



# Module 4

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## Coordination of shutdown operations, Radio Communication, Extinguishing means & Basic actions in extinction



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# Module 4

## Unit 4.3. Basic actions in extinction

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# The objective of the unit

The objective of the unit is to briefly illustrate the basic actions in forest fires.



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# Learning Outcomes

The Volunteer is able to explain the basic actions in forest fire.



One of the first actions during forest fires is to make sure that you are in a safe scenario and you need to ensure the safety of your team. This is possible applying the LACES protocol.





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There are different safety protocols in use around the world to help mitigate hazards and keep firefighting personnel and members of the public safe. A number of countries currently implement the LACES Safety Protocol.



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# LACES PROTOCOL

- L** → Lookout
- A** → Awareness / Anchor Points
- C** → Communication
- E** → Escape Route and plan
- S** → Safety Zones

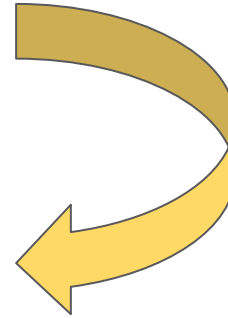


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# Lookouts

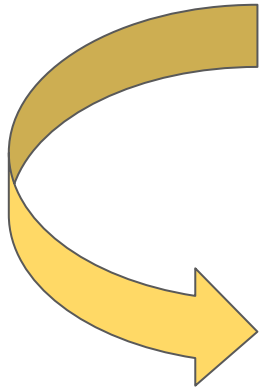
- there must be good, advantageous observation spots;
- they must be experienced, competent and reliable people
- they must know the position of the teams
- must know the escape routes and safe areas
- must have maps, binoculars, watches, compasses, weather kits, cameras







# Anchor Points/Awareness



- ensure anchor points to carry out the operations in safety
- always be careful, do not "get used" to the procedures
- Remain constantly vigilant

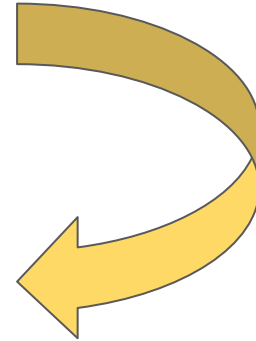


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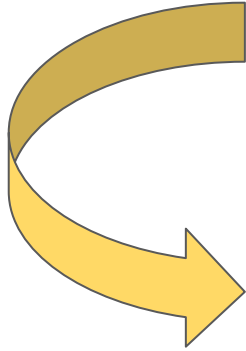
# Communication

- Radio frequencies must be known and usable
- back-up and periodic check-in procedures must be envisaged
- updates must be provided every time there is a change of situation
- It is necessary to use a concise and shared language
- give the alarm in time, without delay





# Escape Route and plan



- there must always be more than 1 escape route
- avoid the escape routes upwards and towards inaccessible areas
- preventive recognition of unstable soils, rocks and vegetation
- establish the escape time on: speed of the slowest, temperature and fatigue factors
- Indicate whether the escape route is for the night or for the day
- evaluate the escape speed with respect to the expansion speed of the fire
- vehicles always ready to escape

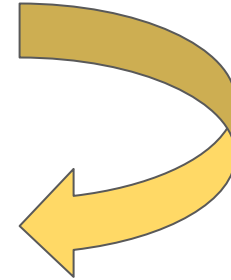


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# Safety Zone

- they must guarantee survival even without fire shelters
- they can be areas that are already totally burned (or burned for the occasion)
- near natural manifestations of fire obstacles (rocks, swamps, etc.)
- built sites: fire protection strips, wide streets, parking lots, etc.
- it is necessary to avoid leeward areas (they must not be invaded by smoke)
- Avoid areas near vertical walls, saddles, gullies.





## About coordination...

One of most used methodology of coordination on disasters scenarios is the “I C S - Incident Command System” (developed by CAL FIRE) after a series of wildfires in the ‘70s.

