

<b>Work package number</b>	WP6	<b>Lead beneficiary</b>	16 - RIVM
<b>Work package title</b>	Multisectoral Preparedness and Response		
<b>Start month</b>	1	<b>End month</b>	36

### Objectives

The specific objective of WP6 is to support EU MS and JA partner countries in identifying the core elements of multisectoral preparedness of, and response to a public health emergency

### Description of work and role of partners

#### WP6 - Preparedness and Response planning [Months: 1-36]

RIVM, THL, RKI, INMI, BMASGK, MCA, CIPH, SUJCHBO, MOH-FR, NNK, SEMS, MOHLT, MFH, NIZP-PZH, MS, IPHS, NIJZ, ISCIII, DH

Lead: RIVM (NL)/EMC (NL); Co-lead: ISCIII (ES)

1. A list of core elements of multi-sectoral collaboration which Member States can incorporate into their national Preparedness and Response plans.
2. Learning from COVID-19
3. E-learning and tabletop exercise protocols and pilots on multi-sectoral collaboration to encourage continuous evaluation and improvement of multisectoral collaboration in Preparedness and Response planning of (cross border) threats.
4. Best practices guidelines on multi-sectoral collaboration, for (all hazard) integrated Preparedness and Response planning are provided to all participating countries. These are based on the lessons learned from COVID-19 and can be used for continuous learning through implemented e-learning and tabletop exercises.

The specific objective of the WP6 will be achieved through the following tasks:

#### Task 6.1: Identifying core elements of an integrated multi-sectoral preparedness and response plan

Lead: RIVM; Participants: FI (THL and FFA), DE (RKI), IT (INMI and MoH), AU (AGES), UK (DH/PHE), ES (ISCIII) BA (MCA), HR (CIPH and UHID), CZ (SUJCHBO), HU (NNK), LV (SEMS), LT (MOHLT), MT (MFH), PL (NIZP- PZH and NVRI), PT (MS), RS (IPHS), SI (NIJZ).

The aim is to identify the core elements of multisectoral collaboration as described in literature and (inter)national Preparedness and Response tools and instruments. The specific needs and minimum requirements for the sectors involved in the IHR Preparedness and Response cycle (as defined in the ECDC Health Emergency Preparedness Self-Assessment (HEPSA) Tool) will be identified.

#### 6.1.1 Review of literature on international and/or national tools and instruments for Preparedness and Response with focus on multi-sectoral collaboration.

Lead: RIVM/EMC; input from WP5, WP7, WP9, WP10

##### 6.1.1.1 Literature review

Lead: RIVM

The aim of this integrative review is to identify core elements of multisectoral collaboration within academic literature and grey literature, with a focus on collaboration in the various stages of preparedness and response planning. We will include international organizations' websites to collect (unpublished) international tools and instruments. Information collected in the workshop 6.1.1.2 will also serve as input.

#### 6.1.1.2 Workshop on multisectoral collaboration

Lead: RIVM

Multisectoral collaboration: A (digital) workshop will be organized with the aim to collect relevant tools, instruments or core elements that were identified by the partners in the first wave of the COVID-19 pandemic (biological) and in chemical emergencies. Those elements (may) have different meaning or weight for different sectors or countries. The starting point for this workshop will be the preliminary data from literature review 6.1.1.1 as well as identified existing documents, such as ECDC Health Emergency Preparedness Self-Assessment (HEPSA) Tool, the Joint External Evaluation (JEE) reports, the EU Laboratory Capability Monitoring System (EULabCap, 2016), WHO Laboratory assessment tool (2012), and the WHO Strategic framework for emergency preparedness (2017) ([https://ecdc.europa.eu/sites/portal/files/documents/2016\\_EULabCap\\_EUreport\\_web\\_300418\\_final.pdf](https://ecdc.europa.eu/sites/portal/files/documents/2016_EULabCap_EUreport_web_300418_final.pdf); [https://www.who.int/ihr/publications/laboratory\\_tool/en/](https://www.who.int/ihr/publications/laboratory_tool/en/); <https://www.who.int/ihr/publications/9789241511827/en/>) and other documents as suggested by the experts from WP7, WP9 and WP10. Input from the distributed pre-workshop questionnaire.

