Chapter 4
"Resilience for All" and "Collective Resilience": Are These Planning Objectives Consistent with One Another?

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Abstract Several cases of risk management ventures, predominantly post-disaster recovery experiences, have evidenced the individualized and liberal nature of Resilience to Risks and Hazards. This has been addressed by several authors some of whom have arrived at provocative suggestions regarding the role of Resilience, such as that "Resilient/adaptive systems actively try to turn whatever happens to their advantage" (Waldrop 1992), or that "Resilience refers to agents interacting locally according to their own principles or intentions in the absence of an overall blueprint of the system" (Stacey et al. 2000) or even that "Cities' transformation after disasters come in response to conflicting or multiple resiliences" (Vale and Campanella 2005). Above authors advocate the view that resilient to hazards can be any entity, agency or system from single individuals and businesses to Local Authority Organizations, National Governments or International Institutions. Each one of these actors should actor be faced with a single or multiple risks will opt solutions and actions matching own interests and own risk and vulnerability trade-offs. These self-centered solutions may exacerbate vulnerability and exposure of other actors, either collective entities or individual households. Besides, these solutions may trigger off new hazards currently or in the future. If this is the case indeed, i.e. individual comes in conflict with collective Resilience, one might wonder how could both objectives of "Urban Resilience" and "Resilience for all individual Citizens" be simultaneously accommodated. Also how these objectives impact one another. The present paper addresses these problems and suggests ways out of the impasse.

Keywords Social resilience · Institutional resilience · Resilient city · Personal resilience · Vulnerability · Vulnerability transference/transformation

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4.1 Introduction: Clarifying the Terms "Resilience", "Social Resilience" and "Resilient City"

The country I come from, Greece is currently running a serious fiscal and socio-economic crisis. Under the circumstances the state shrinks its social welfare functions, among them pensions and health care subsidies. As a result pensioners and people with chronic diseases in need of their periodically consumed medicines encounter difficulties in satisfying such basic necessities. Consequently, public health is put at risk.

What actually happens in this case is that the State in pursue of reduction of its vulnerability to debt-crisis cuts its expenses by jeopardizing health of the Greek citizens. The state employs its Resilience possibilities to avoid default by transferring its own financial vulnerability to the aged and the chronically sick and transforming it to social or health vulnerability. In this example, Resilience is beneficial to the agent employing it but may be harmful for other interconnected agents (in our case the groups of fragile health).

This dual working of Resilience should not surprise us if we took seriously the suggestion that self-organization, i.e. resilience refers to agents following their own principles and satisfying their own intentions (Stacey et al. 2000); or even the suggestion (Waldrop 1992) that systems try to turn whatever happens to their own advantage.

In Chap. 7 of the *World Disaster Report—Focus on Community Resilience* (International Federation of Red Cross and Red Crescent Societies (IFRCS) 2004a) one reads about a woman in the slums of Mumbai who lived by herself in a derelict plastic-sheet tent under a bridge. The woman has been interviewed by researchers who had approached her in search of a case study dweller exposing a poor mitigation strategy. Instead they discovered one of the most successful examples of vulnerability treatment by means of Resilience. According to the researchers' report among the woman's personal possessions was a TV powered by a clandestine electrical connection. The Report reads (International Federation of Red Cross and Red Crescent Societies (IFRCS) 2004a, p. 149):

> At first glance her living situation seemed highly exposed to risks of flooding fire and eviction….. The woman seemed either ignorant of the risks she faced or simply that she did not prioritize risk reduction… In fact however, the woman had a very conscious and coherent risk mitigation strategy. She was the owner of a simple, yet well-built flat in an established neighbourhood somewhere else in Mumbai. Having a school-aged daughter and relying on relatively few skills herself with which to compete for employment, she placed the greatest importance on protecting the one specific livelihood asset that could assure a better future for herself and her daughter. In order to afford sending her daughter away to school, she rented out her safe home and lived in a dwelling which, though precarious, would be easy to replace if damaged by a natural hazard….

