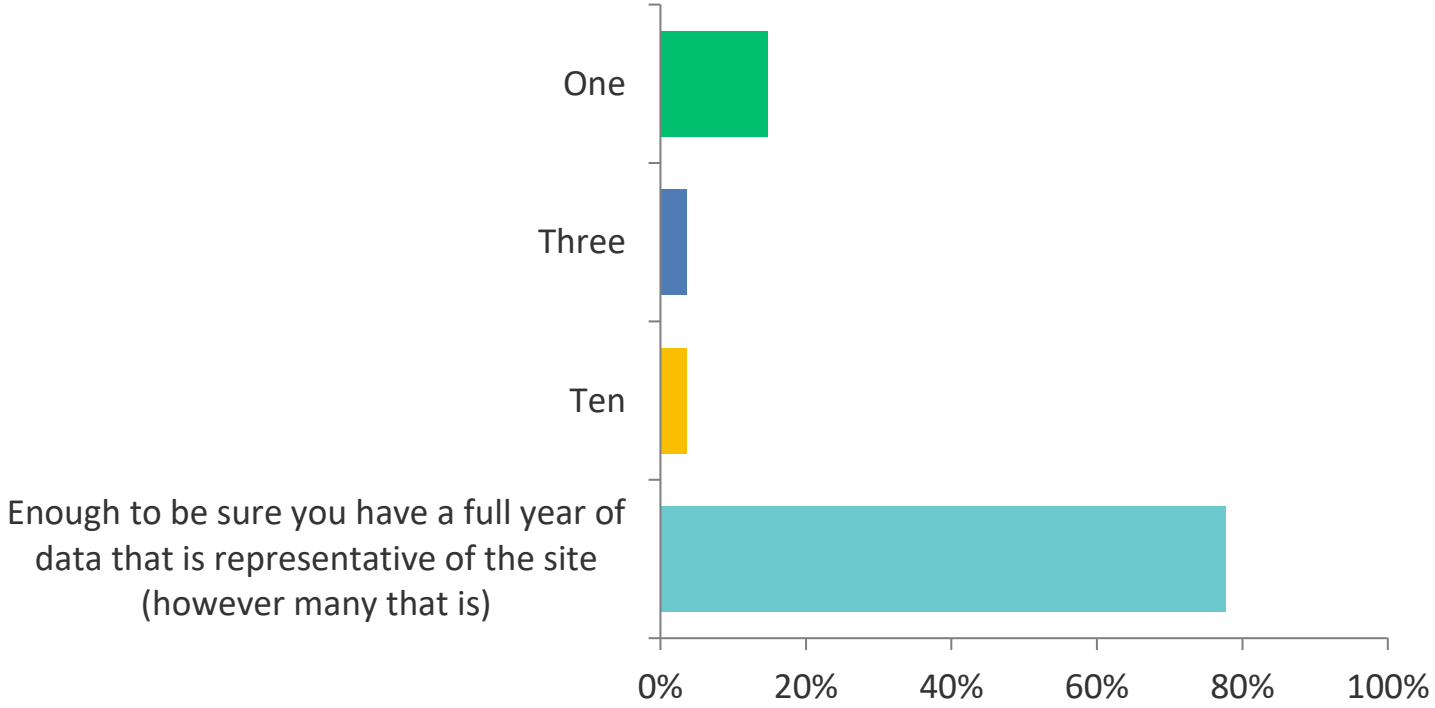
Q7: Which type of atmospheric dispersion model could model dispersion at the global scale?

Answered: 27 Skipped: 0

ANSWER CHOICES	RESPONSES	
Gaussian	44.44%	12
Wind tunnel	0%	0
Lagrangian	51.85%	14
None of the above	3.70%	1
TOTAL		27

Q8: How many years of meteorological data do you need to collect for assessing impact of installation on the environment?