Outcome should be mutual understanding and agreement of terms, tools, sectors, instruments and core elements identified in a biological (COVID-19) multi-sectoral Preparedness and Response plan.

#### 6.1.2 Achieving consensus among countries on the core elements of a multisectoral Preparedness & Response plan by expert meeting or online consultation

Lead: RIVM/EMC, input from WP4 – W10

We will compile a list of the sectors, core elements, tools and instruments of multisectoral collaboration during Public Health Emergencies based on the outcome of 6.1.1

##### 6.1.2.1 Expert meeting / online consultation

Lead: 5.1.2a

The list includes an inventory of tools, sectors, instruments and core elements identified for multisectoral collaboration. A database will be developed and a gap analysis performed which will be discussed in the expert meeting (or during an online consultation depending on the circumstances) on core elements of multi-sectoral collaboration during Public Health Emergencies, and define the most important and/or essential tools and instruments relevant to multisectoral collaboration in any Preparedness and Response planning.

All JA SHARP partners will be consulted regarding set of core elements identified in the literature review (task 6.1.1.1) We will ask their opinions on the applicability in their countries. Based on the results of the consultation the database will be adapted and a checklist will be developed, which Member States can incorporate in their (existing) national Preparedness and Response plans. These core elements can be used for multisectoral collaboration (including low GNI countries) and will be used in the e-learning and table top exercises if suitable.

#### **Task 6.2: Learning from COVID-19**

Lead: RIVM/EMC; participants: all SHARP partners

Understanding multisectoral collaboration during the COVID-19 pandemic, based on sectors, tools, instruments and core elements identified. Prepare a lessons learned document for future disease X.

The aim of the task is to have a better understanding of multisectoral collaboration in the response phase of the COVID-19 pandemic. Focus will be on the decision making process and the interaction between policy and stakeholders.

##### 6.2.1: The decision making process: the example of COVID-19 and testing strategies

Lead: RIVM/EMC; participants: all SHARP partners

All EU Member States have access to the same scientific information and the advices of international organizations such as the WHO and ECDC. However, there are large differences between MS regarding test strategies used during the first wave of the COVID-19 pandemic. There are (large) differences in volume of testing and criteria for testing, and these may also change over time. What causes these differences and changes? In this task we will investigate this by studying the three (3) countries with the highest number of tests conducted and three (3) countries with the lowest number of tests conducted and investigate what factors cause these differences. As a source of information we will approach relevant decision makers, including at least one policy maker, a national IHR expert and a (national) expert from the laboratory side per country.



Based on the outcomes of these inventories further stakeholders/sectors maybe approached for subsequent interviews. We will study what factors contributed to the final decision(s) on test strategies and study the role of the different stakeholder, particularly the public health (IHR) and the laboratory side.  
The outcome of this task will be an evaluation and analysis of these factors. Together with the protocol developed for this task the results will be shared with JA member states. The protocol may be used by individual member states and/ or may be adapted (with WP6's help) to address other non-medical measures (see optional task 6.2.3) .

#### 6.2.2. Understanding the citizen's role in multisectoral collaboration during the COVID-19 pandemic

Lead: RIVM/EMC; participants: all SHARP partners

One important sector identified in the COVID-19 pandemic is the citizen. Citizens are key as they have to understand, accept and comply to these mitigation measures. The results of the literature review suggest citizens must play a role however it is unclear what their role is, can or should be. We would like to have a better view on the citizen's perceived role from the citizen's perspective. Which role does the citizen feel it plays, can play, has or should have play in the preparedness and response to the COVID-19 pandemic?

These leading question will be addressed by conducting several focus groups in the SHARP partner countries with Citizens. The first set of (pilot) interviews will be conducted in the Netherlands during the (upsurge) of the first wave of the COVID-19 pandemic. Results from these interviews will be used to develop a protocol with improved methodology (including substantiated sample size) to perform a new set of interviews in autumn in JA partner countries. This protocol will be made available to all JA partners for translation into their own national language and partners will be encouraged to perform this exercise using this protocol in autumn 2020. The outcome of this task will be the evaluation and comparison of the group interviews from the different member states participating in the JA.