In this illustrative example the interviewed woman-leader of her household would actually face not only the obvious hazards of flooding, fire and eviction but also the threat of poverty and further marginalization should her daughter was left

uneducated. With her limited resources the woman opted to target one hazard (long-term poverty and marginalization) and long-term socio-economic vulnerability only. The woman made maximum use of her minimal livelihood assets by being pro-active and mitigating what she opted as primary hazard and primary form of vulnerability and by deteriorating at the same time the hazards of her daily life (natural hazards and eviction) and immediate forms of vulnerability (health and physical vulnerability of her dwelling).

It should not escape that the resilient woman in the slums of Mumbai and other slum dwellers with similar attitudes perpetuate slum existence and expansion and increase vulnerability of their neighbourhoods and the city as a whole. Resilient citizens may become unwillingly accountable for vulnerable and non-resilient city structures. Hence, "Resilient Citizens" and "Social Resilience" cannot be identical with "Resilient Cities".

The first example about the Greek state transforming and transferring its own vulnerability to specific population groups is an evidence of resilience as a process of transformation and transference of vulnerability from certain actors (institutional in our case) to others (e.g. powerless population groups). The second example of the dweller in Mumbai slums is an evidence of resilience as a process of rebalancing own vulnerability facets (short and long term, also economic, physical, health etc.) and in relation to the various hazards encountered.

Indeed there are five options of resilience functions (Sapountzaki 2012):

(a) Internal (re)balancing of own vulnerability facets, meaning control and restriction of certain facets leaving others to deteriorate;
(b) Transformation and transference of vulnerability (specific facets) to other actors;
(c) Redistribution of vulnerability in time, i.e. in relation to the disaster cycle stages; also rebalancing between exposure and response capacity;
(d) Redistribution of vulnerability with regard to current and future hazards;
(e) Receiving vulnerability from other actors.

In the example of Mumbai slums we have seen how people's resilience or "social resilience" may undermine an urban structure's resilience and the whole city's vulnerability. One might wonder then: What is "Urban Resilience"? How sensible is the term "Resilient City"? May a "Resilient City" be the habitat of vulnerable citizens? If all citizens of a city are resilient, will they constitute then a resilient urban community and a "Resilient City Structure"?

In the exciting book *The Resilient City—How modern cities recover from disaster* (Vale and Campanella 2005) which explores the notion of resilience with regard to the post-disaster recovery phase, the editors are wondering in the final chapter (p. 335):

> …at least for the last centuries or so, nearly every traumatized city has been rebuilt in some form. This historical fact raises the question of whether it is possible for a city to be rebuilt without being resilient. What does the concept of Resilient City mean if every city appears to qualify?

The above text embodies the assumption that a city that has been reconstructed rapidly after devastation from a disaster has proved to be a resilient city. For instance, the city of Tangshan is considered by many as a highly resilient city (Chen 2005) because after having been turned into a vast ruin by the earthquake of July 28, 1976, was rebuilt then, within 10 years, into a modern earthquake resistant city with an improved quality of life, a source of pride for modern China. But has it been resilient for sure, considering that the old city lost more than 240,000 of its population, 97 % of its residential buildings and 78 % of its industrial facilities (Chen 2005)? Is it possible for a city which has been rebuilt from scratch to qualify a resilient city? Or in reality, recovery of Tangshan was due to the resilience of the then new state regime under Deng Xiaoping (after Mao's death and end of leadership) *who foresaw the potential of using a rationally reconstructed Tangshan to show the outside world China's ability to modernize and to affirm the superiority of Deng's socialist regime over Mao's outdated leftist ideology.*

Vale and Campanella (2005) recognize and admit that the process of rebuilding alone is not enough for a stricken city to qualify resilient in the recovery phase. What matters is who recovers, which aspects of the city and by what mechanisms. It is worth quoting a relevant extract (Vale and Campanella 2005, p. 341):

> In any traumatic societal event, some people will always be more resilient than others and so the notion of a resilient city is always inherently incomplete and unpredictable … There is never a single, monolithic vox populi that uniformly affirms the adopted resilience narrative in the wake of disaster. Instead key figures in the dominant culture claim authorship, while marginalized groups or peoples are generally ignored in the narrative construction process.

