

3rd UK National Observers Group (NOG) Meeting

Friday, 21 March 2014

Presentation by
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Involving Londoners in flood risk management

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RainGain 3rd National Observers Group meeting. Friday 21.03.14





Summary

The GLA co-funded RainGain to develop a workshop pack for local authorities to help them engage with their communities on flood risk and flood risk management.

1. Why they may flood / have flooded
2. Who is responsible for managing it
3. What are the options for managing it



WHY IS IT IMPORTANT?

Climate Change

More frequent torrential
rains



Increased Paved Areas

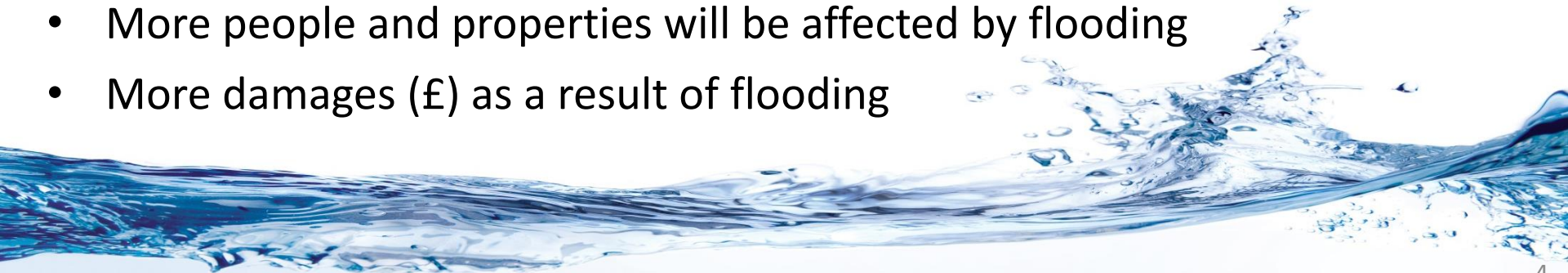
Less water goes into the soil
→ more water stays on the
surface and goes to drainage



Lots of People & Buildings

When flooding occurs in
cities, lots of people and
buildings can be affected

- Flooding across the country is likely to get worse and happen more often
- More people and properties will be affected by flooding
- More damages (£) as a result of flooding



WHY IS IT IMPORTANT?

Croydon: 4th Settlement in England Most Susceptible to Surface Water Flooding!

Settlement Rank	Settlement Name	Local Authority (county / unitary)	Estimated Number of Properties at Risk
1	Westminster	City of Westminster London Boro	31600
2	Birmingham	Birmingham District (B)	22900
3	Lambeth	Lambeth London Boro	21400
4	Croydon	Croydon London Boro	21100
5	Kensington and Chelsea	Kensington and Chelsea London Boro	20800
6	Islington	Islington London Boro	19800
7	Camden	Camden London Boro	19700
8	Wandsworth	Wandsworth London Boro	18800
9	Lewisham	Lewisham London Boro	18100
10	Southwark	Southwark London Boro	17800
11	Bromley	Bromley London Boro	16900
12	Hackney	Hackney London Boro	16300
13	Hammersmith and Fulham	Hammersmith and Fulham London Boro	15900

Source: National Rank Order of Settlements Susceptible to Surface Water Flooding – Defra 2009

THIS IS AN EXAMPLE SLIDE FOR CROYDON:

In this section LAs should insert pictures, videos and statistics (£ - damage, properties affected) of previous flood events in the area of interest.

LAs may use the Greater London Authority's DVD, which includes interviews of people who have been affected by flooding