#### 6.2.3. Survey among all countries to inventory lessons learned during COVID-19 and remaining possible needs for further development of and critical questions for a disease X scenario

Lead: NIJZ, **5.1.2a** participants: all SHARP partners

Based on the results of tasks 6.2.1 and 6.2.2 and evaluation of the elements in the decision making process and interaction with relevant sectors as proxies for the understanding mechanisms of collaboration in COVID-19, an online survey/workshop/consultation will be carried out. A final inventory of the lessons learned during the COVID pandemic, and remaining needs for development of (country specific) recommendations regarding multisectoral collaboration, e.g. in case of identified important core-elements that were not/less relevant during the COVID-19 pandemic (e.g. chemical sector elements) will be gathered.

The outcome of this inventory is an identification of the gaps concerning multisectoral collaboration during preparedness and response, which require more research and/or training.

### **Task 6.3: Translating lessons learned into all hazards e-learnings and tabletop exercises**

5.1.2a

The COVID-19 pandemic (as disease X scenario) is the most robust setting in which the strengths and weaknesses of (core elements of) multisectoral collaboration, the sectors involved, tools and instruments applied, are identified. For continuous learning from and improvement of these aspects these experiences need to be translated into all hazards scenarios.

E-learnings and tabletop exercises are accessible methods to test different aspects of multisectoral collaboration at different phases of preparedness and response planning in all hazard threats at any frequency and/or depth needed. The situations presented within the e-learnings and tabletop exercises will test the (day-to day) preparedness and response capacities and capabilities of all parties involved in the national plan and the strengths and limitations regarding multisectoral collaboration. The tested scenarios may include any health event, including infectious diseases requiring multisectoral collaboration.

If necessary, appropriate and feasible (a) slimmed down (nonbiological) disease X scenario(s) may also be developed in e-learning(s) and/or table top exercise(s) to simulate elements that were not tested in the COVID-19 outbreak, but may be important to other threats (see 6.2.4).

<p><b>6.3.1. Literature review</b> Lead: <b>5.1.2a</b></p> <p>In preparation of all hazard e-learning and tabletop exercises a literature review will be carried out. This review will include a selected amount of recent threats, use the outcomes of tasks 6.1 and 6.2, and translate these core-elements into multisectoral collaboration (from task 6.1.) in preparation of tabletops and e-learning in which these core-elements, their interactions and dynamics (from task 6.2) will be trained. Elements of this review may also serve task 4.2. "Selection of best practices"</p>
<p><b>6.3.2. Consultation and (online) workshop on development of e-learning and table top exercises protocols</b> Lead: NIZP-PZH, <b>5.1.2a</b> / RIVM; participants: all SHARP partners</p> <p>Lessons learned from task 6.1 and 6.2 and the results from the literature review in task 6.3.1 will form the basis for the online consultation and the (online) workshop. The online consultation for the protocol development will focus on making inventories of needs, feasibilities and barriers for conducting e-learning and table top exercises. Gaps, feasibility and barriers for participating countries need to be identified in order to achieve successful development of all hazard multisectoral preparedness and response plan e-learning and tabletop for all participating countries, and particularly for low GNI countries</p> <p>Following the online consultation first topics will be selected and (generic) protocols for exercises and e-learning will be written.</p> <p>These topics and protocols will be the subject of the (online) workshop. The outcome of this workshop will be an initial set of topics for accessible e-learning and tabletop exercises for different sectors (e.g. public health, clinical, chemical, zoonotic, and others), including an agreed (set of) checklist(s) to facilitate implementation of e-learning and table top exercises.</p>
<p><b>6.4. Development of first e-learning and tabletop exercises; pilot evaluation and (if feasible) translation into best practices</b> Lead: RIVM/EMC, WP4,(WP5),WP7 and WP8 (WP10)</p> <p>SHARP partners will be consulted to develop and (if feasible) conduct first (sets of) e-learning(s) and/or table top exercise(s). In each case this will be followed by an evaluation questionnaire within 3 months of the consultation to improve protocols, checklists and best practices for continuous, accessible method(s) for simulating multisectoral collaboration in (all hazards) threats.</p>
<p><b>6.4.1. Conduct of first e-learning(s) and tabletop exercise(s)</b> Lead: RIVM/EMC, participants: all SHARP partner countries</p> <p>The first e-learning(s) and tabletop exercise(s) protocol(s) will be sent to the JA partner countries with a required predefined time until feedback and/or conduct (e.g. within one month) and reporting of outcomes in standard evaluation reports and questionnaires (e.g. 3 months). These outcomes are input for task 6.4.2.</p>
<p><b>6.4.2. Evaluation of outcomes and questionnaires from e-learning and tabletop development and/or conduct of participating countries.</b></p> <p style="text-align: center;"><b>5.1.2a</b></p> <p>Outcomes of this evaluation of e-learning and tabletop exercise development and/or conduct are important for the following reasons:</p> <ul style="list-style-type: none"> <li>- to improve protocols (including checklists) for accessible method(s) for simulating multisectoral collaboration in (all hazards) threats</li> <li>- to enhance sustained implementation of e-learning and tabletops a methods for continuous simulation of multisectoral collaboration in different phases preparedness and response planning</li> <li>- to translate experiences into optimized national plans</li> <li>- translate into best practices (with WP4 and WP5)</li> <li>-</li> <li>- The outcome of this task will be a report on evaluation from e-learning and tabletop protocols and/or exercises. This report will serve as framework for the final workshop described in task 6.4.</li> </ul> <p>- <b>6.4.3 Workshop on translation of outcomes of WP6 into best practices and guidelines for continuous</b></p>