However, to the author's view the problem of the term "Resilient City" is not simply that it is an inherently disputable and contested term due to its political content. The problem rests basically with the inherent contradiction that the term embodies and conceals. Indeed, when one agent (e.g. an individual, household, institution etc.) is resilient and recovers or avoids risk in the city it is most probable that some other agent(s) experience increase/transformation of their vulnerability either simultaneously or in the future. This is because of the finiteness of resources usable to resilience and the modus operandi of resilience. In this sense a city is resilient and vulnerable at the same time while these two properties constantly interact and change. This is reasonable because as it has been explained already resilience means vulnerability transferences, transformations, redistributions and reallocations. No one can ever characterize a city (especially a mega-city) as totally resilient or totally vulnerable. In this sense the term "Resilient City" is a misleading term.

Resilience attitudes are actually performed by a wide variety of actors/agents in the city: Authorities and institutional organizations, individuals and households, social groups and business networks, techno-human systems and so on. What concerns us mostly in the context of this paper is what happens to the citizens if a city is qualified with resilient authorities/institutions (i.e. authorities capable of engaging and utilizing appropriate resources for the purpose of avoidance of or fast

recovery from risks/disasters). Reversely, if a city is qualified with resilient citizens what will happen then to the institutions and the urban community? Furthermore, what will be the repercussions on the physical structure of the city in each of the above cases? The two following sections are an attempt for answers to these tricky questions.

4.2 Resilient Governments/Institutions: Who Takes the Vulnerability?

Sakdapolrak et al. (2008, p. 14) examining the case of mega-cities suggests that *the central regulatory mechanism for the mega-city resilience sphere consists of two elements: institutions and people and their interaction…. People and institutions each have specific vulnerabilities and resiliences determining their ability to withstand to perturbation.* Current section is devoted to the vulnerabilities and resiliences of institutions, particularly authorities and their impact on vulnerability and resilience of cities and citizens.

Chen (2005, pp. 236–237) in his analysis of the reconstruction of Tangshan after the 1976 earthquake makes eloquent observations regarding the secrecy of the authorities and the denial of the then Mao regime to release information about the disaster to the outside world:

> …. If the earthquake had not been detected by a number of seismological centers around the globe the news of this great catastrophe would never have reached the outside world…. The authorities were so reluctant for the outside world to find out about the impact of the earthquake that they closed the city to foreigners for the next two years.

The regime in an effort to manage its own vulnerability of authority (i.e. propensity to do harm to the status of authority, political acceptance and competence of a government or institution in general) attempted to avoid exposure to international criticism regarding the size of losses. As a result it deprived the traumatized city from external aid thus increasing citizens' vulnerability in the emergency and recovery period.

Similar is the case of post-disaster Mexico city under De la Madrid's leadership. In the three years prior to the quake De la Madrid having worked closely with IMF toward liberalization of the economy of Mexico (for the purpose of recovery from the 1982 debt crisis), made the initial decision to reject foreign aid. Later, he changed his mind, but the delay stalled reconstruction and angered the citizens (Davis 2005). Once again, vulnerability shifts from the state to the most impotent social groups.

Governments and authorities in general are usually featured by three basic forms of vulnerability regardless of the hazard or risk to which they are exposed: economic vulnerability (i.e. limited accessibility to economic resources should a crisis arise), operational/functional vulnerability and vulnerability of authority (the probability of losing competence, political power and legitimacy). If the authorities

are resilient mitigation planning measures in advance are rarely an option as such measures are costly and usually unpopular, meaning that such measures tend to deteriorate both economic and vulnerability of authority.

