Uscore2

Module 2: Identify, Understand and Use Current and Future Risk Scenarios

Uscore2: City-to-City Peer Review Tool

CONTENTS

INTRODUCTION

Uscore2 is a peer-to-peer review process for cities. Designed with funding from the European Commission, it enables cities to share and learn from good practice in Disaster Risk Reduction (DRR) in other cities across the world. 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 are examined on an equal basis by fellow peers who are experts from other cities. This approach facilitates improvements in DRR through the exchange of good practice and mutual learning, whilst also maintaining impartiality and transparency. 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.

Cities undertaking a peer review of disaster risk assessment will generally be undertaking this as part of a wider review as outlined in the Uscore2 Step-by-Step Guide to city-to-city peer reviews for Disaster Risk Reduction. The Step-by-Step Guide provides an essential 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.

It is strongly recommended that cities interested in inviting another city to peer review their DRR activity work through the Step-by-Step Guide as a precursor to undertaking Module 2.

This Module Guide gives information relevant to those steps in the peer review process which are specific to Module 2.

During the development of Uscore2, the peer review process has been piloted by three cities: Amadora (Portugal), Salford (UK) and Viggiano (Italy). The pilot cities spoke positively of their experiences:

> "Peer reviews are interactive and about mutual learning, exchange of good practice and policy dialogue, a support tool for prevention and preparation under the EU civil protection mechanism and promote an integrated approach to disaster risk management, linking risk prevention, preparation, response and recovery actions."

Funded by
European Union
Civil Protection

BACKGROUND

This Module focuses on improving decision making for resilience by exploiting knowledge of risk (UNISDR n.d) including learning from cities with equivalent risk profiles to understand similar risk and resilience issues (UNISDR, 2017). Over the last 10 years, there has been significant progress in strengthening disaster preparedness, response and early warning capacities and in reducing specific risks. However, progress has been limited in most countries when it comes to managing the underlying risks.

Priority 1 of the Sendai Framework for Disaster Risk Reduction 2015 – 2030, 'Understanding disaster risk', states that "policies and practices for disaster risk management should be based on an understanding of disaster risk in all its dimensions of vulnerability, capacity, exposure of persons and assets, hazard characteristics and the environment. Such knowledge can be leveraged for the purpose of pre-disaster risk assessment, for prevention and mitigation and for the development and implementation of appropriate preparedness and effective response to disasters" (Sendai Framework, 2015 p. 14).

To achieve this, a number of areas should be developed at national and local levels, and global and regional levels (Sendai Framework, 2015). At the national and local level the focus is on the collection, analysis and management of data to assess disaster risks and identify the population's exposure, vulnerability, susceptibility, and adaptive capacity to these risks (Birkmann et al. 2013; Sendai Framework, 2015). The Sendai Framework also highlights the importance of disseminating local risk information to decision makers, the general public and communities at risk of exposure to disasters (Sendai Framework, 2015). In turn this supports improved targeting of risk information to populations (Cardona and Carreño 2011), and increased government attention on DRR and resilience (Fleischhauer et al. 2012).

At the global and regional level the Sendai Framework highlights the importance of fostering collaboration across global and regional mechanisms and actively engaging in the global, regional and sub-regional platforms for DRR in order to develop partnerships, assess progress, and share good practice and knowledge (Sendai Framework, 2015).

Due to the growth and expansion of urban areas more people, are being exposed to hazards (Meerow et al., 2016). Risks arise from the combination of hazards and vulnerabilities at a particular location and time. Assessments of risk require systematic collection and analysis of data and should consider the dynamic nature of hazards and vulnerabilities that arise from processes such as urbanisation, rural land-use change, urban development, environmental degradation and climate change (Basu et al. 2013; Birkmann et al. 2013).

