

Safety: The manual of everything

A safety system comprises many elements, almost all of which can be described in policies & procedures, staff records, and other instructions & documents.

Without a single home or compendium, however, easy reference and retrieval is restricted, necessary revisions & additions are fragmented, and any confidence that the system does indeed present a significant improvement in, and control of, the plethora of risks that have needed to be addressed is lost.

Understanding the essential elements and then compiling or at least reviewing this compendium for effective safety management, is an essential task for the DSO.

A mature and safe business, compliant regarding ongoing HIRA assessments, needs to describe its system in the form of a single compilation or system: a safety manual.

With the modern information technology and on-line storage systems, this can be done using a secure electronic, paperless form.

Guidelines for compiling a safety manual

Compiling a safety manual is not simply a tedious task for the safety officer; instead the whole idea is to produce a highly relevant, practical reference guide to:

- enable effective management
- ensure consistency in practices
- enable all new appointees to understand the full scope of their activities & responsibilities
- provide specific job responsibilities
- ensure system readiness and preparedness
- provide for safety in all operations
- provide a curriculum for specific system training
- provide for all required documentation
- provide instruction on use, maintenance and care of the facility and equipment; and
- assure a safe, effective and financially healthy business.

The safety manual should include essential reporting forms, assessment and monitoring instructions, maintenance schedules, liability-reducing registration documents, and client and staff instructions should be collated here. It should also elaborate a strategy for the maintenance of records, to assure proof of a robust safety system.

To achieve all of these objectives, a safety manual incorporates various elements. The following list is non-exhaustive, and should be individualised based on the actual business operation.

Safety Policy:

A safety policy portrays a dive operation's commitment to ensuring safety, and compliance with legal requirements and industry standards, with a statement as to how it intends to achieve this.

It is usually a single paragraph or two, containing statements on issues such as an abbreviated scope of services, preparedness, compliance with specific standards, and the commitment to providing safe operations.

An integrated policy, ensuring compliance with national, regional and municipal regulations, together with the all associated practices and equipment, should be established and enforced by suitably competent and experienced personnel.

It is important to note that this safety policy is not intended to serve as an Occupational Health & Safety Policy - a mandatory document that serves to ensure workplace safety of employees, and described in more detail in the DAN article on Occupational Health & Safety¹. The policy can, however, be referenced or included the safety manual.

Scope of activities & services:

- (1) A diving operation can be defined as a series of activities and/or services offered to its clients, including dive professionals, students, divers or other customers requiring products or services.
- (2) The operation should be organised, integrated, staffed and directed commensurately with the scope of services offered.
- (3) Each operation decides upon and provides the necessary details on what it intends to offer.

Typical activities and services may include any combination of:

- a) Training: dive agency, safety association or equipment-related training
- b) Diving: shore, charter boat, or longer liveaboard diving excursions
- c) Boat charters: diving, fishing or other tourist-related trips
- d) Diving and dive-related equipment servicing
- e) Retail of diving and water-sport products or services
- f) Rental of dive gear, boats or facilities such as training rooms, pool or storage
- g) Accommodation & catering for training, diving or other visitors
- h) Cylinder filling, possible including gas blending or breathing gas analysis

Activities and services should be described in written form and retained in the manual.

¹ The article Occupational Health & Safety: Taking care of your staff is an integral part of the DAN DSO training program. It describes the need for, requirements pertaining to and terminology associated with health & safety in the workplace

Personnel:

All units should employ the services of competent and suitably trained staff, preferably appointed in writing, and provided with clear responsibilities, delegated with the appropriate authority to be able to carry these out.

A suitably qualified safety officer should be appointed.

The ultimate responsibility for the care and safety of divers and personnel lies with the owner and/or management team of the dive operator. This person or team should thus ensure that safety, rules, practices and conduct throughout the operation are effectively and formally delegated to competent and responsible people.

In all cases, the staff should adopt and adhere to the professional & legal regulations and industry standards.

The operator should also consider statements or policies required by law, such as non-discrimination, workplace equality or harassment of any nature.

Records of job and training requirements, appointments, delegations, staff records & evaluations, and completed training, competencies, licences and qualifications should be filed in the manual. Careful note of the validity of time-limited documents should be made to ensure the timeous replacement of such permissions.

Safety in the workplace: a legal requirement¹ [above](#)

Occupational health and safety in the workplace is generally enforced as part of national laws and regulations, applicable to all owners of business that expose workers to risk associated with injuries, illness or any other form of harm.

This specialised area of safety requires more in-depth knowledge of workplace risks, requirements to ensure safety and the obligations of business owners.

The article referred to below contains a more thorough description of workplace safety requirements that need to be included in the health and safety manual. They are not repeated in this article.

Operating Procedures:

Safety begins with situational awareness and operating in accordance with industry-accepted, documented practices. This requires well-proven procedures, instruction (training), implementation, and continuous monitoring.

The approach to risk assessments for activities that present with or are exposed to potential hazards, such as dive-site evaluations, operational equipment - including compressors or generators, flammable and/or toxic fluids, and handling of high-pressure equipment, should be described.

Also, policies for sales & contracting, assessing fitness-to-dive, cancellation or curtailment of activities, and dealing with non-compliant, aggressive or unacceptable behaviour in both clients and staff, should be established and documented.

