

Kolloquium am 01.12.2017

Beherrschung von Unsicherheit durch Resilienz

Multidisziplinäre Perspektiven

Resilienz aus Sicht der Stadtentwicklung

Prof. Dr.-Ing. Annette Rudolph-Cleff

Entwerfen und Stadtentwicklung

Blue Dunes: The future of coastal protection 2013-14 West 8

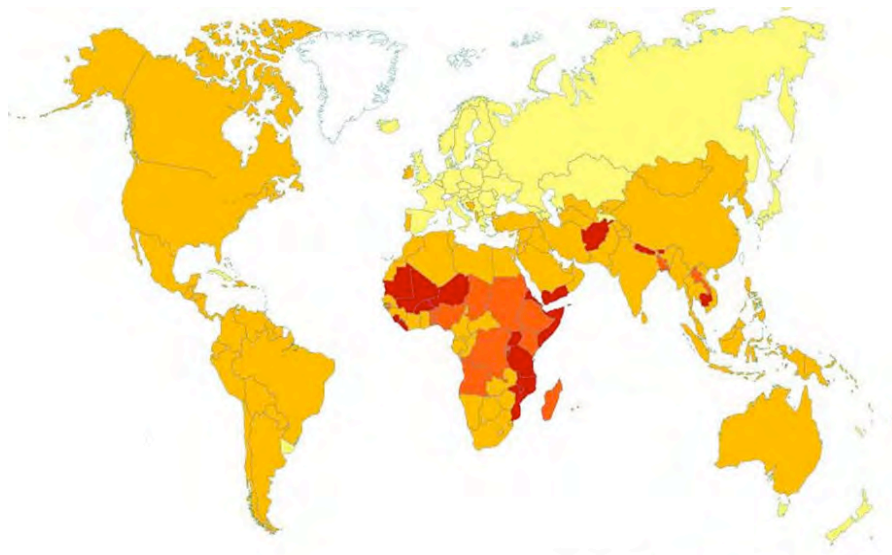


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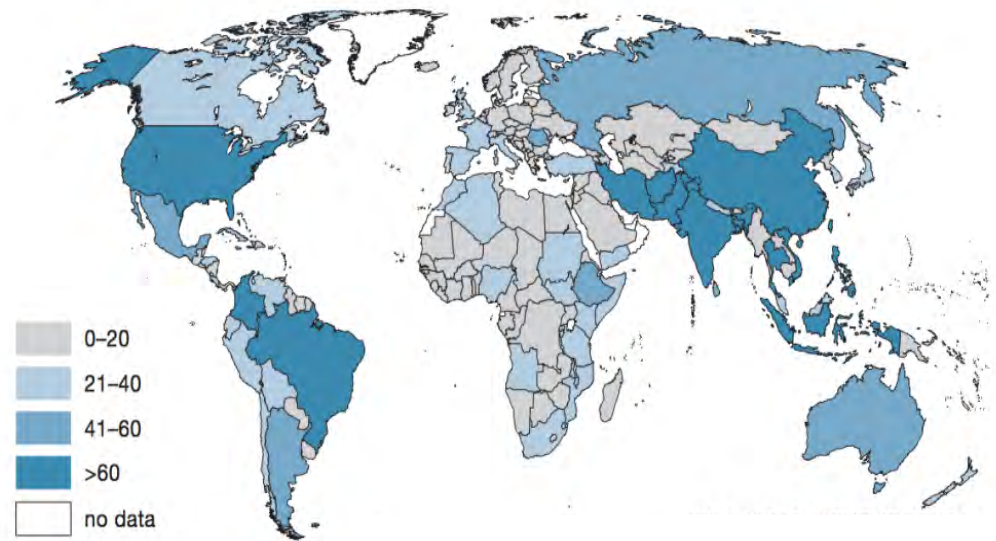
Making cities safe and inclusive, resilient and sustainable

UN Sustainable Development Goal 11

„Resilience is the ability of a system, community or society exposed to shocks and stresses to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner.“ (UNISDR 2011)



Rapid urban growth



Flood Events, 1970-2011. Source: EM-DAT



The question of risk and resilience



New planning perspectives?

Addressing risk and uncertainty

A new understanding of space and time

A new focus on the urban infrastructure

A new emphasis on ecosystem services



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Design strategies and planning examples