ACTIVITIES

1. Why does it flood in your local area? Where? What's the impact?



2. Who is responsible for flood management in your local area?



3. What can we do to reduce flood risk in this area?



4. How to assess flood risk reduction options?



5. Selection of flood risk reduction options for your local area





Activity 1

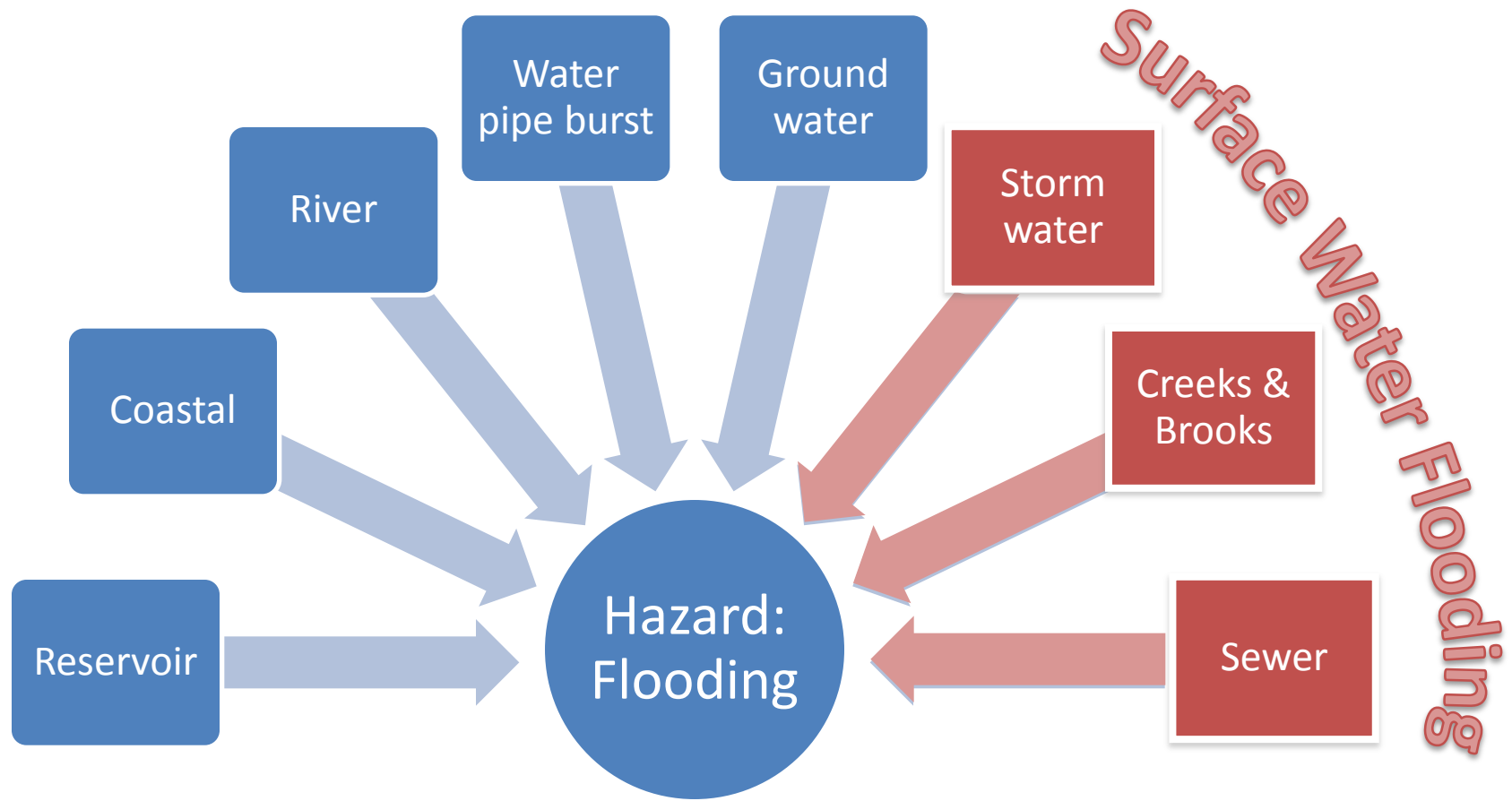
IDENTIFICATION OF SOURCES, EXTENT AND IMPACTS OF FLOODING IN YOUR LOCAL AREA



- Why does this area flood?
- Where does it flood?
- What are the impacts of flooding in the area?



