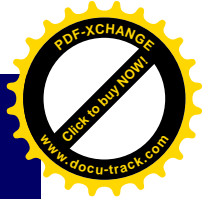
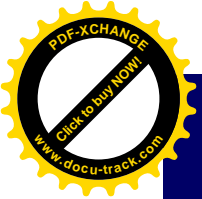


PEOPLES UNIVERSITY
Disaster Management and Emergency Planning Module

Emergency Preparedness

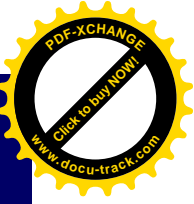
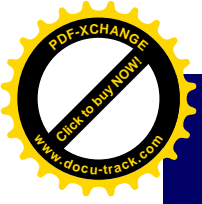
Dr Andrew Lee
Clinical Lecturer in Public Health
Sheffield, UK



Emergency Preparedness

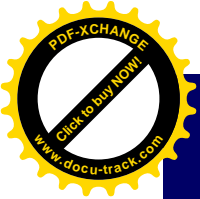
- n Once the hazard or hazards have been identified, and the community's vulnerability has been assessed, the next stage involves drawing up an emergency plan and making preparations for the hazard.





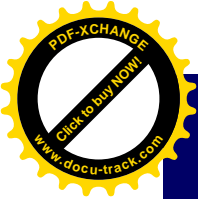
Emergency Preparedness

- n Steps in emergency preparedness
 - n 1) Assessing local capability
 - n 2) Planning
 - n 3) Capability maintenance
 - Training
 - Rehearsing
 - n 4) Disaster risk reduction



1. *Capability Assessment*

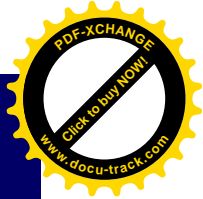
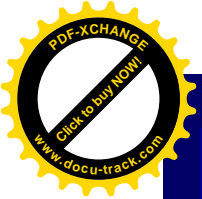
- n Assess local resources available for an actual emergency, as well as local coping strategies.
- n Match identified resources against functions they will support in the event of an emergency.
- n Identify capability shortfall or gaps and devise development plans to meet it.
- n Need to understand organizational structures locally and identify all relevant agencies that may need to be involved, or can contribute to an emergency response when a disaster has occurred.



Gap analysis :

Identifying where the shortfalls are

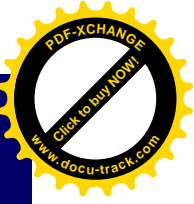
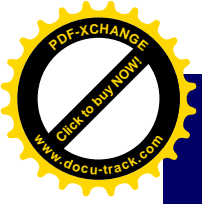
Emergency Functions	Who does it?	Notes
Emergency health care	a) Local hospital b) Clinics c) Health posts	a) Serious injuries b) Minor injuries c) First aid only
Law and order	Police	Protect lives & property
Co-ordinate rescue services	Not known	Who would know?
Search and Rescue	a) Fire service b) Army?	b) How do we contact them?
Surveillance of infectious disease	Not known	Who would know?
Communication with public Alert and warning	a) Local radio? b) Mobile speakers	a) How do we access radio? b) Where are they kept?
Emergency medical supplies	Central drug stores	How do we access the supplies?
Emergency food supplies	Not known	Who would know?
Emergency shelters	Not known	Who would know?



? Exercise: Gap analysis

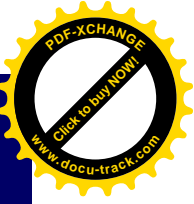
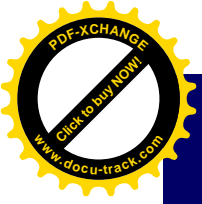
Can you list some emergency functions? Some examples are listed below. Identify who is responsible for them in your area. How would you contact or access them? Have you identified any gaps?