To quote an example, the terrible disaster in Bam after the earthquake of 2003 revealed a number of problems regarding seismic legislation and its application in Iran. The inspectors who are sent to examine new public and commercial buildings are often paid off by developers to certify their construction as conforming to earthquake design standards, without carrying out a thorough inspection. Furthermore, despite the provisions that the engineer bears responsibility if the damaged building is constructed after the code of 1989, in practice prosecutions are almost non-existent. On top of that there are no laws against negligent municipalities which fail to protect municipal infrastructure through retro-fitting (International Federation of Red Cross and Red Crescent Societies (IFRCS) 2004b).

Pre-disaster risk mitigation can really be an option for elected governments if the respective urban communities are featured by high risk perception. In such cases governments are compelled to mitigation planning so as to keep their vulnerability of authority low. Indeed, high risk perception of communities is the "necessary" (but not "sufficient") condition for actual risk mitigation by these communities.

In recovery periods resilient authorities waver between targeting their vulnerability of authority on one hand and economic on the other. In the case of Mexico city post-earthquake recovery first priority for the governing party (PRI) was to rebuild and recover the major offices of the ruling party and the government. Davis (2005, p. 266) reports: *President de la Madrid made a great effort to visit building sites and assess physical damage. It did not go unnoticed that he did not visit any of the victims nor meet with displaced citizens… These stances further alienated citizens who felt that people should come before the party/state in any recovery plan.*

To refer to another example, after the landslide of Venezuela in 1999 which hit especially the Vargas state the government gave priority to large scale engineering works and underestimated social issues. As a result several months after disaster numerous families lived in houses with structural damage, many lacked potable water and adequate disposal of solid and human waste (Sapountzaki 2012).

In both above examples the authorities acting as resilient agents opted to reheat national and regional economies and spend their resources to this end while generating at the same time new exposures and transferring extra vulnerability to the already victimized groups (e.g. exposure to epidemics and problems of public health, vulnerability to future extreme events etc.). This is the essence of government's post-disaster resilience: to be knowledgeable of the diverse options of a nation's or a city's vulnerability, how these affect government's own vulnerability and consequently select to treat, relieve and recover those aspects that match better government's interests and principles (under conditions of specific resource availability).

At the initial stage of relief after the 1976 Tangshan earthquake with Mao being still the leader of China, Mao's dogma was that if the people alone (without external aid) could recover they would have achieved a great human triumph regardless of the human hardship. This would serve to confirm the superiority of Mao's leadership and the victory of his ideology within the Chinese communist party (Chen 2005).

Finally, in case of governments minding their economics and opting to avoid economic vulnerability, reconstruction/recovery is usually left to the private sector. More often than not however, the private investors speculate on the urgent needs of the homeless and the latter experience an extra burden of social and economic vulnerability. Hein (2005) describes eloquently how the neologism "yakeya" was brought about in Edo, Japan. In the past Edo has been suffering from repeated conflagrations and the reconstruction of affected districts was always left to the private sector. *Yakeya –based on the words for speculative rental row houses (nagaya) and burning (yake)- were so poorly built and rebuilt that they would bring profit to their investors even if easily and frequently vanished in flames.*

4.3 Resilient People: Do They Mitigate City's Vulnerability?

The examples and theoretical remarks of the previous section show clearly that more often than not citizens and individual households are left alone in their struggle to cure their several vulnerabilities (economic, human, pre-disaster, recovery period's, vulnerability to eviction, unemployment, displacement, natural hazards etc.). On top of that the poorest and mostly marginalized groups have often to deal with extra vulnerabilities transferred to them by formal institutions and authorities during post-crisis periods. Consequently, they have to rely on their own resilience resources and defend them with courageousness and self-sacrifice. Sapountzaki (2007) reminds us that those groups that do not take advantage of the expensive for them public offers in relief and recovery periods can alternatively capitalize on material or immaterial, routine or exceptional resources either under private or social control: private property, behavioural assets, personal knowledge, experience, formal and informal social and economic networks, social knowledge, memory and ethics, place focused cultural practices, parallel structures of illegality etc. Especially the land property rights and assets constitute for middle and lower classes the non-negotiable asset enabling some sort of resilience. It is for this reason that urban structures rarely change after reconstruction even in case of razed cities after disasters.

