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Introduction to Canadian Response to Natural Disasters Abroad - Annex C.

Floods

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Causal	Naturally occurring flash, river and coastal flooding from intense rainfall or inundation associated with seasonal weather patterns
phenomena	Human manipulation of watersheds, drainage basins and floodplains
General	Flash floods-Accelerated runoff, dam failure, breakup of ice jam
characteristics and effects	River floods-Slow buildup, usually seasonal in river systems
	Coastal floods-Associated with tropical cyclones, tsunami waves, storm surges
	Factors affecting degree of danger: depth of water, duration, velocity, rate of rise, frequency of occurrence, seasonality
Predictability	Flood forecasting depends on seasonal patterns, capacity of drainage basin, flood plain mapping, surveys by air and land.
	Waming possible well in advance for seasonal floods, but only minutes before in case of storm surge, flash flood, or tsunami.
Factors	Poverty, location of settlements on marginal lands; settlements on floodplains
contributing to vulnerability	Lack of awareness of flooding hazard
	Reduction of absorptive capacity of land (erosion, concrete)
	Non-resistant buildings and foundations
	High risk infrastructural elements
	Unprotected food stocks and standing crops, livestock
	Fishing boats and maritime industries
Typical adverse effects	<i>Physical damage</i> —Structures damaged by washing a way, becoming inundated, collapsing, impact of floating debris. Landslides from saturated soils. Damage greater in valleys than open areas.
	Casualties and public health-Deaths from drowning but few serious injuries. Possible outbreaks of malaria, diarrhea and viral infections.
:	Water supplies—Contamination of wells and groundwater possible. Clean water may be unavailable.
	Crops and food supplies-Harvests and food stocks may be lost to inundation.
	Animals, farm tools and seeds might be lost. Floodplain mapping, Land use control
Possible risk reduction measures	Flood control (channels, dikes, dams, flood-proofing, erosion control)
Specific preparedness measures	Flood detection and warning systems
	Community participation and education
	Development of master plan for floodplain management
Typical post- disaster needs	Search and rescue; medical assistance; disaster assessment; short term food and water supplies; water purification; epidemiological surveillance; temporary shelter
Impact	Damage survey forms; aerial surveys
assessment tools	