

# 1

# GLOBAL CHALLENGES

The global risk society paradigm describes a world in which the concept of risk has broken all kinds of borders and extended to the daily life of millions of people, even threatening the very existence of humanity as a whole. This scenario has immediate and unexplored consequences for urban environments: an increase in traumatic events, but also a strong influence on social and economic processes that continuously shape cities and territories. Urbicide and widespread violence, disasters and climate change, social and economic risks are currently absent from urban discourse but have the potential to become extraordinary engines of urban metamorphosis. Extreme events have to be seen as a chance to liberate the potential inherent in every radical transformation mechanism and to explore disruptive solutions.

# GLOBAL CHALLENGES



## 1.1 THE CITY IN THE RISK SOCIETY

Historical evolution and processes of cultural and economic globalization have brought out relevant and frightening risks on a global scale: from climate change to uncontrolled urban explosion, from the spread of informal low-intensity conflicts to the development of extended forms of technological control and the enormous widening of economic and social inequalities. Humanity as a whole is today facing epochal challenges that require a radical metamorphosis of inhabited spaces. We live in what Ulrich Beck has defined as a global risk society:

the speeding up of modernisation has produced a gulf between the world of quantifiable risk, in which we think and act, and the world of non-quantifiable insecurities that we are creating . . . . “Risk” inherently contains a concept of control. Pre-modern dangers were attributed to nature, gods and demons. Risk is a modern concept. It presumes decision-making. As soon as we speak in terms of “risk,” we are talking about calculating the incalculable, colonising the future . . . . But what happens in world risk society is that we enter a world of uncontrollable risk and we don’t even have a language to describe what we are facing. “Uncontrollable risk” is a contradiction in terms. And yet it is the only apt description for the second-order, unnatural, human-made, manufactured uncertainties and hazards beyond boundaries (BECK 2002).

The responses to this condition of permanent existential siege, which undermines the very reasons of community living and suggests an imminent “end of time,” have been compared by Slavoj Žižek to the five stages of mourning: rejection, anger, negotiation, depression, acceptance (ŽIŽEK 2011). Today’s reactions are technocratic, convinced of the salvific function of markets and technological innovations, or depressed, in the total lack of future prospects, or even apocalyptic, aimed at strengthening the individualism of “save whoever can” (LEONARDI AND BARBERO 2017). Resignation appears as one (and often the only) pos-

sible outcome of unacceptable inequalities, of catastrophic natural phenomena, of the irreparable loss of biodiversity, but it is not necessary: the challenges hide a new revolutionary space for the convergence of the different struggles and for the creation of a common front (KLEIN 2014). It is necessary to build “not sad philosophies about change” (GIANNUZZI 2015) that abandon the sense of inevitability and instead allow renewed political, social, and behavioral choices and, most of all, a renewed design attitude. Beck too underlines the extraordinary opportunities for the radical rethinking of the approaches and processes that shape our societies and cities, within the paradigm of the global risk society. “Uncontrollable risk is now irredeemable and deeply engineered into all the processes that sustain life in advanced societies. Pessimism then seems to be the only rational stance. But this is a one-sided and therefore truly misguided view. It ignores the new terrain. It is dwarfed by the sheer scale of the new opportunities opened up by today’s threats, that is the axis of conflicts in world risk society” (BECK 2002).

For the purposes of this study, we have subdivided these risks and opportunities into three categories in an attempt to systematize the types of extreme events that deeply influence urban metamorphosis in the contemporary built environment. The three proposed categories are:

a.

### URBICIDE AND VIOLENCE

Currently wars vary in scope, dimension, cause, and involved actors, while terrorism and political violence extend the frontier of conflict possibilities to the whole globe, and violent acts can rapidly involve areas peaceful until just very recently.

b.

### DISASTERS AND CLIMATE CHANGE

Natural disasters (earthquakes, floods, fires, etc.) impact, at various levels of risk, large areas of the planet, while the early effects of climate change and biodiversity loss significantly increase the scope of danger and extend the percentage of population involved.

c.

### SOCIAL AND ECONOMIC RISKS

The enlarging of global and local inequalities has substantially increased the exposure to risk of large strata of the population, in both developed and developing areas. Social and economic processes can have a catastrophic impact on urban environments and territories.

This vertical subdivision of interrelated elements partially fails in describing the interwoven nature of the different issues that can as well be read in a horizontal manner (blue wars, climate inequality, ethnic and religious wars, etc.). However, the vertical simplification permits a definition of clear categories that, while not to be seen as rigid borders, can act as useful elements for the interpretation of events and influence the development of design strategies.

## 1.2 URBICIDE AND VIOLENCE

Today, we are faced with a creeping Third World War, or something similar to a global civil war: permanent, unconventional, asymmetrical, local, and mobile, but with major consequences and reverberations. We are witnessing a substantial change in the form of conflict, or of perpetual non-peace, which sees a progressive increase in the involvement of civilians, both victims and targets, compared to the past. The consequence is that cities have become the preferred battlefields, and their destruction, via ground or air, has become a primary strategic goal for military and political purposes (GRAHAM 2010).

This condition leads to the reemergence of the term “urbicide” in urban discourse, defined as the deliberate violence against cities, their destruction, and the intentional elimination of a collective “memory made of stone.” Today, war is fought in urban contexts, and “urbicide is a form of genocide, the fundamentally illegitimate form of modern war in which a civilian population as such is targeted for destruction by armed force” (SHAW 2004). The term urbicide was popularized by Marshall Berman to describe the consequences on his native Bronx of Robert Moses’s “meat axe” in the 1960s (CARO 1974) and first applied to a war context in the 1990s during the Yugoslav Wars (BOGDANOVIC 1993) with the exhibition *Mostar 92 Urbicid* (RIBAREVIC-NIKOLIC AND JURIC 1992) and a seminal article by Giancarlo De Carlo in *Spazio e Società* (DE CARLO 1997). Today, the dire images coming from Aleppo, Benghazi, Sanaa, or Kyiv show the consequences of combat action involving the heart and souls of cities on the population and on the urban environment.

Urbicide is the silent witnessing of the complete integration of the military–industrial complex (HOSSEIN-ZADEH 2006) and the tip of the iceberg of a global trend toward the widespread use of military tools to confront urban issues. It is the conscious transformation of military operations into military urbanism: “techniques of urban militarism and urbicidal violence serve to discipline or displace dissent and resistance. They erase or delegitimize urban claims and spaces that stand in the way of increasing predatory forms of urban planning that clear the way for super-modern infrastructure, production centres or enclaves for urban consumption” (GRAHAM 2010). Current conflicts can be defined as cosmopolitan wars: low-intensity, mobile,

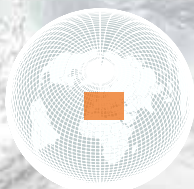
permanent, unconventional, and timeless conflict. These are wars fought on a large scale, which see national and transnational armies and coalitions, terrorist groups, armed groups, guerrilla formations, and ethnic, religious, political, and ideological militias as contingent realities. Such actors associate and dissociate themselves depending on their immediate interests, on the global geopolitical situation, and on various ideological nuances, simultaneously fighting on several fronts according to strategic factors of momentary interest. From this perspective, weapons and battlefields undergo a process of radical cosmopolitanization (HIPPLER 2014). Technological and cybernetic support, local or global terrorism, online indoctrinations, regional and continental migratory processes, media management and “spectacularization” of terror, manipulation of risk perception, and attempts to influence leaders and electoral bodies are all new fighting weapons.

The new paradigm can be defined as “war amongst the people” (SMITH 2005): a struggle that is fought less and less on traditional battlegrounds, and increasingly in places and through forms that make it impossible to immediately identify the expected results of each participant. It is not a *Volkskrieg* (the war of the people theorized by Carl von Clausewitz as a response to massive foreign invasion); not a heroic confrontation in which the people, as a single body, become a belligerent force. It is a war that is essentially fought in the midst of the people and using the people as a weapon. Sarah Sewall, author of the counterinsurgency manual for the US Army, describes the new soldier as a social worker, an urbanist, an anthropologist, and a psychologist (SEWALL 2007); “rather than a giant computer game, modern wars turned out to be more like social work with guns” (BACEVICH 2009).