Investments in new infrastructures and

far-sighted land management

sustainable design of landscapes

Water sensitive urban design

Low impact Development

Climate adaptive planning and building



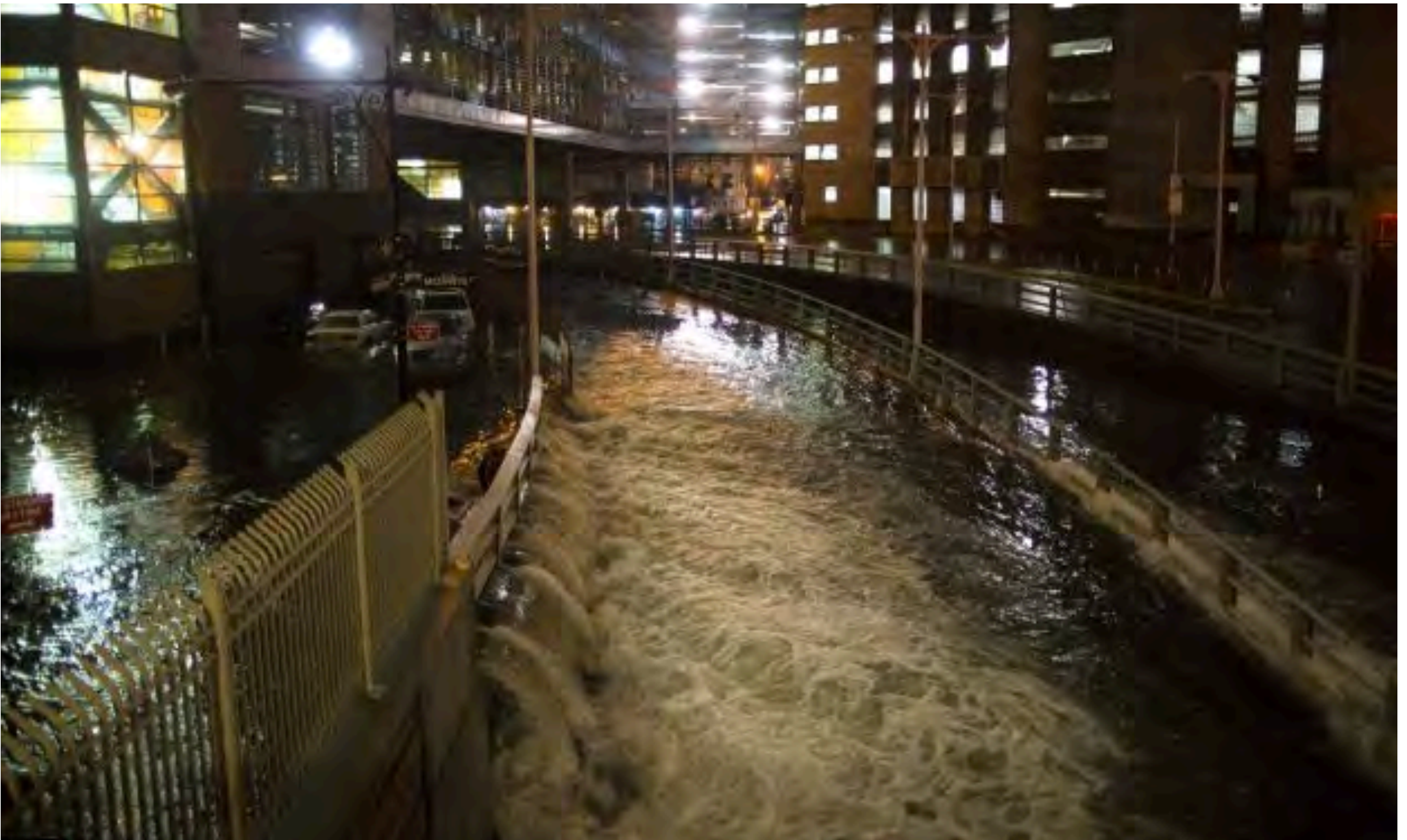
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Hurricane Sandy 2012



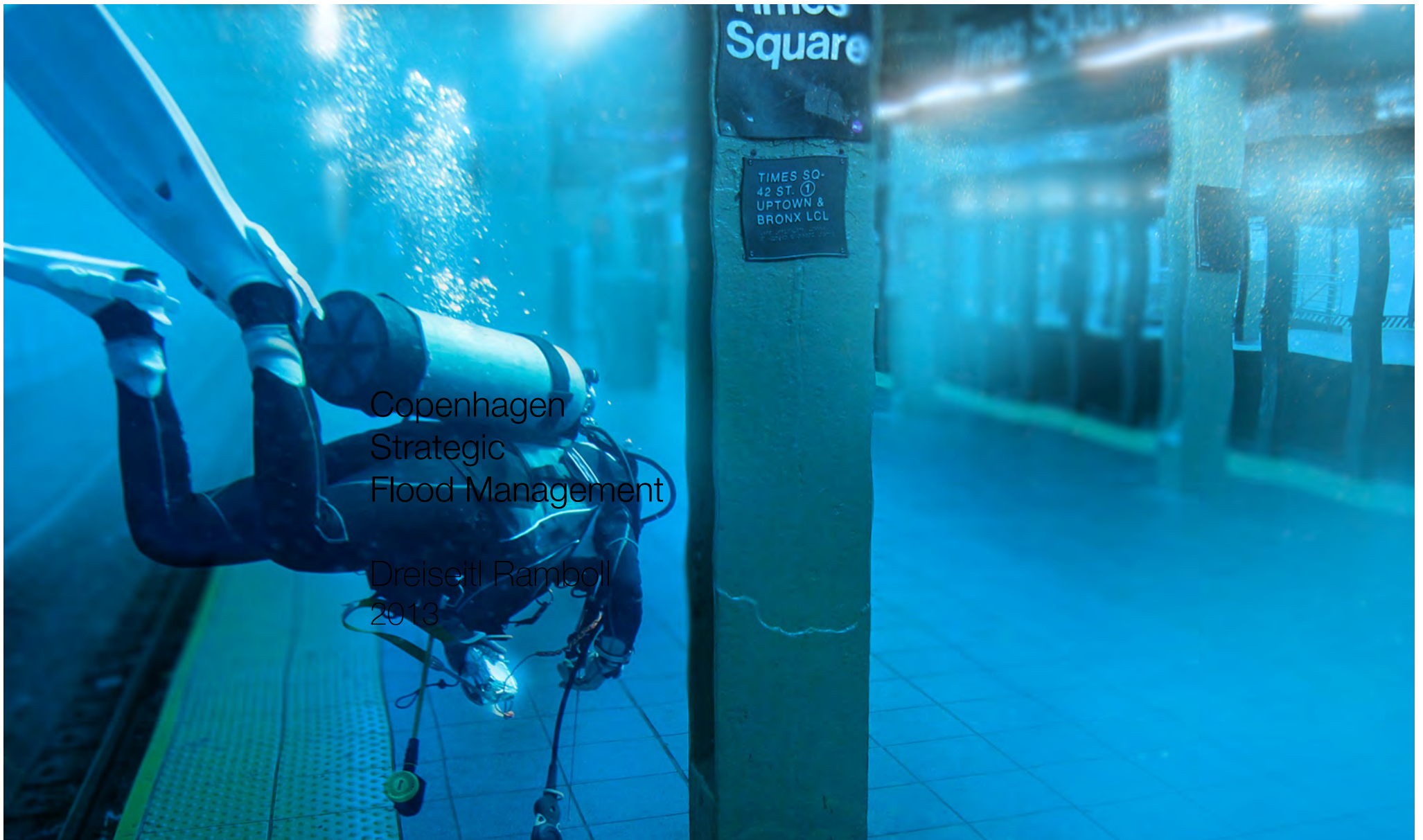
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Hurricane Sandy 2012



