



Uscore2: Step-by-Step Guide to City-to-City

Peer Reviews for Disaster Risk Reduction

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CONTENTS

Introduction to Uscore2 City-to-City Peer Review	3
Developing and enhancing Disaster Risk Reduction in your city	5
Benefits to cities undertaking a Peer Review	7
Phase One - Planning the Peer Review	11
Phase Two - Undertaking the Peer Review	29
Phase Three - After the Peer Review Visit	42
References	46
Notes	47



INTRODUCTION TO USCORE2 CITY-TO-CITY PEER REVIEW

Uscore2 is a peer-to-peer review process for cities, designed with funding from the European Commission, to enable cities to share and learn from good practice in Disaster Risk Reduction (DRR) with other cities across the world. This peer review programme integrates an evidence based methodology for impact evaluation, enabling participants to demonstrate the value generated by the investment in the peer review.

The peer review tool has been developed and tested by three cities, working with a large regional volunteer network, Gruppo Lucano, and national civil protection teams, together with the University of Manchester and the United Nations Office for Disaster Risk Reduction (UNISDR). The three cities that have undertaken a peer review during the design of this methodology are:

- Amadora, Portugal
- Salford, UK
- Viggiano, Italy

The experiences of these cities have been reflected throughout this document.

The Uscore2 peer review is a suggested progression from the use of self-assessment in DRR. The UNISDR has developed the Disaster Resilience Scorecard for Cities to encourage the use of self-assessment for reporting against and implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030. Whilst research has demonstrated the need for, and usefulness of, local governments and communities using such tools to self-assess policies and practices relating to DRR, it has also highlighted the need for an additional independent and transparent means of city resilience assessment.

With over 50% of the world's population living in cities (United Nations 2016), ensuring cities are resilient is crucial. The role of local government is vital in DRR as such organisations are the first to respond to crises, are adept at delivering local services and, importantly, are well connected to the societies they serve.

Uscore2 focuses on the use of city-level peer reviews as a tool with which the activities of one city in the area of disaster risk management and civil protection is examined on an equal basis by fellow peers who are experts from other cities. This approach facilitates improvements in DRR through the exchange of best practice and mutual learning, whilst also maintaining impartiality and transparency.

This document provides an overview of the peer review process, the Impact Evaluation Methodology (IEM) used to measure the impact of the peer review, and the 11 Modules for conducting city-to-city peer reviews for DRR. Further information and reports from the Uscore2 pilot peer reviews can be found on the Uscore2 website www.Uscore2.eu.



MODULES OF THE PEER REVIEW

1. Organise for
Disaster Resilience

2. Identify, Understand
and Use Current and
Future Risk Scenarios

3. Strengthen
Financial Capacity
for Resilience

4. Pursue Resilient
Urban Development and
Design

5. Safeguard Natural
Buffers to Enhance
Ecosystems' Protective
Functions

6. Strengthen
Institutional Capacity
for Resilience

7. Understand and
Strengthen Societal
Capacity for Resilience

8a. Increase
Infrastructure
Resilience

8b. Public Health
& DRR

9. Ensure Effective
Disaster Response

10. Expedite Recovery
and Build Back
Better



DEVELOPING AND ENHANCING DISASTER RISK REDUCTION IN YOUR CITY

Disasters, and their impacts, have been seen to have increasingly destructive consequences on the societies they affect. In 2016 alone, a number of devastating earthquakes were reported in Japan, Ecuador, Tanzania, Italy and New Zealand, while severe flooding was recorded across the US, Europe and Asia, and abnormal weather events reached a record high in the US. The effects of such global adverse events have resulted in approximately 11,000 people losing their lives or going missing (Swiss Re, 2017). In addition, economic losses have substantially risen from USD 94 billion in 2015, to USD175 billion in 2016; the highest they have been since 2012 (Swiss Re, 2017).

These figures demonstrate the magnitude of disaster effects, and provide critical insights into disaster trends. Whilst reduction in disaster mortality has been observed in the last decade, many countries are still unable to reduce the risk of hazards faster than their hazard-exposed populations increase (UNISDR, 2015). In addition, global loss trends indicate that the rapid growth of economic assets in hazard-prone regions is increasing disaster risk (UNISDR, 2015).

These issues are particularly relevant in urban environments which now house the majority of the world's growing population (Meerow et al., 2016). Cities in both developing and developed nations face increased risks. Whilst developing nations have seen large influxes in forms of informal urbanisation, where urban planning and land use remain unregulated (Meerow et al., 2016), developed nations face emerging and evolving threats related to climate change,

migration and population expansion (Gilissen et al., 2016). Research indicates that around 54.5 per cent of the world's population were living in urban settlements in 2016; a figure which is expected to increase to 60 per cent by 2030, with one in every three people living in cities with at least half a million inhabitants (United Nations, 2016).

In exploring city resilience through city-to-city peer reviews an understanding of the term urban resilience is helpful. The definition adopted by the Sendai Framework for Disaster Risk Reduction 2015-2030 is as follows: "the ability of a system, community or society exposed to hazards to resist, absorb, accommodate, or recover from the effects of a hazardous event in a timely and efficient manner, including through ensuring the preservation, restoration, or improvement of its essential basic structures and functions" (Sendai Framework, 2015: 9).



DEVELOPING AND ENHANCING DISASTER RISK REDUCTION IN YOUR CITY

Peer reviews are a unique, and privileged, opportunity for the Review Team from one city and people involved in disaster risk reduction in the Host City to engage, challenge one another and learn together. Taking part in the peer review process enables the Host City and Review Team to debate and generate ideas about different aspects of disaster risk reduction. The process is entirely voluntary and its aim is to encourage conversations in order to seek and promote good practice within cities across the globe. The peer review process is not intended to be used as a comparator of one city to another, it is intended to encourage cross-border cooperation and collaboration whilst promoting the understanding and improvement of effective DRR activities. Every city and the reviewing team are different and so the outcome of each review will be different. All those involved in planning and participating in the review should keep one question at the forefront of their minds during the review process: “What will most help the city to move forward?” If this is done, it’s hard to go wrong.



BENEFITS TO CITIES UNDERTAKING A PEER REVIEW

1. Demonstrating commitment to International and European frameworks and regulation

One of the seven global targets within the Sendai Framework for Disaster Risk Reduction 2015-2030 is to “Substantially increase the number of countries with national and local DRR strategies by 2020” and the Framework emphasises the need to empower local governments to reduce disaster risk. The peer review process will provide feedback to cities to enable this process.

Similarly, EU Civil Protection legislation (2013, Decision No. 1313/2013/EU) advocates that Member States share good practice and help each other to identify where additional effort is needed to reduce disaster risks. Practical translation of this includes cities conducting better risk assessments and developing action plans.

2. Create the opportunity to assess the current situation and identify actions that will further improve a city’s approach to disaster risk reduction

The peer review process takes advantage of a policy exchange among peers to facilitate sharing of best practices, examining the DRR activities of the Host City and offering non-binding recommendations aimed at policy improvement. Because of the nature and the objectives of the peer review process, it can help to develop local level DRR strategies and to strengthen cooperation between cities and countries. Peer reviews can also assist in delivering an integrated approach to DRR at a city level, linking disaster risk prevention, preparedness, response and recovery actions.

3. Receive challenge and support from a multi-disciplinary, cross-sector professional expert panel

Uscore2 peer reviews are based on mutual support between cities and advocate that cities work together across international boundaries. This will bring alternative perspectives to further enhance a broader understanding of how DRR is conducted at the local city-level, drawing on different approaches from around the world.

4. Build confidence in and ownership of the DRR agenda by undertaking a facilitated exchange of good practice and suggesting improvements

An important part of a peer review is for the Review Team to identify good practice in the Host City. In this way, the Host City can build on its existing strengths, share good practice with others, and strengthen city DRR policy and operations through expert review and mutual learning.



BENEFITS TO CITIES UNDERTAKING A PEER REVIEW

5. Initiate a policy dialogue helping to improve consistency in DRR

Disasters do not respect city or national boundaries. As good practice is shared between cities, proven ways of strengthening DRR can be adopted and relationships can be formed that can offer mutual support in a crisis. The peer review can therefore steer progress in critical areas for cooperation.

