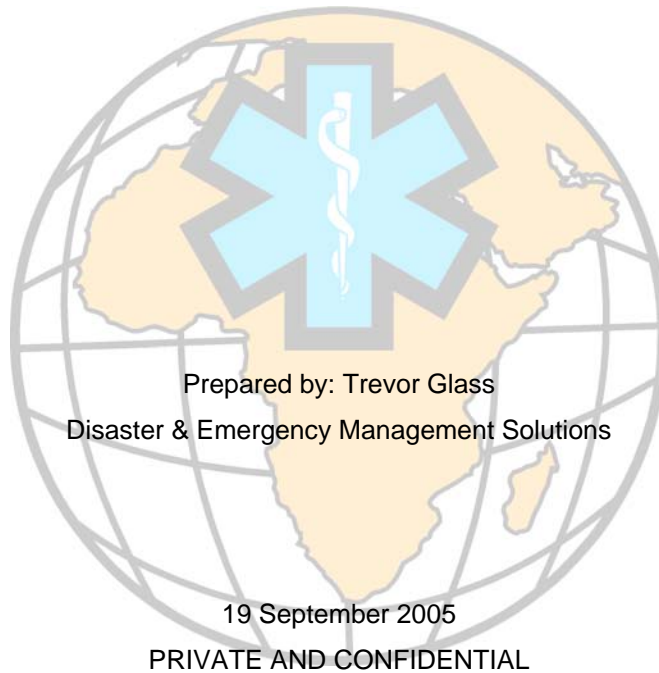




DIVE OPERATOR EMERGENCY RESPONSE PLAN RISK ASSESSMENT



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1. INTRODUCTION

A major challenge faced by DAN is the establishment of an effective *Emergency Response System* to deal with DAN clients involved in a medical emergency. DAN provides insurance and medical services to clients visiting and diving in some of the worlds most remote diving destinations. Many of these destinations are situated in what is best described as emerging economies with limited infrastructure and capacity to deal with medical emergencies. Due to the remoteness of many of the dive sites and the limitations of local infrastructure, the effective management of a DAN client involved in a medical emergency poses significant challenges.


The acute management of an injured diver requires the activation of an effective emergency response system to ensure the delivery of optimal patient care. Planning, preparation and response form the foundation of successful management of an emergency. The design and implementation of a Local Emergency Response Plan (LERP) is a critical element of building an effective system that offers the diving tourist and staff “peace of mind” in the event of a medical emergency, and thereby, contributes to the growth and development of the local diving industry.

2. EMERGENCY RESPONSE PLAN RISK ASSESSMENT

The DAN Emergency Response Plan Risk Assessment (ERPRA) is a tool designed for local Dive Operators aimed at highlighting areas of weakness as well as environmental constraints that may negatively effect the management of a medical emergency. The ERPRA will provide insight into the manner in which emergencies are currently managed, the availability and reliability of local resources and the general level of preparedness.

On completion of the ERPRA by the Dive Operator, the information and insight gained will be used to design a unique, locally applicable emergency response and evacuation strategy aimed at assisting the Dive Operator in improving local capacity and efficiency in dealing with medical emergencies.

3. RISK ASSESSMENT GUIDE OBJECTIVES

- 
- Gather local insight and information applicable to dive sites and dive operations
 - Provide an understanding of local challenges, constraints and requirements
 - Provide information to develop practical and sustainable solutions
 - Identify all relevant stakeholders and their respective roles and responsibilities
 - Underpin an overall programme of:
 - Relationship building
 - Education & Training
 - Partnering on Safety & Risk
 - Marketing DAN
 - Quality Assurance & Follow-up
 - Provide information to establish an effective communication network
 - Provide the basis for a standardized approach to non-diving related medical emergencies
 - Provide the basis for a standardized approach to diving related emergencies

4. 6 R's of EFFECTIVE EMERGENCY MANAGEMENT

The 6 R's are the links of the effective emergency management chain. Each link in the chain is as important as the next. The chain links an effective framework, a reliable communication network, identifies the mission critical steps and encompasses local resources whether they are formal or informal, to ensure a timely response and provide reliable and accurate information to decision makers, thereby enabling effective management and recovery of medical emergencies.