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Copenhagen
Strategic
Flood Management

Dreiseitl Ramboll
2013

Hurricane Sandy 2012



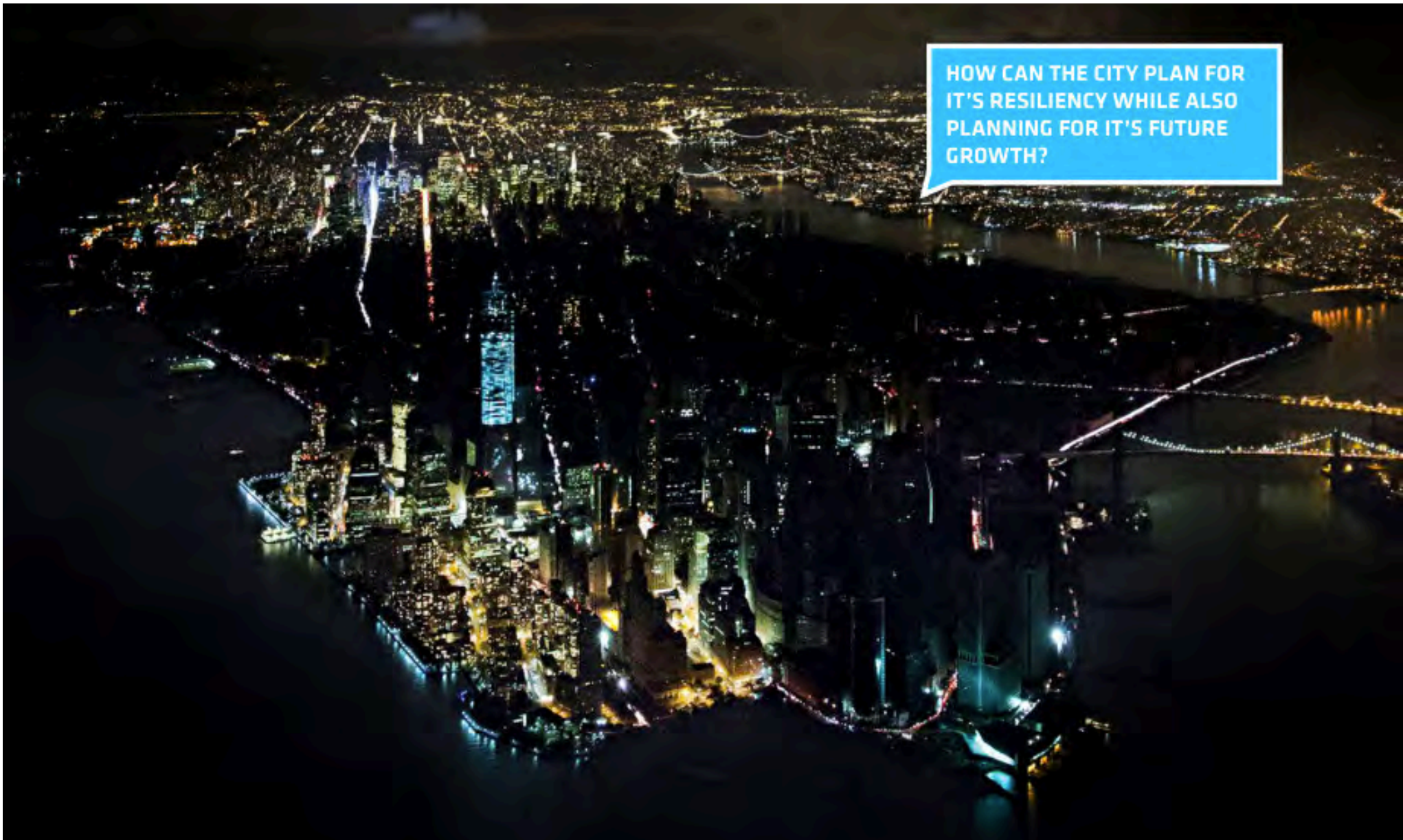
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Hurricane Sandy 2012