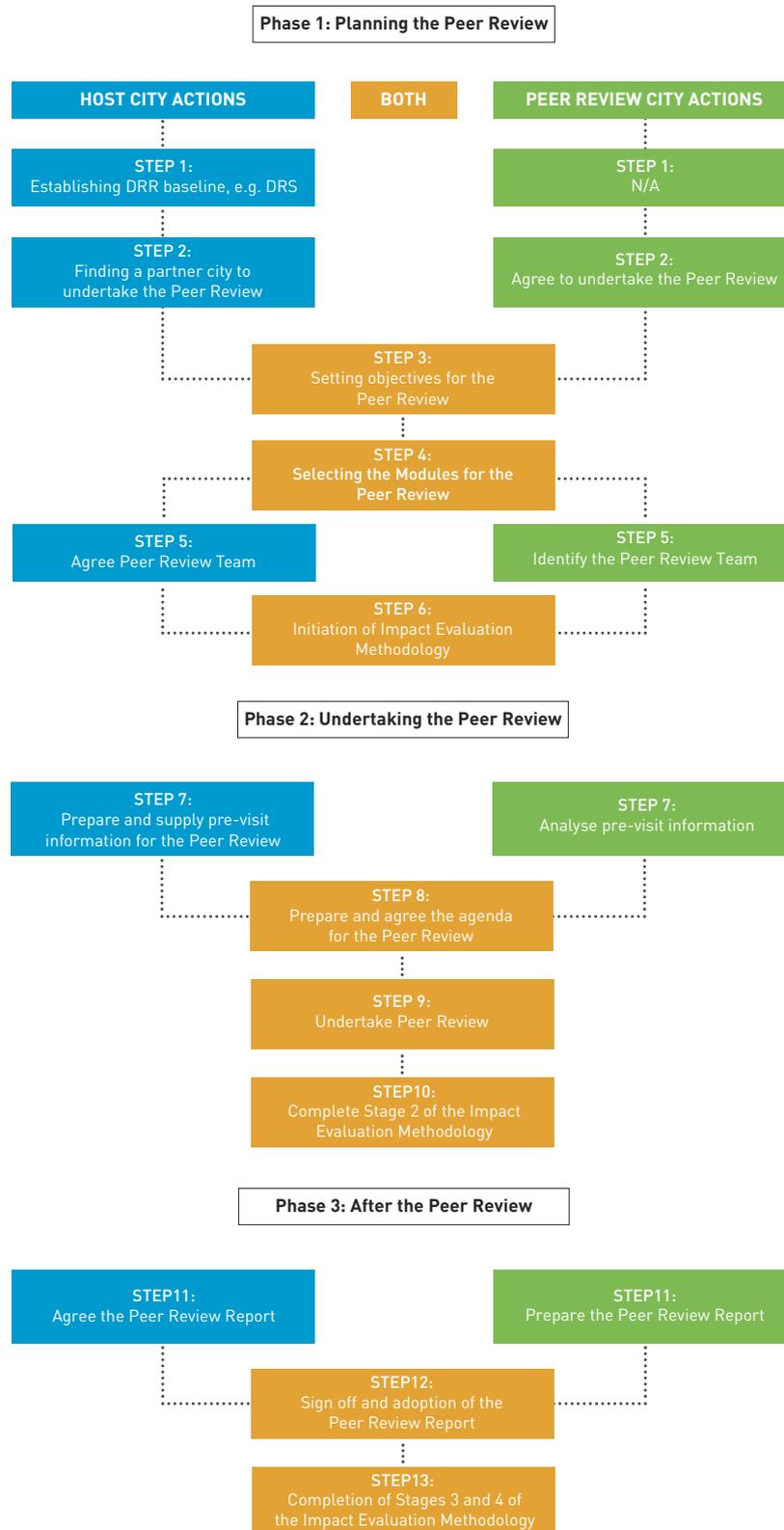
6. Incorporate a proven impact evaluation methodology

A peer review requires investment of resources by both the Host City and the Review Team. The Impact Evaluation Methodology helps cities to demonstrate the value of the investment in the review.

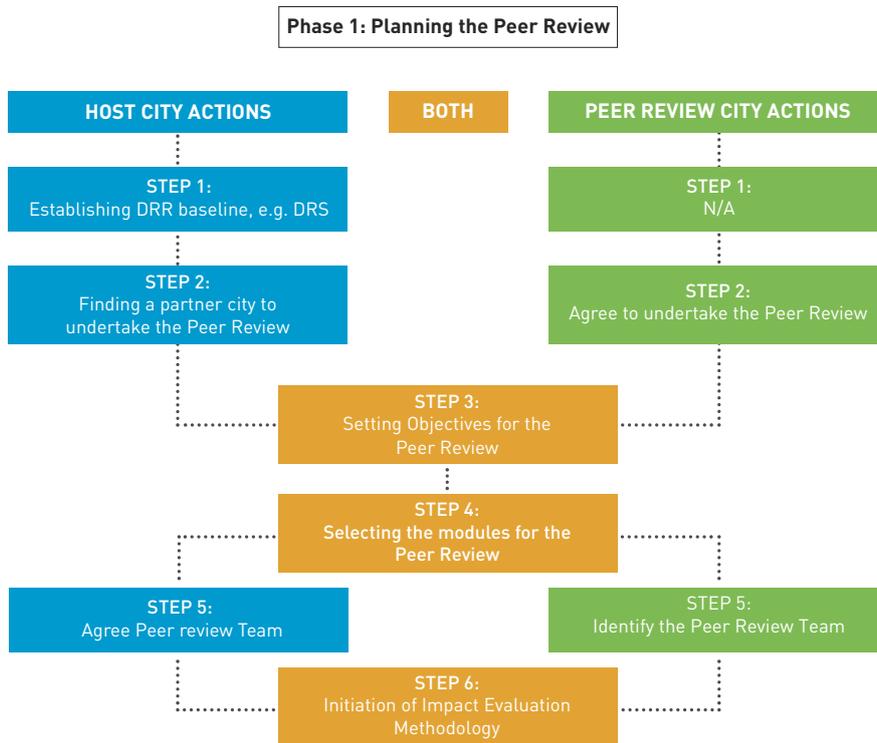
7. Personal and professional development for people participating in the peer review process.



METHODOLOGY



PHASE ONE – PLANNING THE PEER REVIEW: TIME 3-6 MONTHS

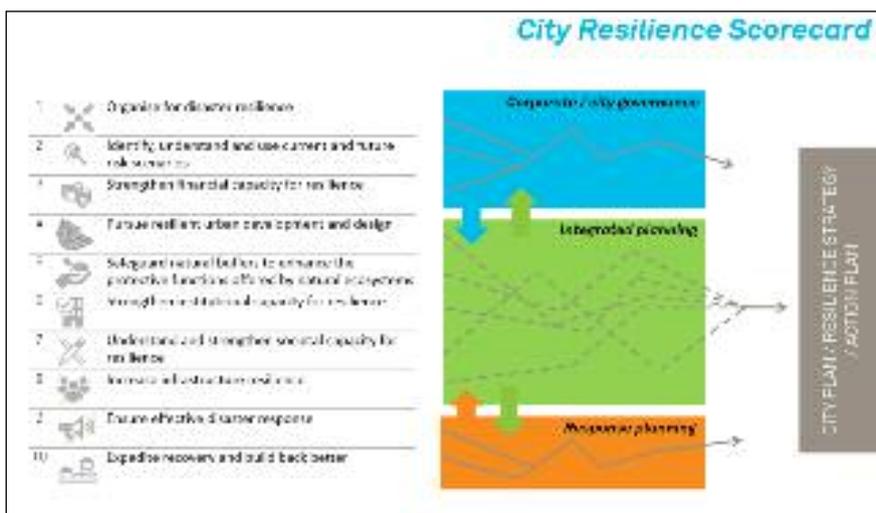


PHASE ONE - PLANNING THE PEER REVIEW

STEP ONE – Establishing the DRR Baseline

It is important for the Host City to have a clear assessment of its baseline position on DRR before the peer review is undertaken. It is recommended that the Host City consider completing the Disaster Resilience Scorecard for Cities Preliminary Level Assessment (DRS). The DRS is structured around the UNISDR’s recommended ten essential activities for Making Cities Resilient. Whilst completion of the DRS is not a pre-requisite it enables the Host City to gather evidence of DRR activities and to self-assess the status of DRR within their city.

DRS link: <http://www.unisdr.org/campaign/resilientcities/home/toolkitblkitem/?id=4>



Completion of the DRS may also help to:

- encourage stakeholder participation
- set objectives for the peer review
- identify the topics (Modules) on which the city should invite the peer review
- elicit leadership, political and community support for the peer review.

PHASE ONE - PLANNING THE PEER REVIEW

Securing Funding

Unless agreed otherwise, all the costs to undertake a peer review will be borne by the Host City. In addition to demonstrating the commitment of the Host City to the peer review process, the rationale behind the Host City financing the peer review is that it will prevent cities asking for a peer review without considering the resources required by all parties. It will also support cities who have respected DRR arrangements or who have experienced particular DRR challenges who may receive multiple requests to undertake peer reviews. Whilst these cities may be willing to participate and share their experience it would be unfair for the burden of financing several peer reviews to fall on them and would likely prevent their involvement.

Consideration could be given to an agreement / contract being drawn up between the Host City and Review Team at an early stage to clarify the arrangements in place regarding funding and any other terms and conditions in advance of the peer review commencing.



Rights

With regard to intellectual rights, agreements should be reached between the Host City and Review Team as to whom will hold the intellectual rights of any publications produced during the peer review and any obligations and limitations thereafter.

Agreement should be sought between the Host City and Review Teams with regard to who bears responsibility for the information set out in any publications produced as part of the peer review and any future dissemination limitations, including the inclusion of information that may be deemed sensitive or confidential in nature.



STEP TWO - FINDING A PARTNER CITY TO UNDERTAKE THE PEER REVIEW

Host City: Identifying a Peer Review Partner

The Host City needs to identify and contact prospective Review Cities. There are many ways in which a Host City could find an international partner city to conduct a peer review. The starting point is to consider the factors that may make a city an ideal partner. This could include similarities or differences for either ease of shared understanding or to generate new perspectives. Criteria could include:

- size
- key economic sectors
- demographic or geographic factors
- risk profile
- experience of similar hazards
- reputation of the city in DRR.