Hazard

X

Exposure

X

Vulnerability

=

Disaster Risk
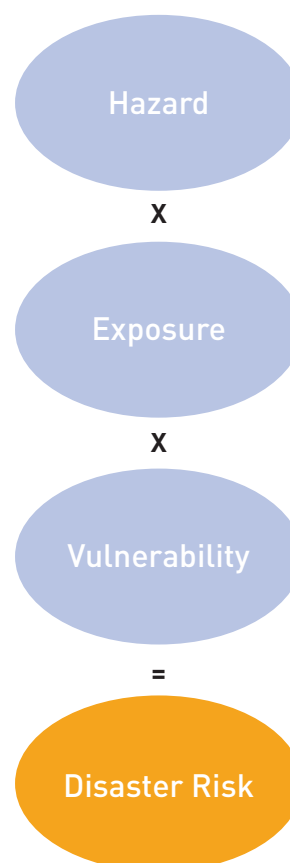
Risk assessments identify both the hazards to which the city is exposed and the city-wide vulnerability, enabling understanding of the geographic and sectoral distribution of risk. In addition to identifying the hazards to which the city is prone and carrying out hazard assessments, cities should include cascading effects and trans-boundary risks within their risk assessments (UNISDR, 201 p. 37). Among other things, risk assessments are a basis for the identification of effective structural and non-structural mitigation measures. Risk assessment and analysis must be both systematic and updated as often as possible to match the changing nature of risk (RTF-URR, 2010 p. 35).

Disaster risk should be understood as a contingent liability (described as "another category of toxic assets" (GAR, 2015 p. 54)). If a country ignores disaster risk and allows risk to accumulate, it is in effect undermining its own future potential for social and economic development. However, if a country invests in disaster risk reduction, over time it can reduce the potential losses it faces, thus freeing up critical resources for development.

Managing risk, rather than managing disasters as indicators of unmanaged risk, now has to become inherent to the art of development; not an add-on to development, but a set of practices embedded in its very DNA. Managing the risks inherent in social and economic activity requires a combination of three approaches:

1. Prospective risk management, which aims to avoid the accumulation of new risks;

2. Corrective risk management, which seeks to reduce existing risks;

3. Compensatory risk management to support the resilience of individuals and societies in the face of residual risk that cannot be effectively reduced. (GAR, 2015 p. ix).

In summary, disaster risk management must be based on an understanding of disaster risk scenarios, the characteristics of hazards, who and what is exposed, the level of capacity within a society and its level of vulnerability (UNISDR, n.d). Peer review will support cities in developing risk analysis strategies, risk reduction measures and planning, to support the implementation of meaningful DRR and resilience building programmes. Unless local governments have a clear understanding of the risks they face, and discuss risk scenarios in detail with the public and other stakeholders, implementation of meaningful disaster risk reduction measures may be ineffective (UNISDR, n.d). The peer review process therefore helps to facilitate conversations between local government and other stakeholders who may not be readily consulted, to promote commitment to DRR and resilience strategies from all levels of society (Twigg 2009).

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.

Cardona, O. D., & Carreño, M. L. (2011). Updating the Indicators of Disaster Risk and Risk Management for the Americas. Journal of Integrated Disaster Risk Management, 1(1), pp. 27–47.

Fleischhauer, M., Flex, F., Greiving, S., Scheibel, M., Stickler, T., Sereinig, N., Koboltschnig, G., Malvati, P., Vitale, V., Grifoni, P., & Firus, K., (2012). Improving the active involvement of stakeholders and the public in flood risk management: Tools of an involvement strategy and case study results from Austria, Germany and Italy, Natural Hazards and Earth System Science, 12(9), pp. 2785–2798.

GAR, (2015). Global Assessment Report on Disaster Risk Reduction 2015, United Nations, Geneva, available from: https://www.preventionweb.net/english/hyogo/gar/2015/en/gar-pdf/GAR2015_EN.pdf

References

Meerow, S., Newell, J. P., & Stults, M. (2016). Defining urban resilience: A review, Landscape and Urban Planning, 147, pp. 38–49.

RTF-URR, (2010). Asia Regional Task Force on Urban Risk Reduction, 'A Guide for Implementing the Hyogo Framework for Action by Local Stakeholders, available from: https://www.unisdr.org/files/13101_ImplementingtheHFA.pdf

Sendai Framework, (2015). Sendai Framework for Disaster Risk Reduction 2015 – 2030, United Nations, Geneva.

Twigg, J. (2009). Characteristics of a Disaster-Resilient Community: a Guidance Note. Aon Benfield UCL Hazard Research Centre.

UNISDR. (2017), How to Make Cities More Resilient: A Handbook for Local Government Leaders, UNISDR, Geneva, available from: http://www.unisdr.org/campaign/resilientcities/assets/documents/guidelines/Handbook%20For%20Local%20Government%20Leaders_WEB_May%202017.pdf

UNISDR. (n.d), 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

Further Information

For further information on peer reviews visit: www.Uscore2.eu. Also refer to ISO 22392 when published. Currently it is in draft and will contain further information about peer reviews.