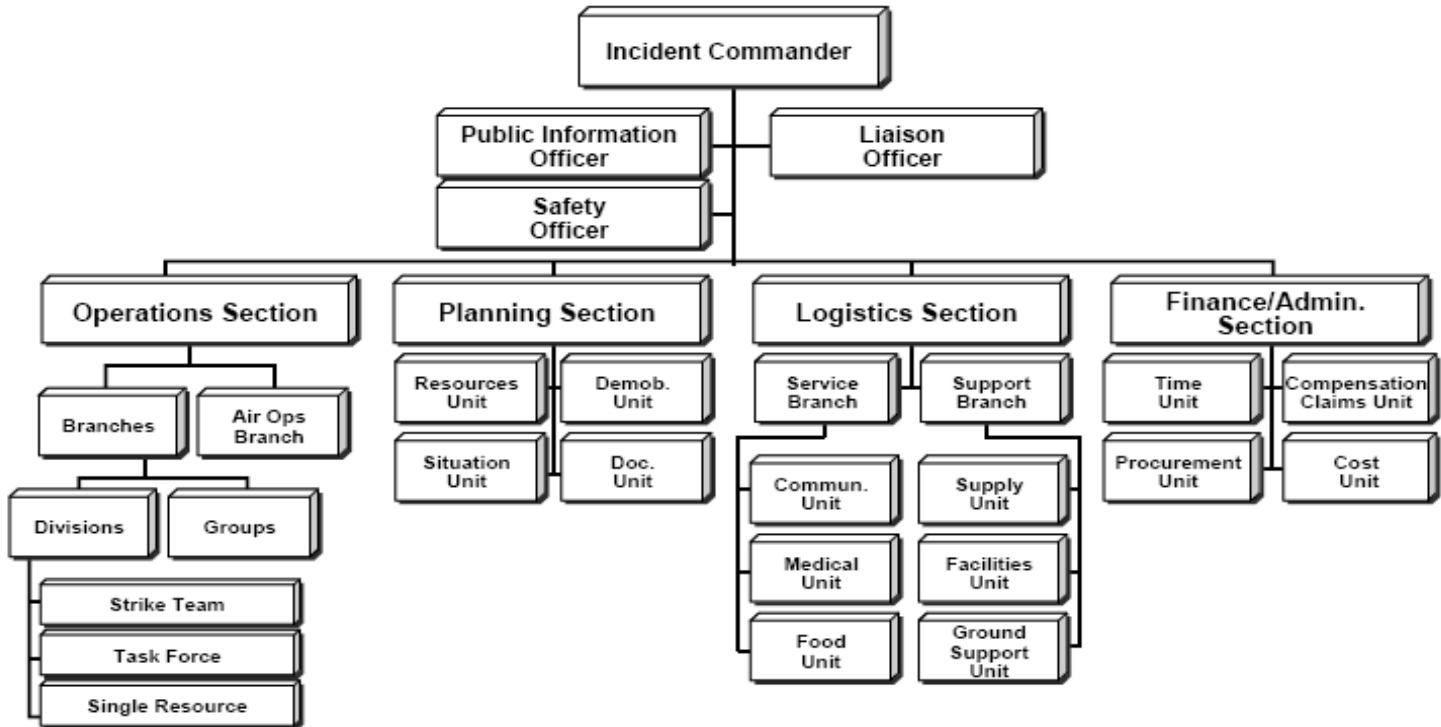
ICS is typically divided into five major functional areas:

- Command – Controls overall incident management
- Operations – “Boots on the ground”, accomplishes objectives
- Planning – Manages planning process
- Logistics – Provides incident support, ensures Operations has what they need to do their job
- Finance/Admin – Manages funds for the incident