Answered: 27 Skipped: 0



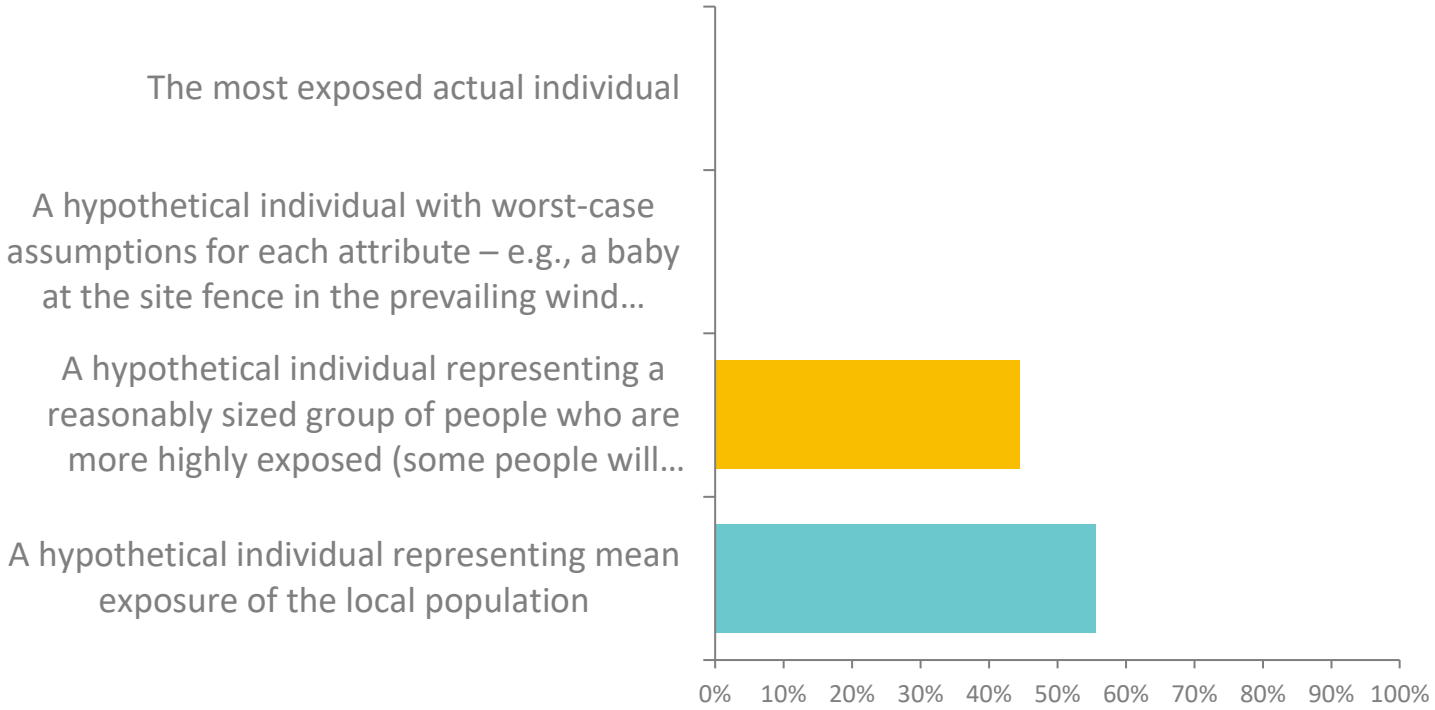
Q8: How many years of meteorological data do you need to collect for assessing impact of installation on the environment?

Answered: 27 Skipped: 0

ANSWER CHOICES	RESPONSES	
One	14.81%	4
Three	3.70%	1
Ten	3.70%	1
Enough to be sure you have a full year of data that is representative of the site (however many that is)	77.78%	21
TOTAL		27

Q9: What best describes the Representative Person?