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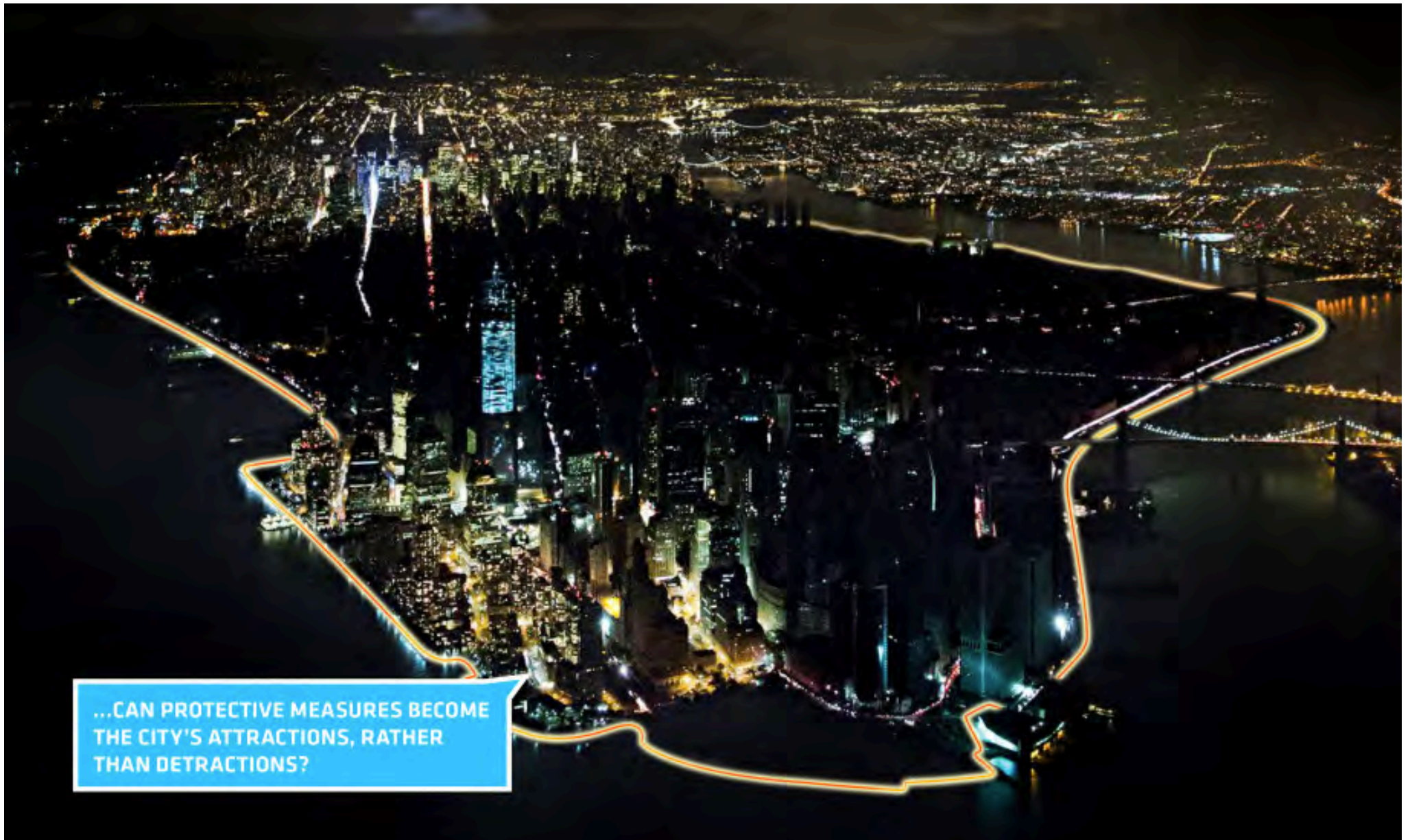


HOW CAN THE CITY PLAN FOR
IT'S RESILIENCY WHILE ALSO
PLANNING FOR IT'S FUTURE
GROWTH?