Indeed most of the ambitious comprehensive reconstruction plans have failed in practice due to the citizens themselves exhibiting resistance to change of land ownership/tenure patterns. Vale and Campanella (2005) argue that visionary new

city plans aimed at correcting long-lasting deficiencies or limiting current and future urban risks and vulnerabilities do not find their way to implementation even after substantial devastation of urban areas. To back their position they quote the example of the futile efforts of the architects after London's great fire of 1666, to put in practice bold new plans for the city's street network. Above authors invoke then Kevin Lynch's explanation (1972): *The most ambitious plans were thwarted by entrenched property interests and a complicated system of freeholds, leases and subleases with many intermixed ownerships.*

It becomes evident that individual citizens and the poorest rather, themselves combat and undermine collective or city level resilience just because they claim their rights on the means of personal resilience (basically their pre-disaster property rights). More specifically, the sum of claims of individual citizens for their pre-disaster entrenched rights on urban land perpetuate and increase a collective form of vulnerability, i.e. urban structure's physical vulnerability.

There are actually numerous examples of direct conflicts between individual and collective resilience (i.e. the resilience of the community as a whole), or to put it in another way causal relationships between individual resilience and collective vulnerability. In the previous section we have seen already why and how institutional (i.e. some form of collective) resilience produces numerous individual vulnerabilities. It has been revealed already that it is a myth that resilience is always good as an ever vulnerability abating factor. It does only good to the agent employing the property but it may harm others (collective or individual agents) by increasing their vulnerability.

People and individual households as if they are conscious of this dubious nature of resilience they usually opt individual resilience instead of collective. It is exactly for this reason that physical and other forms of the wider urban structure do not improve in reconstruction/recovery periods and not because of some kind of *inertia of urban resilience* as Vale and Campanella (2005, p. 346) suggest. The preference of people and households to personal resilience rather than collective has been confirmed in the Bam's reconstruction after the earthquake of December 2003. After pressures from the victimized groups, four months after the disaster, the International Red Crescent Society introduced a cash voucher system to replace the distribution of relief items (except for hygiene kits). This has enabled disaster affected people to recover part of their livelihoods and hence to acquire means for activating always more individual resilience.

According to theoretical assumptions resilience is centered virtually on self-priorities and self-capabilities (Sapountzaki 2007). Resilience is about selecting among risk targets, selecting among vulnerability facet targets, allocating these targets in time and striking the selected targets (by using available resources) according to own principles and survivability prospects. It is more than obvious that the range of above risk and vulnerability targets (and available resources to striking them) differ from agent to agent especially from individual to collective agents such as central and local authorities. Under the circumstances it is almost unlikely that the solutions of collective resilience as emanating from institutional organizations can meet the necessities of each individual for vulnerability curing

and risk confronting. Instead, knowledgeable private individuals struggle for their own opportunity to resilience by defending and expanding their livelihoods, especially durable income sources and land property assets.

4.4 Resilience in Mega Cities: Selecting Among Risk Mitigation Targets

Mega cities are incubators of risk. Hansjurgens et al. (2008, p. 20) argue that:

> Mega urbanization involves unprecedented growth, high population density and a concentration of economic and political power, turning the urban habitat into both a space of opportunity and a space of risk. What is more mega cities generate a highly complex variety of simultaneous and interacting processes that produce and reinforce risks and dangers.