A number of approaches to identifying and contacting a specific city include:

- through institutions at the international, EU or national levels such as UNISDR, DG-ECHO, ICLEI etc.
- through the city's academic and research organisations who often engage in trans-boundary research in collaboration with other institutions, building strong city-to-city relationships as a result
- through the use of the city matching tool developed by the RESIN project (EU only) <http://www.resin-cities.eu/home/our-aim/>
- through existing international networks in which the city participates such as the Making Cities Resilient Campaign, ICLEI, 100RC, Medellin Collaboration for Urban Resilience (MCUR) etc.
- through an open call using tools such as the UNISDR CONNECT tool available at: <https://www.preventionweb.net/rcc/>



- through reference to national and local DRR peer review reports which will signpost nations and cities with experience of DRR peer reviews
- considering the Uscore2 pilot cities.

The peer review may be more efficient and effective if the two cities have a common shared language. This will also remove the need for translation services with their associated costs. Whilst desirable, a shared language is not essential.

STEP TWO - FINDING A PARTNER CITY TO UNDERTAKE THE PEER REVIEW

Review City - Agreeing to Undertake the Peer Review

Cities approached to undertake a peer review should consider the potential benefits, primarily in learning from the review to improve their own city's DRR. There are also opportunities for the development of new skills for potential Review Team members.

City leadership will need to agree that the city should undertake the peer review for the Host City. In becoming a Review City, key stakeholders who may need to participate in the peer review will need to be engaged. A cost analysis is advisable to form the basis of a resource request to the Host City. Further detail of how to assemble a Review Team is provided in Step Five.

Benefits from conducting the peer review for the Review Team as identified during the pilots

- Improved DRR knowledge acquisition and transfer
- Heightened visibility of DRR and resilience within the Review City
- New perspectives on DRR challenges within the Review City
- New ideas to inform the development and strengthening of DRR and resilience building strategies
- Increase in skills and experience that can be brought to subsequent work in the Review City

FROM THIS STEP ONWARDS, THE PROCESS IS A COLLABORATION BETWEEN THE HOST AND REVIEW CITIES



STEP THREE - SETTING OBJECTIVES FOR THE PEER REVIEW

The Host City is recommended to set up a small project team to coordinate the different activities of the peer review process. In particular a single point of contact to make arrangements for the peer review visit is advised.

An early step for the Host City is to consider the purpose for inviting a peer review and the outcomes the city is seeking. Research and the literature review undertaken to inform the Uscore2 peer review methodology identified the following broad outcomes as achievable through a peer review:

- To champion an all-of society approach to assess, understand, adapt and cope with risks within cities (Christensen et al. 2016), through improved communication, knowledge exchange and resource mobilization (Basu et al. 2013; Kamh et al. 2016)
- To identify contextually relevant factors which strengthen city resilience and to identify the form a resilient city may take in that context (Boin and van Eeten 2013; Duit 2016)
- To develop international cooperation to better understand contributions to resilience in an effort to support the facilitation of meaningful resilience strategies
- To consider multi-agency approaches to DRR and resilience building to support cities in coordinating and implementing DRR and resilience strategies (Khunwishit et al. 2018)
- To consider structural aspects of DRR and resilience building such as plans and policies to formalize networks and legislative frameworks to support their implementation (UNISDR n.d, c)
- To consider social dimensions of risk such as the population's exposure (Birkmann et al. 2013), to further understand the specific vulnerabilities within the city which may affect the implementation of structural aspects of DRR and resilience building.



STEP THREE - SETTING OBJECTIVES FOR THE PEER REVIEW

At the start of the peer review process, the Host City should agree the overall aim and some objectives for the peer review. Agreeing up to four objectives with senior level sign-off can help promote political and strategic engagement with the peer review process.

The objectives should recognise:

- The local city context: specific hazards, demographics, vulnerabilities, exposure to risk.
- City maturity in DRR: multi-sectoral partnerships in place, DRR actions embedded across city activities, experience of handling emergencies and / or disasters
- Previous experience of DRR assessments: self-assessments, peer reviews. The outcome of the UNISDR Preliminary Disaster Resilience Scorecard for Cities (DRS) may be useful at this stage
- Specific DRR requirements: areas where review or challenge of DRR practice would be welcomed, topics where assurance about DRR is required, issues where new ideas and access to good practice would be helpful
- Whether the objectives should cover the whole review (see example below from Viggiano) or be specific to the Modules / topics chosen (see examples below from Amadora and Salford).

Host City	Module	Objective
Viggiano	Whole review	Improve the level of understanding, participation and coordination on DRR among the different stakeholders.
Viggiano	Whole review	Spread the results among the population to improve not only understanding on DRR but also the level of trust towards the institutions.
Amadora	Module 1	Understand if the work carried out by the municipality in terms of Disaster Risk Reduction is perceptible to stakeholders; what are the direct and indirect contributions of stakeholders to the city's resilience; and how the Disaster Resilience Scorecard contributed to the definition / implementation of a local strategy.
Amadora	Module 6	Improve networking from the point of view of institutional resilience; better understand the importance of local government in supporting the construction of a culture of security; improve efficiency and effectiveness of risk communication to entities and the population; better understand what is lacking in order to have a local platform on resilience, with the contribution of local stakeholders.

STEP THREE - SETTING OBJECTIVES FOR THE PEER REVIEW

Host City	Module	Objective
Salford	Module 8a	Recognising the complex interdependencies between different infrastructure types in a large urban context, to explore the resilience to disaster risks of infrastructure providing essential services to the city region.
Salford	Module 10	Understanding that the city region has, in the last three years, used its recovery plans after several emergencies, to seek an independent perspective on the recovery processes to validate current planning and to inform their future development.

These objectives will need to be shared with the Review Team (see Step Seven).



STEP FOUR - SELECTING THE MODULES FOR THE PEER REVIEW

The Uscore2 methodology for conducting peer reviews enables a city to select themes for the peer review, each theme being the basis of one of 11 Modules. The 11 Modules are based on the 10 essential steps for building city resilience as set out in the UNISDR's Making Cities Resilient Campaign. Each Module describes a different theme within DRR, with the Module covering Essential 8 being split into two parts.

A guide for each Module has been prepared covering information specific to that Module. This includes:

- a description of the essential from the Making Cities Resilient Campaign
- indicators for assessing the topics covered
- suggestions for information to send in advance of the peer review visit
- suggestions for activities to undertake during the peer review visit
- suggested questions to be used during the peer review relevant to the topic being considered
- forms to collate the Review Team's summary of the information gathered and potential recommendations.

It is strongly recommended that Host Cities consider including either Module 1 or 2 in their selection. The pilot of this methodology demonstrated that the Review Team can work most effectively when it understands the city and DRR governance arrangements, together with understanding the risks that a city faces. A lack of clarity in these areas could undermine the ability of the Review Team to make realistic assessments and evaluations of the Host City's DRR activities.

If the Host City does not wish to include these Modules, then information about these topics must be included as part of the pre-review information pack (see Step Six). One of the pilot cities, Salford, submitted a detailed description of their governance and risk assessment arrangements and an extract is included below as a worked example.



STEP FOUR - SELECTING THE MODULES FOR THE PEER REVIEW

Worked Example: Extract from Salford's pre-visit information describing governance

In the UK there are three tiers of disaster risk governance: UK national level, Metropolitan/ Greater Manchester level, and District / Local level. The national/ UK Government tier has a strong liaison with the metropolitan and local tiers through regionally-based resilience teams. The 10 local authorities in Greater Manchester (GM) have a long history of partnership and collaborative working through the Association of Greater Manchester Authorities (AGMA) and now (as a result of devolution to GM) through the Greater Manchester Combined Authority (GMCA).

In the UK, the Civil Contingencies Act (2004), and accompanying non-legislative measures, delivers a single framework for civil protection in the UK. The Act is split into two substantive parts: local arrangements for civil protection (Part 1); and emergency powers (Part 2). Part 1 of the act establishes a clear set of roles and responsibilities for those involved in emergency preparation and response at the local level, and divides responders into two categories:

- Category 1 organisations which are core to the response of most emergencies (the emergency services, local authorities and National Health Service (NHS) bodies) and are subject to the full set of civil protection duties
- Category 2 organisations (the Health and Safety Executive, transport and utility companies) which are 'cooperating bodies' and are only likely to be involved in incidents that affect their own sector.

Category 1 and 2 organisations come together to form 'local resilience forums' which help coordination and cooperation between responders at the local level.

Part 2 of the Act allows for the making of temporary special legislation to help deal with the most serious of emergencies. The use of emergency powers is a last resort and can only be deployed in exceptional circumstances, and is subject to a robust set of safeguards.

In Greater Manchester, the Greater Manchester Resilience Forum (GMRP) sits at the heart of civil protection for the region. As a multi-agency partnership it brings together a wide range of stakeholders from different agencies to drive forward an integrated emergency management approach. The GMRP provides a strong foundation for civil protection activities with collaboration and coordination of activity across different stakeholders.