### 1.3 CONFLICT RECURRENCE

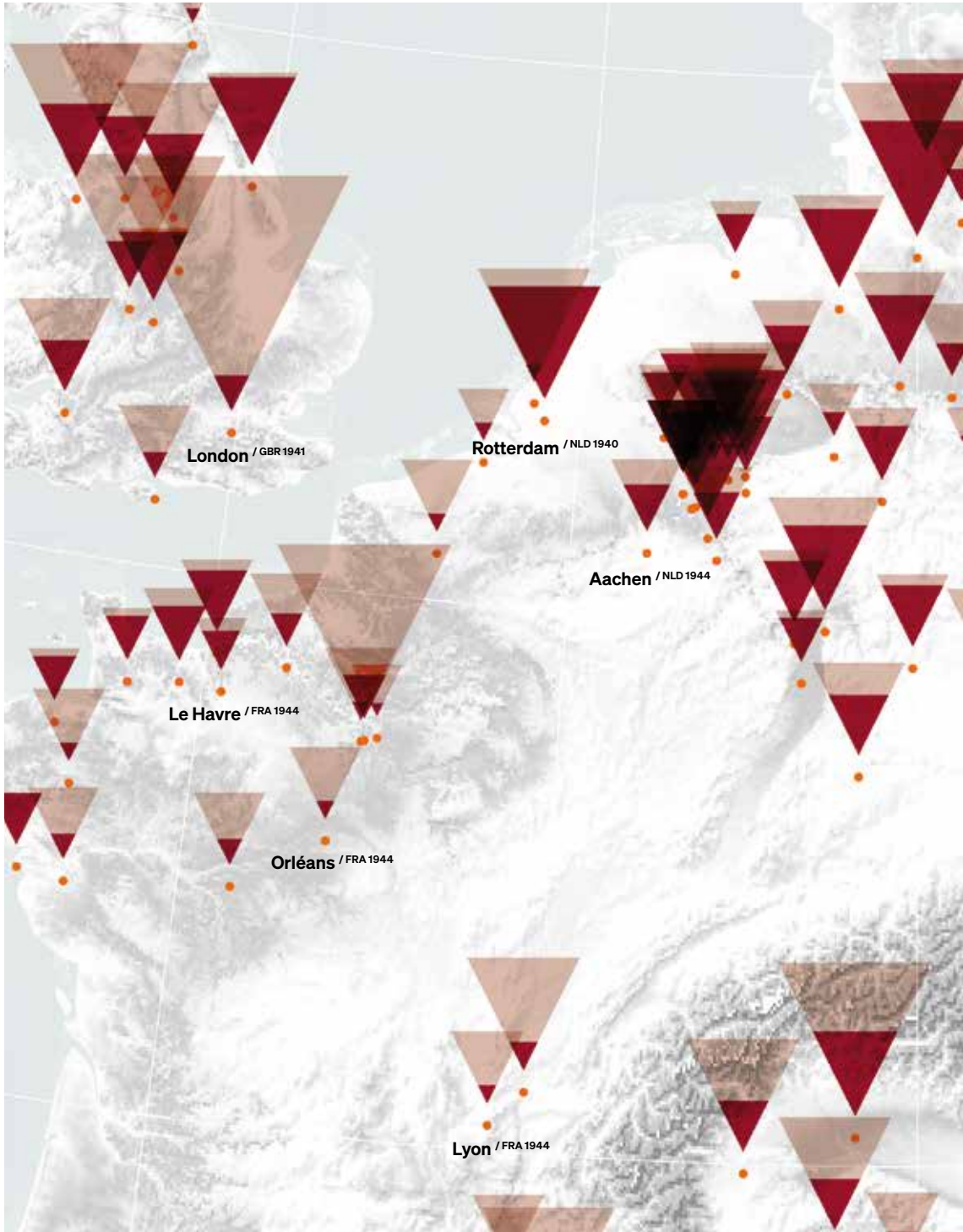
Ninety percent of the wars of the twenty-first century’s first decade occurred in countries that had experienced civil war in the prior thirty years. Conflicts have become a recurring event involving certain territories with a given return period, almost like a natural catastrophe. Selected areas of the globe have become the global testing ground for necropolitics (MBEMBE 2003), the physical space in which death, its presence and its possibility, has become a permanent feature of the life of the majority of the population. Conflict recurrence generates a new type of war: one with no easily defined front lines and rarely a clear beginning or end that shifts fluidly in time and place, evolving unpredictably with sudden changes in alignment and power distribution. State and non-state actors from within and across borders are driven in the conflicts by fractured interests such as personal and collective identities, control of local resources, and strategic, economic, and ideological competition; adding fuel to long-standing grievances and tearing communities apart (WORLD BANK 2011, 2017).