Emergency Functions	Who does it?	Notes
Emergency health care		
Co-ordinate rescue services		
Surveillance of infectious disease		
Communication with public		
Emergency medical supplies		
Emergency food supplies		
Emergency shelters		
Alert and warning		



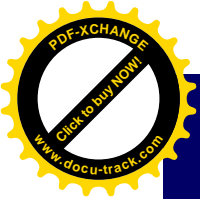
2. *Emergency Planning*

- n *'Doing the right thing at the right time'*
- n Plans aim to make effective use of existing resources and capabilities.
- n Involves key decision-makers in the planning process



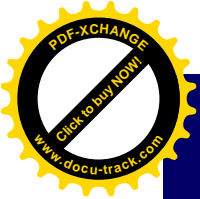
2. *Emergency Planning*

- n Well-prepared plans specify
 - what will be done
 - where it will be carried out
 - when it will be done
 - and by whom (*'Tasking'*)



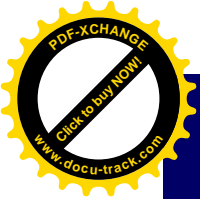
Key functions to be considered in an emergency plan

- n Emergency management organisation
- n Emergency operations planning
- n Resource management
- n Command and control
- n Emergency communication
- n Public information
- n Alerting and warning
- n Business continuity
- n Evacuation
- n Shelter
- n Protective measures
- n Emergency support services
- n Emergency reporting ('sitreps')
- n Surveillance
- n Training and education
- n Exercises and drills



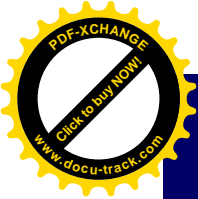
Business continuity management

- n In the event of an emergency, organisations such as hospitals, schools, and public works may stop functioning.
- n There are many possible reasons for this, e.g. staff are sick, injured or killed, the staff can't get to work, there is no power or water supply to buildings, etc.
- n Business continuity management is a process by which organisations can plan in advance how to maintain critical services in the event of an emergency or any disruption.



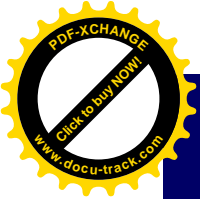
Business continuity management - *continued*

- n This involves identifying
 - A) **Key functions**
 - n What is the minimum that needs to be done in an emergency to keep things working?
 - B) **Personnel** needed :
 - n What is the minimum number of staff needed
 - n What are the key skills that the staff have that are required
 - C) **Key resources and equipment** that are needed



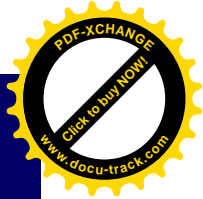
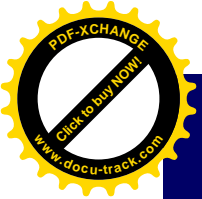
Business continuity management - *continued*

- n This involves identifying (continued)
 - D) Location:
 - n Is there a critical place to work from? Are there alternatives?
 - E) Key risks :
 - n What happens if there is no power, or water supply, or if your regular supplies (e.g. drugs) were to stop, or your staff don't come in?



? Exercise: Business continuity

- n If an emergency were to happen, how would you keep your organisation working?
- n What is the minimum that needs to be done?
- n Who do you need?
- n What can you do now to prepare your organisation for an emergency?