STEP FOUR - SELECTING THE MODULES FOR THE PEER REVIEW

Each Module is designed to be implemented during a one day evaluation during the peer review visit. The exception to this is Module 8a which can take 3 days to complete if all infrastructure types are covered during the visit. With complex Modules such as 8a, consideration could be given to conducting a Module in isolation during a peer review or to whether specific sections of the Module should be the focus of the review.

Depending on the Modules chosen, up to 3 Modules could be selected by the Host City to be conducted in a 3 day evaluation. This is a suggestion and the overall duration of a peer review can be agreed by the Host City and Review Team.

The choice of Modules should be done in collaboration with the Review Team so that consideration of mutual interests and availability of appropriate Review Team members can be considered.

11 Peer Review Modules	Why select this Module?
1. Organise for Disaster Resilience Evidencing MCR Essential 1	To effectively contribute to a city's development objectives and sustainability, a holistic approach in understanding the potential threats and managing disaster risk must be adopted. It is important to include the engagement of local government decision makers, various officials and departments, academia, business and citizens. Accompanied by the participation of these major groups and actors in planning, implementing and monitoring, an effective organisational structure is a prerequisite for sound decision making and practical disaster risk reduction actions. It will foster collaboration and partnership among all the stakeholders for prevention, mitigation, preparedness, response, recovery and rehabilitation of disaster risk.
2. Identify, Understand and Use Current and Future Risk Scenarios Evidencing MCR Essential 2	Disaster risk management need to be based on an understanding of disaster risk scenarios in all its dimensions of hazard characteristics, local exposures, capacity and vulnerability. Risk scenarios analysis and assessments therefore are essential for informed decision making, prioritising projects and planning for disaster risk reduction measures (prevention, mitigation, preparedness and response). Unless local governments have a clear understanding of the risks they face, as well as fully discuss with the public and other stakeholders about risk scenarios, implementation of meaningful disaster risk reduction measures may be ineffective.

STEP FOUR - SELECTING THE MODULES FOR THE PEER REVIEW

11 Peer Review Modules	Why select this Module?
<p>3. Strengthen Financial Capacity for Resilience</p> <p>Evidencing MCR Essential 3 and part of Essential 7</p>	<p>Only through the inclusion of specific, dedicated resources and mechanisms can actions and progress in resilience improvement be carried out and sustained. Resources can come from city revenues, national distribution and allocations to sectoral departments, public-private partnerships and technical cooperation, as well as civil society and external organisations. Financial mechanisms may include both stand-alone financing of resilience and resilience embedded into broader development planning and spending. Included in this Module is business continuity planning.</p>
<p>4. Pursue Resilient Urban Development and Design</p> <p>Evidencing MCR Essential 4</p>	<p>Not all hazards are expected to cause disasters. A disaster occurs when a hazard results in devastation that leaves communities unable to cope unaided. Pre-emptive measures therefore can help build better resilience capacity, avoid and/or minimise the disruption and destruction of networks, grids and infrastructure, which can cause severe social and economic consequences. Integrating resilience into socio-economic development planning and infrastructure will safeguard development investments.</p>
<p>5. Safeguard Natural Buffers to Enhance Ecosystems' Protective Functions</p> <p>Evidencing MCR Essential 5</p>	<p>Ecosystems provide critical services for disaster risk reduction as protective barriers against hazards. They are central to hazard mitigation by offering, for example, flood regulation and protecting steep slopes. They also enhance the resilience of communities to withstand, cope with and recover from disasters through providing many livelihood benefits, such as food, firewood, clean water and the like. A degraded ecosystem is unable to provide these mitigation and resource benefits, which in turn significantly increase community vulnerability. Through the process of urban expansion, cities transform their ecosystems and often generate new risks. Recognising the economic value and multiple benefits of healthy ecosystems acting as natural buffers is important for reducing risks and contributing to urban resilience and sustainability.</p>

STEP FOUR - SELECTING THE MODULES FOR THE PEER REVIEW

11 Peer Review Modules	Why select this Module?
<p>6. Strengthen Institutional Capacity for Resilience</p> <p>Evidencing MCR Essential 6</p>	<p>Understanding a city’s institutional background regarding risk reduction/management and building resilience can help in detecting current gaps in local capacity to coordinate and act towards prevention, mitigation, response and recovery in the case of disasters, as well as identifying the best and most effective approaches to strengthen relevant institutions for managing disaster risk. Institutions include, as applicable, central, state and local government organisations. Other groups also have a role to play in reducing some of the vulnerabilities, which is complementary to government measures, such as private sector organisations providing public services (depending on locale, this may include phone, water, energy, healthcare, road operations, waste collection companies and others as well as those volunteering capacity or equipment in the event of a disaster); industrial facility owners and operators; building owners (individual or corporate); NGOs; professional, employers’ and labour organisations; and cultural institutions and civil society organisations.</p>
<p>7. Understand and Strengthen Societal Capacity for Resilience</p> <p>Evidencing MCR Essential 7</p>	<p>If citizens are to take part in the collective effort of creating resilient cities, education, training and public awareness programs are critical (they must also be incorporated into all Ten Essentials). The entire community must know about the hazards and risks to which they are exposed so that they are able to prepare and take measures to cope with potential disasters. Education and capacity building programs are also key to mobilising participation of citizens and communities in the city’s disaster management strategies, for example, improving community preparedness and response to local early warnings. Social ‘connectedness’ and a culture of mutual help therefore has a beneficial outcome on the impact of disasters of any given magnitude.</p>

STEP FOUR - SELECTING THE MODULES FOR THE PEER REVIEW

11 Peer Review Modules	Why select this Module?
<p>8a. Increase Infrastructure Resilience</p> <p>8b. Public Health & DRR</p> <p>Two Modules Evidencing MCR Essential 8</p>	<p>Critical infrastructure includes that required for the operation of the city and that required specifically for emergency response, where different. As such, special attention must be paid to their safety and risk reduction efforts must focus on ensuring they can continue providing services when most needed. Critical infrastructure required for city operation may include but is not limited to: transport (roads, rail, airports and other ports), vehicle and heating fuel supplies, telecommunication systems, utilities systems, hospitals and healthcare facilities, educational institutes and school facilities, food supply chain, police and fire services, etc. They also carry out essential functions during and after a disaster, where they are likely to provide recovery and relief.</p>
<p>9. Ensure Effective Disaster Response</p> <p>Evidencing MCR Essential 9</p>	<p>Well-conceived emergency preparedness and response plans not only save lives and property, they often also contribute to resilience and post-disaster recovery by lessening the impact of a disaster. Preparedness efforts, early warning systems and communication systems will help ensure that cities, communities and individuals threatened by natural or other hazards can act in sufficient time and appropriately to reduce injury, loss of life and damage to property and fragile environments. Sustainability can be achieved if the community itself and local authorities understand the importance of and need for local emergency preparedness and response.</p>
<p>10. Expedite Recovery and Build Back Better</p> <p>Evidencing MCR Essential 10</p>	<p>Cities are built by many entities over decades or centuries, and hence difficult to rebuild in a short period of time. There is a continual tension between the need to rebuild quickly and to rebuild as safely and sustainably as possible. A well planned and participatory recovery and reconstruction process helps the city reactivate itself, restore and rebuild its damaged infrastructure and recover its economy, empowering citizens to rebuild their lives, housing and livelihoods. Reconstruction must begin as soon as possible – in fact, cities can foresee needs, establish operational mechanisms and pre-assign resources before a disaster. Recovery and rehabilitation can be planned ahead of the disaster to a considerable degree. Leadership, coordination and obtaining funding is key.</p>

STEP FIVE - IDENTIFYING A REVIEW TEAM

Step Two outlines the process by which the Host City selects a compatible Review City to conduct the peer review. Once the Review City has agreed to undertake the review, a Review Team must be selected to efficiently and effectively conduct the peer review. The Review Team should accommodate the particular needs and circumstances of each unique peer review.

The team should consist of approximately three members (negotiable) with expertise in the selected Modules. The members can be a mixture of local government/city officials, national government officials, or those from academia, private sector and civil society. The aim is that the Review Team has the requisite knowledge to allow for a comprehensive review of the relevant Modules. It may be the case that the Review Team includes team members who are from outside of the Review City's geographical location but have the expertise required.

The Review Team members should be equipped with substantial knowledge in the thematic area of the selected Modules and DRR. This should preferably be accompanied by years of professional experience in their career as well as seniority in their area of expertise. All team members will require the capacity to be released from regular duties to participate in the peer review process. Excellent analytical and communication skills together with an appreciation of different cultures and international work will be essential.

Management skills will be required to conduct the peer review processes effectively. In particular, the peer review requires team members to have time and skills to be involved in:

- pre-visit discussions with the Host City
- the analysis of the pre-visit information in accordance with the objectives of the peer review and the needs of the Host City

- handling the volume of information both sent in advance of the visit and acquired during the peer review visit to form insights into the existing strengths, gaps and potential actions for the Host City
- attending the peer review visit in the Host City
- assimilating information quickly in order to ask questions to further explore areas of interest during the peer review visit
- drafting and consulting on the peer review report that the Review Team will prepare after their visit to the Host City.