HOW CAN INSTITUTIONAL RESILIENCE BE ASSESSED AND IMPROVED?

The description of Essential 2: identify, understand and use current and future risk scenarios taken from the UNISDR's Making Cities Resilient website and given below, describes the activities a city should be demonstrating to improve resilience in this area. A city's capacity for resilience is the responsibility of a number of organisations, though it is usual for local government to take the lead and enable effective collaboration.

Essential Two: Identify, Understand and Use Current and Future Risk Scenarios

Identify the most probable and most severe (worst-case) scenarios

- Take into consideration how hazards might change over time given the impact of factors such as urbanisation and climate change, how multiple hazards might combine, and how repeated small scale disaster events (if there is a relevant risk of these) might accumulate in their impact over time;
- Prepare and maintain an updated database on: geographic areas exposed and territorial impact; population segments, communities and housing exposed; economic assets and activities exposed including its impact on the social, health, education, environmental, and cultural heritage; critical infrastructure assets exposed, the consequent risk of cascading failures from one asset system to another;
- Estimate timescales over which risks, vulnerabilities and impacts occur as well as responses required;
- Create and publish maps of risk and exposure detailing the above.

Make use of the knowledge from risk scenarios for development decisions
- Seek inputs from the full range of stakeholders (including ethnic and social groupings);
- Update the risk scenario assessment regularly;
- Set the basis for current and future investment decisions;

Widely communicate and use risk scenario assessments for decision-making purposes, and updating of response and recovery plans.

HOW CAN THIS BE MEASURED?

The following table describes the high level indicators for Essential 2 taken from the Disaster Resilience Scorecard Preliminary Level Assessment. These are used in this Module as indicators against which to gather evidence and make recommendations.

Ref	Subject / Issue	Question / Assessment Area
P 2.1	Hazard assessment	Does the city have knowledge of the key hazards that the city faces, and their likelihood of occurrence?
P 2.2	Shared understanding of infrastructure risk	Is there a shared understanding of risks between the city and various utility providers and other regional and national agencies that have a role in managing infrastructure such as power, water, roads and trains, of the points of stress on the system and city scale risks?
P 2.3	Knowledge of exposure and vulnerability	Are there agreed scenarios setting out city-wide exposure and vulnerability from each hazard, or groups of hazards (see above)?
P 2.4	Cascading Impacts	Is there a collective understanding of potentially cascading failures between different city and infrastructure systems, under different scenarios?
P 2.5	Presentation and update process for risk information	Do clear hazard maps and data on risk exist? Are these regularly updated?

The full Detailed Assessment from the Disaster Resilience Scorecard for Cities is available through the following link:
http://www.unisdr.org/campaign/resilientcities/home/toolkitblkitem/?id=4.

METHODOLOGY
PHASE 2, STEP 7: INFORMATION TO SEND TO REVIEW TEAM PRIOR TO THE REVIEW TEAM VISIT

Please refer to the Step-by-Step Guide for advice on both conducting and hosting peer reviews. This section sets out information that is specific to this Module, which begins in Phase 2.

Phase 2, Step 7: Information to send to Review Team prior to the Review Team visit

As set out in the Step-by-Step Guide if Module 1 (Organise for Disaster Resilience) is not undertaken at the same time as Module 2, then an overview of the Host City's disaster risk governance should be included in the pre-visit information sent to the Review Team.

The Host City should aim to send the pre-visit evidence to the Review Team three months ahead of the peer review visit. It is recommended that the pre-visit evidence is limited to 3 – 5 items for each Module.

Suggestions for the type of pre-visit evidence that could be shared between cities

A selection of evidence should be sent to the Review Team before their visit to the Host City. This could include the type of information listed below or any other information that the Host City and the Review Team agree would be of benefit.

It is **highly recommended** that the Host City prepare a **summary** of how the Host City ensures it is identifying, understanding and using current and future risk scenarios including:

- An overview of the mechanisms in place to undertake disaster risk assessments at a local level

- How the disaster risk assessments inform city level decision making, including which governance arrangements in the Host City have the responsibility to consider disaster risk assessments

- The major risks faced by the Host City, their likelihood of occurrence and potential impacts, including the most probable and most severe scenarios

- The outcomes of local completion of the UNISDR's Disaster Resilience Scorecard for Cities, Essential 2.

For the remaining indicators, **no more than 4 other items** in total should be selected from the suggestions below to demonstrate the Host City's baseline capacity on disaster risk assessment.