The same authors suggest that mega cities' vulnerability is affected by three types of risk: (a) single hazardous events, (b) chronic long-term damaging processes and (c) events related to global change. Hansjurgens et al. (2008) suggest that three elements of mega cities shape each one's specific vulnerability: size/scale, speed of change and complexity. Mega city's increasing social polarization due to globalization causes and reproduces social exclusion with an always increasing in percentage marginalized population. According to Sakdapolrak et al. (2008, p. 11) these people *are vulnerable to the effects of economic, social and political insecurity, exploitation, environmental pollution, natural hazards, health crises, food insecurity.* Meikle (Meikle 2002) explains that their livelihoods are threatened by their informal/illegal status undermining their labour, tenure and political rights; their degraded living environment affects their health and their reliance on the cash economy makes them vulnerable to price rises and financial crises. As regards location of the marginalized informal neighbourhoods IFRCS (International Federation of Red Cross and Red Crescent Societies (IFRCS) 2004a, p. 145) reports that slum settlements in Mumbai *have sprung up wherever land could be found: on steep slopes, by open gutters and streams, on low-lying flood plains, under high voltage wires, beneath stone quarries, along railway lines and highways and inside industrial zones.* As a result natural hazards in the slums become more destructive; flood waters remain for long periods in these non-serviced districts; their residents are exposed to bacteria and communicable diseases due to garbage and sewage left in the open air and polluted land and water table; infant mortality rates become high; natural and technological hazards combine into Na-tech and residents' vulnerability deteriorates due to the high density of poorly built structures and the labyrinth like pattern of streets trapping inhabitants in case of emergency.

The example of the highly resilient female slum dweller quoted in the introduction is instructive as regards slum dwellers' resilience:

- Slum dwellers are gifted with high resilience owing to their high exposure and vulnerability, plight experiences/memories and hence their high risk perceptions.
- The predominant resilience functions of the slum dwellers are (a) re-arrangement of own vulnerability facets (economic-social, physical-housing, human etc.) and (b) selecting a hazard to target among the several being encountered.
- In selecting a hazard target slum dwellers show preference to chronic hazards rather than extreme events. After all chronic hazards cause harm daily while with some luck extreme events may be late comers to find them in a more robust position.
- In selecting a vulnerability facet to combat slum dwellers show preference to their economic or income vulnerability. This preference most probably deteriorates other forms of slum dwellers' vulnerability (health, housing, social, human etc.) as a result of a vulnerability rollover process.
- Slum dwellers are interested in boosting their own individual resilience rather than cooperate with others and the Municipality for collective resilience in the slum districts. This is partly because they feel that vulnerability in their slum neighbourhood is generated and reproduced by the authorities themselves, migration processes and even their neighbours or newcomers in the slums. Hence slum dwellers adopt usually a dual strategy: In the slums they treat only immediate crisis physical vulnerabilities and only through minor adjustments; but they appeal to distant places and spaces for durable resilience resources to pro-actively cure their long-term vulnerabilities.

It seems then that there are widespread myths and delusions about resilience and its universally welcomed effect. The next concluding section deals with these myths and reviews urban policy options under a renewed perspective.

4.5 Conclusions: Myths and Dilemmas on the "Resilient City"

The term "Resilient City" even as a long term vision is a misleading term/concept. It is a term denoting that all components of a city can become simultaneously resilient, i.e. capable to get rid of or cure their vulnerability. We have seen however, that resilient citizens do not identify with resilient city structures (physical and other). The Resilient City is utopia because resilience and vulnerability co-exist they constantly reproduce one another. The two properties co-habit in the urban system. An urban community of resilient citizens cannot ever become a non-vulnerable community. On the contrary, documentary evidence shows that resilient individuals may and most probably produce vulnerable communities, institutions and/or urban physical structures, i.e. collective vulnerability. Documentary evidence indicates that the reverse is also valid: resilient governments/authorities may burden with extra vulnerability impotent and marginalized social

groups, meaning that institutions may produce individual and social vulnerability. Hence, the best the concept "Resilient City" can offer as a policy objective is to boost resilience of some aspects/actors in the city by deteriorating the vulnerability of others. Besides, the slogan "Resilient City" equalizes the most and the least vulnerable in the city as regards their rights on resilience.