The Big U, New York, Bjarke Ingels Group



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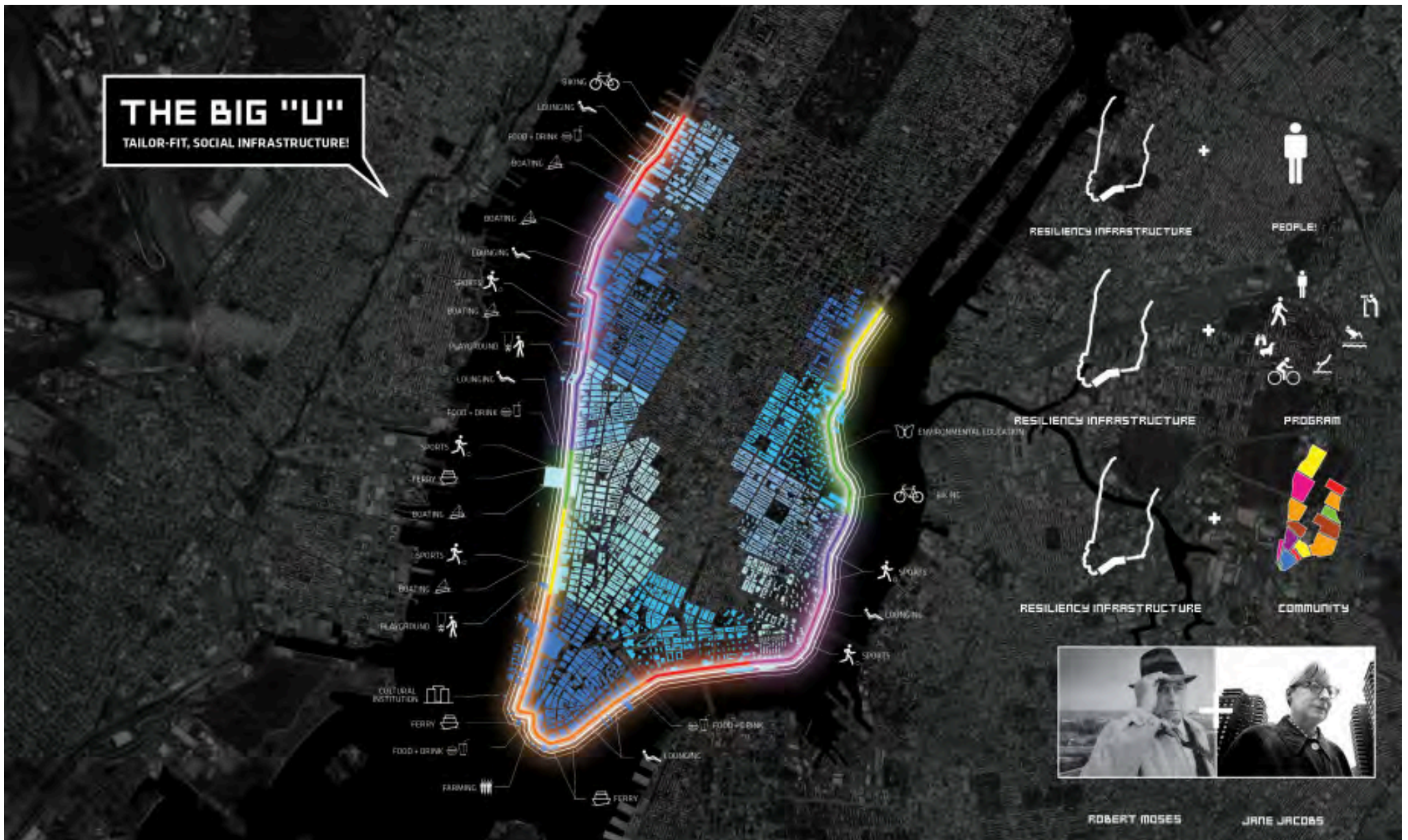


...WHICH BOTH PROTECT AND SERVE AS UPGRADES, RATHER THAN DOWNGRADES. FOR THE SOCIAL AND URBAN FABRIC?

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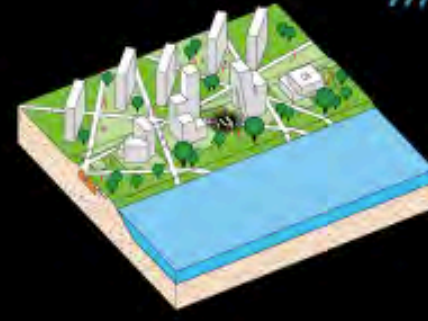
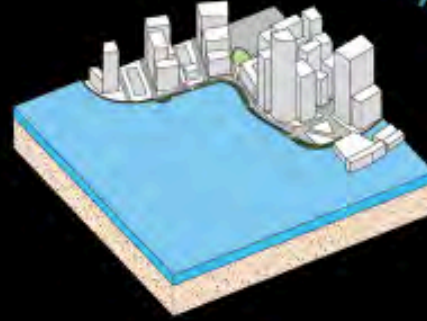
ART-PROTECTION IN CHELSEA?



CULTURE-BERM AT THE BATTERY?

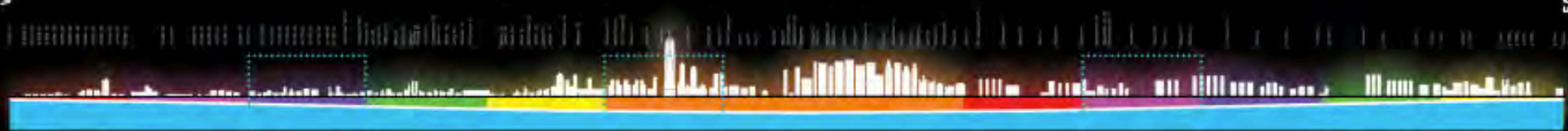


INTEGRATED F.D.R. FOR THE EAST-SIDE?



WEST 54th STREET

EAST 40th STREET

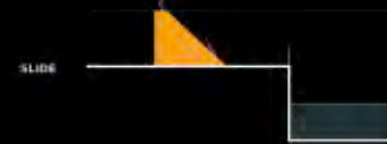
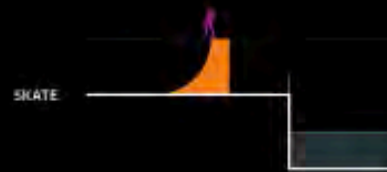
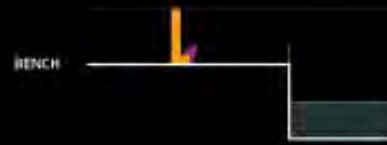
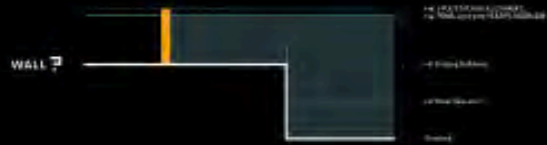


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HOW CAN A WALL BE MORE THAN A WALL?