# URBICIDE / 1936-2023











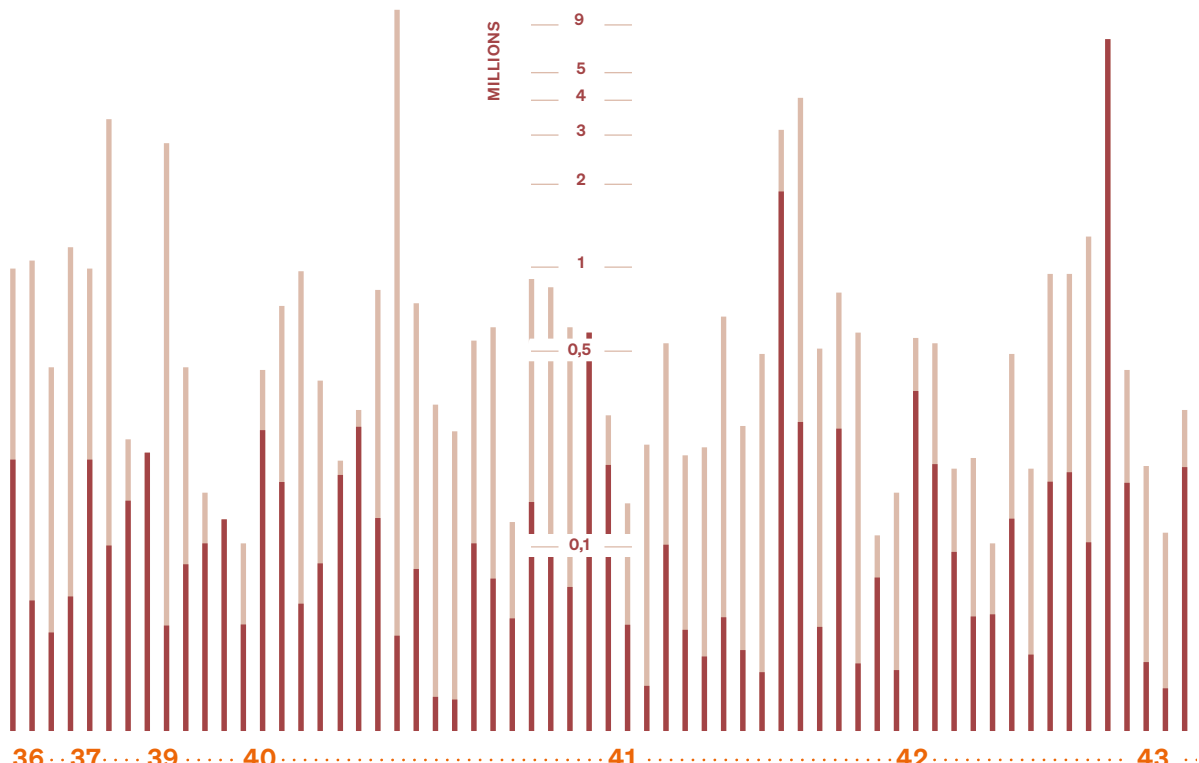
### URBICIDE / 1936–2023



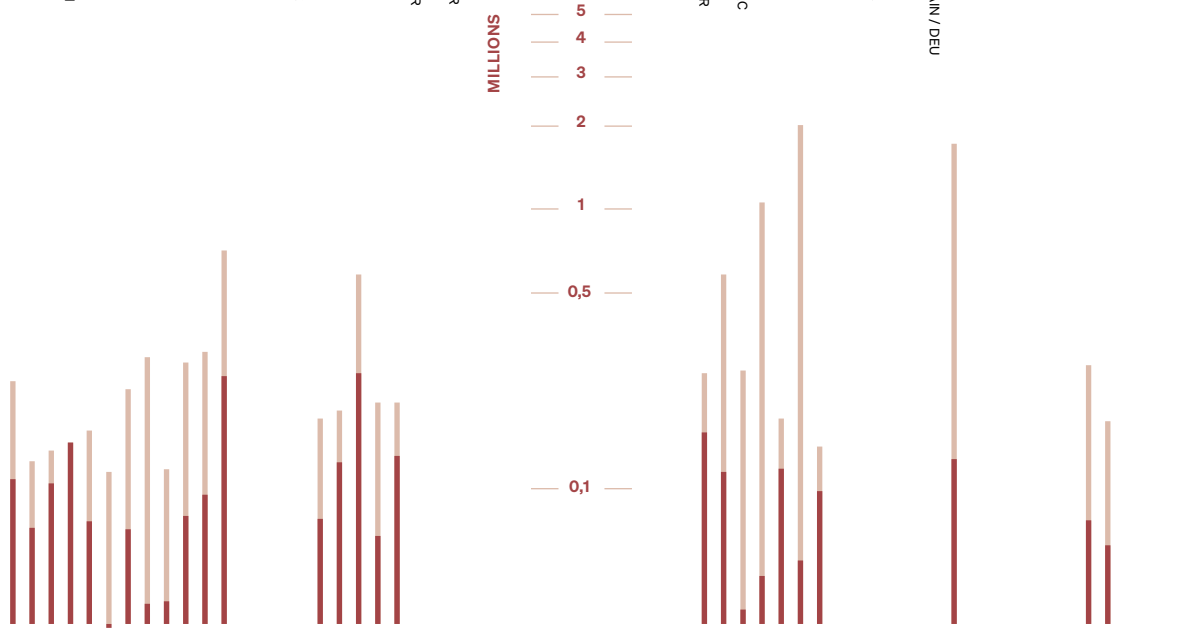
The dimension of each triangle represents the total population of the city in the year before the conflict, while the darker portion is the percentage of the urban environment that was completely destroyed. The map constructs an asynchronous vision of urbicide, comparing cities destroyed in different time frames, from World War II to recent conflicts in Syria and Ukraine, highlighting the substantial increase in the average size of involved cities and in the total scope of destruction.

The data visualization allows one to understand the global trend of urban warfare and the increase in average size of destroyed cities. Cities destroyed in World War II were mainly of a small size (with substantial exceptions such as Berlin, London, Tokyo, Warsaw, etc.), while urbicide experienced a stable decrease in the second half of the twentieth century, only to increase again in the new millennium when the incremental growth of urban population brought conflict back to densely populated areas (Aleppo, Mosul, Kyiv, etc.).

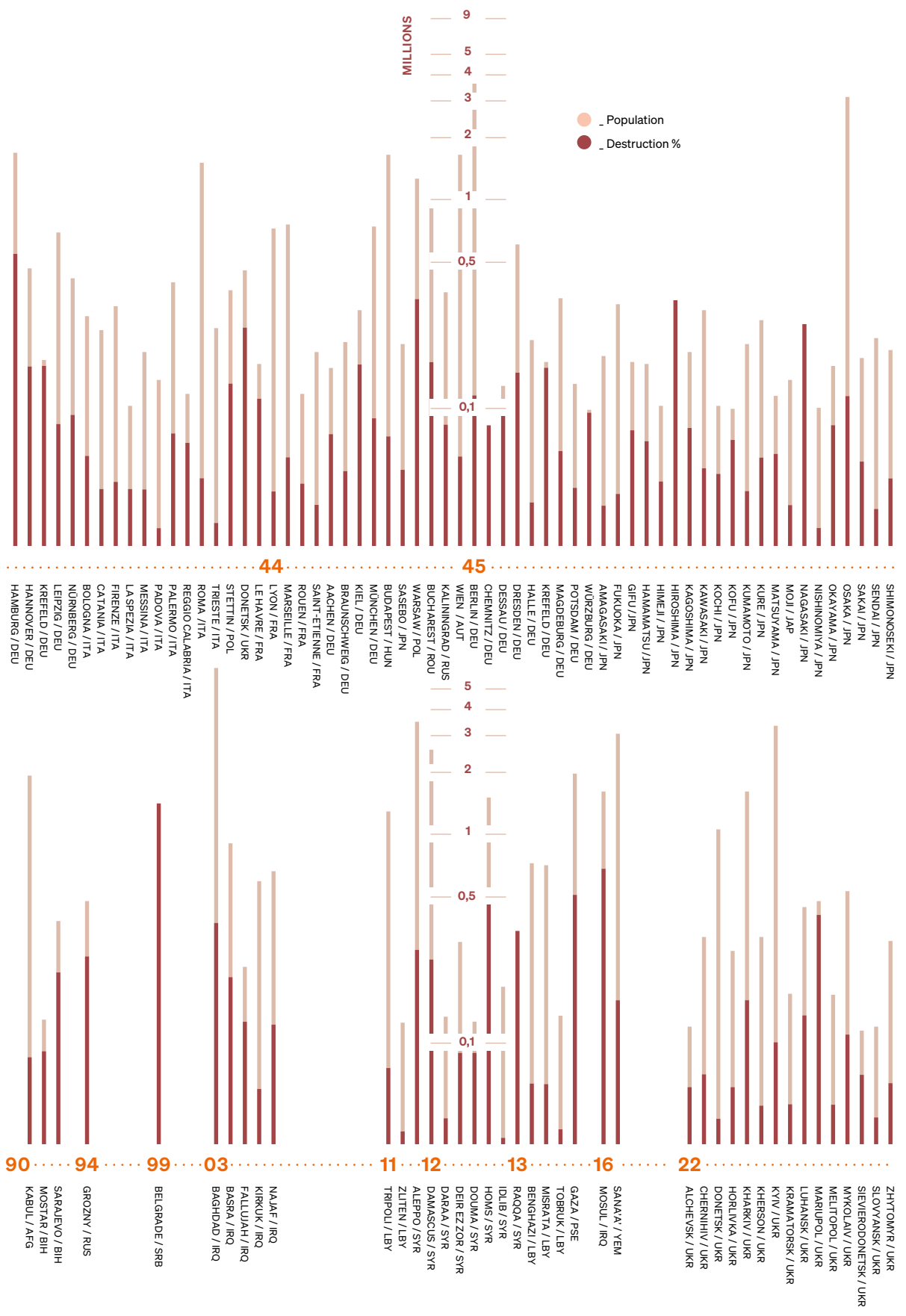




**36** BARCELONA / ESP  
**37** MADRID / ESP  
**39** VALENCIA / ESP  
**37** GUANGZHOU / CHN  
**39** SHANGAI / CHN  
**37** CHONGQING / CHN  
**39** HELSINKI / FIN  
**39** PARIS / FRA  
**40** DUISBURG / DEU  
**40** MANIZ / DEU  
**40** GDYNIA / POL  
**40** BONN / DEU  
**40** BREMEN / DEU  
**40** KÖLN / DEU  
**40** BIRMINGHAM / GBR  
**41** BRISTOL / GBR  
**41** CONVENTRY / GBR  
**41** HULL / GBR  
**41** LIVERPOOL / GBR  
**41** NOTTINGHAM / GBR  
**41** NEWCASTLE / GBR  
**41** MANCHESTER / GBR  
**41** LONDON / GBR  
**41** SHEFFIELD / GBR  
**41** GENOVA / ITA  
**41** MILANO / ITA  
**41** NAPOLI / ITA  
**41** LIVORNO / ITA  
**41** ROTTERDAM / NLD  
**41** TORINO / ITA  
**41** MINSK / BLR  
**41** TALLINN / EST  
**41** LYON / FRA  
**41** BELFAST / GBR  
**41** PLYMOUTH / GBR  
**41** PORTSMOUTH / GBR  
**41** ATHENS / GRC  
**41** THESSALONIKI / GRC  
**41** THE HAGUE / NLD  
**41** LENINGRAD / RUS  
**41** MOSCOW / RUS  
**41** ROSTOV / RUS  
**41** KHARKIV / UKR  
**41** ODESSA / UKR  
**41** SEVASTOPOL / UKR  
**42** TOLUON / FRA  
**42** ESSEN / DEU  
**42** FRANKFURT AM MAIN / DEU  
**42** KASSEL / DEU  
**42** LÜBECK / DEU  
**42** OSNABRÜCK / DEU  
**42** STUTTGART / DEU  
**42** MESSINA / ITA  
**42** KOBE / JAP  
**42** YOKOHAMA / JPN  
**42** NAGOYA / JPN  
**42** TOKYO / JPN  
**42** STALINGRAD / RUS  
**43** NANTES / FRA  
**43** BOCHUM / DEU