Sources of Flooding



IMPACTS (RISK)

Economic:

Your money, properties, local businesses and shops

Environmental:

Your parks, streets, creeks

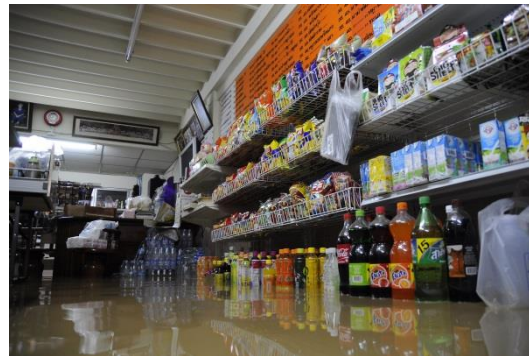
Social:

You and your neighbours

ECONOMIC IMPACTS



- Damage to homes, shops and businesses
- Damage to urban infrastructure (roads, electricity lines, water supply, gas pipelines, drainage system)



- Decrease in property values
- Increase in insurance premiums
- Loss of profits
- Labour costs of business interruption

ENVIRONMENTAL IMPACTS



- Sewage from overflowing sewers
- Storm water “picks up” pollutants and rubbish and spreads it through large areas, thus polluting rivers, lakes, green areas, properties, etc.
- Destruction of wild life





INSTRUCTIONS (1)

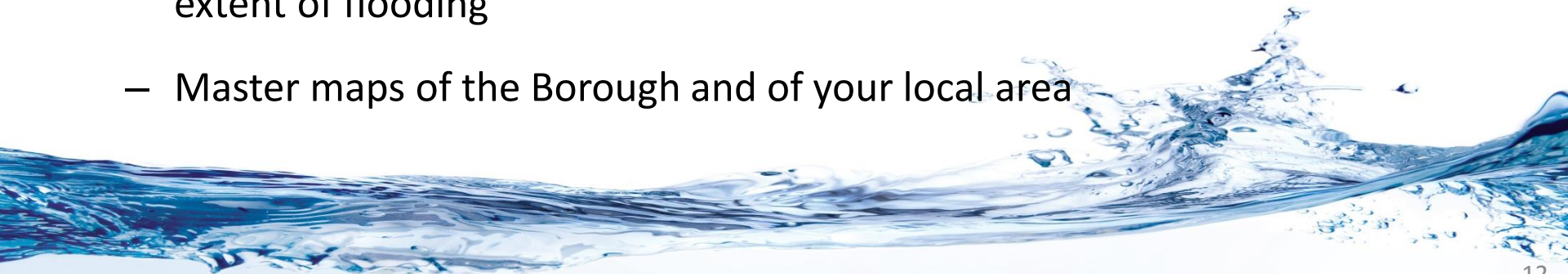
In order to identify the sources, extent and impacts of flooding in your local area, the following information will be used:

- Records of previous flood events in your area
- Existing flood depth and hazard maps of your area



INSTRUCTIONS (2)

- Split in groups of approximately 5 people
- A pack containing the following will be given to each group:
 - A copy of the slides containing information about the sources and impacts of flooding
 - Maps of flood extent and photographs of previous flood events
 - Flood depth and hazard maps for the whole of the Borough and for your local area (with a short explanation)
 - A questionnaire to guide you through the identification of the sources and extent of flooding
 - Master maps of the Borough and of your local area





INSTRUCTIONS (3)

- Based on the material provided, each group is invited to complete the following activities:
 - Produce a list of the main sources of flooding in your local area. Wherever possible, point out these sources in the master maps provided
 - Produce a list of the areas at highest risk of flooding in your local area, considering both the possibility of flooding and the potential consequences of it. Point out these areas in the master maps provided
 - Produce a list of the impacts of flooding in your local area
 - Nominate a reporter who will present the results in front of the audience
 - Time for this activity: 40 min
- A representative (reporter) of each group will present the group's findings to the audience



Activity 2

WHO does what? What do we all need to do?



- Who is responsible for flood management in your local area?
- Who would implement flood risk reduction options?





Transport for London



NHS

GREATER
LONDON
AUTHORITY



Utilities
(gas,
electricity,
telephone)



LOCAL
COUNCIL

Insurance
companies





Activity 3

understanding of LOCAL flood risk REDUCTION **MEASURES** AND options



What can be done to reduce flood risk in your local area?