The critical links in the chain are:

- 
- Risk Prevention
 - Recognise Problems
 - Raise the Alarm
 - Resources Required
 - Response
 - Recovery

5. DIVE OPERATOR

The Dive Operator plays a vitally important role in the successful management of a medical emergency. Dive operators are invariably the first responders to the incident, performing a life saving role in the early administration of emergency care. Very often, the Dive Operator or facility will be required to hold the patient, sometimes for extended periods of time, while the formal emergency response and evacuation is undertaken.



From the time of incident until the arrival of professional service providers, the Dive Operator is a critical source of invaluable information to decision makers and coordinators allowing them to make informed decisions as to the most appropriate means of further treatment and if required, mode of evacuation.

6. DIVERS ALERT NETWORK

DAN has deployed two initiatives to enhance the service offering to the injured diver. These are the Recompression Chamber Assistance Program (RCAP) and the Risk Assessment Guide for Recompression Facilities. The ERPRA is a component of the third initiative, the *Emergency Response System* designed to improve the overall planning and response to a medical emergency in the diving community.

DAN's Mission Statement

“Divers Alert Network (DAN), a nonprofit organization, exists to provide expert information and advice for the benefit of the diving public. DAN's historical and primary function is to provide emergency medical advice and assistance for underwater diving injuries, to work to prevent injuries and to promote diving safety. Second, DAN promotes and supports underwater diving research and education particularly as it relates to the improvement of diving safety, medical treatment and first aid. Third, DAN strives to provide the most accurate, up-to-date and unbiased information on issues of common concern to the diving public, primarily, but not exclusively, for diving safety. DAN is *Your Dive Safety Association.*”

DAN'S Vision

"DAN's vision is to be the most recognized and trusted organization worldwide in the fields of diver safety and emergency services, health, research, and education by its members, instructors, sponsors, and recreational diving community at large."

7. EXPLANATORY NOTES

Appendix A is a detailed self evaluation questionnaire designed to elicit the information necessary to glean an understanding of the local environment. This questionnaire is not intended to be punitive, but rather to gain an accurate understanding of the current local situation and to enable the targeted design of a dive facility specific Emergency Response Plan. Table 1 depicts examples of the manner in which questions are posed. In the *RESPONSE* column of Appendix A, please circle the relevant answer, if the column is not pre-populated, please write in the relevant answer. If you would like to write in a comment, please do so in the *COMMENT* column.

You are kindly requested to be as comprehensive and accurate as possible.

Once the questionnaire has been completed, please email or fax to the return address indicated at the end of the questionnaire.

Table 1

QUESTION	RESPONSE	COMMENT
Community perception of local resources	Poor / Fair/ Good	
Interest in becoming a DAN affiliated centre	Yes / No	
Number of Dives conducted annually		

APPENDIX A: EMERGENCY RESPONSE PLAN RISK ASSESSMENT

EMERGENCY RESPONSE PLAN RISK ASSESSMENT		
LODGE / DIVE OPERATION		
NAME		
DESIGNATION		
DATE		
CONTACT NUMBER		
EMERGENCY RESPONSE PLAN (ERP)	RESPONSE	COMMENT
Is there an ERP in place?	Yes / No	
Are ALL staff aware of the ERP?	Yes / No	
Is there an ERP Emergency Contact List?	Yes / No	
Are the emergency contact numbers current?	Yes / No	
Is there a procedure for an emergency at sea?	Yes / No	
Is the ERP reviewed every 6 months?	Yes / No	
Has the ERP been drilled in the last 6 months?	Yes / No	
EMERGENCY RESPONSE OFFICER (ERO)		
Is there a dedicated ERO for the dive facility?	Yes / No	
Is there a replacement ERO in the event the primary ERO is away / unavailable?	Yes / No	
Are the ERO's aware of their responsibilities?	Yes / No	
Do the ERO's make use of a standardised system?	Yes / No	
DAN/EMS/LOCAL RESOURCES		
Community DAN awareness	Poor / Fair/ Good	
Community perception of local resources	Poor / Fair/ Good	
Interest in becoming a DAN affiliated centre	Yes / No	
DIVE OPERATION PROFILE		
Number of dives conducted annually		
National divers / year		
Foreign divers / year		