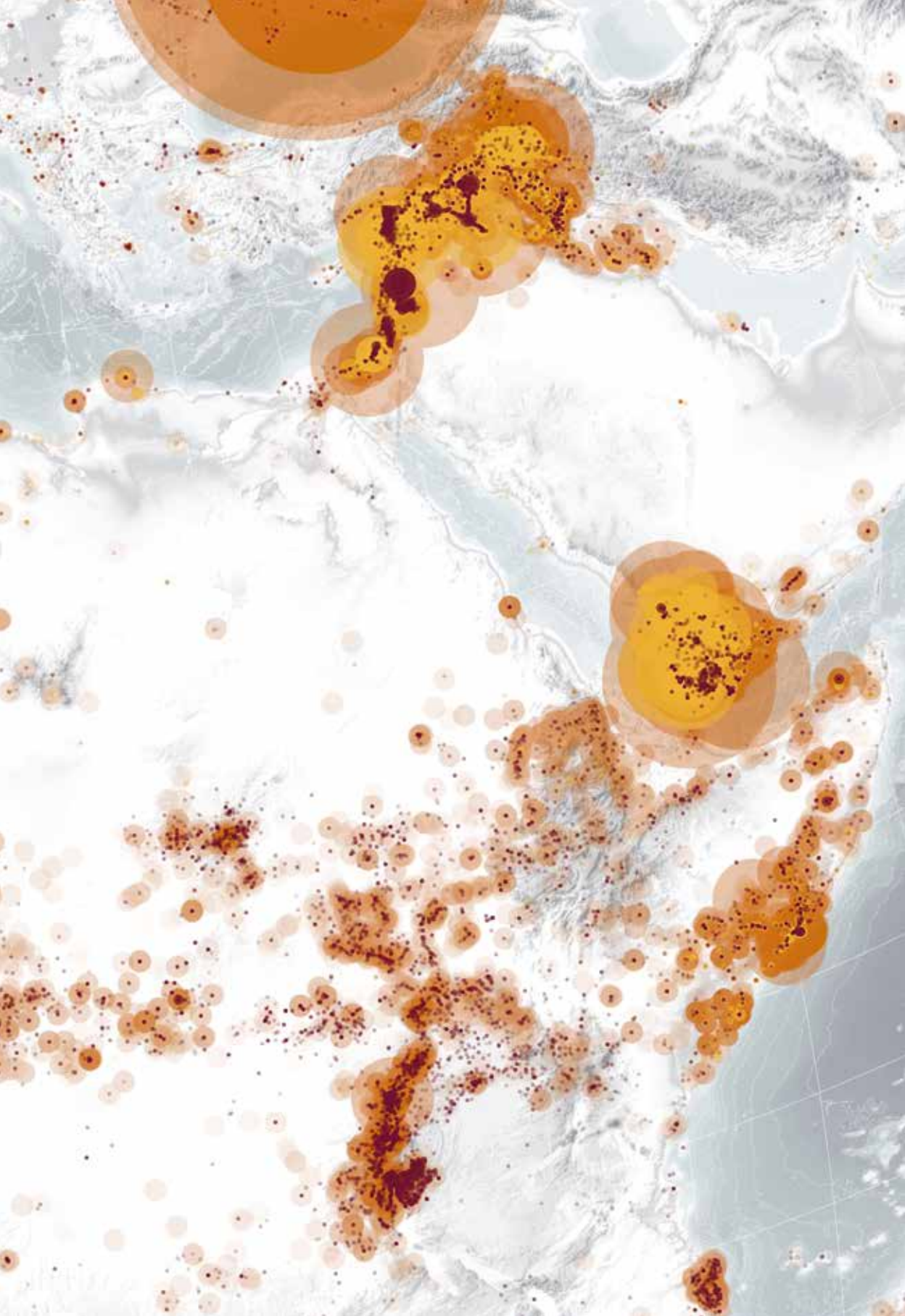


**45** SHIZUOKA / JPN  
**45** TAKAMATSU / JPN  
**45** TOYOHASHI / JPN  
**45** UBE / JPN  
**45** WAKAYAMA / JPN  
**45** YAWATA / JPN  
**45** YOKKACHI / JPN  
**45** GDANSK / POL  
**45** POZNAN / POL  
**45** WROCLAW / POL  
**50** CHONGJIN / PRK  
**50** HAMHUNG / PRK  
**50** PYONGANG / PRK  
**50** SINUJU / PRK  
**50** WONSAN / PRK  
**66** HAIPHONG / VNM  
**66** HA NOI / VNM  
**66** JERUSALEM / ISR  
**66** TEL AVIV / ISR  
**66** DA NANG / VNM  
**66** SALON / VNM  
**66** HUE / VNM  
**75** BEIRUT / LBN  
**82** HAMAHA / SVK  
**82** HERAT / AFG