P2.1: Hazard assessment
- City-wide maps illustrating the exposure of different areas of the Host City to different risks, including trans-boundary risks

- A summary of the historical disasters that have occurred within or impacted the Host City

- An analysis or research article describing how climate change projections are informing future risk modelling and how natural assets offer protection to the city in relation to key risks

- National and / or local risk registers

- Public information leaflets or digital applications that advise the public about the key hazards that the city faces.

P2.2: Shared understanding of infrastructure risk
- An explanation of how risk scenarios and population exposure to hazards inform urban development

- A city masterplan or equivalent planning framework that shows how the Host City factors disaster risk assessments into urban development and infrastructure planning

- Minutes of a cross-sector meeting, such as a local DRR platform, where representatives from the Host City and utility / infrastructure providers meet to discuss disaster risk and resilience

- A case study describing a cross-sector approach to investing in measures to strengthen the resilience of key points of stress in the Host City's critical infrastructure

- A report from a collaborative training event or exercise where the city and utility / infrastructure providers rehearsed the response to a disaster affecting the Host City's infrastructure.

P2.3: Knowledge of exposure and vulnerability
- A description of the most probable and most severe disaster scenarios, setting out the city-wide exposure and vulnerability

- A description of how vulnerable groups and members of the community who may have specific needs are included in risk assessments

- A case study describing how the Host City's risk assessment arrangements have helped to identify a disaster risk and have, in turn, led to the disaster risk being mitigated (economic, social, health or environmental).

P2.4: Cascading impacts
- An analysis of the potential cascading failures across the city if a key infrastructure is damaged in the reasonable worst case scenario for a high impact risk

- A plan to show how the Host City will respond to a high impact, low probability disaster scenario affecting key city systems

- Mapping or analysis of the interfaces between different systems that may be important in the cascading impacts of a disaster

- A debrief report written in the aftermath of a disaster that illustrates the cascading consequences, together with an action plan to mitigate the cascading impacts in future events.

P2.5: Presentation and update process for risk information
- Examples of hazard maps and data on risk, including a monitoring and review schedule

- Details of any public facing website, application or social media platform that gives information, including maps, on risk and resilience

- Details of any website, application or other digital platform through which the Host City's DRR practitioners share data, including maps, on risk and resilience.

PHASE 2, STEP 8: ARRANGEMENTS FOR THE PEER REVIEW VISIT

As described in the Step-by-Step Guide, in the 3-6 months before the peer review visit, the Host City and Review Team are recommended to agree an agenda for the visit. This will include a range of activities to enable the Review Team to understand how the Host City is strengthening and maintaining arrangements for disaster risk assessment. The types of activities could include some or all of those listed below, or any other relevant actions. It is anticipated that the review of this Module will take a day. For all interviews, the Host City should ensure translators are available if they are required.

At the start of the Review Team's assessment of Module 2, the Host City is **highly recommended** to make a summary **presentation** to the Review Team which sets out the approach to disaster risk assessment. This could include information about:

- How the Host City's arrangements for identifying, understanding and using disaster risk assessments operate
- The institutions and other stakeholders in the Host City that are involved in assessing disaster risks and how these are coordinated and work together to develop credible risk scenarios
- How well those involved in disaster risk assessment understand the risks the Host City faces and how this knowledge is transferred into city decision making that reduces risks and strengthens the Host City's resilience whilst avoiding the creation of new risks.

Who should the Review Team interview?
When considering who is important for the Review Team to interview and / or receive a presentation from, it is **highly recommended** that the **Mayor** and / or other key local political leaders who give leadership in the Host City's resilience work and a mandate to strengthen disaster risk assessment arrangements are included and available. The Host City and Review Team should consider all Modules being assessed during the peer review and combine relevant questions with each senior politician or officer into one appointment.

