Resilience of Public Healthcare Systems for 'Build Back Better' An evaluation analysis using a scorecard approach
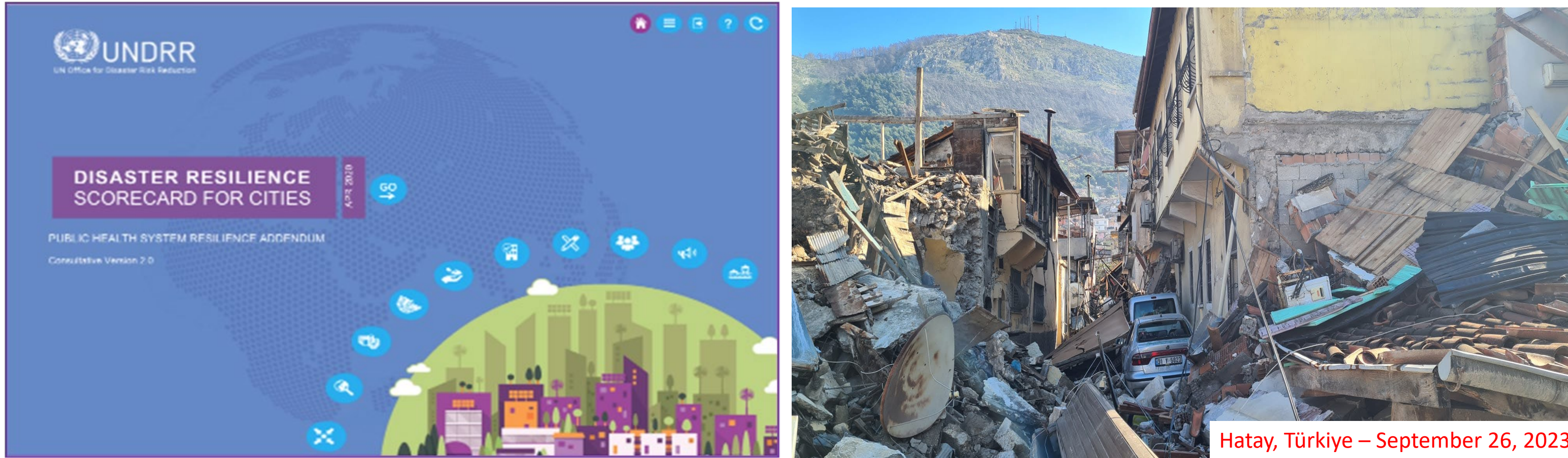
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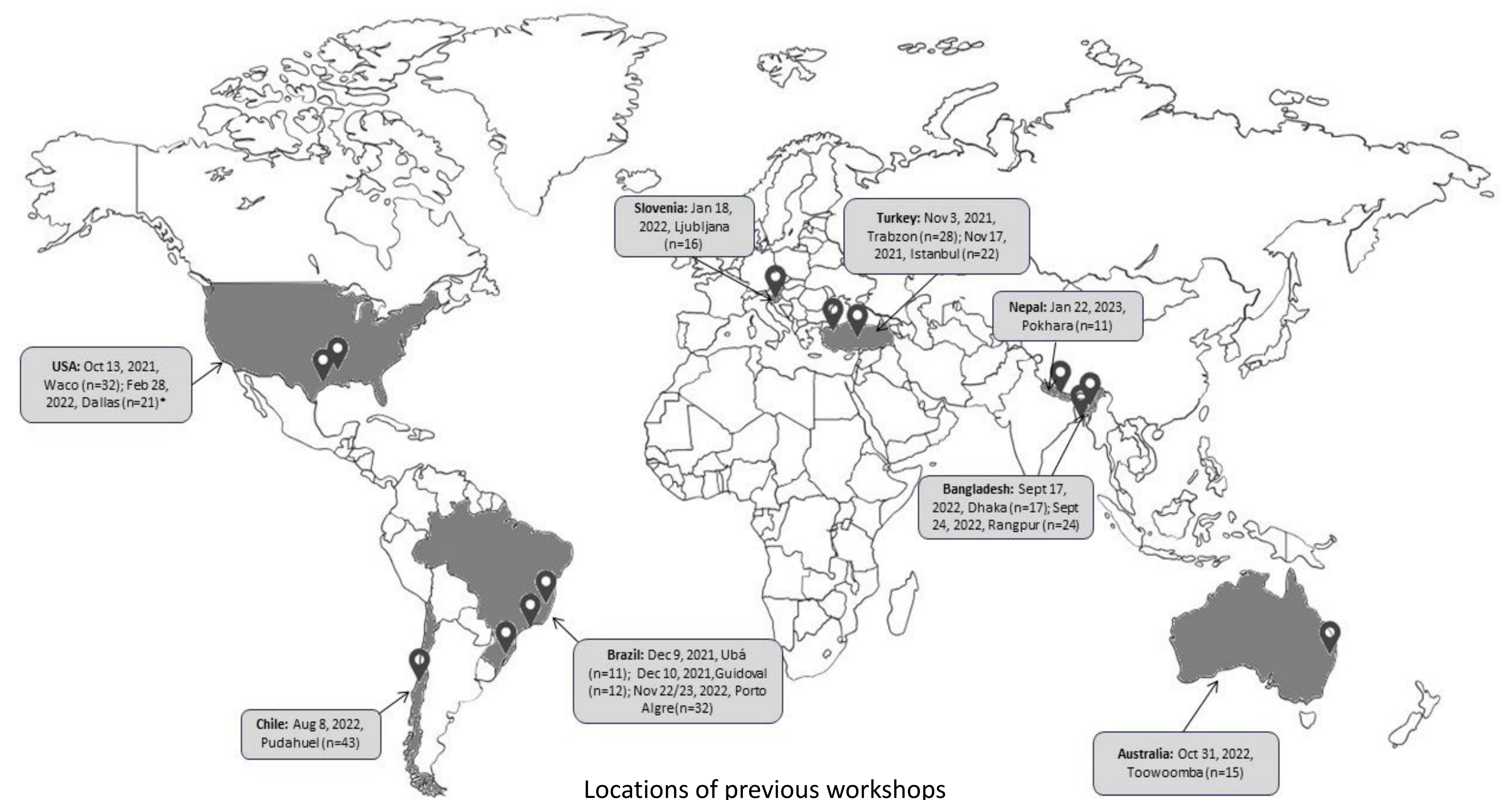
Aim

