



CORPO NAZIONALE SOCCORSO ALPINO E SPELEOLOGICO

Scuola Nazionale Tecnici Soccorso in Forra

Italian National Canyon Rescue School



CANYON RESCUE

OPERATIONAL SCHEMES AND RELATED TECHNIQUES

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THE PROGRESSIVE TECHNIQUES
DEVELOPED BY SNAFOR ARE AIMED AT THE
SAFETY HANDLING OF RESCUERS



IN PARTICULAR IN CANYON
WITH AQUATIC DIFFICULTIES

S.NA.FOR . DEVELOPMENT
TECHNIQUES ENABLE SAFETY
RECOVERY OF THE STRETCHER
IN THE MOST VARIOUS SITUATIONS



KNOWLEDGE OF TECHNIQUES IS
NOT THE ONLY ASPECT TO BE
CONSIDERED

THE SUCCESS OF A RESCUE
OPERATION ALSO DEPENDS **ON**
THE SPEED OF THE TEAM MOVING
UP IN THE RECOVERY OF THE
STRETCHER

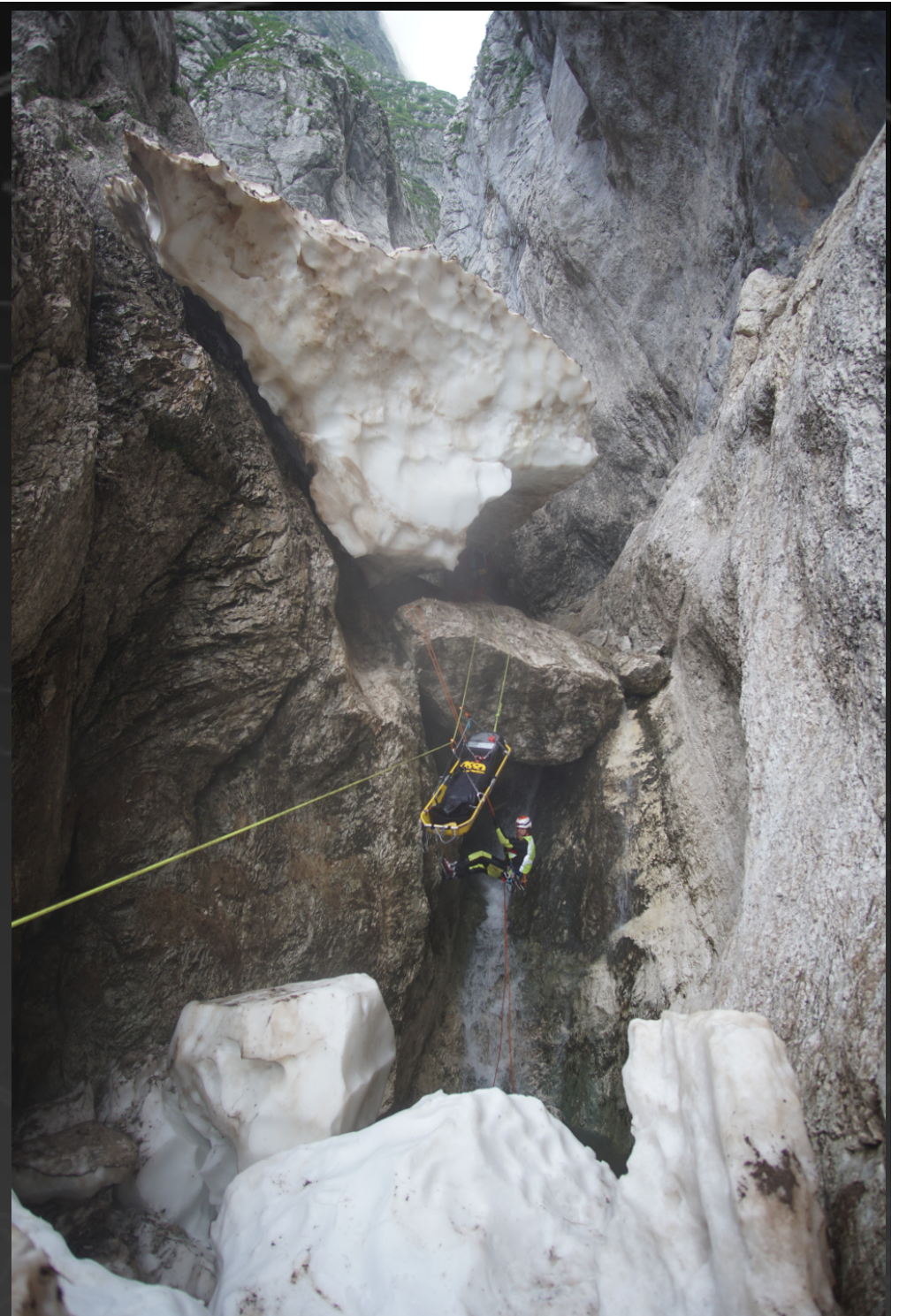


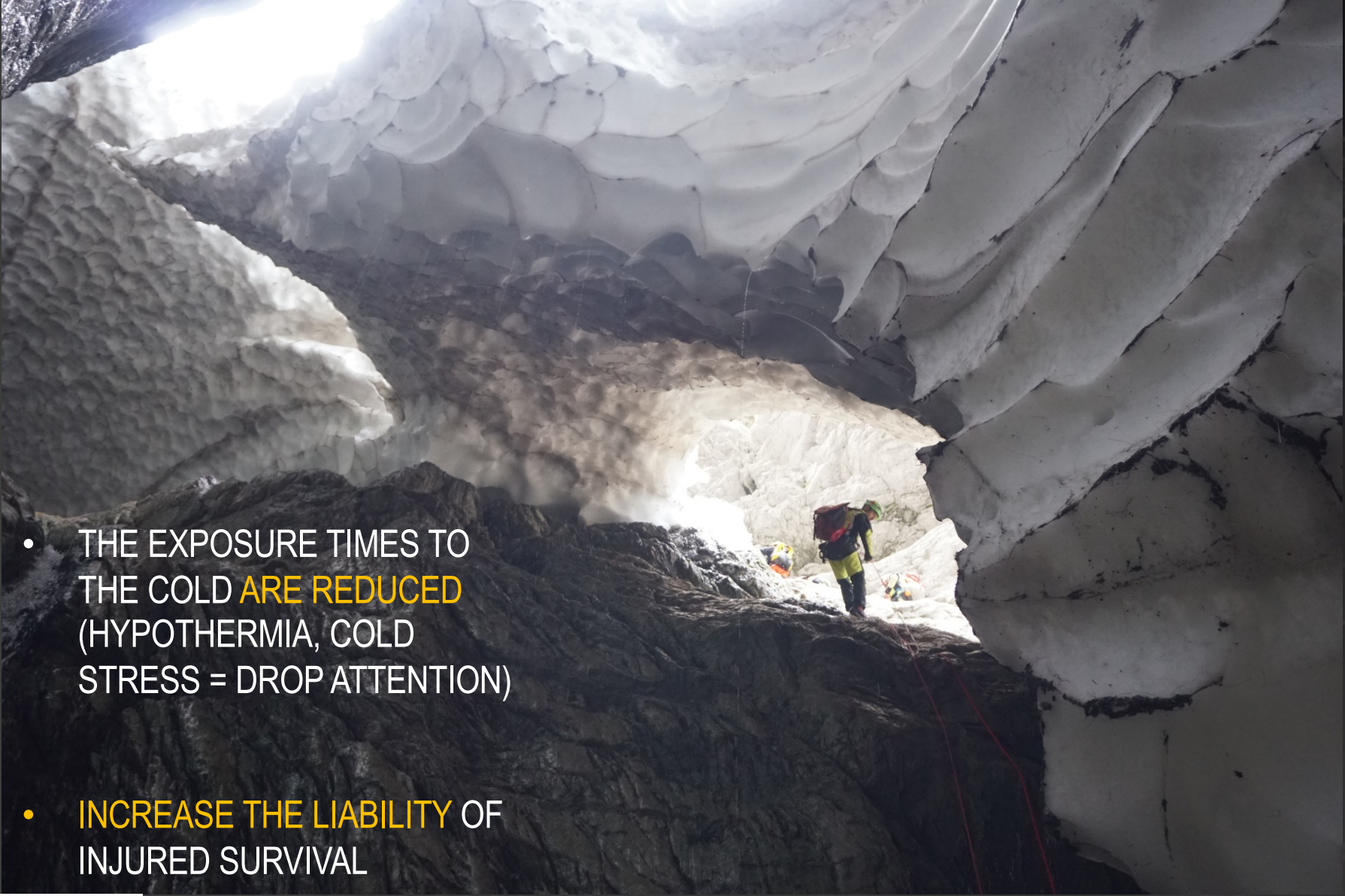
WITH THE TIMES OF PERMANENCE IN CANYON THE RISKS RELATED TO THE HUMAN FACTOR AND THE ENVIRONMENTAL FACTORS GROW PROPORTIONALLY (TIME OF EXPOSURE TO RISK)