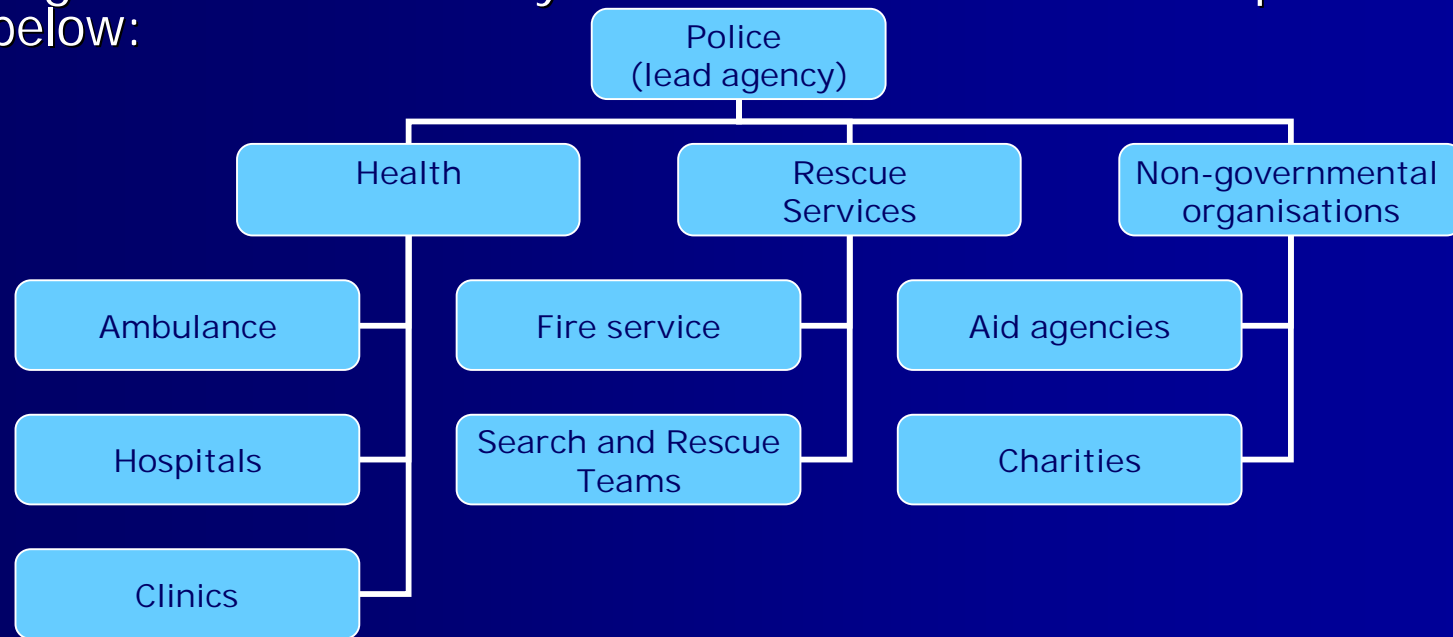
Emergency Planning - Challenges

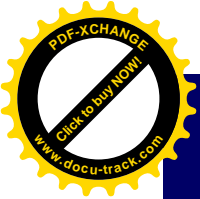
- n A common challenge encountered in most emergency situations is that of coordination.
- n Uncoordinated action by many agencies leads to confusion, wastage, and inefficient use of limited resources.
- n Conducting operations according to an emergency plan reduces reaction times and improves coordination.
- n Carrying out **emergency exercises** ('rehearsing') helps prepare staff by practising coordination and identifying issues before an emergency occurs
- n **Engagement of stakeholders** in the emergency planning process is also another significant obstacle, but if is done, it can really facilitate the response process.

Command and control structures

'Knowing who is in charge'

- n A key component of coordination is an understanding of how the various agencies fit together, as well as the command hierarchy or structure.
- n Organizational links vary around the world. One example is shown below:





One example of a command structure:

n Gold (Strategic)

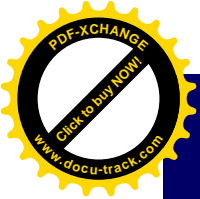
- Sets the strategic policy: Takes a broader view of the emergency, e.g. considers next day, next week, next year issues.
- Involves lead representatives from various agencies
- Often meet at a command centre away from the disaster

n Silver (Tactical)

- Works from an Incident Control Point at the incident site
- Manages the tactical deployment of resources
- Ensures that the efforts of frontline teams are co-ordinated

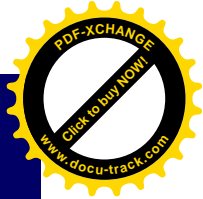
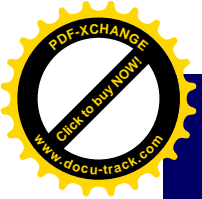
n Bronze (Operational)

- Frontline staff at the scene of a disaster such as ambulance crews, police, firemen, search and rescue teams
- Involved with hands-on work, operationalises the plan



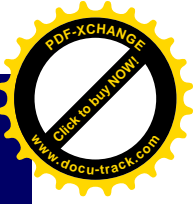
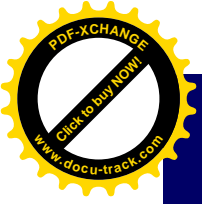
Mutual aid

- n Local communities and organisations do not need to respond to a disaster solely by their own efforts and resources. Often, it may be possible to get additional help from neighbouring districts and agencies.
- n Neighbouring agencies/districts can set up *'mutual aid'* agreements before a disaster strikes.
- n Emergency planners therefore need to identify key contacts from other agencies and districts. A memorandum of understanding can be set up for mutual aid agreements.



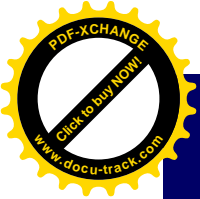
3. Capability Maintenance

- n Once developed, the ability to respond diminishes with time. There is a continuing need to:
 - Review and update plans
 - Test and service equipment
 - Train personnel
 - Educate and inform the community at risk
 - Rehearse emergency plans, procedures and systems (realistically!)



