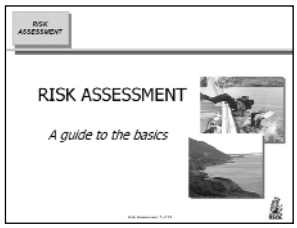
Risk Assessment

Instructor Notes

British Sub-Aqua Club

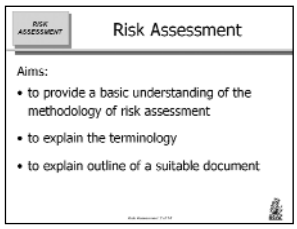
BSAC
Diving for divers

The following notes are a brief outline of the necessary points to convey to those wishing to acquire a basic understanding of the risk assessment process. These notes can be viewed in 'Note View' in the Powerpoint presentation or as this separate set of notes.



Risk Assessment - Introduction

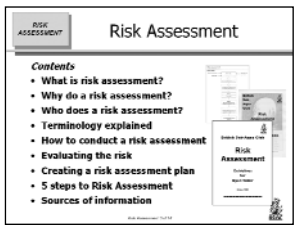
Introduce yourself and the topic title of 'Risk Assessment', emphasising that this presentation is a basic guide to what is involved in identifying hazards and evaluating risks associated with sports diving activities.



Risk Assessment - Aims

There are three aims to the presentation:

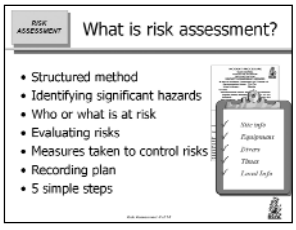
1. To explain what is involved in conducting risk assessment and how the principles are applied to recreational diving activities. This will be done by explaining the five basic steps and giving examples at each stage.
2. It is important to understand the common terminology used in risk assessment so that it can be linked to existing BSAC procedures and training. The HSE may use different wording to describe practises that the BSAC already have in place.
3. Documenting your risk assessment is an important stage and it is far better to have a common style to this documentation to help communications and gain continuity. The BSAC have produced model formats.



Risk Assessment – Contents

This is a list of the presentation contents and itemises the stages covered in the order they are considered.

At this point there is no need to provide any details other than the items in the list. BSAC Branches conducting their diving to Safe Diving Practices and following marshalling guidelines are already producing risk assessments - just the teminology is different.



What is Risk Assessment?

Risk Assessment is a common sense approach to deciding the hazards involved in any activity and then evaluating them for a level of risk. If the approach is presented as a structured method there is more chance of the system being understood and accepted by those unfamiliar with risk assessment.

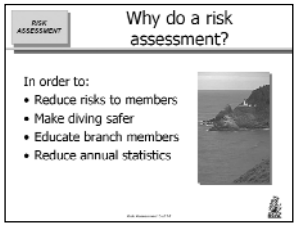
There are five simple steps to the method.

1. Simply deciding what the potential and significant risks are.
2. Deciding who or what is at risk for the duration of the activity.
3. Deciding how dangerous the risks are by using a system of 'evaluation', which will be explained in more detail later.
4. Discuss and decide what controls can be put into place that will help minimise the identified risks. Much of this control will already

be inherently in place through the BSAC training programme.

5. The final stage is recording the actions and decisions you have taken by putting the plan onto paper for further use, update and filing as a record.

Quite simply FIVE simple steps.



Why do a risk assessment?

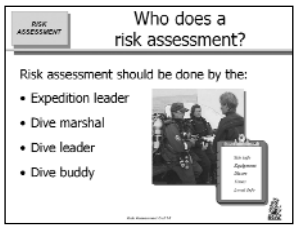
The reason for conducting a risk assessment is to assist in making the activity safer to pursue.

It should reduce the risks to members that are involved with the activity whether they are trainees, instructors or qualified divers simply enjoying their diving.

This plan and risk assessment process will undoubtedly make participants more aware of the potential risks and so make the diving safer.

The presentation and training that will follow should make branch members more aware of the dangers and so increase their knowledge.

By increasing the awareness of the risks that diving activities present, members will assist in reducing the number of incidents so reducing the annual reported statistics, with a favourable effect hopefully on the fatalities.



Who does a risk assessment?

As was previously stated in VA3, much of the risk assessment process already exists with the BSAC diver training programme. Risk assessment is conducted by a number of people involved in a diving activity but has not in the past been referred to as 'risk assessment'.

Expedition Leader

Initially the expedition leader will plan the whole operation considering as many aspects as possible. As each aspect is considered there will be certain decisions made that will help make the aspect a successful component of the plan. The decisions made will depend upon the knowledge and experience of the Expedition Leader and will be recorded as part of the expedition plan.

Dive Marshal

The allotted Dive Marshal for the day will have taken a small part of the expedition plan or created their own plan for the short duration of the planned day's diving. Either way this information needs to have been carefully considered, assessing the limitations of the divers, personal experience and diving grades of those attending. From this, a plan will be put together that needs to be conveyed to the attending divers. Again, it is the knowledge and experience of the Dive Marshal that will be used to ensure all significant risks have been addressed and controls put in place to ensure the risks are limited.

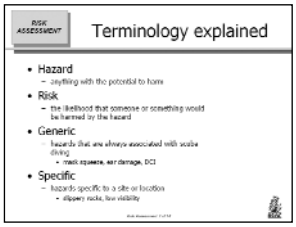
Dive Leader

Each pair of divers will have an allotted Dive Leader and it is the responsibility of this dive leader to ensure that the pair conduct a safe

dive within the limitations provided by the Dive Marshal and the limitations of the least experienced of the pair.