	RESPONSE	COMMENT
Who are the major travel insurers of divers?		
What are the major countries traveling to dive destination?		
Number of diving related problems / year?		
Number of diving related problems requiring recompression therapy / year?		
Number of non-diving related problems (medical / trauma) / year?		
Number of diving-related fatalities / year?		
Number of non-diving-related fatalities / year?		
Number of diving-related evacuations / year?		
Number of non-diving-related evacuations / year?		
Number of tropical / infectious disease problems?		
COMMUNICATIONS		
What modes of communication are available?	Radio, Landline, Mobile Phone, Satellite Phone	
Are these modes of communication reliable?	Yes / No	
Are these modes of communication effective?	Yes / No	
Are landlines dependent on electricity?	Yes / No	
Is there a back-up electricity supply?	Yes / No	
Is there after-hours communication contact availability?	Yes / No	
Does the ERP incorporate communication constraints?	Yes / No	
South African time variation		
DIVE FACILITY		
Dive facility GPS coordinates		
What is the road surface of the road to the facility?	4X4, Dirt, Tar	
Is the road surface adversely affected by rain?	Yes / No	
Would evacuation require immigration procedures?	Yes / No	
Is there a helipad?	Yes / No	
If "yes" what are the GPS coordinates?		

	RESPONSE	COMMENT
Is there a temporary mortuary site?	Yes / No	
FIRST AID FACILITIES		
Is there a safe holding area for patients?	Yes / No	
Is the safe holding area accessible 24/7?	Yes / No	
Is the medical equipment available 24 hours a day?	Yes / No	
Is it easily accessible?	Yes / No	
Are First Aid kits stocked?	Yes / No	
Are First Aid kits sealed?	Yes / No	
Is Oxygen available?	Yes / No	
Is an oxygen delivery system available?	Yes / No	
Is there access to an AED?	Yes / No	
Is there a Spine Board and Spider harness?	Yes / No	
Are Cervical Collars available?	Yes / No	
Are Head Blocks available?	Yes / No	
Do staff know how to use medical equipment?	Yes / No	
Is there a monthly medical equipment checklist system?	Yes / No	
Is one person in charge of checking the medical equipment?	Yes / No	
FIRST AID TRAINING		
Are staff trained in First Aid?	Yes / No	
Are First Aiders certifications current?	Yes / No	
What is the highest medical qualification available at the dive facility?		
Are staff trained as Oxygen Providers?	Yes / No	
Is there a medical training register?	Yes / No	
DIVE OPERATIONS		
Do all dive boats have radio communications with the beach?	Yes / No	
Are beach radio communications monitored during dive operations?	Yes / No	
Is there mobile phone communication in the area of dive operations?	Yes / No	
Do all dive boats carry basic survival equipment?	Yes / No	

	RESPONSE	COMMENT
Is there legislation governing boat operations?	Yes / No	
Do all dive boats comply with this legislation?	Yes / No	
Do all boats carry First Aid kits?	Yes / No	
Do all boats carry Oxygen?	Yes / No	
Are all skippers First Aid trained?	Yes / No	
What is the longest boat ride in the area of dive operations?		
EMERGENCY MEDICAL SERVICES (EMS)		
Is there a local EMS?	Yes / No	
If "yes" is it available 24/7?	Yes / No	
Is the EMS service a private or state service?	State / Private	
Does the EMS service offer Basic, Intermediate or Advanced Life Support?	Basic; Intermediate; Advanced	
How is the EMS service activated?		
Contact number?		
Will the local EMS find the dive facility without an escort?	Yes / No	
Will the EMS vehicles be able to access the dive facility?	Yes / No	
What is the response time to the dive facility?		
Does the EMS have access to helicopter support?	Yes / No	
Is there access to water-borne transport if required?	Yes / No	
Is there a national EMS registry?	Yes / No	
What is the country of origin of training?	Yes / No	
DOCTOR ON CALL		
Is there a doctor on call 24 hours?	Yes / No	
Does the doctor travel to the dive facility?	Yes / No	
Do ALL staff know the policy for contacting the doctor?	Yes / No	
Do ALL staff have access to the telephone number for the doctor?	Yes / No	
PROXIMITY TO LANDING STRIP		
Is there a landing strip in close proximity to the dive facility?	Yes / No	