To assess post-earthquake public healthcare system by implementing a scorecard in Hatay and Kahramanmaras, provinces in Türkiye after the Kahramanmaras earthquakes.

Hatay, Türkiye – September 26, 2023

Methods

- The UN Office for Disaster Risk Reduction (UNDRR) public health system resilience scorecard (scorecard) was applied.
- Participants scored the 23 resilience questions/indicators using a Likert type scale with zero the lowest and five the highest.
- Scores from each participant were aggregated to develop a mean and ranking for each resilience question/indicator.
- The two workshops scores were calculated to analyse the differences between the cities. The normal distribution of each workshop score was evaluated based on kurtosis and skewness values.

Kahramanmaraş, Türkiye – October 23, 2023
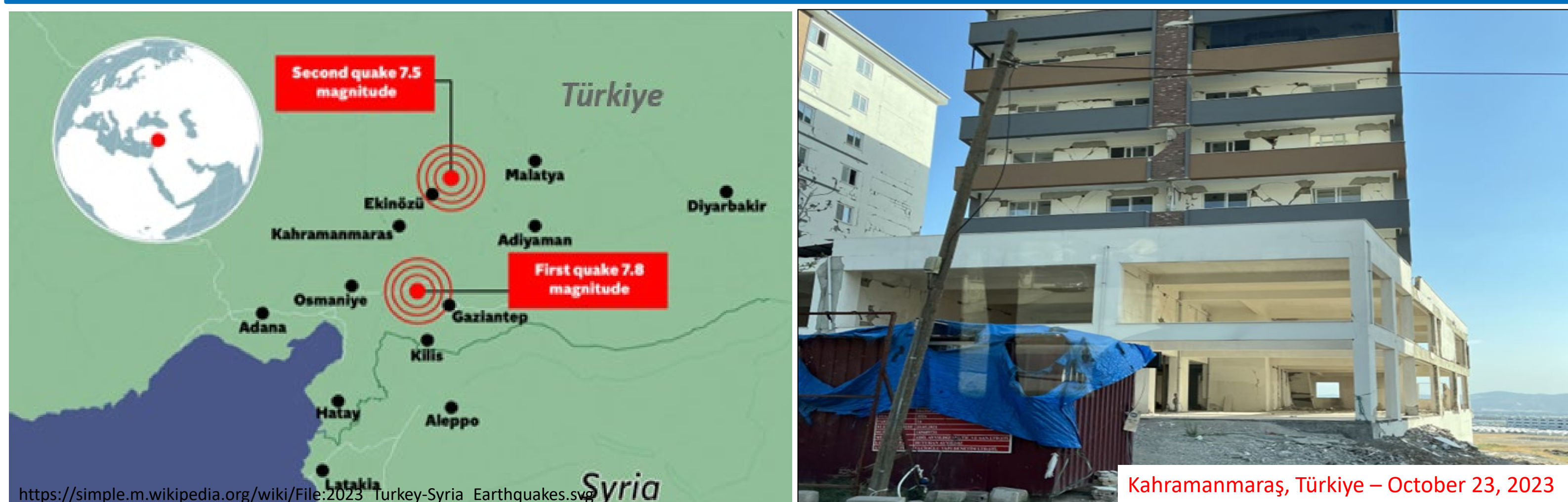
Results