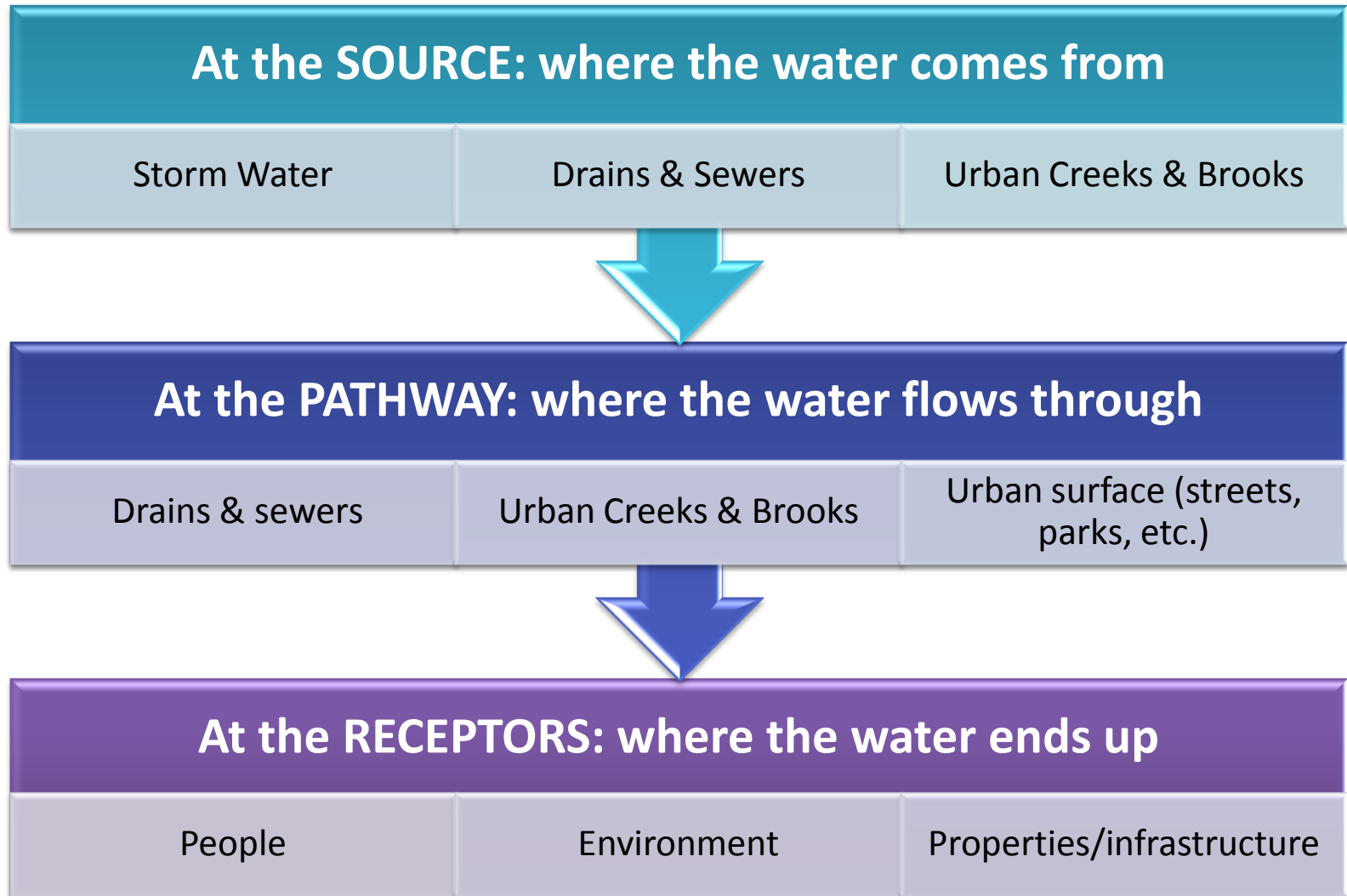
What are flood risk reduction measures and options?

- **Measure:** single action intended to reduce flooding and/or flood damage
- **Option:** combination of flood risk reduction measures, which complement each other



ACCORDING TO “WHERE” THEY FIGHT FLOODING

We can fight surface water flooding at different points



ACCORDING TO “**HOW**” THEY FIGHT FLOODING

Prevention / Mitigation

Prevention:

Aims at reducing flood occurrence and magnitude

Example: cleaning drains

Mitigation:

Aims at reducing damage

Example: household level protection

Resilience / Resistance

Resilience:

Intended to minimise damage if water gets in.