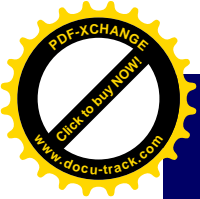
Community engagement

- n An essential consideration in emergency preparedness is **community participation** with the process.
- n There are numerous benefits for this:
 - **Raising awareness** in the community where there may be ignorance or lack of knowledge
 - **Strengthening community resilience and capacity** to cope in the event of an emergency
 - **Making use of expert local knowledge** of resources, issues, etc. to help guide planning
 - The community may be more receptive if a **bottom up approach** is used



Community engagement - continued

- n Another important reason for community engagement is as a means for officials and organisations to demonstrate **accountability** to their beneficiaries.
- n As was demonstrated in the aftermath of the Asian Tsunami Disaster of 2004, there was often an '**accountability deficit**' experienced by beneficiaries.
- n This can lead to community needs not being met, grievances, confusion and inefficient distribution of aid.



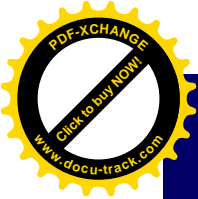
Community engagement - continued

- n Community engagement is essential to make programmes **sustainable**.
- n As with formal services, community groups need coordination both during the planning phase pre-emergency and in the response phase once the emergency has occurred.
- n Action plans for the community need to be 'community-based'. This helps meet their needs and improves the community's problem solving skills

4. Disaster Risk Reduction

- n Central to the reduction of disaster risk are mitigation efforts aiming to **reduce a population's vulnerability**.
- n **'Vulnerability'** as a concept refers to limitations or lack of access to resources. These resources are essential as they help the population cope with a disaster and recover from it. Thus, a population's vulnerability affects the impact of a disaster.

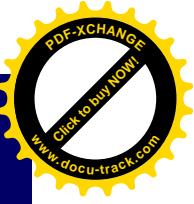
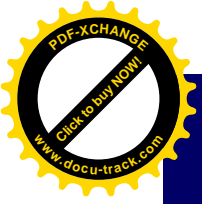




Disaster Risk Reduction - continued

n Types of vulnerability

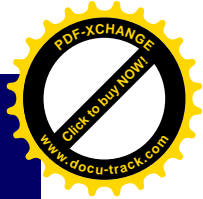
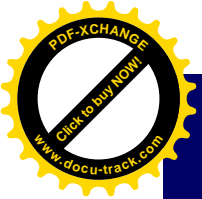
- **Social**: e.g. degree of integration in the community, family links, community networks
- **Economic**: e.g. savings, income, tools/machinery needed for income generation, market garden
- **Physical**: e.g. health
- **Physical**: e.g. building design, flood defences, location of houses
- **Psychological**: e.g. feeling of security, feeling of empowerment and control over one's life
- **Political**: e.g. access to policy makers



Why is mitigation necessary?