## EXAMPLE OF ICS MODEL

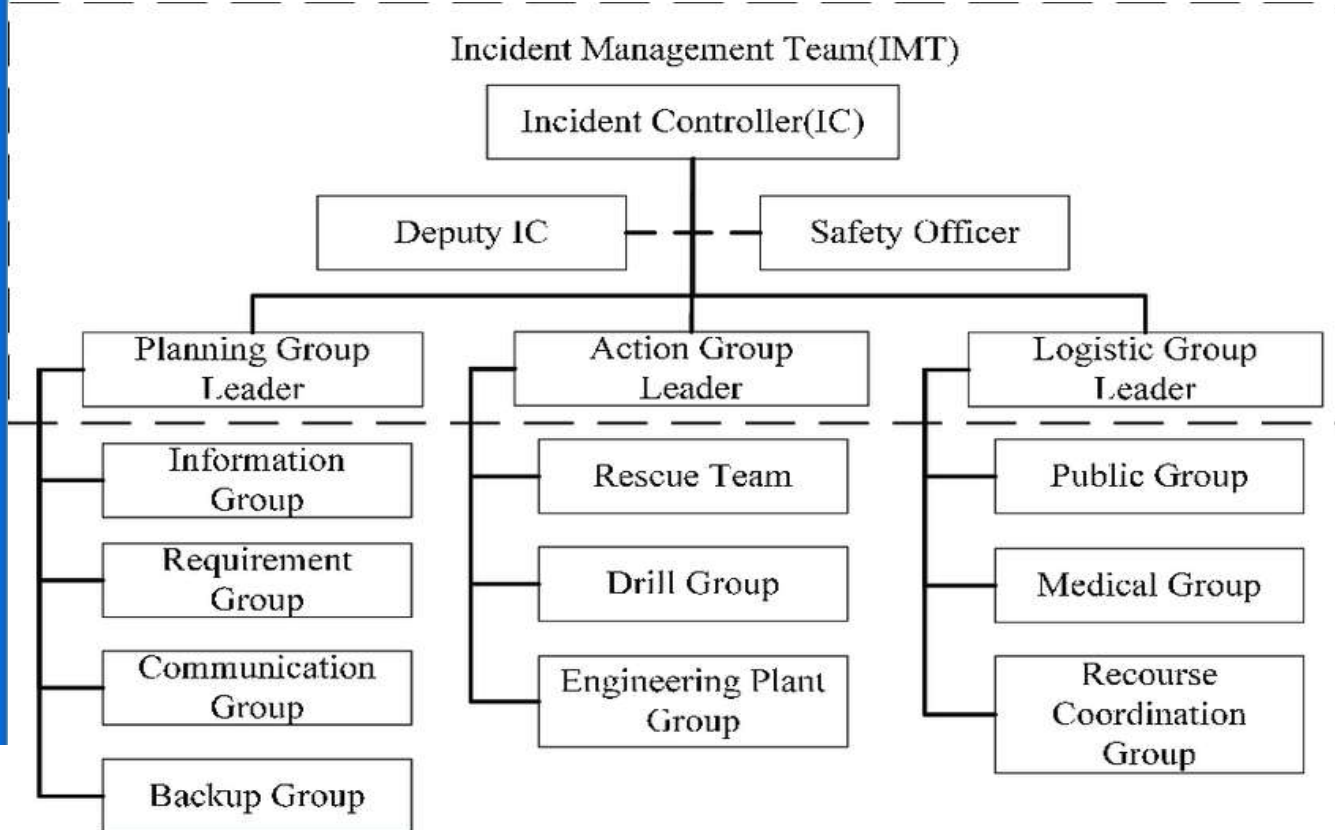
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## EXAMPLE 2 ICS MODEL

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The structure of the ICS is adaptable in function of scenario, location, incident, resources available in place etc.



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## **IMPORTANT!**

The ICS is one of most popular and used methodology of coordination, but not the only one. Every state could have a different methods.