The symbiotic relationship between resilience and vulnerability in the city rests with the modus operandi of resilience. Its employment necessitates resources which are limited and for which numerous actors, individual and collective, struggle in the urban arena. It is evident that *the actors dispossessing others or collective entities from their own resilience resources restrict the latter's possibilities for vulnerability reduction* (Sapountzaki 2007). Besides, one of the basic resilience functions is vulnerability transference (in time and space) to other actors. Hence, boosting of resilience of some actors translates into increasing vulnerability of others.

Assessment of the resilience effect on vulnerability necessitates identification of resilience origin (i.e. where/whom it comes from), resilience function type and the levered vulnerability's "journey" and destination. Resilience as internal rebalancing of one's own vulnerability facets by an actor beneficial may be to this actor because it allows the actor to adjust effectively to changing circumstances of resource availability and the blend of hazards confronted. It does so without doing harm to other actors, individual or collective. Resilience as a mechanism of transference of vulnerability is generally beneficial for the actor taking the resilient action but may be harmful for others. If vulnerability shifts from the poor and vulnerable toward the well-off and safe or accountable institutions, resilience then may rehabilitate "vulnerability justice" in the city and/or trigger institutional reforms to this direction. If on the other hand vulnerability shifts from the well-off and the political elite to the already poor and vulnerable vulnerability inequalities are going to increase.

The slum districts and squatter/illegal settlement areas of mega-cities are incubators of risks, vulnerabilities and resilience. The residents of these marginalized districts exhibit preference to individual rather than community resilience. Their individual resilience strategies target chronic rather than extreme event risks and own economic or income vulnerability rather than physical, human, housing or health vulnerability. Should opportunities arise they develop dual strategies, for combating both immediate crisis vulnerability on the spot and long term vulnerability by appealing to distant safer places and spaces.

Resilient governments and authorities are those which mind for their economic and vulnerability of authority. Mitigation planning measures in advance of disasters are rarely an option for these authorities because mitigation measures are costly and unpopular. Only in case of communities with high risk perceptions predisaster risk mitigation can become a viable option for public authorities. It is not by chance that after seismic disasters seismic design building codes usually become stricter.

In post-disaster recovery periods authorities and state institutions waver between managing their vulnerability of authority on one hand and their economic

on the other. More often than not they prioritize national or regional level macro-economic objectives to the disadvantage of local level social issues and the mostly victimized groups. The latter finding their vulnerability worse and worse turn to their own material and intangible resilience resources. Among them land property rights are of paramount importance and those who feel dependent on these obstruct any change in the urban pattern even for urban structure vulnerability mitigation. In a sequence of events resembling a vicious circle institutions deteriorate social and individual vulnerabilities and numerous individuals resist collective resilience at least in the form of urban vulnerability mitigation planning. Improving risk perceptions is the only way to break these vicious circles of vulnerability transference.

4.6 Recommendations

- The slogan "Resilient City" should be replaced by "Resilience in the City" as it rests with the urban community to prioritize between resilient citizens and resilient institutions, or individual and collective resilience (i.e. the resilience of the urban, physical and other structures) through consensus-building or other democratic processes. This change rehabilitates the political content of the concept and may have a really activating impact on citizens so as to become effective vulnerability managers.
- Vulnerability and Resilience assessment studies in relation to single or only natural hazards do not make sense. In the real world vulnerability and resilience are always complex properties generated by and constituting reactions to multi-risk contexts. Hence, policies to boost resilience cannot refer exclusively to flood risk, earthquake, risk of poverty, social exclusion, epidemics etc. Policies for resilience can only refer to the whole spectrum of hazards each actor is confronted with and it is up to this actor to decide hazard targets, hazard prioritization etc.
- City residents and institutions should all become aware and knowledgeable of the threats and risks encountered in the different parts of the city and by the various individual and collective actors. Each city should assign or conduct a multi-risk identification study with reference to chronic risks, extreme event risks and local impact of globalized risks. Official reports accessible by the public should inform every citizen about where, by whom, what risk is encountered. Threats to institutions are important and should also be included in such reports. These multi-risk identification reports should be constantly updated by means of a risk observatory similar to the environmental monitoring systems.
- The resilience means of the poor and vulnerable should be enhanced during normal periods if vulnerability/resilience justice is to be pursued in the city. Among these resources land property rights (freeholds, leasing, sub-leasing, land allocation etc.) are very significant. If these rights are offered inside the