	RESPONSE	COMMENT
What are the GPS coordinates?		
What is the elevation of the strip?		
What is the length of strip?		
What is the width of the strip?		
What is the surface of the strip?		
Is the strip surface adversely affected by rain?	Yes / No	
What is the travel time to the strip?		
What is the road surface of the road to the strip?	4X4, Dirt, Tar	
Is the road surface to the airport adversely affected by rain?	Yes / No	
Is there access to fuel?	Yes / No	
Is there access to emergency lighting?	Yes / No	
PROXIMITY TO AIRPORTS		
What is the name of the closest airport to the dive facility?		
Contact number?		
Does this airport have an Immigration office?	Yes / No	
Is there access to immigration after hours?	Yes / No	
What are the GPS coordinates?		
What is the elevation of the runway?		
What is the length of runway?		
What is the width of the runway?		
What is the surface of the runway?		
What are the aircraft limitations?		
What is the travel time to the airport?		
What is the road surface of the road to the strip?	4X4, Dirt, Tar	
Is the road surface to the airport adversely affected by rain?	Yes / No	
Does the airport have night landing capacity?	Yes / No	

	RESPONSE	COMMENT
Is there access to fuel after hours?	Yes / No	
PROXIMITY TO MEDICAL FACILITIES		
What is the name of the closest medical facility?		
Contact number?		
What are the GPS coordinates of the closest Medical Facility?		
What is the travel time to the closest medical facility?		
What is the road surface to the closest medical facility?	4X4, Dirt, Tar	
Is the road surface adversely affected by rain?	Yes / No	
Is there a helipad at the medical facility?	Yes / No	
MEDICAL FACILITY		
Is the medical facility a primary healthcare clinic or a hospital?	Clinic / Hospital	
Does the medical facility have an Accident & Emergency (A&E) Department?	Yes / No	
Does the medical facility operate 24/7?	Yes / No	
Does the medical facility have an Intensive Care Unit (ICU)?	Yes / No	
Are X-Ray facilities available?	Yes / No	
If "yes" is it available 24/7?	Yes / No	
Are CT and/or MRI scanners available?	Yes / No	
If "yes" is it available 24/7?	Yes / No	
Are there laboratory services available?	Yes / No	
Are there Theatre facilities available?	Yes / No	
What medical disciplines are available?		
RECOMPRESSION FACILITY		
Where is the closest recompression facility?		
What are the GPS coordinates of the closest recompression facility?		
Is this a DAN recompression facility?	Yes / No	
Contact number?		
What mode of transport is required to access this recompression facility?	Road / Air	

	RESPONSE	COMMENT
Is the recompression facility commercial diving; police; navy, privately operated?	Diving; Port Authority; Police; Navy; Private	
Is this recompression facility accessible to members of the public?	Yes / No	
Has this recompression facility been used by your dive operation before?	Yes / No	
Are there specific financial requirements for public access this recompression facility?	Yes / No	
MORTUARY		
Are there local mortuary facilities available?	Yes / No	
Contact number?		
Is this facility available after hours?	Yes / No	
MEDICAL EVACUATION		
Is there an Emergency Medical Evacuation Policy in place?	Yes / No	
Who is responsible for activating an evacuation?		
How will the evacuation take place?	Road /Air	
How long will it take for professional services to arrive?		
FIRE FIGHTING EQUIPMENT		
Do ALL communal areas and guest rooms have fire extinguishers?	Yes / No	
Are fire extinguishers easily accessible?	Yes / No	
Are fire extinguishers in good condition?	Yes / No	
Is there a monthly fire extinguisher checklist system?	Yes / No	
Are fire extinguishers checked professionally annually?	Yes / No	
Is there a fire blanket in the Kitchen?	Yes / No	
Do ALL staff in the kitchen know how to use it?	Yes / No	
Is there a Burnshield blanket in the kitchen?	Yes / No	
Are there hose reels?	Yes / No	

	RESPONSE	COMMENT
Are they easily accessible, especially in the dark?	Yes / No	
Is there a monthly hose reel checklist system?	Yes / No	
Are hose reels checked professionally annually?	Yes / No	

Send completed questionnaires to:

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