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Water Plaza Rotterdam, De Urbanisten



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Water Plaza Rotterdam, De Urbanisten



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Bishan Ang Mo Kio Park, Singapore Dreiseitl 2006



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http://www.landezine.com/index.php/2015/05/copenhagen-strategic-flood-masterplan-by-atelier-dreizeit/copenhagen_cloudburst-masterplan-atelier-dreizeit-10/



Copenhagen Strategic Flood Management

Dreizeit| Ramboll
2013



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Copenhagen Strategic Flood Management

Dreiseitl Ramboll
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Copenhagen Strategic Flood Management

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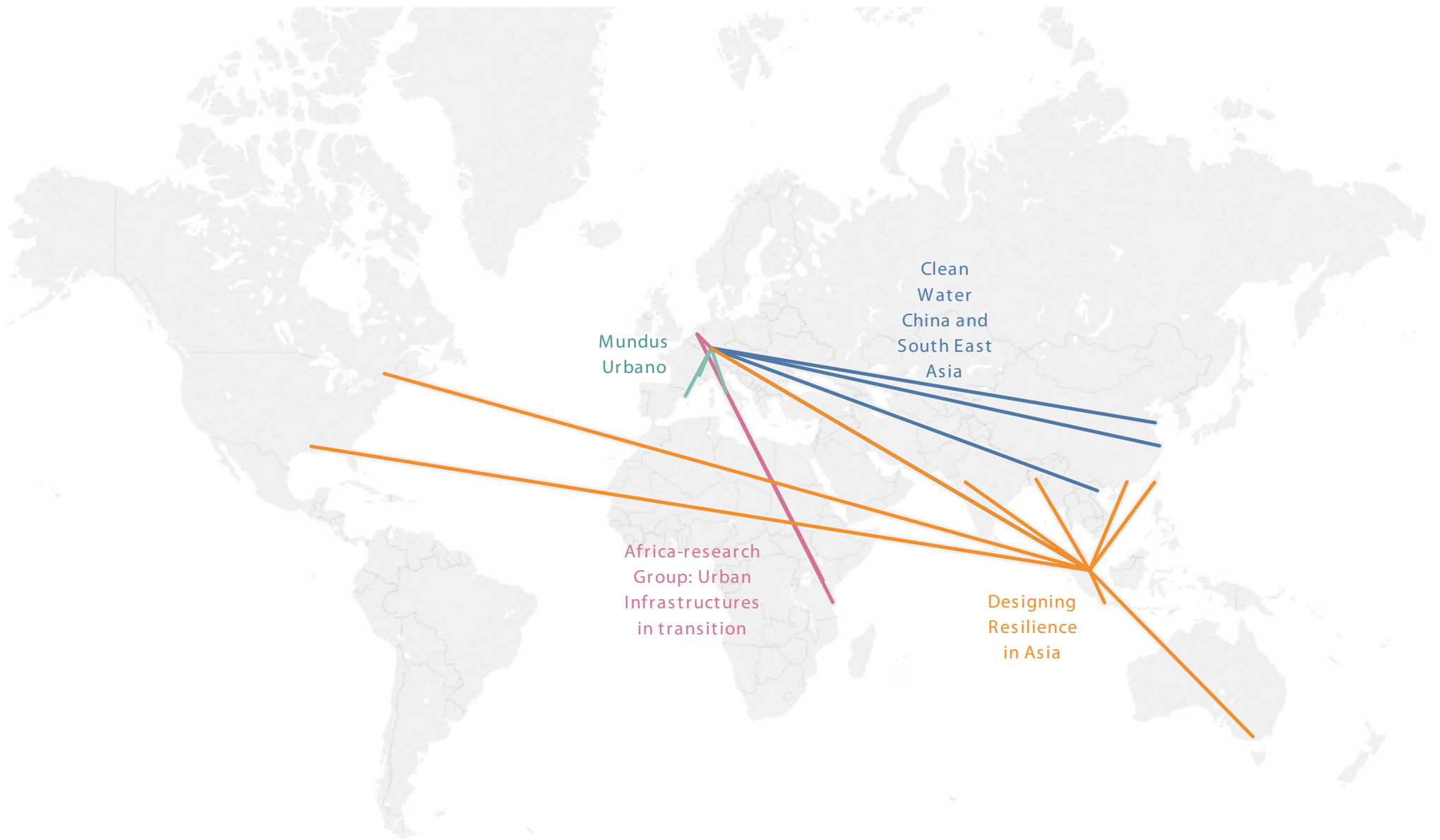
http://www.landezine.com/index.php/2015/05/copenhagen-strategic-flood-masterplan-by-atelier-dreiseitl/copenhagen_cloudburst-masterplan-atelier-dreiseitl-09/

Copenhagen Strategic Flood Management

Dreiseitl Ramboll
2013



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DESIGNING RESILIENCE IN ASIA

DESIGNING RESILIENCE IN ASIA 2015
International Design Competition and Symposium



**DESIGNING
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IN ASIA**

DESIGNING RESILIENCE IN ASIA 2015
International Design Competition and Symposium

International design competition and symposium

National University of Singapore
Cept University, Gujarat India
Bangladesh University of Engineering
and Technology, Bangladesh
Institut Teknologi Badung, Indonesia
Technische Universität Darmstadt
RMIT University, Australia
National Cheng Kung University,
Taiwan
South China University of Technology,
Guangzhou, China
Université de Montréal, Canada
Louisiana State University, USA



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und stadtentwicklung



Focus

The main focus of the competition is the **utilization of urban and architectural design, as well as, building technologies** to endow, support, amplify, and maintain a **community's resiliency** in light of natural disaster event, namely, a **typhoon and its associated effects**, i.e. high winds, storm surge, flooding, and excessive precipitation.