<p>(improvement - of) multisectoral collaboration in (all hazard) (cross boarder) threats.</p> <p style="text-align: center;">5.1.2a</p> <p>-</p> <p>- In order to achieve sustainable, integrated Preparedness and Response plans in the Member States and JA participating countries and to facilitate further improvements, the lessons learned from the activities within this WP are documented in best practices catalogues and guidelines. The framework for this will be discussed in the final workshop.</p> <p>The aim of this workshop is to discuss the report from 6.4.2 of lessons learned from WP6 on multisectoral collaboration in all phases of the preparedness and responses planning. Outcome should be mutual understanding and agreement of best practices, and translated into best practices guidelines applicable to all MS and JA participating countries, including tools to measure sustained implementation of national Preparedness and response plans.</p>
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#### Participation per Partner

Partner number and short name	WP6 effort
1 - THL	2.00
FFA	1.00
2 - RKI	0.10
3 - INMI	1.00
MoH	0.75
4 - BMASGK	0.00
AGES	0.50
5 - MCA	3.80
6 - CIPH	1.60
UHID	3.50
7 - SUJCHBO	5.50
10 - MOH-FR	4.75
12 - NNK	0.80
13 - SEMS	6.00
14 - MOHLT	3.00
15 - MFH	1.50
16 - RIVM	58.00
Erasmus MC	13.77
18 - NIZP-PZH	18.00
NVRI	4.00
19 - MS	7.00
20 - IPHS	12.10
21 - NIJZ	19.00
22 - ISCIH	22.25

24 - DH	1.20
<b>Total</b>	191.12

**List of deliverables**

Deliverable Number <sup>24</sup>	Deliverable Title	Lead beneficiary	Type <sup>25</sup>	Dissemination level <sup>26</sup>	Due Date (in months) <sup>27</sup>	Update Octobre 26, 2020
D6.1	Review of planning and evaluation tools	16 - RIVM	Report	Public	18	Expected delivery : October 2020 (M18)
D6.2	Report on COVID-19 lessons learned	16 - RIVM	Report	Confidential, only for members of the consortium (including the Commission Services)	33	At this point we expect to achieve the due date.

**Description of deliverables**

D6.1 : Review of planning and evaluation tools [24]  
 Review of multisectoral collaboration, sectors, core elements, tools and instrument relevant to Preparedness and Response cycle

D6.2 : Report on lessons learned from COVID-19 [33]  
 Report on “lessons learned from COVID-19”, and evaluations from e-learning and table tops. This report will serve as framework for the best practices guidelines.

**Schedule of relevant Milestones**

Milestone number <sup>18</sup>	Milestone title	Lead beneficiary	Due Date (in months)	Means of verification	
MS20	Lessons learned from COVID-19 evaluated	16 - RIVM	24	Report including protocol and evaluation factors influencing test strategies; protocol and evaluation role of sectors made available to all JA partners for implementation	At this point we expect to achieve the due date.