For example in Italy, forest fires scenarios are coordinated by DOS: **Direttore delle Operazioni di Spegnimento = **Extinguishing Operations Director.****

**Before your departure abroad for a Forest Fire get informed about procedures and methods of that state!**





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## Safety on aerial firefighting operations



It's important to pay attention when on the scenario are working aircrafts, also approaching helicopters on the ground!



## Approaching helicopter on the ground

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### SAFETY AROUND HELICOPTERS

#### Approaching or Leaving a Helicopter

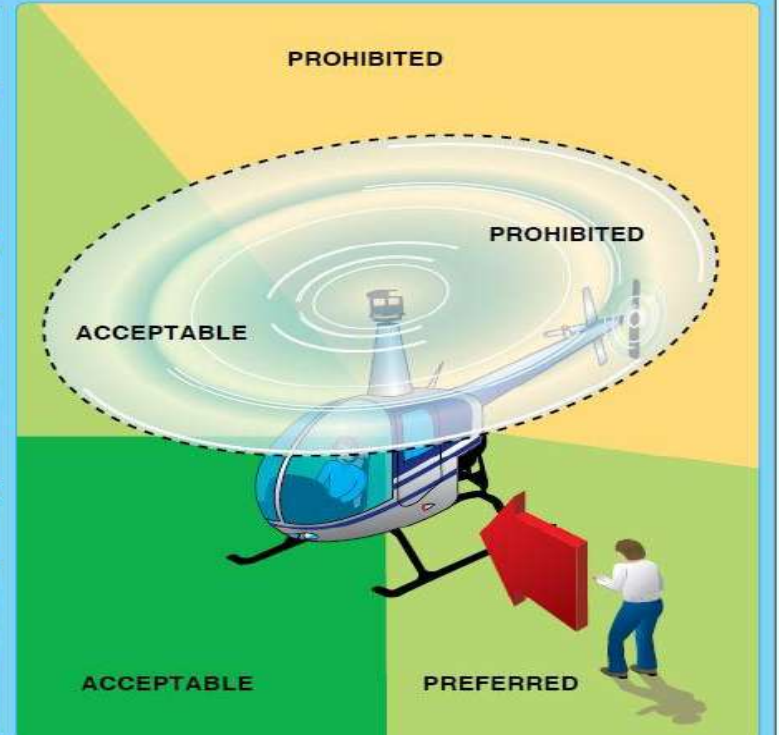
Do not approach or leave without the pilot's visual acknowledgment. Keep in pilot's field of vision **at all times**. Observe helicopter safety zones (see diagram at right).



On sloping ground, always approach or leave on the downslope side for maximum rotor clearance.



If blinded by swirling dust or grit, **STOP**—crouch lower, or sit down and await assistance.





## Approaching helicopter on the ground

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If disembarking while helicopter is at the hover, get out and off in a smooth unhurried manner.



Proceed in a crouching manner for extra rotor clearance. Hold onto hat unless chin straps are used. **NEVER reach up or chase after a hat or other articles that blow away.**



Do not approach or leave a helicopter when the engine and rotors are running down or starting up.



Carry tools, etc., horizontally below waist level—never upright or on the shoulder.



Obviously you must wear all your personal protective equipments!



## Aerial Operations

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Look around and pay attention at radio communication.  
Avoid the water Drops! It could reach several tons of weight.  
Pay attention at air displacement in first place and to the debris that might fall due to the same drops.





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## Additional Training Material

**About ICS:** <https://www.redzone.co/2016/03/11/wildfire-101-incident-command-system-ics/>

**About LACES:**  
<https://www.ukfrs.com/guidance/search/laces-safety-protocol>

**About approaching helicopters:**  
<https://www.flightliteracy.com/safety-in-and-around-helicopters/>



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## SUMMARY of the UNIT

In this unit the volunteers will learn about the basic actions in forest fires. In particular we will focus on LACES protocol, ICS protocol and basic precaution.



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Project web-page: <https://volinact.com/en/>

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