The Host City and Review Team should minimise jargon during the peer review to benefit all participants to ensure clear understanding of concepts.

A common language between the Review Team and the Host City is highly desirable as this reduces the cost of hosting a peer review. If this is not possible the peer review process can be conducted via a translator, who should have a familiarity and expertise in this area of work. It is suggested that translators are carefully briefed about their roles during the peer review and the aims of the peer review to ensure the function of the translator is suitable, understood and delivered.

Review Team members can be recruited and selected in a variety of ways ranging from a direct appointment by a Review Team leader (high-level government official) to a recommendation by Host City. Ideally, the composition and membership of the Review Team should be agreed by the Host City ahead of the peer review visit.

STEP SIX – INITIATION OF IMPACT EVALUATION METHODOLOGY

The Impact Evaluation Methodology (IEM) is integral to the peer review. It offers a structured way of assessing the impact of the peer review and documenting and capturing learning during the peer review process. This is achieved by asking questions of both the Host City and the Review Team to elicit information regarding the expected and realised value and impact of conducting the peer review. Peer reviews are a two way process and both the Host City and Review Team should benefit from their involvement in the peer review.

The IEM should be conducted in 4 Stages. Stage 1 is conducted before the review, Stage 2 is carried out during the review, and Stages 3 and 4 are after the review. The Stages provide an important audit trail for cities to help identify the potential and actual benefits and to track over time the progress made as a result of the peer review. During all of these Stages, the Host City and Review Team should agree timescales in which to plan and implement the IEM.

Stage 1: Before the review

Stage 1 of the IEM is a self-assessment and should be conducted before the peer review commences by the Host City and the Review Team in their own cities. It should include involvement of stakeholders who are likely to be part of the review process.

For the Host City, this assessment offers an opportunity to intentionally consider the wider potential benefits of the city's review and to check that the city's aspirations are reflected in the objectives set in Step 3.

For the Review Team, this assessment has value in establishing the possible benefits and impacts it may attain as a result of engagement in the peer review, consolidating the decisions made in Steps 2 and 5 to become the peer reviewer.

As with other steps in the Uscore2 methodology, a collaborative approach is recommended and the Host City and Review Team may wish to share the outcomes of their self-assessments to ensure expected benefits of the peer review are jointly understood.

Understanding benefits

When considering the expected benefits, the Host City and Review Team should:

- describe the potential benefit as clearly as possible and which stakeholders, including communities, are likely to be impacted by the benefit
- explore whether any benefits can be maximised to add even further value
- identify any direct or proxy metrics or measures that are currently used for this benefit and whether a baseline value can be determined so that changes during and after the peer review can be monitored to give an objective and consistent measure of the impact of the peer review.



STEP SIX – INITIATION OF IMPACT EVALUATION METHODOLOGY

Measuring impacts on DRR

The IEM is based on a well-known theory of organisational cybernetics called Viable System Model (VSM). VSM proposes that every organisation should have five systems that operate in a sustainable manner for the organisation to be viable. These are:

- a clear strategy and vision with effective leadership
- intelligence, information and data
- management systems
- coordination and communication, within services, externally and between partners
- operational delivery.

The table below presents a self-assessment for both the Host City and Review Team to complete before the peer review visit. The Host City and Review Team should determine the anticipated impacts of the peer review and record the reasoning for the assessments.

Stage 1 of IEM: Self-assessment for Host City and Review Team

For each key area below, how will the peer review bring benefits in DRR in your city?		
Factors that drive success	Anticipated benefits	Reasoning
1. Strategy, vision and leadership (e.g. developing the culture and strategies for DRR)		
2. Intelligence (e.g. analysing external and internal information, building strategic collaborations, and exploring the environment)		
3. Management of systems, processes and planning, including audit (e.g. sustainable resource management, performance measurement, and learning from itself and others)		

STEP SIX – INITIATION OF IMPACT EVALUATION METHODOLOGY

For each key area below, how will the peer review bring benefits in DRR in your city?		
Factors that drive success	Anticipated benefits	Reasoning
4. Coordination and communication of operations (e.g. coordinating resources and partners, sharing information effectively internally and externally)		
5. Delivery of operations (e.g. managing effective and efficient on-site delivery, and adapting to external feedback)		

Further Information:

Beer, S. (1979). *The Heart of Enterprise*. John Wiley & Sons Ltd, Chichester.

Beer, S. (1981). *Brain of the Firm*. John Wiley & Sons Ltd, Chichester.

Beer, S. (1985). *Diagnosing the System*. John Wiley & Sons Ltd, Chichester.

Espejo, R., and Gill, A. (1997). *The Viable System Model as a Framework for Understanding Organizations*.

Flood, R., and Jackson, M. (1991). *Creative Problem Solving*. John Wiley & Sons Ltd, Chichester.

Hildbrand S., and Bodhanya, S. (2015) Guidance on applying the viable system model. *Kybernetes*, 44(2), 186-201.

Jackson, M. (1988). An appreciation of Stafford Beer's 'viable system' viewpoint on managerial practice. *Journal of Management Studies*, 25(6), 557-573



PHASE ONE - PLANNING THE PEER REVIEW

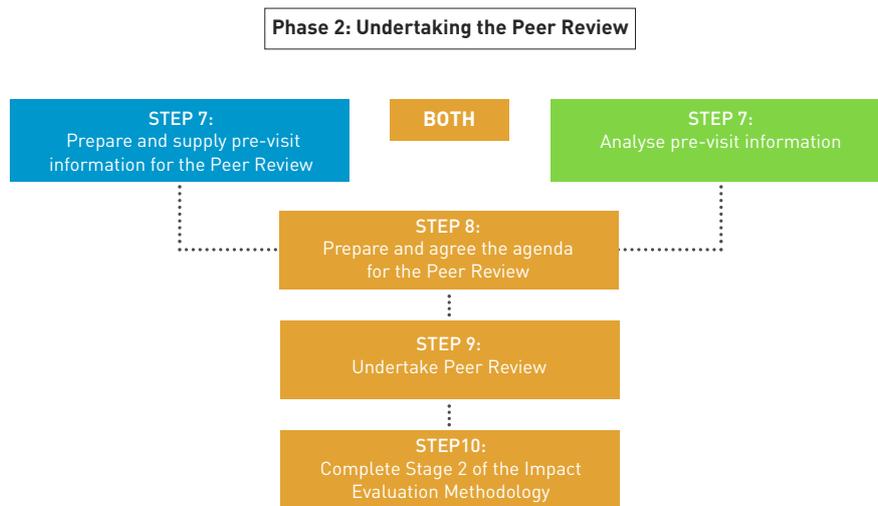
By the end of Phase 1 of the peer review:

Host City will have	Review Team will have
<ul style="list-style-type: none"> • set the baseline and secured funding • engaged a Review City • put contracts in place with the Review City • identified and agreed objectives of review • identified and agreed Modules to review • approved the suggested Review Team • completed Stage 1 of the IEM self assessment to determine the expected benefits and impacts of the peer review 	<ul style="list-style-type: none"> • secured key stakeholder commitment to the review • agreed contracts on funding and rights • agreed objectives for the review • agreed Modules to be reviewed • engaged an appropriate Review Team • completed Stage 1 of the IEM self assessment to determine the expected benefits and impacts of the peer review

It is anticipated that Phase 1, including Stage 1 of the IEM, will take at least 3 months to complete.



PHASE TWO - UNDERTAKING THE PEER REVIEW: TIME 3-4 MONTHS



STEP SEVEN - PREPARATION AND ANALYSIS OF PRE-VISIT INFORMATION

Host City: Gathering and collating information to send to the Review Team in advance of the peer review visit

The Host City will be the primary source of background information provided to the Review Team ahead of the peer review visit. The Host City will have selected and agreed, with the Review Team, the Modules to be peer reviewed and will gather and send Module-specific information to the Review Team. Learning from the pilots to validate the peer review methodology demonstrated that the time invested by the Host City and the Review Team in understanding the Host City's expectations and how the peer review will be achieved is time well spent.

The pre-visit information sent by the Host City to the Review Team should include:

- the aim and objectives for the peer review
- information about the city (a brief overview of the city's historic, cultural and political landscape)
- information about the city's approach to DRR

- a summary of the city and its DRR governance arrangements together with information about the risks the city faces (unless Modules 1 and 2 have been chosen in which case more detailed information is suggested as part of the pre-visit information for these Modules – see step 4)
- background information specific to each of the Modules chosen (suggested information is contained within the guides for each Module).

Since the Review Team will be busy city practitioners, it is recommended that this information be limited to a summary for each Module together with 3-5 highly relevant pieces of evidence.

The Host City will engage with relevant stakeholders to obtain pre-visit information. Where appropriate, documents should be translated into a language mutually agreed by the Host City and Review Team in advance of forwarding to the Review Team. The aim should be to forward the pre-visit information to the Review Team at least 3 months in advance of the peer review.

The Review Team will identify and request, if needed, additional information required as part of this pre-visit background information.