MS21	All hazards e-learning tool launched	16 - RIVM	33	scenario-based e-learning tools developed, tested, with focus on low GNI countries	at this point we expect to achieve the due date. But see also MS23
MS22	WP6 workshops conducted	16 - RIVM	33	<p>Eight (digital) workshops or consultations conducted:</p> <ol style="list-style-type: none"> <li>1. to collect data on multisectoral collaboration</li> <li>2. to achieve consensus on the core elements of a multisectoral Preparedness &amp; Response plan</li> <li>3. to learn from the decision making process: the example of COVID-19 and testing strategies</li> <li>4. to understanding the citizen's role in multisectoral collaboration during the COVID-19</li> <li>5. to clarify gaps &amp; feasibility to develop a multisectoral preparedness and response plan for participating countries;</li> <li>6. to collect the lessons learned in multisectoral collaboration during the COVID-19 outbreak</li> <li>7. to agree on elements for development of e-learning and table top exercises protocols</li> <li>8. to agree on best practice guideline(s)</li> </ol>	At this point 1 finished; points 2-5 are in preparation
MS23	First (pilot) table-top exercises conducted	16 - RIVM	30	Country-specific (all hazards) multisectoral Preparedness and Response plans tested.	At this point no need for change in due date -however everything depends upon feasibility based on the development in the COVID-19 pandemic over the coming months.



<b>Specific Objective Number</b>	3 (WP6 Preparedness and Response planning)	
<b>Specific Objective</b>	EU Member States and JA partner countries supported in developing operational integrated preparedness and response plans and mechanisms for serious cross-border health threats with an integrated all hazards approach.	
<b>Process Indicator(s)</b>		<b>Target</b>
<b>Consultations</b> 1. Achieving consensus among countries on the core elements of a multisectoral Preparedness & Response plan 2. decision making process: the example of COVID-19 and testing strategie 3. understanding the citizen's role in multisectoral collaboration during the COVID-19 4. protocol development all hazard e-learnings and tabletop exercises	5.	Four consultations by month 33
<b>Workshops</b> (cooperation with WP8) 1. on multisectoral collaboration 2. on lessons learned from COVID-19 3. development of e-learnings and tabletop exercise 4. translation of outcomes of WP6 into best practices and guidelines for continuous (improvement of) multisectoral collaboration in (all hazard) (cross boarder) threats	6.	Four workshops by month 27
<b>E-learnings and tabletop exercises</b> 1. developed and/or piloted (in cooperation with WP7, WP9 and WP10), evaluated and disseminated	2.	At least 1 e-learning tool and/or tabletop exercise by month 33
<b>Output Indicator(s)</b>	4.	<b>Target</b>
<b>Literature reviews</b> 1. Review of literature on international and/or national tools and instruments for Preparedness and Response with focus on multi-sectoral collaboration 2. Review of a selected recent threats in preparation of tabletops and e-learnings	3.	2reviews by month 21
<b>Checklist</b> 1. For e-learnings and tabletop exercise development.	2.	checklist by month 27
<b>Databases</b> 1. on core elements of multi-sectoral collaboration during Public Health Emergencies	5.	database by month 24

<p><b>Protocols</b></p> <ol style="list-style-type: none"> <li>1. literature review on international and/or national tools and instruments for Preparedness and Response with focus on multi-sectoral collaboration</li> <li>2. decision making process: the example of test strategies in COVID-19</li> <li>3. understanding the citizen's role in multisectoral collaboration in COVID-19</li> </ol>	6.	3 protocols by month 18
<p><b>Catalogues &amp; guidelines</b></p> <ol style="list-style-type: none"> <li>1. Catalogue of best practices on integrated multisectoral preparedness and response plan implementation</li> <li>2. Guidelines of best practices on integrated multisectoral preparedness and response plan implementation</li> </ol>	3.	1 by month 27 1 by month 33
	8.	
<b>Outcome/Impact Indicator(s)</b>	<b>10.</b>	<b>Target</b>
JA partners actively participated and know what barriers may hamper multisectoral collaboration in preparedness and response cycle, and steps needed to achieve implementation	12.	100% of the JA partners
Member States participated in lessons learned on COVID-19 and/or participated in at least one e-learning and tabletop protocol development and/or exercise	14.	80% of Member States
JA partners consulted and/or actively participated in the development of best practices guidelines on multisectoral collaboration in preparedness and response and know how to use them	16.	100% of the JA partners