The Host City and Review Team may also wish to consider who would be most appropriate in light of their initial exchange of pre-visit information and also given the most probable and most severe disaster scenarios for the Host City. Suggestions include:

- Senior managers of institutions that are part of the Host City's risk assessment arrangements and are responsible for identifying, understanding and using current and future risk scenarios
- Officials who are responsible for drawing up the Host City's disaster risk assessment and risk register
- Senior managers in different organisations and from different sectors who have a responsibility for and an investment in ensuring effective disaster risk assessment
- Practitioners, academics and technical experts who have been involved in disaster risk assessment
- Senior managers from utility / infrastructure providers who have a role in managing critical infrastructure within the Host City

- Representatives from national and regional government who have a role in identifying, understanding and using risk information, especially in relation to infrastructure risk
- Community representatives who have been involved in the identification of hazards in their area and developed a community mitigation response alongside the Host City's response
- Representatives of vulnerable groups who may have specific needs taking into account gender, disabilities, age, migrants, etc. to identify if the overall risk assessments detail their particular vulnerabilities and the mitigation of any increased risk to them
- Practitioners who have been involved in a city-to-city knowledge exchange on risk assessment
- Insurance sector representatives to determine if there is a shared understanding of the major hazards, their likelihood of occurrence and the insurance cover in place for the Host City.

How can the Host City multi-agency risk assessment capacity be demonstrated?

In addition to interviews and presentations, suggestions for activities within the programme for the visit include but are not limited to:

- Visit a team researching and assembling data in relation to risk assessment
- Site visits to major hazard locations, including those where mitigation activity has been successful in reducing risk
- Site visits to observe the work of infrastructure providers in understanding and mitigating infrastructure risks
- Demonstrations of specialist capabilities to identify and monitor disaster risk
- Observation of a cross-sector, partnership meeting in which Host City officials and utility / infrastructure providers are developing and using a shared understanding of disaster risk
- Observation of an example of a meeting where risk assessment is influencing Host City decision making taking place in the Host City at the time of the visit.

Exercises and Training

Especially in the context of this Module, observation by the Review Team of a public or practitioner training event taking place in the Host City at the time of the visit, or observation of a table top or live exercise to rehearse the city's emergency response would be very helpful. If required, 'real time' translation of the training / exercise into the preferred language of the Review Team should be organised by the Host City.

Observing a training event or exercise is beneficial in that it will enable the Review Team to visualise how the Host City understands and uses disaster risk assessments to inform proportionate and appropriate preparations in case a disaster occurs.
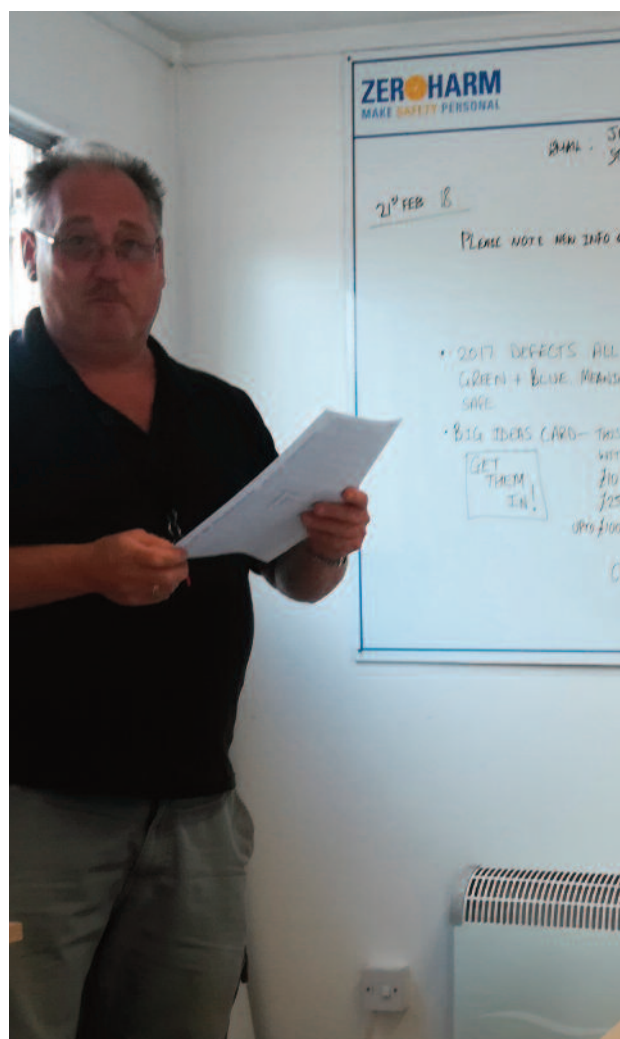
PHASE 2, STEP 9: REVIEW TEAM: GATHERING EVIDENCE

The Review Team will gather evidence from the pre-review information submitted before the peer review visit, together with information from interviews and activities undertaken during the visit, to gain a view of the effectiveness of the Host City's existing approaches to identifying, understanding and using current and future risk scenarios. This will include:

- Effectiveness of the disaster risk assessment activity in the Host City and whether there are suitable and sufficient organisational arrangements in place

- Effectiveness of the Host City in engaging all relevant agencies and organisations to support and augment the identification, understanding and use of current and future risk scenarios within the Host City

- Effectiveness of communication of disaster risk assessments within the governance structures, to key institutions and to communities.