Risk mitigation documents, such as the release of obligations or indemnification from legal or other responsibilities should be included.

Emergency Action Plans:

In the event of an accident potentially endangering the lives of people, threatening damage to equipment & facilities, harming the environment, or even posing a risk to the business itself, a rapid, pre-determined course of action is required. This serves to protect against, mitigate or at least contain the any harm.

A realistic assessment of the vulnerability to emergency situations is required and emergency plans established to ensure rapid and effective responses.

Records of the Emergency Action Plans (EAPs), the implementation thereof, and drills & practices should be in the manual.

This provides evidence of responsible planning and may mitigate consequences, including legal and liability issues.

Safety evaluation and monitoring:

All risk and safety evaluations encapsulated in the HIRA process should be documented.

Events such as accidents, near misses, non-compliances, failures, conflicts or other undesirable situations, which have been identified and intentionally managed or controlled by risk mitigation measures, such as policies, procedures, EAP's, training, protective measures or equipment, should be recorded.

Steps to re-evaluate and/or reimplement the mitigation measures, as might be required, should be similarly documented.

Records of all risk assessment, mitigation and monitoring activities should be retained in the manual.

Maintenance of equipment & facilities:

Regularly planned maintenance is an essential part of ensuring function, reliability and availability of critical equipment. When servicing or repairing equipment belonging to others as part of the business operation, an additional responsibility is assumed.

Servicing & repair procedures and instructions need to be carefully evaluated and documented, whether for the operation's own planned maintenance system or for others.

Reports, calibration and testing certificates are typically issued for:

- a) Planned, time or usage-based maintenance and servicing
- b) Repairs undertaken
- c) Measuring instruments requiring calibration & function testing
- d) Inspection of emergency equipment, such as fire extinguishers, alarms, breathing apparatus, medical equipment and supplies, and hoisting devices.
- e) Cleaning, especially for oxygen service.

A policy on authorization to work, and the quality of replacement parts and materials, should be established and documented.

Typical composition of a safety manual

The following are examples of documents usually filed in the safety manual.

Please note that this is only an indicative list and actual documents are likely to vary significantly between operations & businesses.

Preface	Introductory instructions, including: <ul style="list-style-type: none"> - Safety policy - List of contents - Authorizations (permits & licenses to operate, etc.) - Review frequency
Instructions	General working instructions & house-rules, including: <ul style="list-style-type: none"> - Daily opening & closing hours - Security arrangements - Housekeeping - Restricted admission & hazardous areas - Treatment of clients & co-workers (respect, no harassment)
Legal	Applicable legal & regulatory requirements, including: <ul style="list-style-type: none"> - Working area safety requirements including noise, lighting, hazardous materials, operating dangerous machinery, high pressure equipment, barriers & signage, personal protection equipment - Rights of staff, including labour & employment regulations - Workers compensation for occupational diseases & injuries - Restricted areas (marine parks & reserves) & coast guard directives - Regulations or codes of practice for diving activities - Transport (boat, vehicle, trailer) regulations
Personnel	Documents & records, including: <ul style="list-style-type: none"> - Job description, roles & responsibilities - Organizational chart - Training, qualification & competency certificates & reports - Licenses (teaching, driving, boating, operating equipment) - Evaluations, disciplinary & other notices
Operations	Standard operating procedures, including: <ul style="list-style-type: none"> - Selling products & services, including right of refusal - Dive excursion cancellation, curtailment or refusal - Assessment of client's fitness-to-dive - Dive-site risk assessment - Dealing with unacceptable behaviour (non-cooperation, aggression)

- Diving operations (briefing, checks, site evaluation & rules)
- Pool operations
- Boat launching and excursion
- Use of vehicles
- Operating equipment (compressors & pumps, blenders, generators)
- Waste disposal (hazardous, flammable, biological & toxic nature)
- Planned maintenance system

Emergencies Emergencies and Emergency Action Plans, including:

- Dive centre (fire, explosion, exposure, spills, electrocution)
- Pool & training areas (chemicals, injuries, drowning, medical-health)
- Diving (trauma, DCI, lost diver, drowning, HMLI, medical-health)
- Boats (lost/incapacitated, capsized, fire, weather, hi-jacking)
- Vehicles (lost, MV accidents & breakdowns, hi-jacking)
- Other (lost guest, medical-health, death, arrest, violence, unrest)

Skills Refreshing of operating practices & emergency drills, including:

- Which practices need to be refreshed, with frequency schedule
- Records of skill refreshers
- Emergency Action Plans to be drilled, with frequency schedule
- Records of drills performed

Monitoring Safety and incident monitoring, including:

- Accident & incident reports
- Investigative reports
- Findings
- Corrective actions

Maintenance Records for all maintenance, repair & servicing performed, including:

- Planned maintenance completed, including: equipment & facility inspections & emergency equipment inspection reports
- Service records (equipment, boats, motors, vehicles, compressor, cylinders, filter replacement)
- Pool health & hygiene records
- Client equipment servicing certificates
- Repair reports
- Calibration certificates
- Air quality analysis certificates
- Cleaning certificates for oxygen & other hazardous conditions