STEP SEVEN - PREPARATION AND ANALYSIS OF PRE-VISIT INFORMATION

Examples of the pre-visit information sent to the Review Teams by the Host Cities during the Uscore2 pilots are described in the table below:

Essential 1
<ul style="list-style-type: none"> • City action plan • Report describing outcomes of completing the Disaster Resilience Scorecard • Report on the city's engagement in the UN Making Cities Resilient Campaign
Essential 2
<ul style="list-style-type: none"> • Report describing seismic classification system, including maps • City emergency plan including descriptions of the most severe and most probable risks • City map indicating buildings most vulnerable to earthquake risk • Public risk register describing the emergency risks faced by communities
Essential 4
<ul style="list-style-type: none"> • Report describing how the city balances urban development with environmental needs • Report describing the city's approach to urban regeneration • City masterplan including reference to the city emergency plan
Essential 6
<ul style="list-style-type: none"> • Public information sheet describing how to sign up to the city's early warning system • Report detailing the findings from a city-to-city knowledge exchange between DRR experts • Journal article describing local community resilience • Research paper on community resilience published in an international academic journal
Essential 10
<ul style="list-style-type: none"> • Public information leaflet about accessing help to recover after a flood • City's multi-agency plan for recovery • Briefing paper for local Mayor evaluating the effectiveness of a post-disaster distress fund • Community impact assessment carried out after a disaster

STEP SEVEN - PREPARATION AND ANALYSIS OF PRE-VISIT INFORMATION

Review Team – analysis of pre-visit information

The Review City will identify Review Team members who are knowledgeable in the Modules to be reviewed (see Step Five).

The Review Team will read and assess the information provided by the Host City ahead of the peer review visit. The Review Team should meet in advance of the visit to the Host City to:

- prepare a collective view of the city, its potential areas of strength in DRR and possible gaps and/or areas for further exploration during the visit
- identify any significant gaps in the information provided and, if needed, make a request for additional information to be made available by the Host City
- generate a list of potential questions to be asked during the peer review visit (see the guides for each Module).

This work will help to inform discussions with the Host City about the timetable for the visit (see Step Eight).



STEP EIGHT- PREPARE AND AGREE THE AGENDA FOR THE PEER REVIEW VISIT

The guides for each Module offer suggestions about the activities that the Review Team may find useful to undertake whilst visiting the Host City, together with some suggested stakeholders that the Review Team may wish to meet. The peer review methodology promotes an all-of-society approach and cities should endeavour to include a wide range of stakeholders from all sectors in society in the peer review process.

The Host City leads the development of the agenda for the peer review visit. This is done in collaboration with the Review Team. The Host City and Review Team should agree the activities (e.g. interviews, presentations, site visits) and therefore the methodology by which the Review Team will secure their evidence during the visit. This will then inform the agenda and enable it to be agreed in advance of the visit.

Experience from the pilot peer reviews to test the Uscore2 methodology suggests the following principles are useful in shaping the agenda:

- all members of the Review Team should carry out each activity so that the team members can share their views and form collective opinions afterwards
- each Module should take approximately a day to review, however this is only a guideline and depends upon the activities chosen
- each day should start with a short presentation by the Host City describing key aspects of their approach to the Module that is being explored that day
- time and resources need to be carefully considered in designing the peer review agenda. For example, site visits are valuable, however some time will be lost to the Review Team during the visit as they travel between sites
- sufficient time should be included in the agenda to conduct the Impact Evaluation Methodology
- setting aside time after each activity allows the Review Team to make notes and collect their thoughts about potential impacts the review may have; consolidate their learning; and structure the ongoing peer review
- including a short session at the end of each day for the Host City and Review Team to meet together enables a quick debrief and the opportunity to deal with any issues that may arise ahead of the following day.



STEP EIGHT- PREPARE AND AGREE THE AGENDA FOR THE PEER REVIEW VISIT

A sample agenda based on one of the peer review pilots is included below.

In ideal circumstances both the Host City and the Review Team will speak a common language. If this is not the case then arrangements must be made so that the review process can be conducted via a translator. It would be beneficial if one of the Review Team is fluent in the Host City local language. Experience from the Uscore2 pilots was that a lack of 'real time' translation was difficult for the review. Additional time will need to be factored into interviews and site visits if translation is required.

Table Top and Live Exercises

To assist the Review Team in better understanding the current maturity of DRR in the Host City, the Host City is encouraged to demonstrate their resilience capabilities by supplying a video or documentation from a previously held exercise. This can help the Review Team to:

- appreciate how the Host City's emergency plans are practically applied
- understand how different responding organisations work together and coordinate with each other in an emergency
- understand the roles and responsibilities of each institution
- identify current strengths and gaps in local capacity.

The stakeholders involved in such exercises should not be restricted to government institutions. Depending on local circumstances, stakeholders may include telecom providers; utility companies; healthcare providers; NGOs and volunteer organisations; industrial facility owners and operators; and building owners (individual or corporate).

If sufficient additional time is available, staging a live or a table top exercise would enable the Review Team to observe the Host City's resilience capabilities directly.



STEP EIGHT – PREPARE AND AGREE THE AGENDA FOR PEER REVIEW VISIT.

Example agenda:

Time	Day 1– Module 8a: Increase Infrastructure Resilience
09:00 - 09:10	Welcome to Host City. Lead: City Mayor
09:10 - 09:40	Host City presentation on risk and governance by Strategic Resilience Lead
09:40 - 10:15	Host City presentation on city infrastructure by City Infrastructure Lead
10 min	Write up previous session
10:25 - 11:00	Presentation and interview: protecting national critical infrastructure by national government representative
10 min	Write up previous session
11:10 - 11:50	Military support to protecting infrastructure by Military Liaison Officer
70 min	Write up and Lunch break
13:00 - 13:35	Interview: Resilience of the UK telecoms network with telecom provider/stakeholder
10 min	Write up previous session
13:45 - 16:00	Interview: Contribution to the infrastructure resilience of transport network with local transport stakeholder
16:00 - 16:30	End of Day Review – Peer Review Team
16:30 - 17:00	End of Day Review between the Host City and Review Team

Time	Day 2 Module 8a: Increase Infrastructure Resilience
08:30 - 09:55	Site visit: Highways Agency maintenance and gritting depot
09:55 - 10:30	Interview: Highways infrastructure with Strategic Highways Lead
10 min	Write up previous session
10:40 - 11:15	Presentation and interview: electricity infrastructure resilience with local energy provider stakeholder
105 min	Write up and Lunch break
13:00 - 14:15	Site visit: retrofit of resilience measures at electricity substation (build back better) Lead: Engineering Strategy Manager
14:15 - 14:50	Presentation and interview about water infrastructure resilience. Lead: Water stakeholder
10 min	Write up previous session
15:00 - 16:30	Site visit: Water treatment works
16:30 - 17:00	End of Day Review – Peer Review Team
17:00 - 17:00	End of Day Review between the Host City and Review Team

Time	Day 3– Module 10 Recovery
09:00 - 09:20	Welcome from Host City Lead. Political lead on DRR Recovery
09:20 - 09:55	Presentation and interview: overview of national recovery arrangements with national government representative
10 min	Write up previous session
10:05 - 10:40	Presentation and interview: Host City's approach to recovery with Host City expert(s)
10 min	Write up previous session
10:50 - 11:25	Presentation and interview: Host City's approach to identifying and implementing lessons after disasters (to inform build back better) with Chair of multi-agency local DRR platform
10 min	Write up previous session
11:35 - 12:10	Focus Group: Recovering from major flood incident that affected the Host City with Local Stakeholders
50 min	Write up and Lunch break
13:00 - 13:35	Presentation and interview: Environment Agency approach to post incident recovery with local expert stakeholder
10 min	Write up previous session
13:45 - 15:45	Site visit: guided walk through flood basin (part of local flood defences) with local expert stakeholder
15:45 - 16:30	IEM Stage 2. Lead – IEM Coordinator
16:30 - 17:00	End of Day Review –Peer Review Team
17:00 - 17:30	End of Day Review between the Host City and Review Team

STEP NINE – UNDERTAKE PEER REVIEW VISIT

The Review Team will visit the Host City to conduct the peer review in line with the agreed agenda.

The Host and Review Teams will meet separately at the start of each day to prepare for the day's events. Similarly, at the end of each day each team should meet to review the day and identify any feedback or requests to be made to either the Host or Review Teams. There should be a brief joint meeting as the final session of the day to handle any requests for clarification or queries ahead of the following day.

Interviews, presentations and site visits

During the peer review visit, a substantial number of activities may be undertaken. This can be a busy three days. The pilots of this methodology demonstrated that good note taking by the Review Team is essential. A template form for taking notes from presentations, interviews and site visits has been included to assist the Review Team. This can be used to record key topics and to aid in writing the final report that details the findings of the peer review. It can be helpful if the Host City arranges for copies of any presentations given by stakeholders to be emailed to the Review Team.

The experience of the Uscore2 pilot cities was that site visits specific to each Module set the DRR activities in context and were appreciated by the Review Team.

Where people within the Host City are giving presentations, being interviewed or escorting site visits, the Host City is responsible for prior briefing of these participants. Similarly, the Host City may wish to debrief participants to ensure any emerging issues or concerns are identified, such as participants feeling they should have offered further information or sensing there are topics on which they would want to offer further clarification to the Review Team.