Answered: 27 Skipped: 0



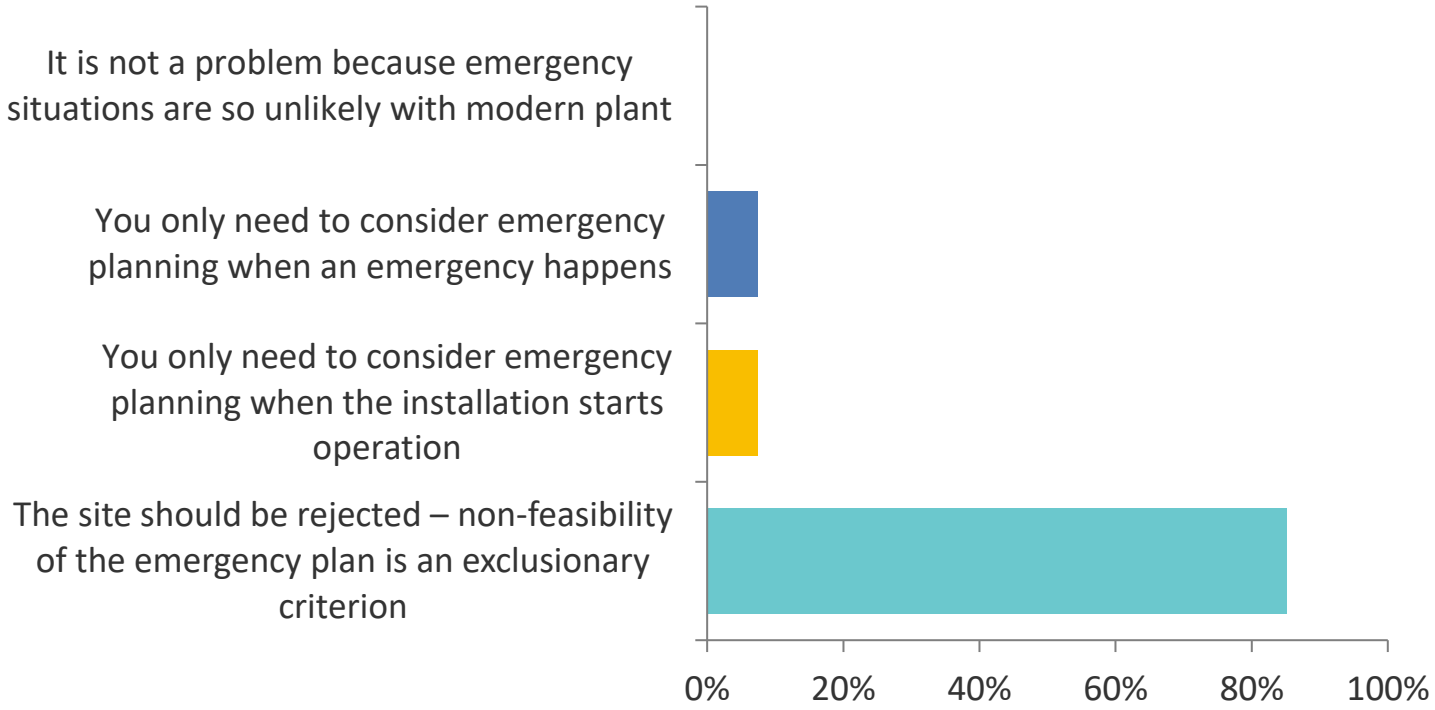
Q9: What best describes the Representative Person?

Answered: 27 Skipped: 0

ANSWER CHOICES	RESPONSES	
The most exposed actual individual	0%	0
A hypothetical individual with worst-case assumptions for each attribute – e.g., a baby at the site fence in the prevailing wind direction consuming food produced at the same location	0%	0
A hypothetical individual representing a reasonably sized group of people who are more highly exposed (some people will have a higher dose but most will be less)	44.44%	12
A hypothetical individual representing mean exposure of the local population	55.56%	15
TOTAL		27

Q10: If it is considered that for the site/installation combination that no feasible emergency plan could be developed, what should happen?