Dive Buddy

The Dive Buddy has the responsibility, both in their own conduct, in self-help, as well as of looking after the interests of the other diver they are diving with. Keeping an eye on the other diver at strategic times will help monitor their activities. They can assist in ensuring that the plan for the dive is followed and if an incident occurs then they are there to render assistance as required.

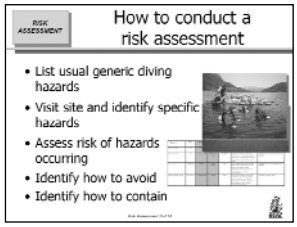


Terminology explained

There are four main terms that are used in discussions of risk assessment:

- Hazard
- Risk
- Generic
- Specific

These terms will be used in the following stages of the presentation.



How to conduct a risk assessment

The first stage is simply to decide what are the more significant hazards that will present themselves to the party of divers under your control. These will range from the generic diving hazards, such as burst lung, mask squeeze, etc to specific hazards associated with the type of diving, such as entanglement with ropes, entrapment while wreck penetrating.

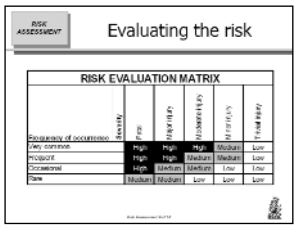
The next stage is to repeat this exercise but this time in association with the site that is being used. If you are familiar with the site a 'generic' assessment may be done prior to visiting the site. These risks will be ones that are clearly associated with the type of site being used, such as rocky foreshore, underwater debris from collapsed structures etc. When the site is actually visited then the more specific hazards can be addressed, such as the visibility and water temperature through to muddy access due to overnight rain.

Having listed the hazards, both generic and specific, time should be spent assessing the risk of these identified hazards. This can be done using a number of methods but one simple method will be explained later using a risk matrix.

When the risk level has been identified, thought must be put to how each risk can be controlled. This is not the actions to take if the hazard occurs but what action or procedure must exist for some control to be seen to have been put in place. This can be simple controls like reminding the divers to breath out on the ascents, avoid mask squeeze by equalising the pressure inside the mask by blowing a small amount of air through the nose.

Finally the hazards must be dealt with effectively if they occur. The last stage is to record what actions will be taken to contain the hazard. This will involve actions to take to evacuate a diver suffering from DCI from the immediate site. What first aid and hospitalisation should be taken

if someone does suffer mask squeeze?

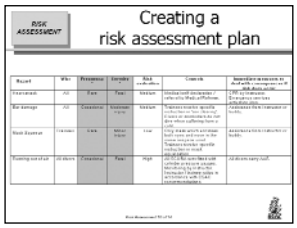


Evaluating the risk

To evaluate the risk for each hazard the matrix shown on the VA can be a very useful tool. It does require a certain amount of reliance on the experience of the diver making the evaluation to decide whether a certain hazard occurs frequently or is a rare occurrence. Also a subjective decision needs to be taken regarding whether the severity of a hazard is fatal or a minor injury. By cross-referencing these two categories a decision can be reached as to the level of risk.

Example1: A heart attack is a possible hazard. This is a RARE occurrence but can be FATAL in its worse case. By using the matrix this will give a level of risk of MEDIUM.

Example 2: Mask squeeze can occur quite FREQUENTLY with divers under training but the results might be considered as a MAJOR INJURY in its worse case – i.e. permanent loss of sight. By using the matrix this gives a level of risk as HIGH.

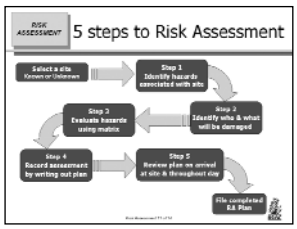


Creating a risk assessment plan

The risk assessment sheet in VA10 is just one example of a layout but one that has been adopted by the industry as a whole. The layout shows examples of evaluating the risks by including the two grey columns. In practise these would not need to be included as the judgement can be made by the person drawing up the plan.

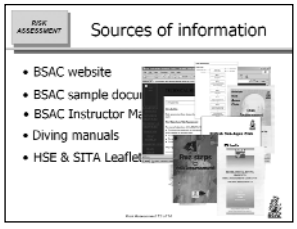
The layout shows the essential information that needs to be included in a risk assessment planning sheet. A brief description of the hazard, an identification of who is at risk, the level of risk after using the matrix, a description of the controls to be in place and finally a description of the measures to take in the event that the controls are not sufficient.

This risk assessment sheet will form part of the dive plan for the day or for the expedition being undertaken.



5 steps to Risk Assessment

This flowchart simply illustrates in a graphical format the five steps to risk assessment. This can be used as a check of knowledge transfer by asking the students to list each stage before you display the associated box.



Sources of information

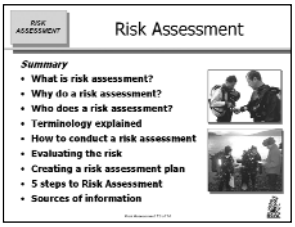
There is a vast range of sources of information available to anyone making a risk assessment for diving activities.
The BSAC website has a dedicated section to risk assessment and can provide background details through to specific site information.

Some locations have dedicated documentation such as the South Docks of Liverpool.

The Instructor Manual and Diving Manuals provide risk assessment aspects for all levels of diver grade and for each of the lessons being

undertaken.

The HSE can provide an extensive selection of books and leaflets on risk assessment including a recreational diving industry standard produced by SITA.



Summary

Use this slide as a check of knowledge transfer of the students ensuring that sufficient numbers of them provide correct answers to the summary points.

END OF PRESENTATION

