



Urban Flood Damage Analysis & Development of an Integrated Inundation Analysis Technology on Ground and Underground in Inland Area



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one

Cause of Urban Flood Disaster

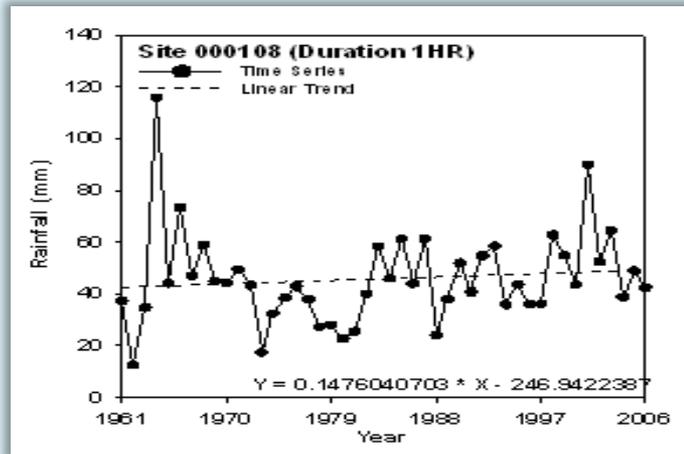
Major Cause of Urban Flood Disaster



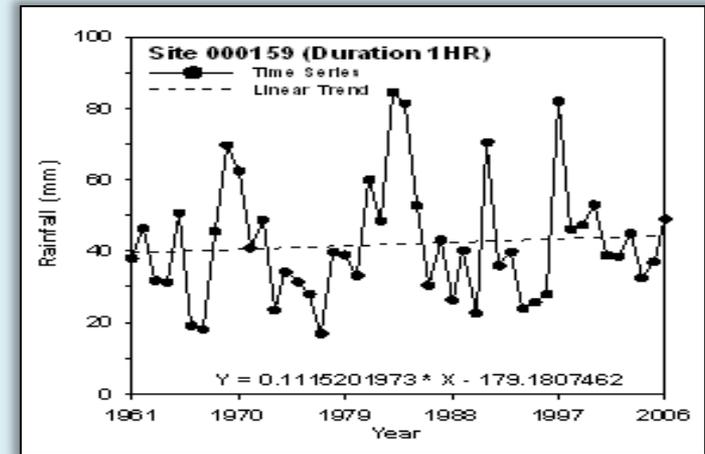
Cause of Urban Flood Disaster (Torrential rain increases)



Hourly rainfall of Seoul and Busan cities



Seoul city



Busan city

Rainfall has increased and typhoon has become larger

Kind	1990s(average)	2000s(average)	Remark
Max. rainfall intensity	94.6mm/hr	97.4mm/hr	↑ 2.8mm/hr
Max. daily rainfall	355.8mm	415.2mm	↑ 59.4mm
Typhoon central pressure	951hPa	944hPa	Larger

Cause of Urban Flood Disaster

Development of riversides lowlands

- Ground level lower than river plan flood elevation

Land use change

- Impervious surface increases due to various urban development

Urbanization and concentration of population

- Increase in casualties and property damage

Capacity deficit of disaster prevention facility

- Urban drainage facility design criterion : Trunk ; 10years, Branch ; 5 years
- Urban river design criterion : small and medium streams ; 50 or 100 years

Construction of a large underground space

- Construction of large underground space such as shopping mall and subway



two

Urban flood damage case

Major cases of urban flood damage in Korea

July 2001 , Seoul

Damage history

Casualties	Death 35, Injury 104
Flooded Buildings	94,375
Major causes	<ul style="list-style-type: none">•Sewer capacity deficit•Insufficient capacity of internal drainage•Lowland flooding•Insufficient capacity of pumping station and detention pond• Poorly drainage due to sediment spill



July 2009, Busan

Damage history

Casualties	Death 2, Injury 3
Flooded Buildings	1,428



预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_5610