Answered: 27 Skipped: 0



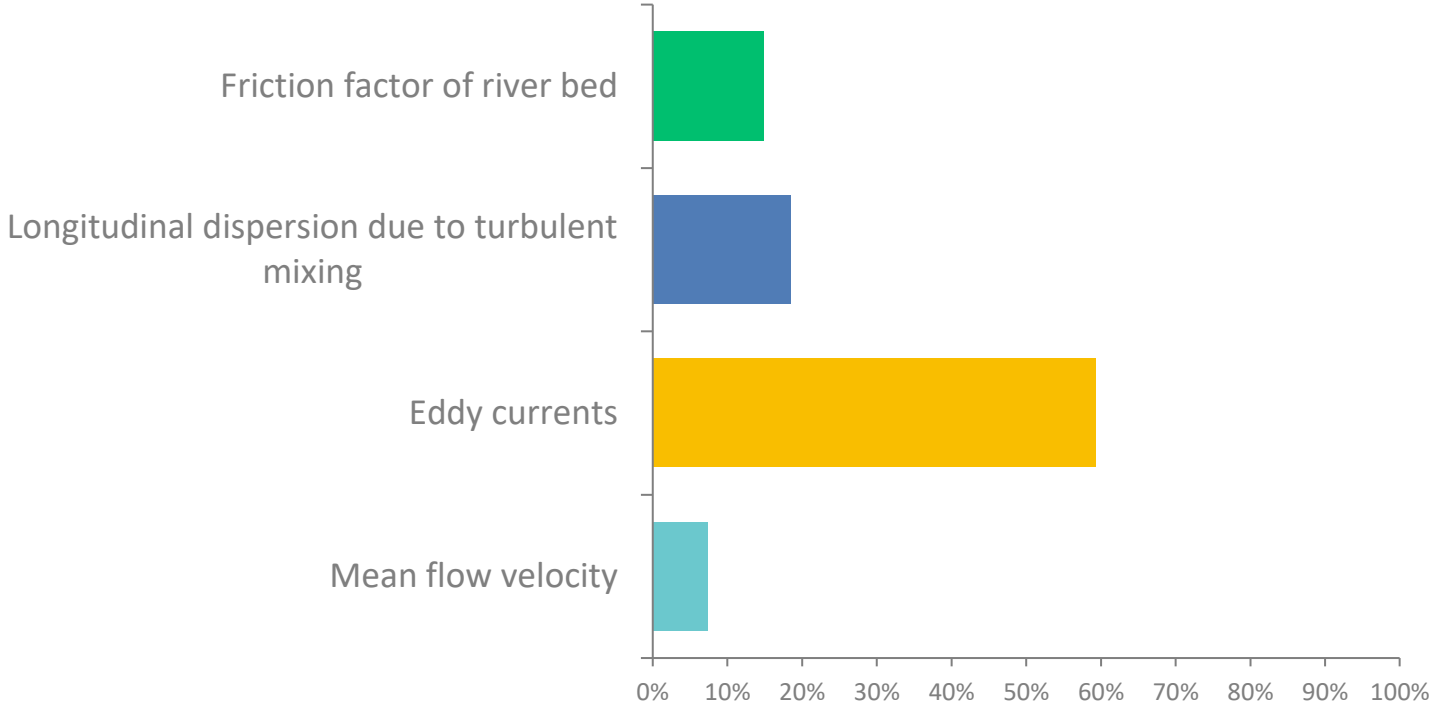
Q10: If it is considered that for the site/installation combination that no feasible emergency plan could be developed, what should happen?

Answered: 27 Skipped: 0

ANSWER CHOICES	RESPONSES	
It is not a problem because emergency situations are so unlikely with modern plant	0%	0
You only need to consider emergency planning when an emergency happens	7.41%	2
You only need to consider emergency planning when the installation starts operation	7.41%	2
The site should be rejected – non-feasibility of the emergency plan is an exclusionary criterion	85.19%	23
TOTAL		27

Q11: Which of these is not a parameter that should be determined for radionuclide transport in rivers?