The two one-day workshops were held in each city during October 2023.

- There were 41 participants (Maras n=18, Hatay n=23).
- The highest level of resilience identified in Maras related to accessibility of individual health records after a disaster (A6.2.2), and the range of emergencies and disasters considered in disaster planning (A2.1).
- In Hatay, inclusion of public health impacts in scenario planning for disasters had the highest level of resilience (A2.2).
- In Maras, the priority area for action related to increasing capacity of the health system to manage a surge in patients (A8.2).
- Improving the resilience of infrastructure beyond hospitals was considered a priority action in Hatay (A8.1), and the communities understanding and fulfilment of their role in the maintenance of public health during and after a disaster (A7.1).

	A1.1	A2.1	A2.2	A2.3	A3.1	A4.1	A5.1	A6.1	A6.2	A6.2.1	A6.2.2	A7.1
Maras	3.0	3.17	2.67	2.44	2.5	2.22	2.78	2.67	2.78	3.0	3.17	1.83
Hatay	3.30	3.26	3.35	2.83	2.91	2.09	2.35	2.65	2.70	2.78	3.17	2.13

	A7.1.2	A7.2	A8.1	A8.2	A8.3	A9.1	A9.2	A9.3	A9.4	A10.1	A10.2	AVE
Maras	2.5	1.94	2.06	1.76	2.11	1.94	2.83	2.28	2.33	2.56	2.35	2.43
Hatay	2.83	2.52	2.13	2.30	2.57	3.13	3.13	2.68	2.39	2.57	2.65	2.71

- In Hatay, scores of inclusion of public health impacts in scenario planning for disasters (A2.2) and early warning systems for impending emergencies (A9.1) (3.35 ± 0.885; 3.13 ± 1.058, respectively) was significantly higher (p=0.037; p=0.002, respectively) than in Maras (2.67 ± 1.138; 1.94 ± 1.162, respectively).
- Regarding inclusion of public health impacts in scenario planning (A2.2), participants pointed out Hatay is a border province and have plans and preparations for public health impacts of disasters. However, it was emphasised that there were some problems in practice. One participant explained that:

«... plans are always ready. As everyone knows, we recently experienced a global epidemic. We have experience from that. Because Hatay is a border province, we are always vigilant and prepared. There have been almost no problems there....There have been no problems in the planning part, but there have undoubtedly been minor disruptions in the implementation.» (Physician, Hatay).

In relation to early warning systems (A9.1) for impending health-related emergencies, participants in Hatay discussed areas for improvement but noted considerable work is being done. One participant said:

«I can say this, for example, after the earthquake, was a warning given that there was a tsunami danger? Yes, it was. So people are trying to do something about this (early warning systems)» (Physician, Hatay).

Locations of previous workshops

Joint workshop in Incheon, South Korea – March 14-16, 2023

Workshop in Kahramanmaraş, Türkiye - October 24, 2023

Workshop in Kahramanmaraş, Türkiye - October 24, 2023

Discussion

- The post-disaster score card application indicated the lower scoring comparing to the scoring during the planning phase.
- Both disaster affected area shared similarities in scoring, particularly essential A8.2 (ability to manage a surge of patients) was the lowest in Maras and third lowest in Hatay.
- The most resilient aspects were also similar with essential A1.1 (integration with governance mechanisms) the highest in Hatay and third in Maras.

Workshop in Hatay, Türkiye - October 26, 2023

Workshop in Kahramanmaraş, Türkiye - October 24, 2023

Kahramanmaraş, Türkiye – October 23, 2023

Conclusion

- The scorecard method can be utilized to indicate the necessities to improve the health system pre- and post-disaster.
- This method can allow community-led actions to be identified for decision makers and funders.
- Both workshop participants scored similarly the need to manage a surge in patients.
- Further qualitative analysis is required to evaluate workshop scoring and the priority areas identified.