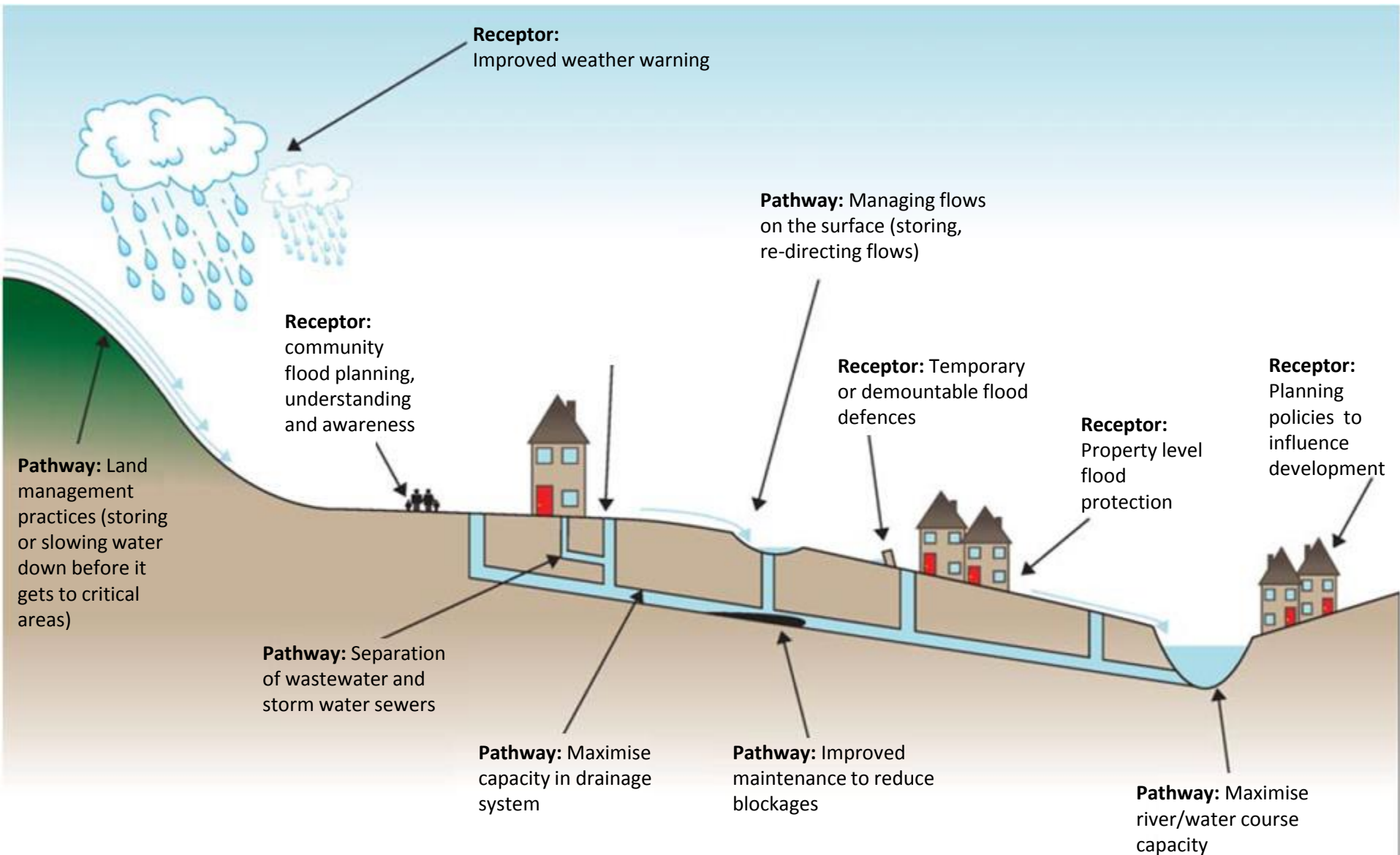
Example: water-proof flooring

Resistance:

Intended to keep water out of buildings.