Answered: 27 Skipped: 0



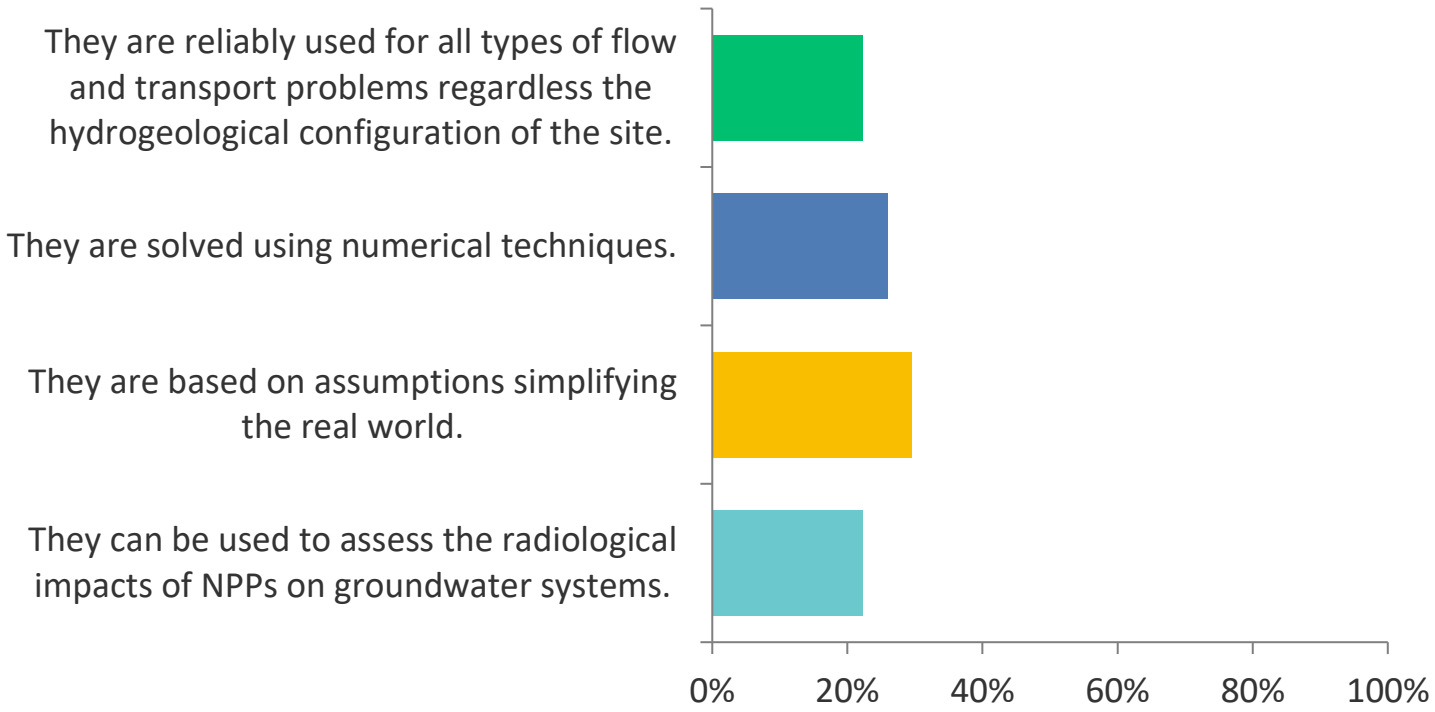
Q11: Which of these is not a parameter that should be determined for radionuclide transport in rivers?

Answered: 27 Skipped: 0

ANSWER CHOICES	RESPONSES	
Friction factor of river bed	14.81%	4
Longitudinal dispersion due to turbulent mixing	18.52%	5
Eddy currents	59.26%	16
Mean flow velocity	7.41%	2
TOTAL		27

Q12: Which of these statements is true about analytical solutions?