**DESIGNING
RESILIENCE
IN ASIA**

DESIGNING RESILIENCE IN ASIA 2015
International Design Competition and Symposium

Panel of judges

Marie Aquilino, ESA Paris
Esther Charlesworth, RMIT
Rohit Jigyasu, ICOMOS
Reena Tiwari, Curtin University

Honorable Mention

Project Technature- TU Darmstadt
Alexander Habermehl | Alexandru
Oprea | Charlotte Schauer
Daniel Mario Appari | Dominika Ewa
Czajkowska | Robert Maximilian Sand |
Sandra Leipe | Sandra Michel | Shirin
Safaei | Sonja Müller



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Technature_objectives

protecting the coastline
securing income sources
establishing risk management
leveraging on-site elements
upgrading infrastructure

Sections

current situation
phase 1_initiation
phase 2_stabilisation
phase 3_consolidation



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DRIA 2015 Overall Design Excellence Award

START SMALL **GROW STRONG**

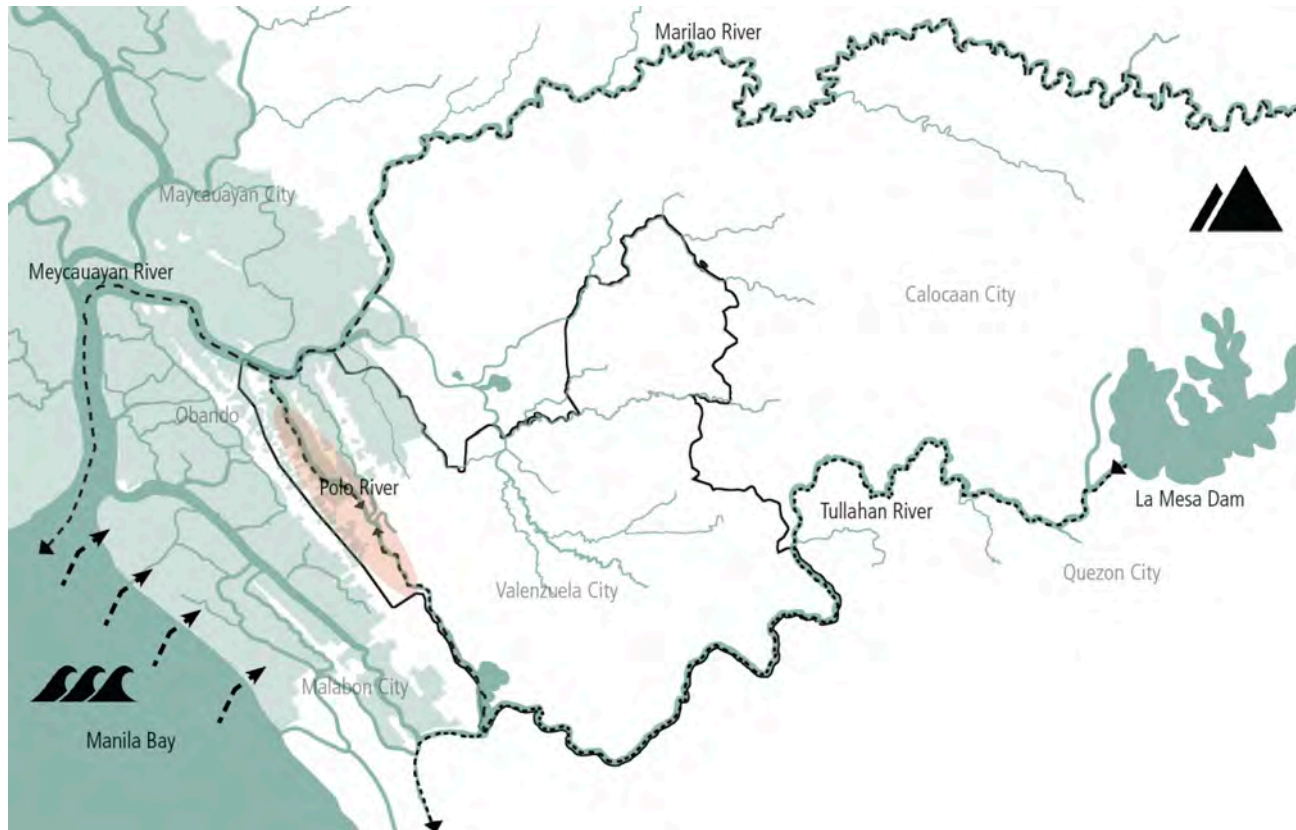
BY PROTECTION CONSTRUCTION AND CONNECTION





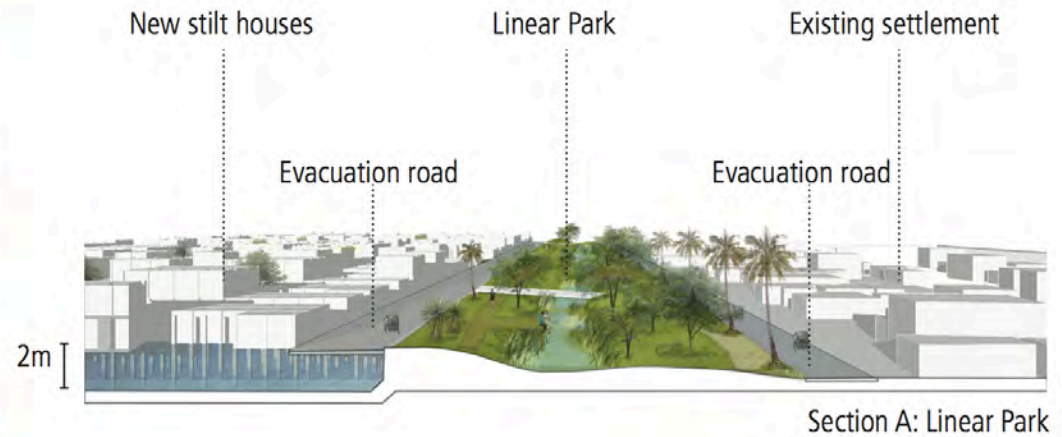
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Project SAFE Waterscapes
DRIA 2016 Urban Design Excellence Award