Example: door seals

WE CAN FIGHT SURFACE WATER FLOODING AT THE **SOURCE**, **PATHWAY** AND **RECEPTOR** AND IN **DIFFERENT WAYS!**





INSTRUCTIONS

- Split in 7 groups (the size of the groups will depend on the number of participants)
- Each group will be assigned a **flood risk reduction option**, which comprises several individual measures. A package containing a brief description of each measure and the option as a whole will be given to each group.
- Each group is invited to read the material provided and understand the **flood risk reduction option** as well as the **flood risk reduction measures** it comprises. (30 min)
- A representative of each group will explain to the audience the **option** analysed by his/her team, including **where and how it “fights” flooding**, what are its main advantages and disadvantages and how it could be implemented. This presentation should last approximately 5 min.



OPTION	STANDARD MEASURES CONSIDERED
1. Do nothing new: continue doing what is currently being done	<ul style="list-style-type: none"> • Continue existing: <ul style="list-style-type: none"> • Planning policy and improvements to it (nation wide improvements) • Drain and sewer maintenance regimes • Emergency response plans • Urban development regulations • Community engagement • Do not implement any new flood reduction measures.
2. Sustainable Drainage Systems (SuDS) at property level	<ul style="list-style-type: none"> • Green roofs and walls • Rainwater harvesting and recycling • Soakaways • Permeable front/rain gardens • Permeable paving
3. Sustainable Drainage Systems (SuDS) at neighbourhood level	<ul style="list-style-type: none"> • Swales • Infiltration trenches • Rain gardens • Permeable paving • Detention basins • Ponds and wetlands • Rural land management practices
4. Re-direction and control of overland water flows and routes	<ul style="list-style-type: none"> • Inlet flow regulators • Road profiling, kerb raising & speed bumps • Threshold raising • Temporary or de-mountable flood defences
5. Increased drainage and storage capacity of above and below ground drainage systems	<ul style="list-style-type: none"> • Increased sewer network capacity • Separation of foul and storm water sewer systems • Increased capacity of local streams • Overland flood storage schemes • Underground flood storage schemes
6. Improved maintenance regimes	<ul style="list-style-type: none"> • Improved / targeted maintenance regimes (of gullies, sewers, screens, etc.)
7. Improved community participation, protection and response to flooding	<ul style="list-style-type: none"> • Community flood planning, understanding and awareness • Improved surface water flood forecasting and warning • Improved property level resilience measures • Improved property level resistance measures • Insurance
Any new options or combination of the options/measures above?	



Activity 4

Understanding of criteria for evaluation of FLOOD RISK REDUCTION options



How to assess flood risk reduction options?



HOW TO ASSESS FLOOD RISK REDUCTION OPTIONS?

Considering **pros** and **cons** in the following areas:

- Economic
- Environmental
- Social
- Technical
- Effectiveness





SOCIAL CRITERIA

Social Cost-Benefit	Will the community benefit or suffer from implementing the option?
Availability & Access to Services	How would it impact on availability and accessibility to public services such as education, health services, cultural facilities, emergency services, cultural and leisure facilities?
Sense of Community	Would this make local communities feel happier?
Equity	Would the impact of implementing the option be distributed among community members? Would it benefit everyone equally?
	Would some community members not like the change and if so why?
Health & Safety	Would it impose any health risks -such as injury, stress, anxiety- during the construction phase and/or later implementation?
Recreation & Comunal Areas	How would it impact on leisure and shared spaces?



TECHNICAL CRITERIA

Feasibility	Is it technically possible?
Reliability	Will it be robust and reliable?
Availability, Research & Development	Is the technology readily available for implementation? Would it require investment in research and development of a new technique?



Activity 5

Selection of flood risk reduction options for YOUR LOCAL AREA



What's the best way to manage flood risk in your local area?



HOW TO SELECT THE BEST OPTIONS FOR YOUR LOCAL COMMUNITY?

By evaluating each flood risk reduction option according to each performance criterion!

	Economic	Environmental	Social	Technical	Effectiveness
Option "x"	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Option "y"	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
...





Thank you!

This workshop pack was developed by Imperial College London with the support of the Local Government Flood Forum and the Greater London Authority. Financial support was provided by the Greater London Authority and by the European Union, through the Interreg RainGain Project.

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