Answered: 27 Skipped: 0



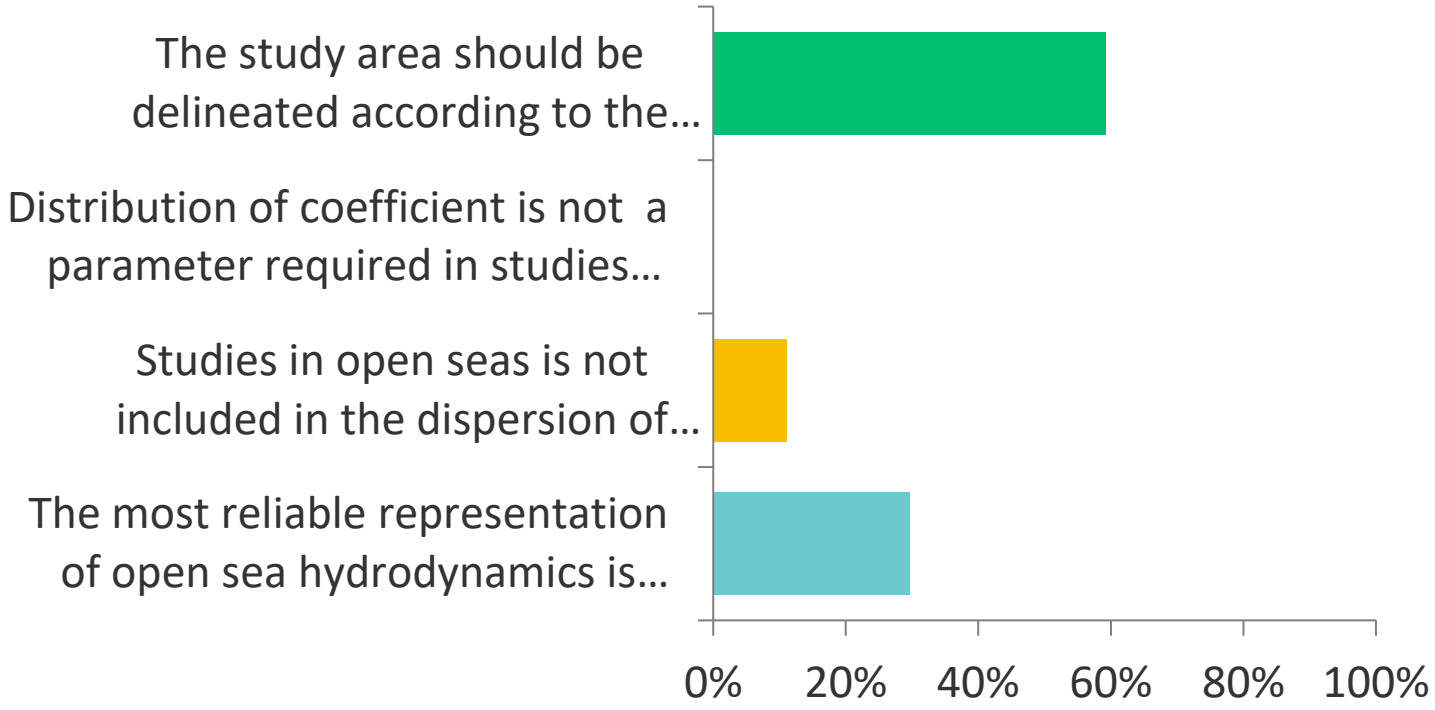
Q12: Which of these statements is true about analytical solutions?

Answered: 27 Skipped: 0

ANSWER CHOICES	RESPONSES	
They are reliably used for all types of flow and transport problems regardless the hydrogeological configuration of the site.	22.22%	6
They are solved using numerical techniques.	25.93%	7
They are based on assumptions simplifying the real world.	29.63%	8
They can be used to assess the radiological impacts of NPPs on groundwater systems.	22.22%	6
TOTAL		27

Q13: Which of these statements is true about hydrological investigations of surface waters?