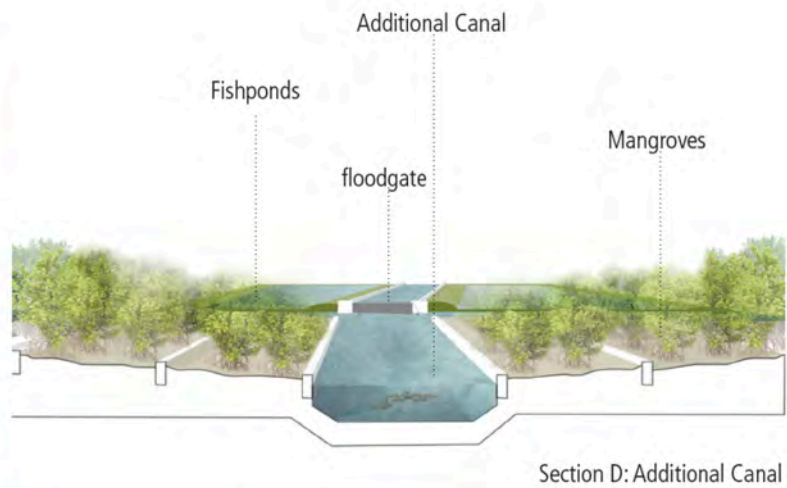
Project SAFE Waterscapes

DRIA 2016 Urban Design Excellence Award



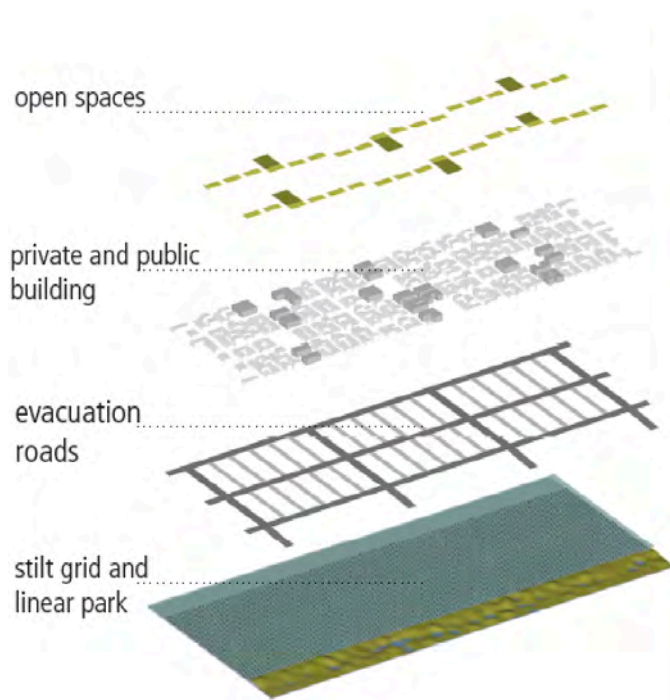
Project SAFE Waterscapes

DRIA 2016 Urban Design Excellence Award



Project SAFE Waterscapes

DRIA 2016 Urban Design Excellence Award



**DESIGNING
RESILIENCE
IN ASIA**
INTERNATIONAL SYMPOSIUM AND
DESIGN COMPETITION

**THANK YOU VERY MUCH
AND SEE YOU NEXT YEAR!**



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Project Retrace, Semarang, Indonesia

DRIA 2017 Urban Design Excellence Award



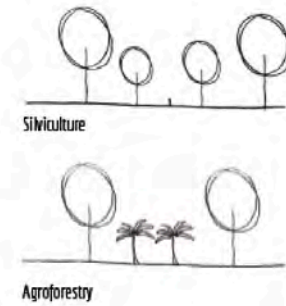
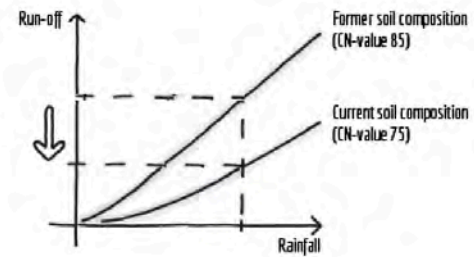
Mai Quynh Lai, Andrea Hanak, Young Eun Ha, Huyen Trang Dao, Diep Chieu Duong Ngo, Johanna Westermann, Marco Padberg, Van Ly Nghiem, Vanessa



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Reforestation

RETRACE





Designing Resilience in Asia 2017, NUS Singapore



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START SMALL **GROW STRONG**

BY PROTECTION CONSTRUCTION AND CONNECTION



The city as social space

Social Resilience

The vulnerability of a Community is critically determined by its social cohesion.



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TU Darmstadt | Germany

Sandro Bellini | Hannah Freund | Nadine Jezernik | Vera Kallenbach | Neele Leson | Beata Preiger | Jennifer Weil | Ann-Cathrin Winkelmann



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