housing districts of the poor and vulnerable they can contribute to physical upgrading and mitigation of vulnerability of these districts by their dwellers themselves. At the same time these poor and vulnerable dwellers should be encouraged to maintain their social, property, family and other bonds with distant places (e.g. with countries of origin in case of external migrants etc.). These bonds will offer to the urban poor pools of resilience resources and the chance of vulnerability transference to distant places beyond the city, especially in emergency and recovery periods.

- Citizens and communities should be consulted (by means of referendums, polling processes or other governance methods) to select between individual and collective resilience. Do they trust institutions to conduct all relief and recovery aspects should a disaster/crisis occur or they do prefer individualized support with resilience resources for each one to find own housing and business recovery trajectory? Should the community opt individualized resilience, external aid in case of disaster will have to be allocated to individual households/firms. Otherwise, institutions become legitimized to use and spend financial aid for collective, national or regional level, recovery objectives (e.g. major infrastructure works, subsidizing reconstruction of the major industries and production sectors etc.).
- Political empowerment of the poor and vulnerable is very critical not only for the purpose of improving their accessibility to resources but mainly for increasing dependence of city institutions and their vulnerability of authority from these groups. To this end, grass-root organizations and NGOs are of paramount importance.
- Enforcement of risk taxes and introduction of penalties for those who demonstrably have transferred vulnerability to or generated exposure for others are policies and measures halting the unfair processes of vulnerability rollover from the powerful and resilient to the powerless and vulnerable. Such provisions might be paralleled to those of environmental taxing.
- Building high risk perceptions is the key policy toward resilience boosting. High risk perception is the key factor toward "Good Resilience", meaning (a) emphasis on pre-disaster vulnerability (pro-active resilience), (b) equal concern for chronic risks and natural or globalized ones, (c) equal concern for current and future vulnerability, (d) rebalancing of own vulnerability without transferring it to others, (e) learning to avoid extra vulnerability coming from others. Risk education, training, information and research are fundamental for high risk perceptions. Hence, risk learning should be embodied in the routine teaching programmes and courses at all levels of education; the respective curricula should address not only hazard and risk but vulnerability and resilience as well. Furthermore, risk and vulnerability mitigation visions and claims should take their position in the political agendas and those of civil society organizations. The mass media should undertake a part of responsibility for risk information release and dissemination.
- Outsiders should be banned from imposing their own resilience narrative on disaster stricken communities. This is particularly the case of private sector investors and developers who profit on disasters by taking advantage of the urgent needs of the homeless and stealing the exceptional resources produced by

the extraordinary crisis situation. This is indeed one fundamental responsibility for the competent institutions; success or failure in this sense will determine their term of authority.

All in all citizens and decision-making bodies should be aware of the fundamental truths about urban resilience politics: Resilience is a counteraction to vulnerability but not a panacea, vulnerability reduction depends on who can be resilient and who cannot; resilience and its fight against vulnerability can never be promoted with a view of one specific hazard because actors in the real world consider all sorts of confronted hazards and make trade-offs; resilience is a liberal path to vulnerability reduction but it entails vulnerability inequalities and does not substitute public mitigation policies. ….And take care: when somebody's vulnerability is reduced sometimes, somewhere, it is probable that others elsewhere are encumbered with some form of vulnerability, currently or in the future. Collective resilience and vulnerability mitigation does not always keep pace with promotion of individual resilience.

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