The Review Team will structure their evidence gathering and interviews to enable the Host City to describe and demonstrate their approach against each of the indicators included in the Disaster Resilience Scorecard Preliminary Level Assessment. Overall, the Review Team should determine:

- Who leads / contributes / coordinates / assesses performance in this area? Is this effective? Is shared ownership of DRR evident?

- Who is missing / underperforming or underrepresented?

- What skills and experience are evidenced? Are there deficits?

- What activities currently support performance in this area and 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 access?

- 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?

Although the Review Team should design their own detailed questions in order to explore issues they consider relevant in the context of the Host City, the following questions are offered as suggestions that may be helpful in stakeholder interviews for Module 2. They are example questions and it is wholly acceptable to tailor them or, equally, not to use them, according to the individual peer review. The Review Team could choose to select just the relevant questions as well as asking additional questions that have not been listed below.

Ref	Subject / Issue	Suggested Questions
P 2.1	Skills and Experience	**Does the Host City have knowledge of the key hazards that the city faces, and their likelihood of occurrence?** • What are your responsibilities and accountabilities in relation to risk assessment? • What powers and capacity do you have to act on these responsibilities? • Who is in overall charge in the Host City for disaster risk assessment and what arrangements are in place to strengthen approaches to risk assessment? • What are the main hazards faced by the Host City? How likely are they to occur? • What makes the Host City's risk assessment activity effective? What are the particular strengths of current arrangements? • How does the Host City ensure risk assessments are informed and evidence based, drawing on scientific, technical or academic advice and knowledge? • How does the Host City assure itself of the effectiveness of its risk assessment activity? • What arrangements are in place for the Host City to model and understand the potential impacts of climate change and how this might affect future risk scenarios? • How does the Host City factor information and assessments about climate change into its decisions to mitigate and reduce future risks? • How are civil society, communities and indigenous peoples and migrants involved in identifying risks? • How do the Host City's risk assessment activities work in partnership / alongside the arrangements in neighbouring cities / areas? • What are the barriers to the Host City strengthening its risk assessment activity? Where and how could risk assessment improve?

Funded by
European Union
Civil Protection

Ref	Subject / Issue	Suggested Questions
P 2.2	Shared understanding of infrastructure risk	**Is there a shared understanding of risks between the Host City and various utility providers and other regional and national agencies that have a role in managing infrastructure such as power, water, roads and trains, of the points of stress on the system and city scale risks?** • How does the Host City work across silos to make the identification, understanding and / or use of disaster risk assessments "everyone's business"? • How do regional and national governments work with the city government to strengthen risk assessment activity? • How does the Host City influence the regional and national risk reduction activity, especially for infrastructure that crosses different administrative boundaries? • How do the Host City and various organisations, such as utility / transport providers and regional / national agencies demonstrate a shared understanding of risk? • How is the input from different sectors and stakeholders coordinated? How do different stakeholders influence risk assessment in the Host City? • How do the institutions in the Host City understand the roles and responsibilities of other institutions in the Host City in disaster risk reduction and during the response to a disaster? • How has the Host City planned to build back better and to reduce the city's exposure and vulnerability to disaster risk following a disaster?
P 2.3	Knowledge of exposure and vulnerability	**Are there agreed scenarios setting out Host City-wide exposure and vulnerability from each hazard, or groups of hazards (see above)?** • How does the Host City's risk assessment activity contribute to and support public awareness and education about existing risks, facilitate community resilience and advocate for an all-of-society approach to risk assessment? • How does the Host City engage citizens in the development / assessment of risk assessment activity?