Answered: 27 Skipped: 0



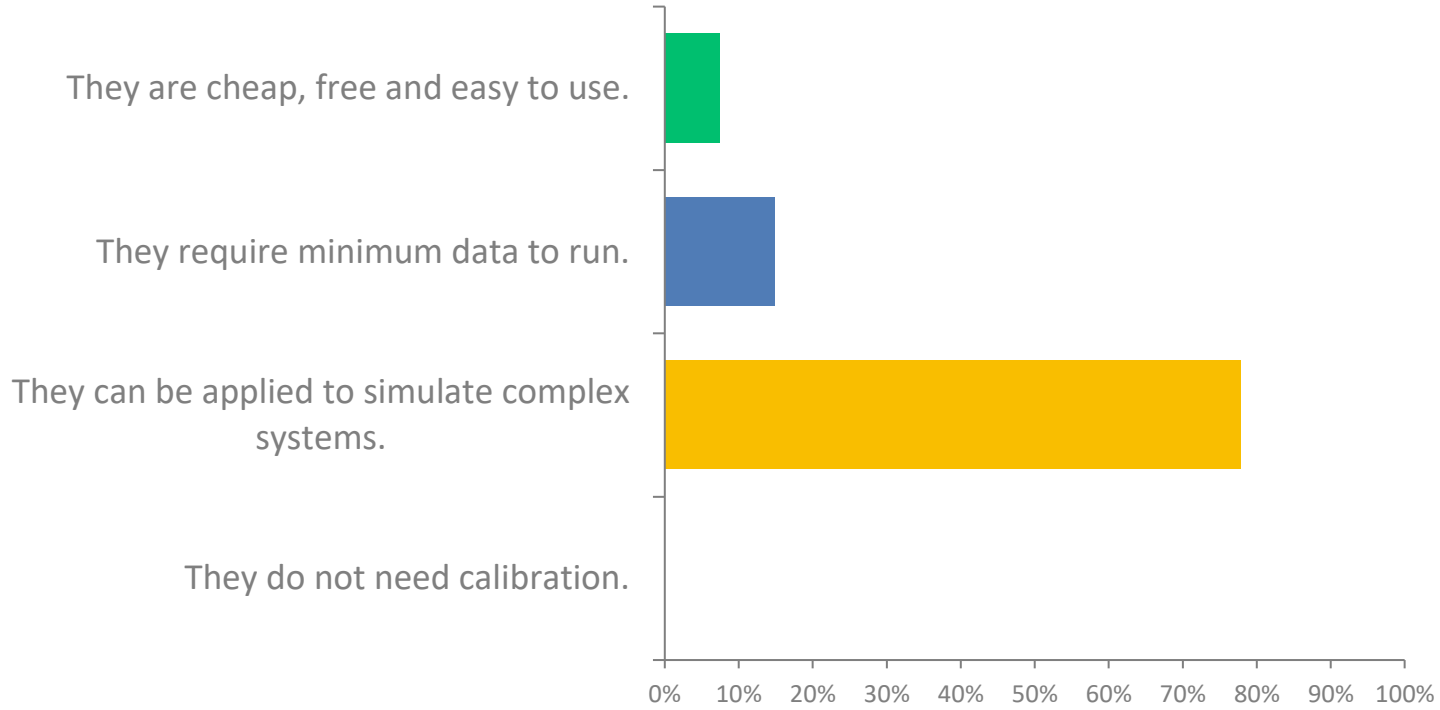
Q13: Which of these statements is true about hydrological investigations of surface waters?

Answered: 27 Skipped: 0

ANSWER CHOICES	RESPONSES	
The study area should be delineated according to the extent of the watershed where the installation is located.	59.26%	16
Distribution of coefficient is not a parameter required in studies of transport in rivers.	0%	0
Studies in open seas is not included in the dispersion of radionuclides in the hydrosphere.	11.11%	3
The most reliable representation of open sea hydrodynamics is the z-coordinate.	29.63%	8
TOTAL		27

Q14: What is the main reason for recommending the use a numerical model in assessing the impact of nuclear installations of groundwater systems.