SPEED IN THESE CASES IS A
SYNONYMOUS SAFETY BECAUSE:

- **THE TIME OF EXPOSURE TO RISK IS REDUCED** (FLASH FLOODS, FALLS STONES, SNOWFIELD COLLAPSE ETC.)



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- THE EXPOSURE TIMES TO THE COLD **ARE REDUCED** (HYPOTHERMIA, COLD STRESS = DROP ATTENTION)
 - **INCREASE THE LIABILITY OF** INJURED SURVIVAL

FOR A FAST PROGRESSION OF THE TEAM IT IS NECESSARY TO USE **THE STRICTLY INDISPENSABLE NUMBER OF TECHNICIANS**, ALWAYS ADVANCING THE FREE ROPES TO RIG FOLLOWING WATERFALL



- IT IS THEREFORE NECESSARY TO OPTIMIZE THE TIMES BY **ADOPTING A LOGICAL SEQUENCE** IN THE ADVANCE:

- SOME MEN
- OF THE ROPES
- OF THE STRETCHER


REDUCING THE STOPS TO A **MINIMUM**



THIS IS OBTAINED BY ADOPTING
AN **OPERATING SCHEME**
TESTED THROUGH TRAINING AND
RESCUE IN CANYON



AS SOON AS POSSIBLE



TO SPEED THE TEAM
PROGRESSION IT IS
NECESSARY TO EQUIPE
MULTIPLE ROPE LINE,
ESPECIALLY ON HUMAN
ANCHORAGES

RESCUERS GO DOWN AT
THE SAME TIME REDUCING
PROGRESSION TIMES

WHEN IT IS NOT POSSIBLE TO
MAKE MULTIPLE ROPE LINES, YOU
CAN CHANGE IN TANDEM,
REDUCING THE TEAM'S
PROGRESSION TIMES





ALSO IN ZIP LINE

HUMAN ANCHORAGES



BUT SOME RULES MUST
BE RESPECTED

A RESCUER CAN HOLD A LOAD
COMPARABLE TO HIS WEIGHT ...
AND MUCH MORE

THE ROPE SLIDES UP
A WIDE AREA
CREATING
FRICTIONS

BALLAST
EFFECT

THE ROPE WILL TRAVEL
AN ACCENTUATED
ANGLE INCREASING
FRICTIONS

STOCKHOLDER
SUPPORT
ON GROUND



CONTACT ROPE WITH WIDE SURFACE
AND ACCENTUATED ANGLE TO
AMPLIFY FRICTION

AT THE START OF THE
WATERFALL THE
TECHNICIAN LAYS DOWN
TO UNLOAD WEIGHT ON
THE WALL

HUMAN ANCHORAGE
IN THE CORRECT
POSITION, FEET
POINTED AND BODY
EXTENDED



SMART ZIP-LINE

REDUCED TEAMS OF 6 RESCUERS TRAVEL QUICKLY ON VERTICAL CANYON:
THE GRAVITY STRENGTH THANKS TO THE STRETCHER'