# VIOLENCE / 2018-2021



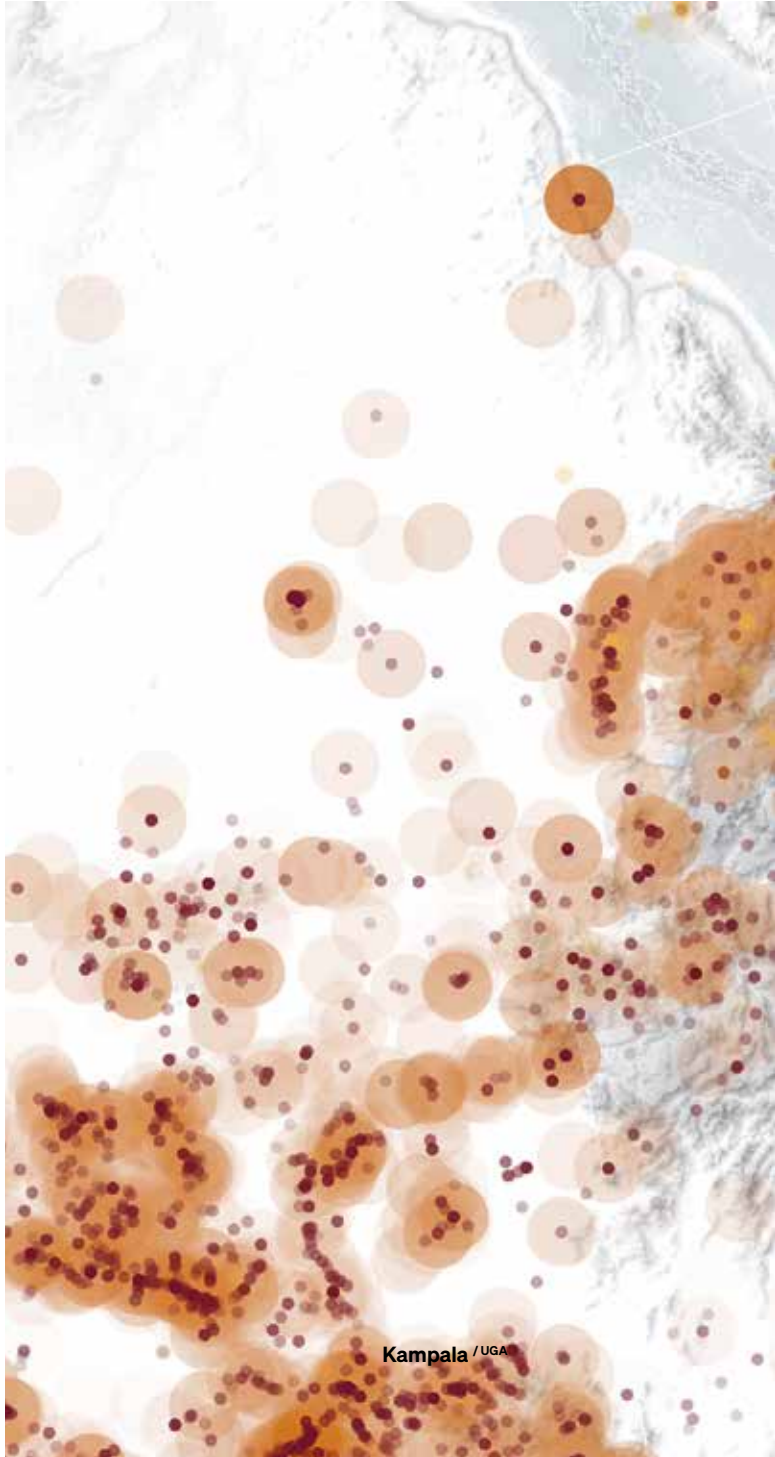


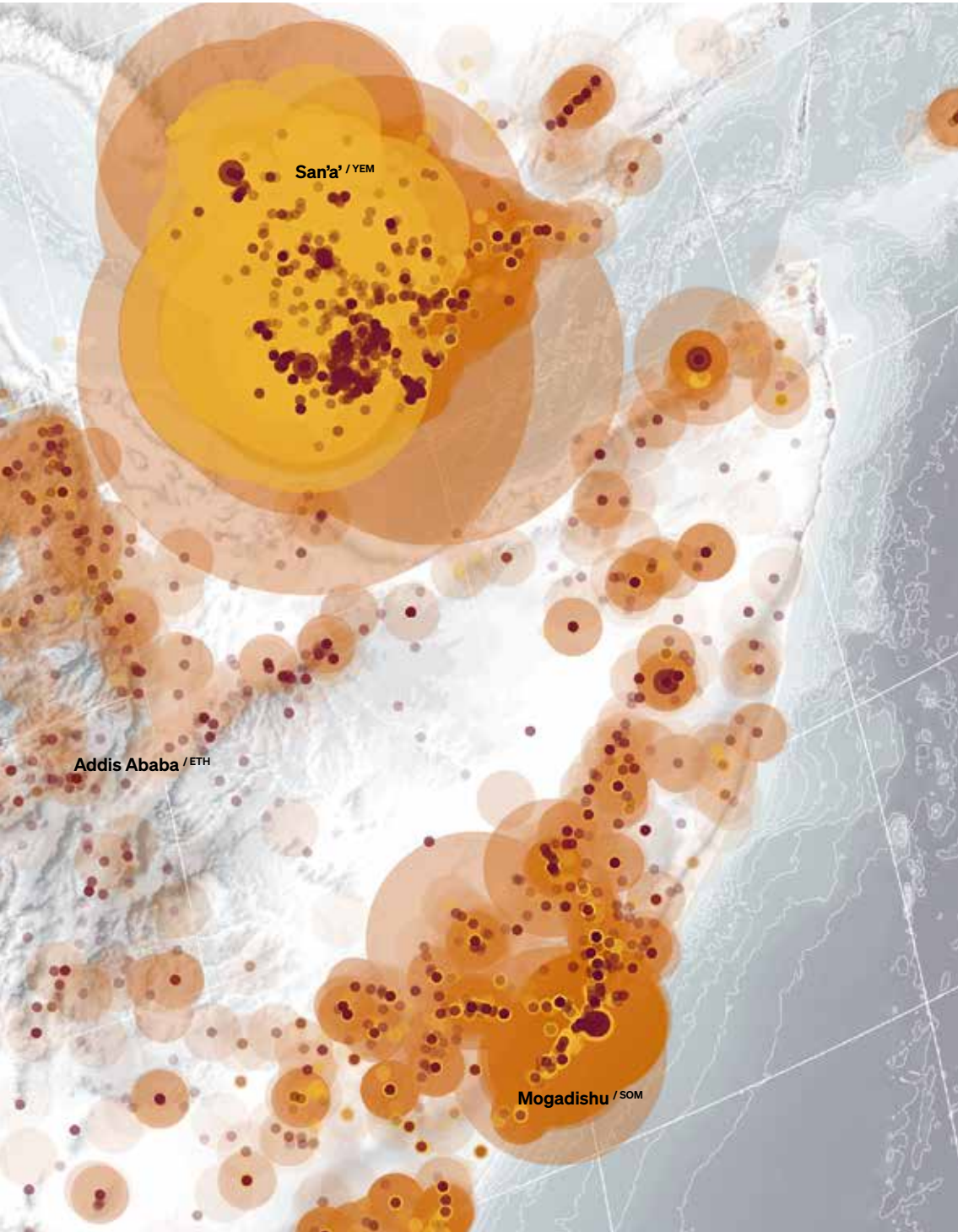
**VIOLENCE / 2018-2021**



Each point on the map represents a violent event. The color and the dimension of each circle respectively denote the type of event and the frequency of violence. Additionally, the gradient color opacity is the selected time frame.

The types of events shown are: battles, violent clashes between at least two state or non-state armed groups; explosions or remote violence, explosive devices used to engage in conflict, either one-sided or from both sides; violence against civilians, attacks on unarmed civilians including sexual violence, abduction, and forced disappearance.







Today's conflicts can be characterized as *fluid* in their unpredictable evolution, *fractured* across space and across multiple actors and interests, and *informal* in their socioeconomic consequences. *Fluid* wars evolve unpredictably and recur continuously: local and national communities are broken, social cohesion is undermined, generations are lost, and social capital is depleted. Wars are *fractured* across space, actors, and interests; even when prolonged conflicts are localized in defined parts of a country, they also have regional and international spillover that causes violence, illicit undertakings, and businesses to flourish domestically and regionally. *Informal* conflicts generate unexpected economic and political underpinnings; relationships are often reconfigured as conflict fuels informal activities and exchange both within and across borders; informality prompts workforce changes and reorientation of the political economy in war-torn societies and in neighboring countries. For war-torn societies to move toward sustainable peace, the root causes of their conflicts must be understood and carefully addressed. Previous peace-building efforts and reconstruction experiences failed to avoid a relapse into conflict and violence: "Traditional efforts usually adopted a bricks-and-mortar and state-centered approach focused on rebuilding physical assets and central institutions, temporarily restoring the country on the surface. But by overlooking or failing to address, and even repressing, deeper social, political, and economic tensions, the real drivers of conflict, they sometimes made the eventual relapse all the more violent. Such reconstructions could lock the country into a 'conflict trap'" (WORLD BANK 2020).

Only a good reconstruction, one able to provide solutions for the immediate necessities of populations exhausted by war and at the same time able to contrast the systemic reasons for violence (ISMAIL 2018) can arrest the vicious circle of conflict recurrence. We need a new design strategy that sees the reshaping of territories and urban environments as a tool for peace, a strategy able to comprehend and interact with the sum of intertwined societal, economic, and urban problems. Reconstruction should consider the initiation of positive economic cycles and promote a transition toward sustainable solutions in terms of technological performance and community participation. Fluid, fractured, and informal conflict requires sensible design interventions capable of being a seismograph of past, present, and future needs, threats, and hopes.