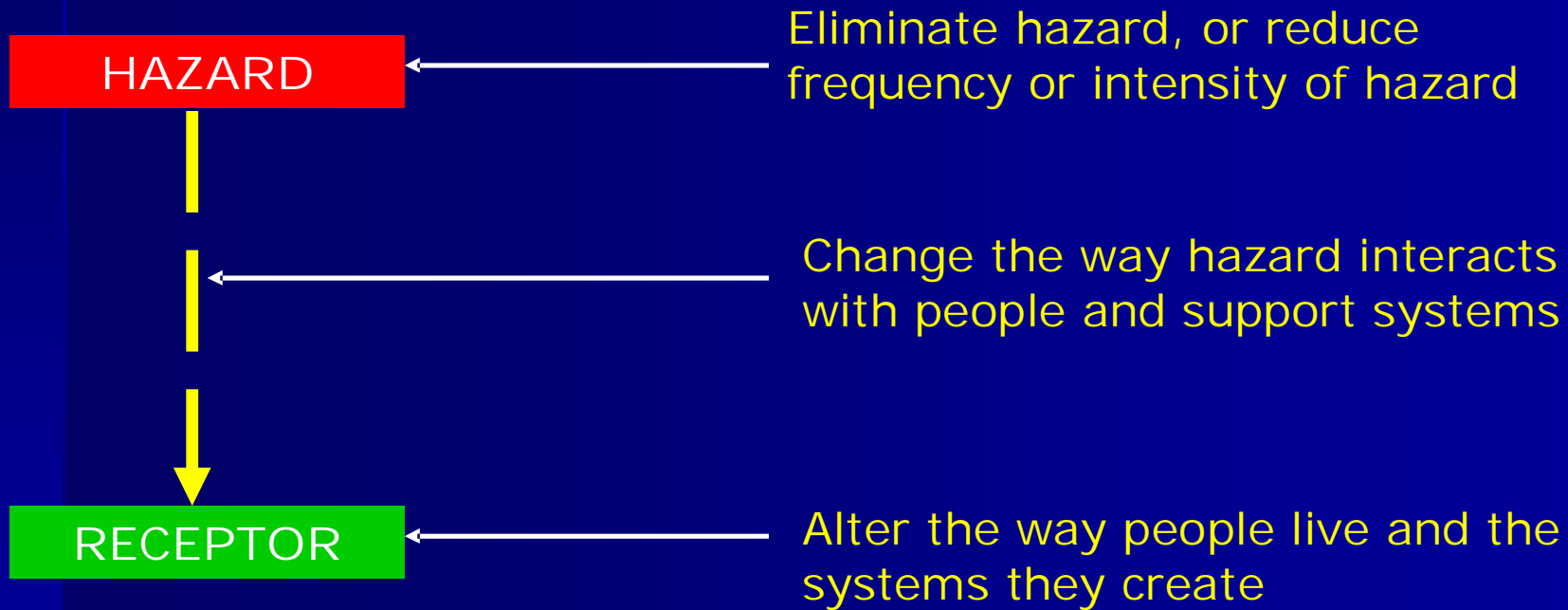
n *“It is the vulnerabilities experienced by people prior to a disaster occurring that require the greatest attention”*

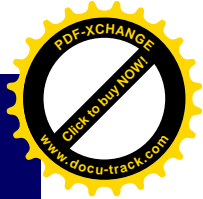
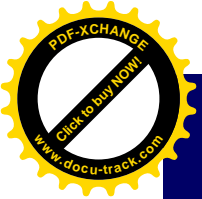
– S Bradshaw, ECLAC, 2004.