Answered: 27 Skipped: 0



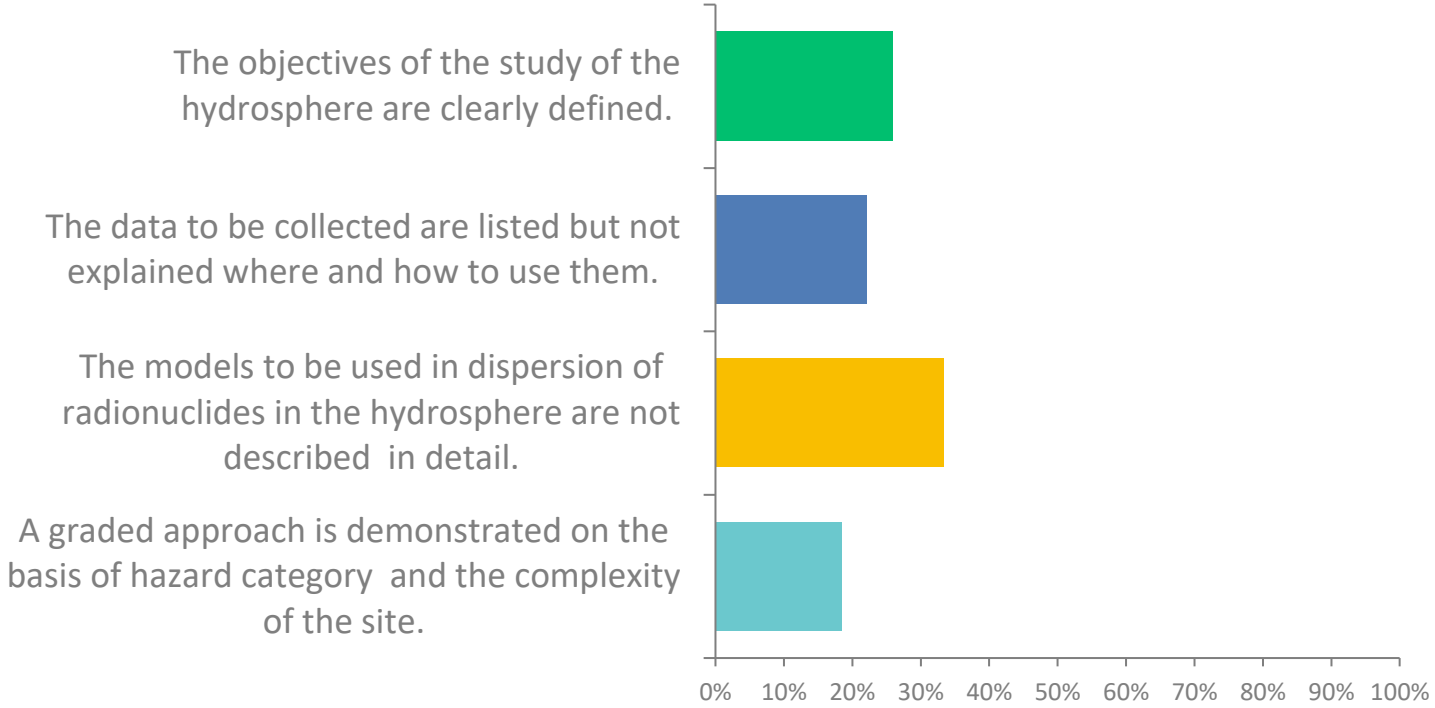
Q14: What is the main reason for recommending the use a numerical model in assessing the impact of nuclear installations of groundwater systems.

Answered: 27 Skipped: 0

ANSWER CHOICES	RESPONSES	
They are cheap, free and easy to use.	7.41%	2
They require minimum data to run.	14.81%	4
They can be applied to simulate complex systems.	77.78%	21
They do not need calibration.	0%	0
TOTAL		27

Q15: Which of these statements about the old (existing) safety guide (IAEA NSG 3.2) is not true?

Answered: 27 Skipped: 0



Q15: Which of these statements about the old (existing) safety guide (IAEA NSG 3.2) is not true?

Answered: 27 Skipped: 0

ANSWER CHOICES	RESPONSES	
The objectives of the study of the hydrosphere are clearly defined.	25.93%	7
The data to be collected are listed but not explained where and how to use them.	22.22%	6
The models to be used in dispersion of radionuclides in the hydrosphere are not described in detail.	33.33%	9
A graded approach is demonstrated on the basis of hazard category and the complexity of the site.	18.52%	5
TOTAL		27