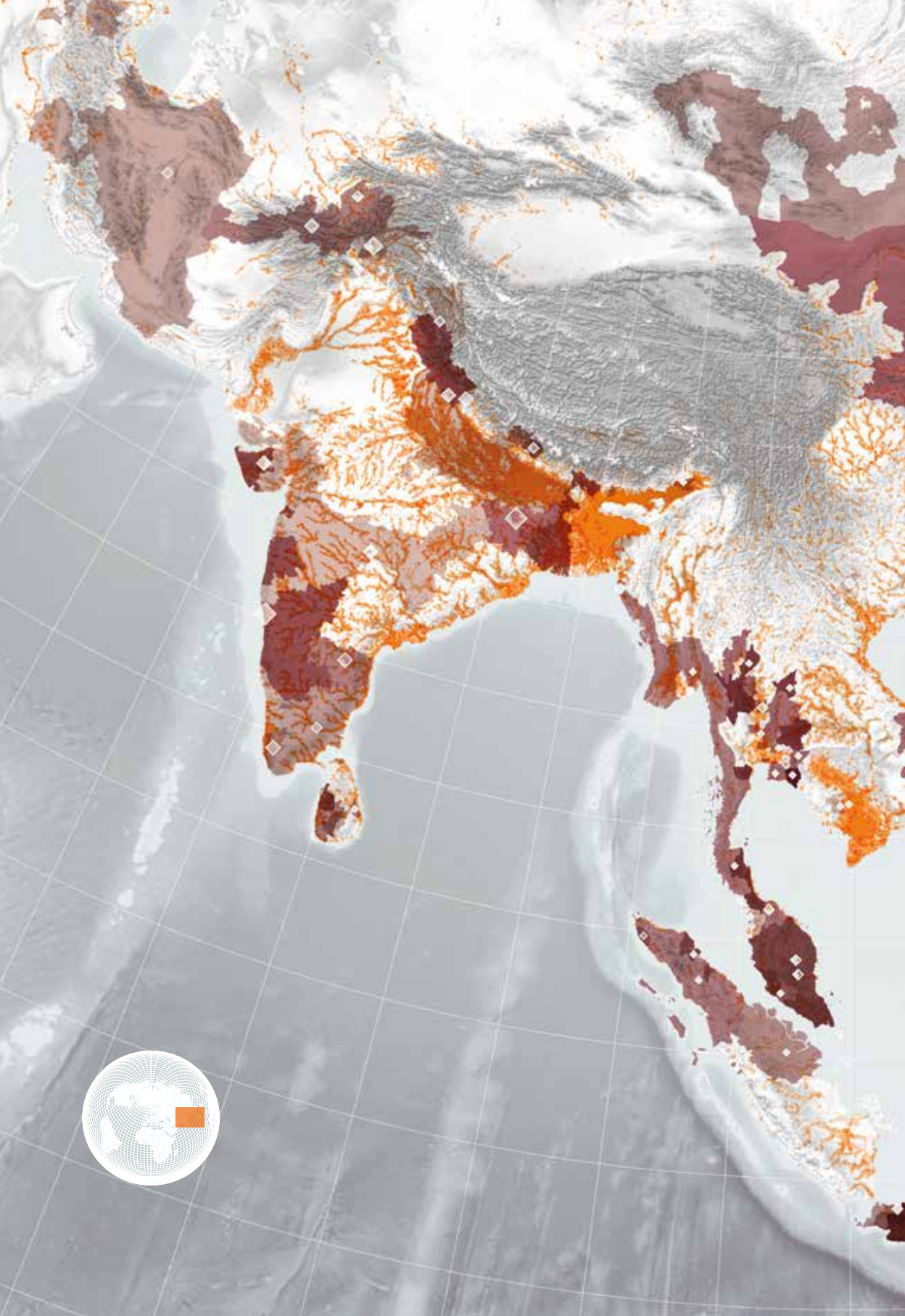
#### 1.4 DISASTERS AND CLIMATE CHANGE


The *Cities Under Pressure* design strategy operates in a framework that considers climate change as an already occurred catastrophe, leading to the necessity of developing completely new conceptual and operative models. Climatic experts widely already operate under this assumption, but urban design and emergency experts still consider the phenomenon to be a recurring series of crises and propose punctual solutions that fail to interpret and react to the complex set of global and local consequences. We need to assume that

ongoing climate change is a macro-catastrophe which moves the current stable system toward a future system that is unexpected (but designable). We can in fact define climate change as the process by which environmental standards, defined in terms of rainfall, temperature, and correlated effects (among which disasters are only the most visible and extreme manifestations), are transforming our urban systems with an increasing impact that is in part recognizable but not fully forecastable in a comprehensive vision.

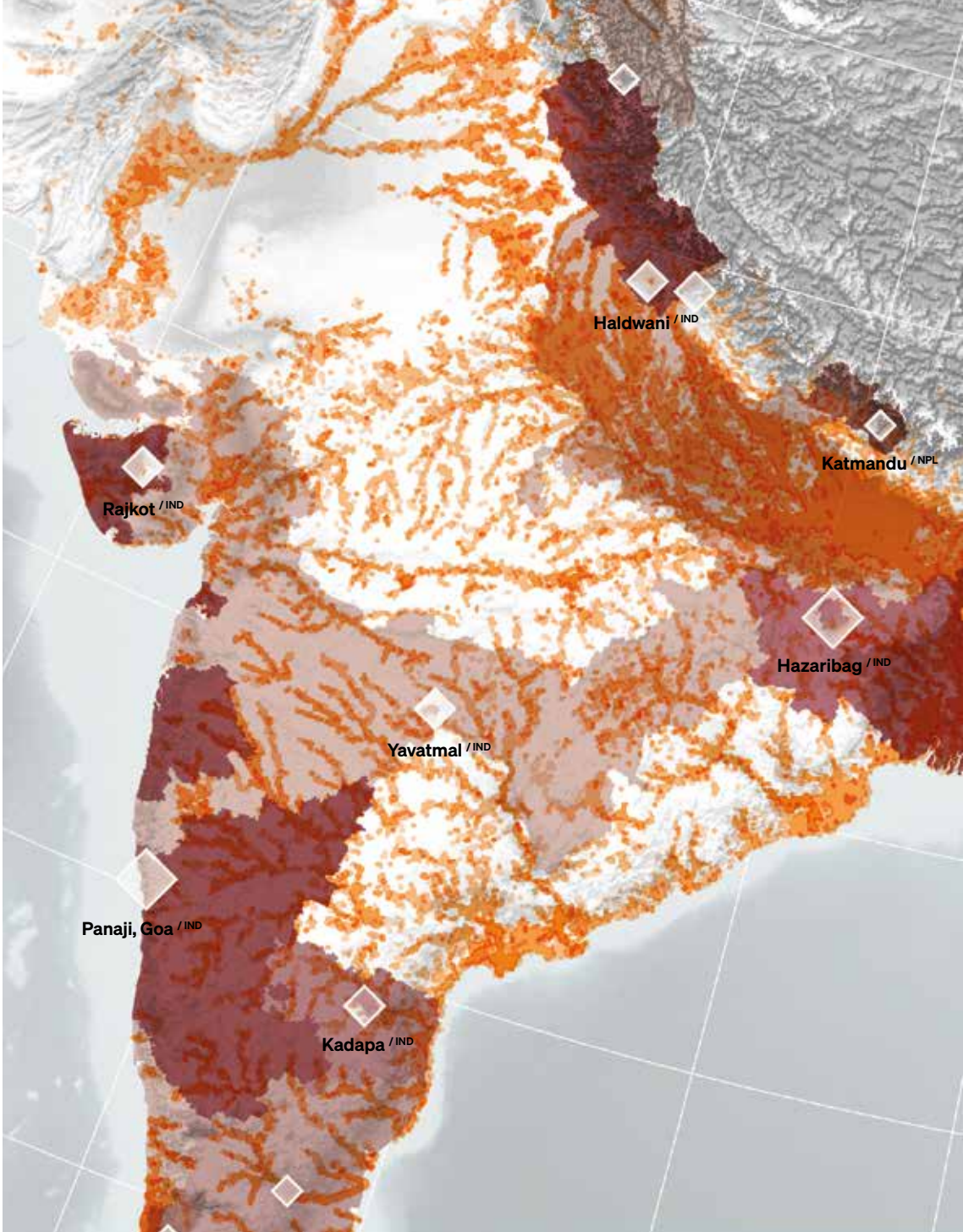
Current studies on climate change adaptation and disaster risk reduction lack cross references; despite clear overlaps the two disciplines and research communities rarely speak to one another or share methods, languages, and results (FORINO ET AL. 2015; BERTIN ET AL. 2020). Disaster risk reduction experts largely concentrate on vulnerabilities and risks in specific areas connected to single events (BIRKMAN AND TEICHMANN 2010). Climate change experts, on the other hand, have a longer-term vision, guided by an awareness that the current urban model will need to be radically rethought due to climate evolution, but, at the same time, they lack consolidated design and planning skills (GALLOPIN 2006; ISENHOUR ET AL. 2015) and often fail to understand the complex factors (economic, social, spatial, etc.) that define urban environments. The *Cities Under Pressure* strategy rethinks the relationship between the two communities, imagining a new, integrated approach that recognizes ongoing climate change in relationship with the traditional skills of emergency management (RAMROTH 2007). Disaster risk management must today acknowledge the different and increasingly frequent catastrophic events as manifestations of a single overall phenomenon and, consequently, rethink its operating design and planning methods (AQUILLUÉ 2021; SANDERSON ET AL. 2016) on the basis of a persistent and already ongoing event, rather than on a multitude of partial, episodic ones. Considering climate change as a global catastrophe means considering urban spaces as systems in transition, in which every part of life is affected by changes that need to be taken into account immediately.