Funded by
European Union
Civil Protection

Ref	Subject / Issue	Suggested Questions
P 2.3	Knowledge of exposure and vulnerability	• How does the Host City identify vulnerable groups who are exposed to disaster risk and how does the city mitigate this vulnerability? • How regularly are the Host City's disaster risk assessments updated to reflect climate change projections? • What arrangements are in place for the Host City to use its disaster risk assessments to inform investments in disaster risk reduction? • What arrangements are in place to use the Host City's risk assessments to inform decisions about urban planning and infrastructure development? • How does the Host City regularly draw on learning and good practice from other cities in respect of risk assessment?
P 2.4	Cascading Impacts	**Is there a collective understanding of potentially cascading failures between different Host City and infrastructure systems, under different scenarios?** • How do the Host City and utility / infrastructure providers work together to identify critical infrastructure and the potential for cascading failures in different risk scenarios? • How do the Host City and utility / infrastructure providers develop a shared understanding of the risks to essential services within the city and how failure in one service might affect another? • How do the Host City, national and regional governments, and utility / infrastructure providers work together to invest in reducing or mitigating the risks of cascading failures under different disaster risk scenarios? • Have the utility / infrastructure providers in the Host City developed joint plans and capabilities to respond to risk scenarios predicted under climate change projections? • What arrangements are in place to understand the potential impacts of climate change on cascading impacts?

Ref	Subject / Issue	Suggested Questions
P 2.5	Presentation and update process for risk information	**Do clear hazard maps and data on risk exist? Are these regularly updated?** • Which stakeholders are engaged in updating risk data, maps and scenarios? • Who has the responsibility in the Host City for identifying, understanding and updating risk information? • How is updated risk information shared with businesses and institutions in the Host City? • How is updated risk information shared with communities across the Host City? • How often is the Host City's risk information updated to reflect updated climate change projections?

PHASE 3, STEP 11: RECORDING INFORMATION AND DRAFTING INITIAL RECOMMENDATIONS

The 'Step-by-Step Guide' describes how the Review Team can record information during the peer review visit and includes a generic form that can be used to capture information during individual presentations, interviews and other activities.

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.

The two tables below are offered as a way of recording the overall findings for Module 2 together with the initial recommendations arising from the activities experienced during the day.

Funded by
European Union
Civil Protection

SUMMARY OF INITIAL FINDINGS

	Comments	Justification for assessment	Good practice identified
P 2.1 Hazard Assessment Does the Host City have knowledge of the key hazards that the city faces, and their likelihood of occurrence?			
P 2.2 Shared Understanding of Infrastructure Risk Is there a shared understanding of risks between the Host City and various utility providers and other regional and national agencies that have a role in managing infrastructure such as power, water, roads and trains, of the points of stress on the system and city scale risks?			
P 2.3 Knowledge of Exposure and Vulnerability Are there agreed scenarios setting out Host City-wide exposure and vulnerability from each hazard, or groups of hazards?			
P 2.4 Cascading Impacts Is there a collective understanding of potentially cascading failures between different Host City and infrastructure systems, under different scenarios?			
P 2.5 Presentation and Update Process for Risk Information a) Do clear hazard maps and data on risk exist? b) Are these regularly updated?			
Other			

INITIAL RECOMMENDATIONS

	Description of areas for potential development	Justification	Time horizon
E.g. Extent to which data on the city's resilience context is shared with other organisations involved with the city's resilience.	E.g. Ensure a consistent flow of information between multi-agency partners.	E.g. A regular flow of information would improve understanding of risk and aid planning for partner agencies.	E.g. Short, medium, long term implementation.
P 2.1 Hazard Assessment The Host City has knowledge of the key hazards that it faces and their likelihood of occurrence.			
P 2.2 Shared Understanding of Infrastructure Risk There is a shared understanding of risks between the Host City and various utility providers and other regional and national agencies that have a role in managing infrastructure such as power, water, roads and trains, of the points of stress on the system and city scale risks.			

Funded by
European Union
Civil Protection

INITIAL RECOMMENDATIONS

	Description of areas for potential development	Justification	Time horizon
P 2.3 Knowledge of Exposure and Vulnerability There are agreed scenarios setting out city-wide exposure and vulnerability from each hazard, or groups of hazards.			
P 2.4 Cascading Impacts There is a collective understanding of potentially cascading failures between different city and infrastructure systems, under different scenarios.			
P 2.5 Presentation and Update a) Clear hazard maps and data on risk exist.			
b) Hazard maps and data on risk are regularly updated.			

Funded by
European Union
Civil Protection

INITIAL RECOMMENDATIONS

	Description of areas for potential development	Justification	Time horizon
Other Area / issue			

NOTES:

NOTES:

Module 2: Identify, Understand and Use Current and Future Risk Scenarios

NOTES:

Further information is available from: www.Uscore2.eu

ISO22392 is being drafted and will contain further information about peer reviews