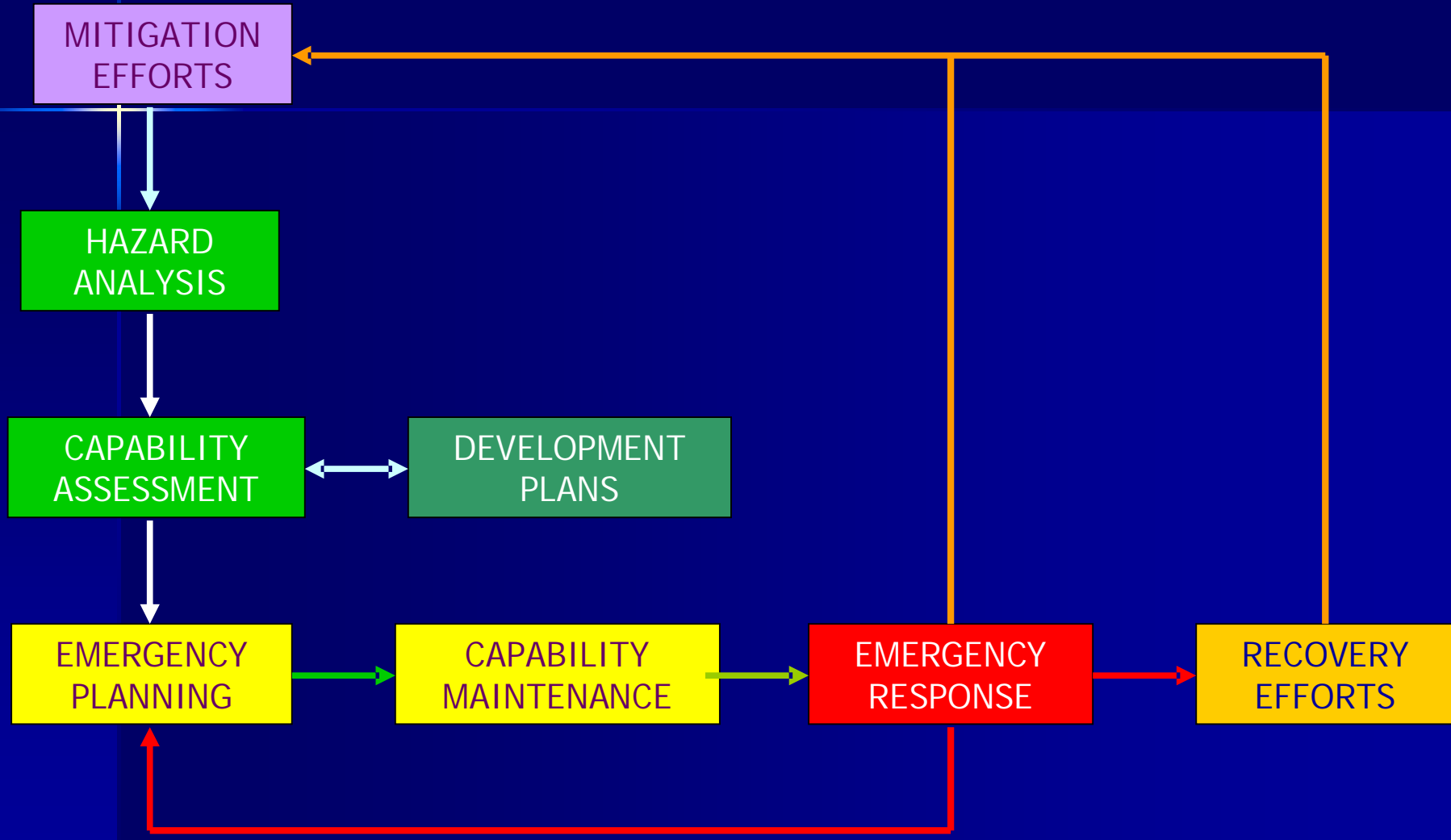
Disaster Risk Reduction - Mitigation

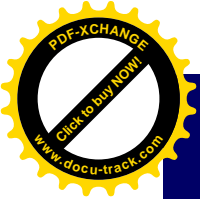
n Planned action to prevent or lessen the impact of hazards.





Disaster Risk Reduction - Mitigation





Examples of Mitigation Efforts

n Economic measures

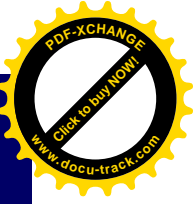
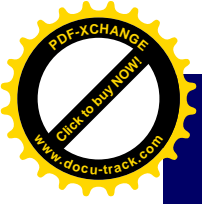
- Farmers could plant drought-resistant crops in drought-prone areas
- Diversify crops grown so that the area is not reliant on a single crop
- Site industries away from flood prone areas

n Infrastructure

- Building storm drains in flood prone areas, or sea walls to protect against storm surge.

n Construction

- Making sure building designs and material used are appropriate e.g. in earthquake zones, landslide-prone areas



Examples of Mitigation Efforts - continued

n Protecting key resources

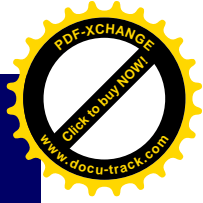
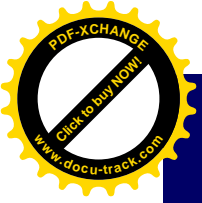
- E.g. protect key water treatment plants, electricity substations, drug stores, etc.

n Communication

- Having backup communication equipment (e.g. wireless radios, satellite phones) in case of telephone failure

n Emergency supplies

- E.g. have a 2-week supply of essential medicines, fuel, food, blankets, generators, etc. stored in a safe location



Examples of Mitigation Efforts - continued

n Individual preparation

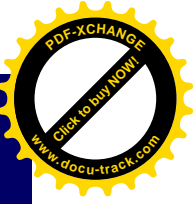
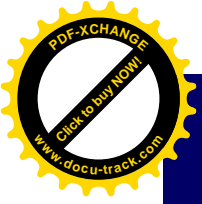
– Advise, encourage and help the community in disaster prone areas make their own preparations

– For example:

n Have personal emergency supplies

n Identify emergency evacuation routes or shelter sites as appropriate

n Give advice to people on how best to strengthen and protect their homes



? Mitigation exercise

- n Think of one hazard that can affect your area.
- n Can you then identify what measures can be taken either by
 - the individual,
 - communities,
 - agencies or
 - the governmentto reduce the potential impact of any disaster?