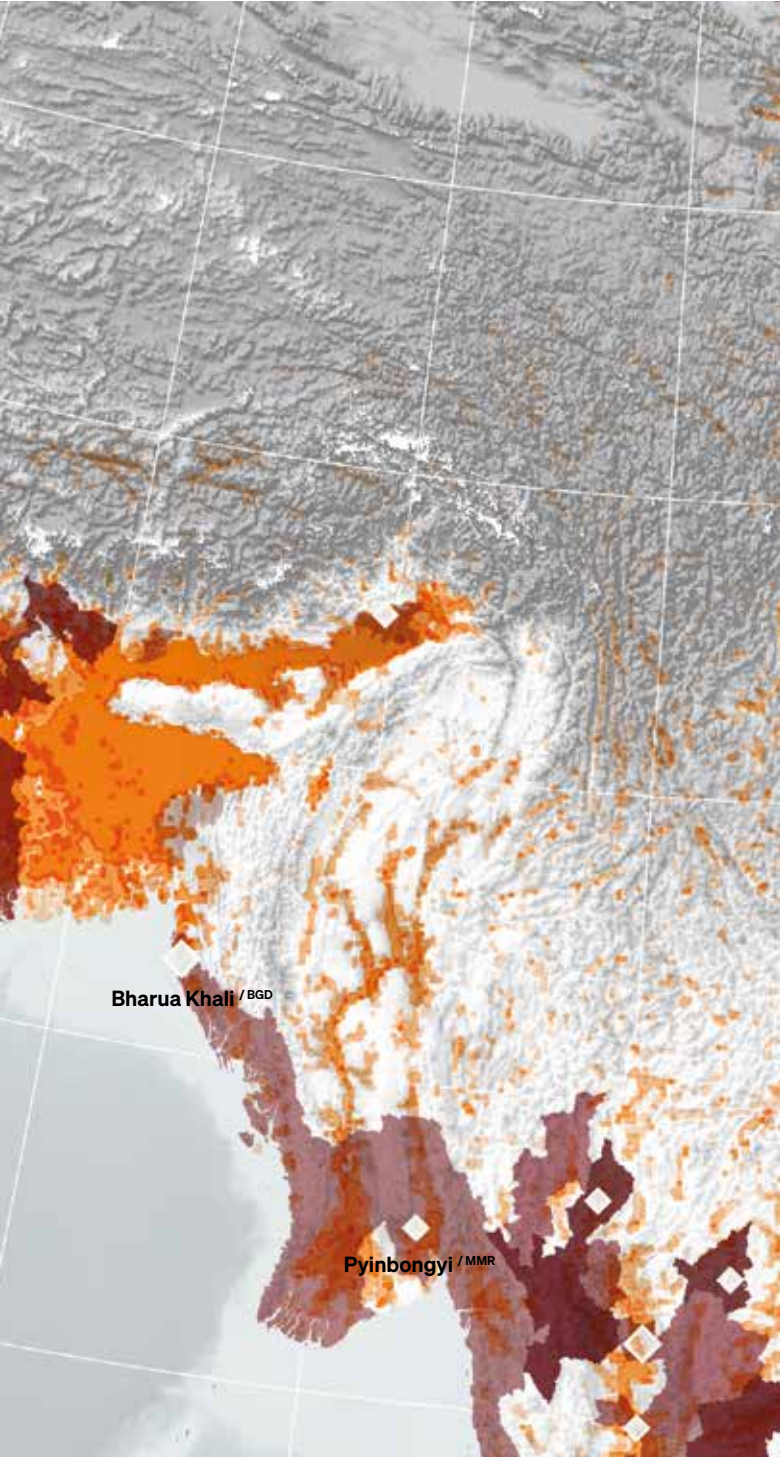
In order to face climate change as an ongoing global emergency resulting from a catastrophe that has already occurred, we must rethink how and when design and planning tools are produced, revised, adapted, and applied on site. Climate change must immediately be seen as a “civilisational wake-up call” (KLEIN 2014) toward the definition of a renewed design paradigm capable of controlling and shaping the Anthropocene (CRUTZEN 2006; MCNEILL AND ENGELKE 2014), the geological era where humans are the engine of the modification (and even the possible destruction) of the planet. *Cities Under Pressure* assumes the Anthropocene paradigm and immediately further criticizes the concept through the notion of the Capitalocene (MOORE 2016), which sees financial capital as the main shaper of the built environment; and introduces climate justice (ROBINSON 2018) as a factor that binds together inextricably linked climatic, social, and economic risks. Designing in and for the Capitalocene means considering contemporary—as tools and as ultimate goals—the power relations that have historically shaped socioecological relations, “avoiding misplacing together exploited and exploiters, colonised and colonisers, bombed and bombers, subordinates and dominant, expropriated and expropriators” (AVALLONE 2017).





DISASTERS / 2020-2021



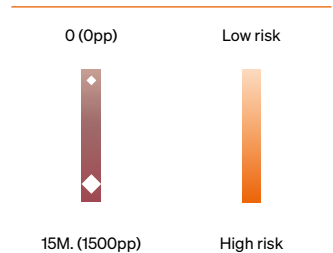


**DISASTERS / 1920-2021**



The map overlaps hydrological disasters, primarily focusing on flood hazards by combining coastal floods, flash floods, ice jam floods, and riverine floods.

The events are represented in terms of risk, overall affected area, and death ratio of each event. The orange gradient represents flood mortality risk from a low to extreme level (vivid orange color), the red gradient refers to the areas affected by flood events registered during the years 2020 and 2021, while the white diamond shape and its size identify the death ratio for each event.



## 1.5 SOCIAL AND ECONOMIC RISKS

Although conflict and climate change have the most immediately visible consequences on urban environments, immaterial social and economic processes are the true shapers of contemporary cities and territories (SECCHI 2013). Today, the only active engine of urban change on a global scale is the real-estate state (STEIN 2019); the transformation of urban spaces and functions into financial commodities has turned cities into the cornerstone of global economic growth. The total value of global real estate is 217 billion dollars, thirty-six times the value of all gold ever mined on the planet; real estate accounts for 60 percent of global financial resources, and 75 percent of world wealth is represented by the value of homes. Capital has definitively transformed itself into the only possible urban form factor, making the work of architects and planners totally ancillary to decision-making processes.

The real-estate state has led to an unprecedented rise in inequality at global, regional, and city levels (MILANOVIĆ 2016). Immense concentrations of wealth, privilege, and consumerism can be observed in all global cities, side by side with an exploding “planet of slums” (DAVIS 2005). The current global coronavirus pandemic (BLAKELEY 2020) has only made evident an ongoing process of urban and global imbalance: “the ‘covid-event’ comes to lift the veil and puts the deep systemic dyscrasia we live in under the eyes of all, dyscrasia that was not caused by the virus: it was already there, but we could no longer grasp it. It can be described as the distance between the needs of capital and those of humans (and of other living beings, and of the earth)” (CONSIGLIERE AND ZAVARONI 2020).

The first reaction to these conditions is a renewed interest in the theme of urban commons (OSTROM 1990; HESS AND OSTROM 2007), which has led to the creation of movements that seek to communalize many functions, today in public or private hands (PUTNAM 2000; BANERJEE AND DUFLO 2011), in order to access socially rather than individually produced wealth (DE ANGELIS 2017). The shared management of commons can become possible through a rich mix of instrumentalities (HARVEY 2012) that is not given but needs to be constructed through the rethinking of living practices, first and foremost the process of city-making. Despite these early forms of resistance, current cities and territories are still plagued by enormous social, economic, and political challenges that significantly alter the processes of urban metamorphosis and often prevent a serious transition toward a sustainable development model. Economic exclusion is today the main shaper of global urban environments, and the imbalance in income among different neighborhoods of global cities has become similar to the disparity between different countries, leading to gated communities (BAGAEEN AND UDUKU 2012) and triggering securitarian policies in which military urbanism techniques are applied to apparently peaceful environments (KRIPA AND MUELLER 2021).

Inequality often leads to social segregation, which mixes with ethnic, religious, or social factors to force an undesirable population (AGIER 2011) to stay within rigid urban borders (ZETTER AND BOANO 2010), ghettos, enclaves, refugee camps, or in the infinite favelas, *villas miseria*, bidonvilles, or shantytowns that account for a staggering 24 percent of the global population. Spaces for dialogue and participation are limited, thus leading to recurring political demonstrations by neglected strata of the population, and to counter repression techniques that alter public spaces temporarily or permanently (RABBAT 2012; MOSTAFAVI 2017).