The guides for each Module suggest questions that the Review Team may ask during the peer review, however these are only suggestions and the Review Team should explore themes in line with their professional expertise. The Review Team will structure their evidence gathering and interviews to enable the Host City to describe and demonstrate their DRR activities in line with the performance indicators described for each Module (see individual Module guides).



STEP NINE – UNDERTAKE PEER REVIEW VISIT

In general, questions that may be helpful for the Review Team to cover, and which could assist the Host City in describing their skills, capacity and expertise in DRR, should include:

- Who leads/contributes/coordinates/assesses performance in this area? Is this effective? Is shared ownership of DRR evident?
- Who is missing/under-performing or under-represented in this area of DRR?
- What skills and experience are evidenced? Are there areas for improvement?
- What activities currently support performance in this area? Are these activities effective?
- What, if any, additional activities would the Host City like to undertake in future? What are the barriers to extending activities?
- How are resources/information/ training shared? Are there exclusions or barriers to accessing these?
- How is the Host City accessing local/national/international sources of expertise to improve DRR in this area? Which networks is the Host City part of to support this activity?

The Review Team may identify, during the course of the peer review, additional interviews or information they would find helpful. The Host City should endeavour to meet any reasonable requests.

At the end of each day, it is recommended that the Review Team assemble to consider all the information that it has heard during the day and summarise the evidence to understand:

- Areas of good practice and strengths on which the Host City can build
- Areas where further information may be needed before the peer review visit is finished
- Areas where possible recommendations for the future may be made.

This process will help to inform both the remainder of the visit and the drafting of the peer review outcome report.

Feedback session

During the pilot peer reviews to test this methodology, the Review Teams found that the amount of information provided during the visit needed proper consideration and discussion and that giving immediate feedback during the visit was difficult. Feedback was captured in a final peer review report after the Review Team had returned to the Review City (see Step Eleven).

However, the Host City and Review Team may agree for the Review Team to provide some initial feedback on their findings before concluding the peer review visit. In this case, it's recommended that an additional day is included at the end of the visit for the Review Team to discuss and collate their findings.

TEMPLATE: NOTES FROM PRESENTATIONS, INTERVIEWS AND SITE VISITS

Subject of presentation/ Theme for interview/ Name of site visited:	
Presenter(s)/ Interviewee(s)/ Guide(s) leading site visit:	
Name	Organisation
Topic(s) covered in session:	

Key points of note presented during session:

Good Practice:

Opportunities for improvement:

STEP TEN – COMPLETING STAGE 2 OF THE IMPACT EVALUATION

After the completion of Stage 1 of the impact evaluation, the Host City and Review Team should conduct Stage 2 during the review. Sufficient time should be allocated to undertake this.

Both teams should consider the following IEM questions:

1. How is the peer review influencing your thinking on:
 - Strategy, vision and leadership?
 - Intelligence?
 - Management of systems, processes and planning, including audit?
 - Coordination and communication of operations?
 - Delivery of operations?
2. What impacts and benefits are expected from initial recommendations regarding:
 - Strategy, vision and leadership?
 - Intelligence?
 - Management of systems, processes and planning, including audit?
 - Coordination and communication of operations?
 - Delivery of operations?
3. How could the review be adapted if necessary, for example the Host City sending additional information to the Review Team after the peer review visit, to have more impact on the Host City?



PHASE TWO - UNDERTAKING THE PEER REVIEW

By the end of Phase 2 of the peer review, including Stage 2 of the IEM:

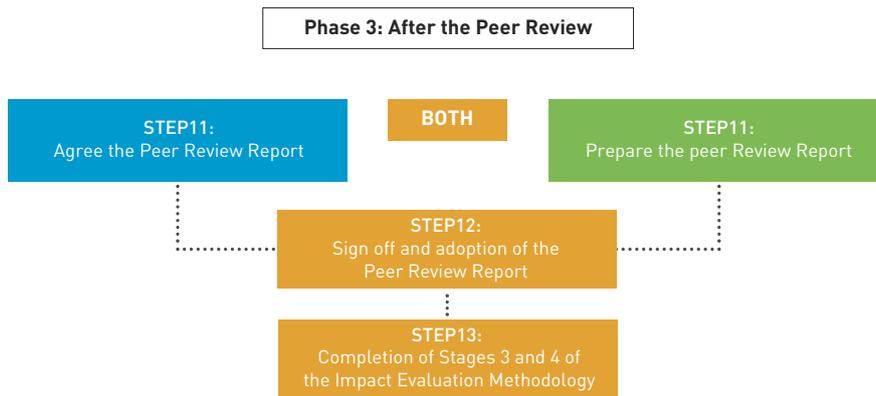
Host City will have
<ul style="list-style-type: none"> • agreed and distributed pre-review evidence pack • identified and engaged those to be interviewed • agreed review activities • created and agreed a review timetable • facilitated the Review Team visit • completed Stage 2 of IEM

Review Team will have
<ul style="list-style-type: none"> • read and analysed the pre-review evidence pack • requested and received any additional relevant information • agreed review timetable • conducted peer review visit and made comprehensive notes of the visit • completed Stage 2 of IEM

Phase 2 of the peer review, including Stage 2 of the IEM, will take between 3 and 4 months.



PHASE THREE - AFTER THE PEER REVIEW: TIME 4-5 MONTHS



STEP ELEVEN - PREPARING AND AGREEING THE PEER REVIEW REPORT

The Review Team will draft the peer review report and manage version control. To prepare the peer review report requires time to be set aside by the Review Team, especially if collecting and integrating specialist input from different Review Team members. However, the peer review report should be drafted within a reasonable timescale after the peer review visit and preferably within three months.

The agenda for and the notes taken during the peer review visit assist in drafting the report. It is anticipated that, through calls and teleconferences, the content and recommendations will be refined in partnership with the Host City. The peer review report should be factually accurate and include:

- peer review methodology
- good practice and what is working well
- areas that could be developed further or for improvement
- recommendations.

Worked Example: Contents Page

1. Executive summary
2. Purpose of document
3. City's governance for DRR
4. Shocks and stresses / risks the city faces
5. Peer review process – what we did
6. Essential peer reviewed
 - a. Why did the city choose this Essential?
 - b. Preliminary Indicators from Disaster Resilience Scorecard for Cities
 - c. Methodology
 - d. Areas of good practice
 - e. Areas to strengthen
 - f. Recommendations
7. Essential peer reviewed
 - a. Why did the city choose this Essential?
 - b. Preliminary Indicators from Disaster Resilience Scorecard for Cities
 - c. Methodology
 - d. Areas of good practice
 - e. Areas to strengthen
 - f. Recommendations
8. Appendix

STEP ELEVEN - PREPARING AND AGREEING THE PEER REVIEW REPORT

This phase of the peer review process, as with all others, is intended to be collaborative. The peer review report will be of the most use to the Host City if it recognises the context of DRR in the city.

The Host City and Review Team should agree the language in which the peer review report should be written when the peer review process is being set up, including where any costs of translation will fall.

Once agreement is reached, the final peer review report can be presented by the Review Team to the Host City for sign off and adoption. The Review Team and Host City could draft and agree a summarised version of the report for wider dissemination within the Host City.

Review Team Learning

Peer reviews are a two-way process of learning and sharing experience in DRR. During the peer review process, the Review Team may find inspiring examples of good practice that it wishes to model, adapt and implement within the Review City. The Review Team should note such examples and submit them to Review City officials for consideration as appropriate.



STEP TWELVE - SIGN OFF AND ADOPTION OF PEER REVIEW REPORT

The Host City should share the peer review report with the recommendations made by the Review Team with key stakeholders within the city and with those who participated in the review. The Host City should submit the peer review report for approval through its governance structures as appropriate.

One of the main goals of the peer review tool is to support cities in implementing the Sendai Framework for Disaster Risk Reduction 2015-2030. Through this Framework, the global DRR community committed to seven targets. Target (6e) is to:

Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020.