BUT IN HORIZONTAL PART OF CANYON THEY CANNOT
MAKE LONG TRANSPORTATION BY HAND

FOR THIS USE THE "SMART" ZIP LINE ARE USE LARGE, CREATED QUICKLY BETWEEN HUMAN ANCHORAGES AT THE ENDS



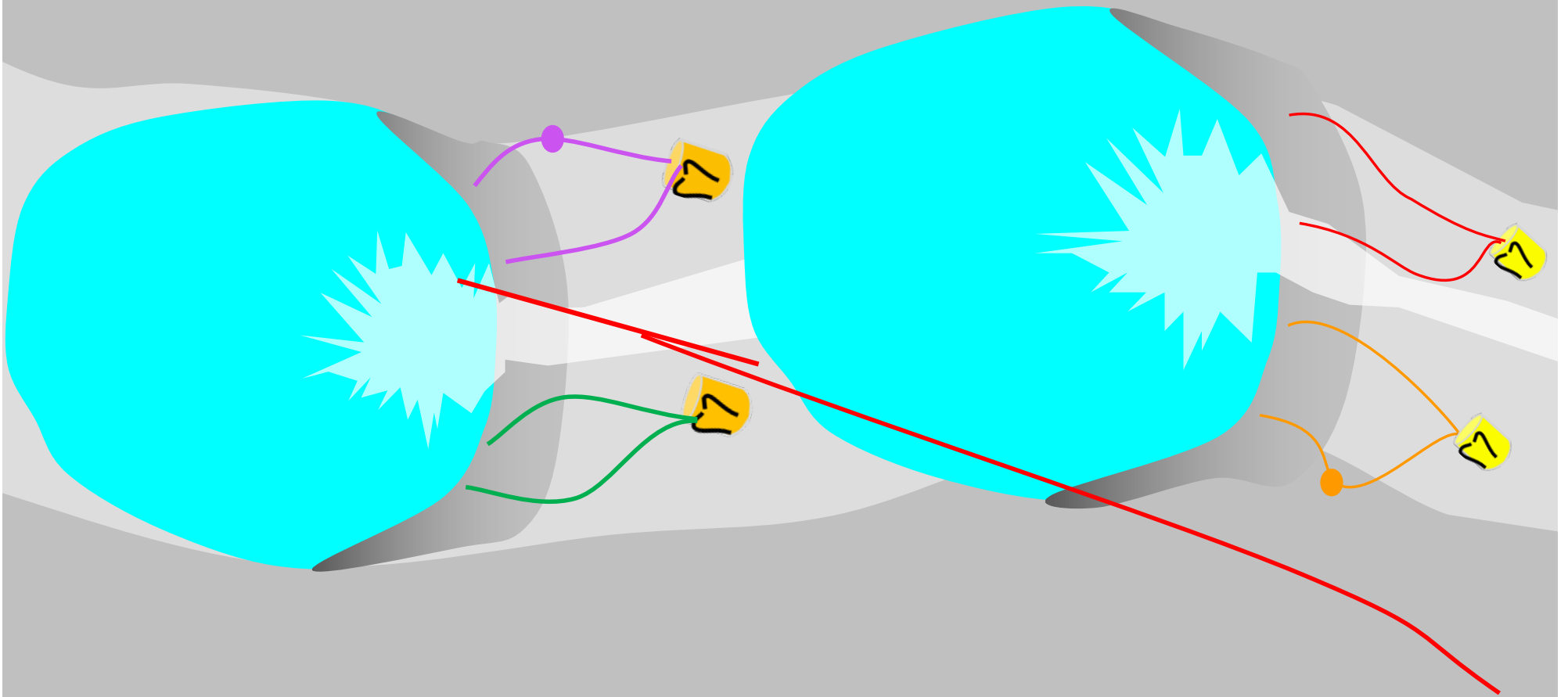
THE STRETCHER TRAVELS PREVIOUSLY ON THE CARRYING ROPE, **SAVING THE RESCUE ENERGIES** AND KEEP INJURED COMFORT

TEAMS OF 6 TECHNICIANS CAN
RECOVER THE STRETCHER ON
RELATIVELY LONG TRAILS



OPERATIONAL SCHEMES WITH LARGE TEAM

13 RESCUERS





THANKS FOR YOUR ATTENTION