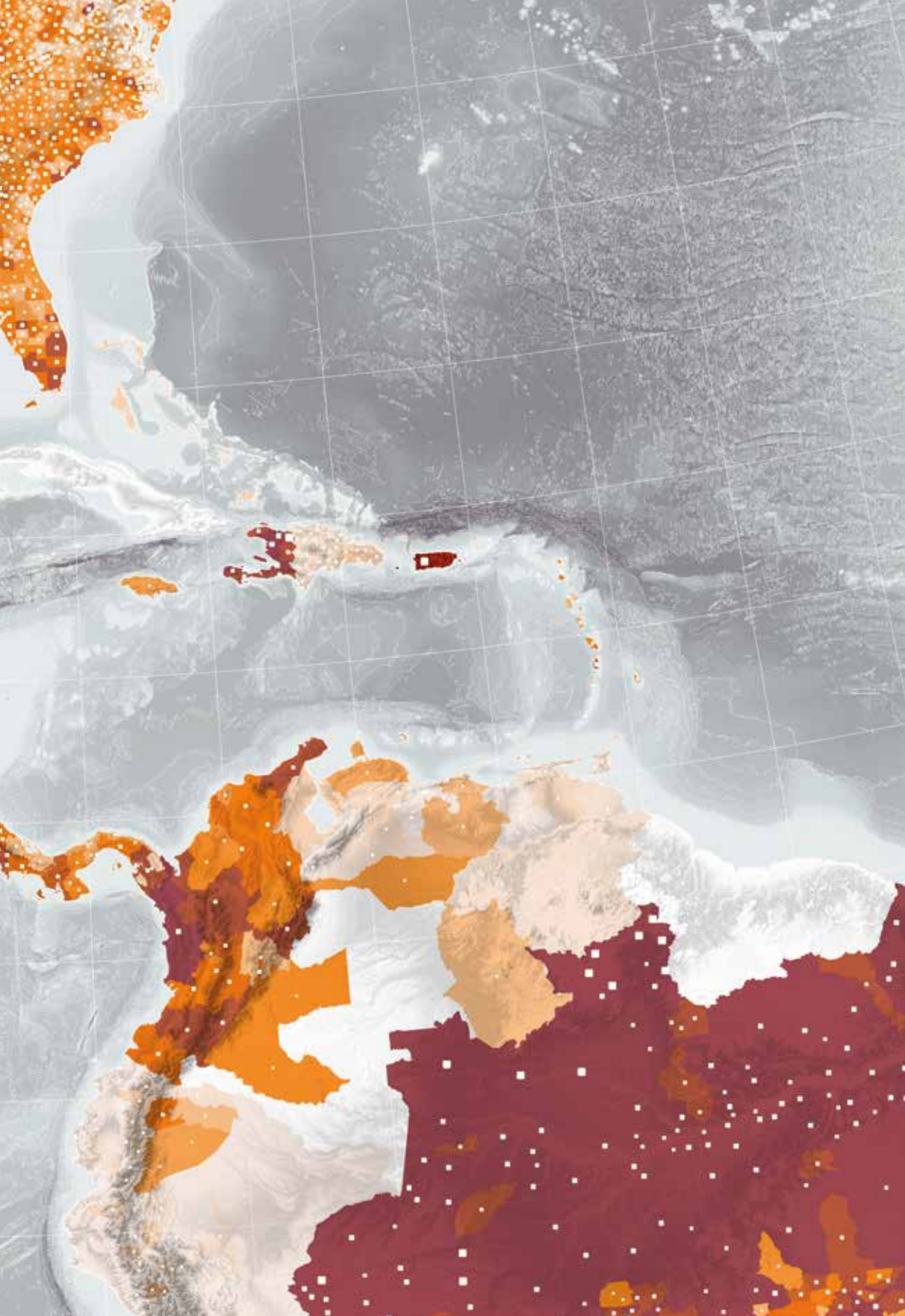
The sum of conflicts, disasters, climate change, and social and economic issues paints a difficult scenario for “our common future” (BRUNDTLAND 1987) and calls for a transition to new models capable of transforming this overwhelming sum of pressures into design factors. Urban settlements are at the center stage of such a transition, being at the same time the areas most responsible for the current risks (70 percent of global emissions, 50 million urban inhabitants involved in war, a projected 216 million climate migrants), those benefitting from the current paradigm (50 percent of the global GDP comes from 380 cities, 83 percent of scientific products and patents), those more involved by future modifications (sea level rise alone will threaten 800 million people by 2050), and are, quite possibly, a significant part of the solution. *Cities Under Pressure* illustrates an open design strategy for intervention in cities and territories, an adaptable and sensible approach that indicates a possible path toward a transition capable of guaranteeing safety and well-being to a large majority of the global population.





# INEQUALITY / 2009-2019





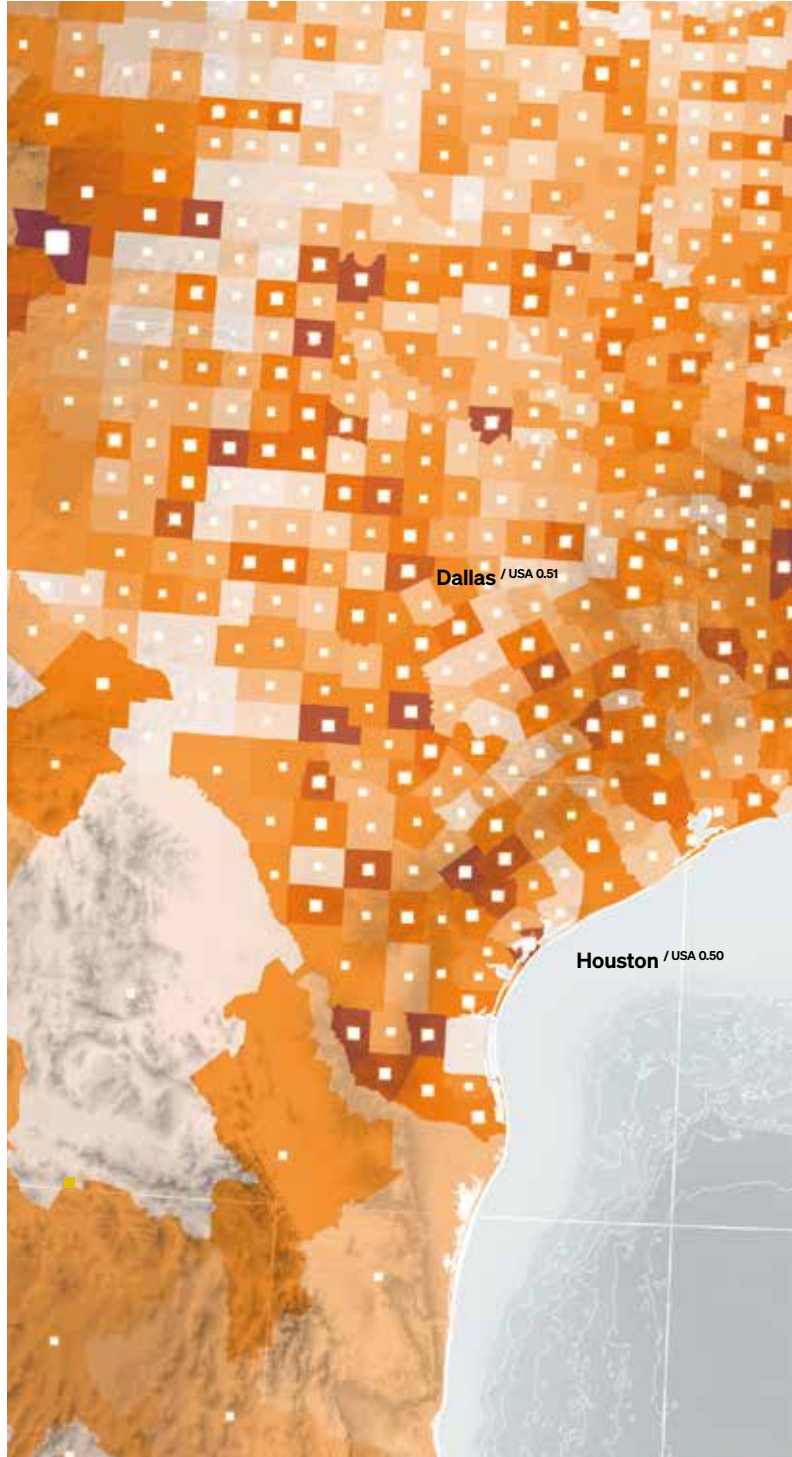
**INEQUALITY / 2009–2019**

→

The color gradient and size of the square represent the Gini coefficient at the federal, regional, or county scale.

The Gini coefficient is an index for the degree of inequality in the distribution of income and wealth, used to estimate how far the income distribution deviates from an equal distribution, where 0 expresses perfect equality and 1 maximum inequality.

A Gini coefficient above 0.4 is frequently associated with political instability and growing social tension.



0.25



0.80