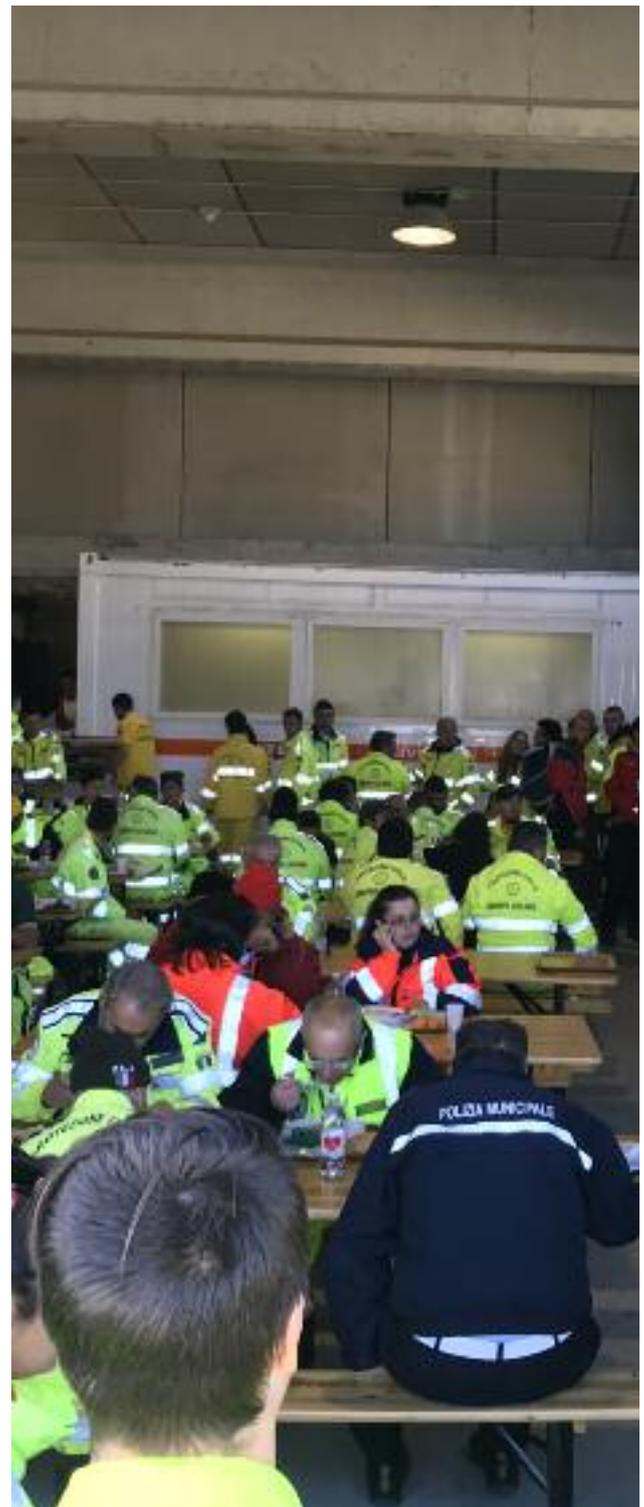
Therefore the Host City may want to consider using the recommendations of the peer review to draft a city Resilience Strategy and an action plan.

Para 27(b) of the Framework commits signatories:

To adopt and implement national and local disaster risk reduction strategies and plans, across different timescales, with targets, indicators and time frames, aimed at preventing the creation of risk, the reduction of existing risk and the strengthening of economic, social, health and environmental resilience.

Presentation of the findings within the Host City could include a return visit by the Review Team leader and/or members to present the report and the findings to an appropriate audience in the Host City, for example, to the Mayor, to city officials and/or to a public meeting.

The peer review report is owned by the Host City. There should be a joint agreement on the dates and means of any publication of the report in its entirety or summaries or articles arising from it, with this activity being led by the Host City.



STEP THIRTEEN - COMPLETION OF STAGES 3 AND 4 OF THE IMPACT EVALUATION

After the review, the Host City and Review Team should consider short and long-term evaluations of the peer review by using the IEM at different points in the development of both cities resilience and DRR activities.

Stages 3 and 4: After the review

Stages 3 and 4 of the IEM are a self-assessment and should be conducted twice after the peer review, Stage 3 after the first few weeks and months and Stage 4 in the following year(s). Completing the self-assessment twice allows cities to consider short and long-term evaluations of the impact of the peer review which provides cities with an audit trail of timely information regarding impact attained as a result of the peer review.

The self-assessment tool presented in the table below is designed with the retrospective view of participants in mind to help cities develop their DRR and resilience strategies. The self-assessment tool for stages 3 and 4 introduces an additional element of evaluation in which cities can consider the level of impact they have made so that development can be tracked, these include:

- We have made no meaningful progress
- We are approaching a satisfactory level of impact
- We deliver a satisfactory level of impact
- We exceed a satisfactory level of impact but have more to achieve
- We have achieved all the impact we want

The self-assessment in stages 3 and 4 should be led by the Host City and Review Teams in their own cities with their stakeholders so that they are able to implement their expert knowledge. A city consensus should be reached to provide an agreed and consistent perspective on the impact of the peer review and any future actions which may be taken. In stages 3 and 4 it may be useful for cities to consult the peer review's final outcome report as drafted by the Review Team.

Whilst the peer review is driven by the needs of the Host City, and the role of the Review Team is to conduct an evaluation based on the choices made by the Host City, conducting the self-assessment is still an important task for both cities as it provides a structured means of analysing the benefits and impacts of peer reviews and progress on city resilience and DRR strategies.



Stage 3/4 Impact evaluation of peer review actions in the weeks/ months/ year(s) after the peer review	We have made no meaningful progress	We are approaching a satisfactory level of impact	We deliver a satisfactory level of impact	We exceed a satisfactory level of impact but have more to achieve	We have achieved all the impact we want	Justification for assessment, including examples	What more should be done (by who and when)
To what extent have your expected benefits and objectives from the peer review been achieved?							
What were your main learning points from the review?							
What would you do differently next time you participate in a peer review?							
To what extent has your learning and the Review Team’s recommendations had impact on your:							
1. Strategy, vision and leadership (e.g. developing the culture and strategies for DRR)							
2. Intelligence (e.g. analysing external and internal information, building strategic collaborations, and exploring the environment)							
4. Coordination and communication of operations (e.g. coordinating resources and partners, sharing information effectively internally and externally)							
5. Delivery of operations (e.g. managing effective and efficient on-site delivery, and adapting to external feedback)							

STEP THREE - AFTER THE PEER REVIEW

By the end of Phase 3 of the peer review:

Host City will have	Review Team will have
<ul style="list-style-type: none">• received, agreed and adopted the peer review report• informed the wider Host City community of the outcome of the review• considered creating a Resilience Strategy and an action plan to implement improvements in DRR identified in the review• completed Stage 3 and 4 of the IEM to determine the realised benefits and impacts of the peer review	<ul style="list-style-type: none">• drafted and agreed the peer review report including recommendations for the Host City• considered and captured any learning by the Review Team that could be recommended for implementation within the Review City• completed Stage 3 and 4 of the IEM to determine the realised benefits and impacts of the peer review

Phase 3 of the peer review should take between 3 & 6 months. There may be a longer time scale for completion of the IEM depending on the gap the Host City and Review Team agree between Stages 3 & 4.

REFERENCES

- Basu, M., Srivastava, N., Mulyasari, F., & Shaw, R. (2013). Making Cities and Local Governments Ready for Disasters: A Critical Overview of a Recent Approaches. *Risk, Hazards & Crisis in Public Policy*, 4(4), pp. 250–273.
- Birkmann, J., Buckle, P., Jaeger, J., Pelling, M., Setiadi, N., Garschagen, M., Fernando, N., Kropp, J., (2013). Framing vulnerability, risk and societal responses: The MOVE framework. *Natural Hazards*, 67(2), pp. 193–211.
- Boin, A. and M.J.G. van Eeten. (2013). The Resilient Organization. *Public Management Review* 15:(3) 429–45.
- Christensen, T., Lægreid, P. and Rykkja, L. H. (2016). Organizing for Crisis Management: Building Governance Capacity and Legitimacy. *Public Administration Review* 76(6): 887–897.
- Duit, A. (2016). Resilience Thinking: Lessons for Public Administration. *Public Administration* 94(2): 364–380.
- Gilissen, H. K., M. Alexander, P. Matczak, M. Pettersson, and S. Bruzzone. 2016. A framework for evaluating the effectiveness of flood emergency management systems in Europe. *Ecology and Society* 21(4): 27.
- Kamh, Y. Z., Khalifa, M. A., & El-Bahrawy, A. N. (2016). Comparative Study of Community Resilience in Mega Coastal Cities Threatened by Sea Level Rise: The Case of Alexandria and Jakarta. *Procedia - Social and Behavioral Sciences*, 216 (October 2015), 503–517.
- Khunwishit, S., Choosuk, C., and Webb, G. (2018). Flood Resilience Building in Thailand: Assessing Progress and the Effect of Leadership. *International Journal of Disaster Risk Science* 9(1): 44–54.
- Meerow, S., Newell, J. P., & Stults, M. (2016). Defining urban resilience: A review, *Landscape and Urban Planning* 147: 38–49.
- Sendai Framework for (2015). Sendai Framework for Disaster Risk Reduction 2015 – 2030, United Nations, Geneva.
- Swiss Re, sigma No. 2/2017 (2017), Natural catastrophes and man-made disasters in 2016: A year of widespread damages, Swiss Re Institute, Switzerland.
- UNISDR. (n.d, c), Essential Two: Identify, Understand and Use Current and Future Risk Scenarios, available from:
<http://www.unisdr.org/campaign/resilientcities/home/index/Essential%20Two:%20Identify%20Understand%20and%20Use%20Current%20and%20Future%20Risk%20Scenarios/?id=2>
- UNISDR. (2015). Making Development Sustainable: The Future of Disaster Risk Management. Global Assessment Report on Disaster Risk Reduction. Geneva, Switzerland: United Nations Office for Disaster Risk Reduction (UNISDR).
- United Nations. (2016). The World's Cities in 2016: Data Booklet, United Nations Economic and Social Affairs, available from:
http://www.un.org/en/development/desa/population/publications/pdf/urbanization/the_worlds_cities_in_2016_data_booklet.pdf

