Master Class
Climate Adaptation and Poverty

ENGINEERS WITHOUT BORDERS DENMARK

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EXERCISE

PART A EXERCISE

Part A SYSTEM RISK MAPPING

STEP 1

Select one of the 4 case studies, that you know well in relation to climate change and resilience with focus on socio-economic co-benefits.

STEP 2

List the main climate hazards for the city (sea-level rise, costal erosion, floods, heat waves, etc)

STEP 3

List vulnerability and exposure (what is affected and how, e.g. hospital affected by flood, crop on a field, water resources for agriculture, elderly by heat waves, houses on the harbour by sea level rise, poor design and construction of buildings, lack of public information and awareness)

STEP 4

List impacts derived by climate hazards in relation to vulnerability and exposure (e.g. premature death of elderly people due to sea level rise, inoperability of hospitals during flood with damages on infrastructures and life of patients at risk, loss of houses in coastal areas requiring relocation)

STEP 5

Generate a system map looking at the interrelation of the different elements of the system (hazards, vulnerability, exposure and impacts) in relation to the specific project and context

Part A SYSTEM RISK MAPPING

Hazard*

The potential occurrence of a natural or human-induced physical event that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, and environmental resources.

- slow-onset events: sea level rise, costal erosion, droughts,
- rapid-onset events: land degradation, loss of biodiversity, flood.

Vulnerability*

The propensity or predisposition to be adversely affected.

Exposure*

The presence of people; livelihoods; environmental services and resources; infrastructure; or economic, social, or cultural assets in places that could be adversely affected.

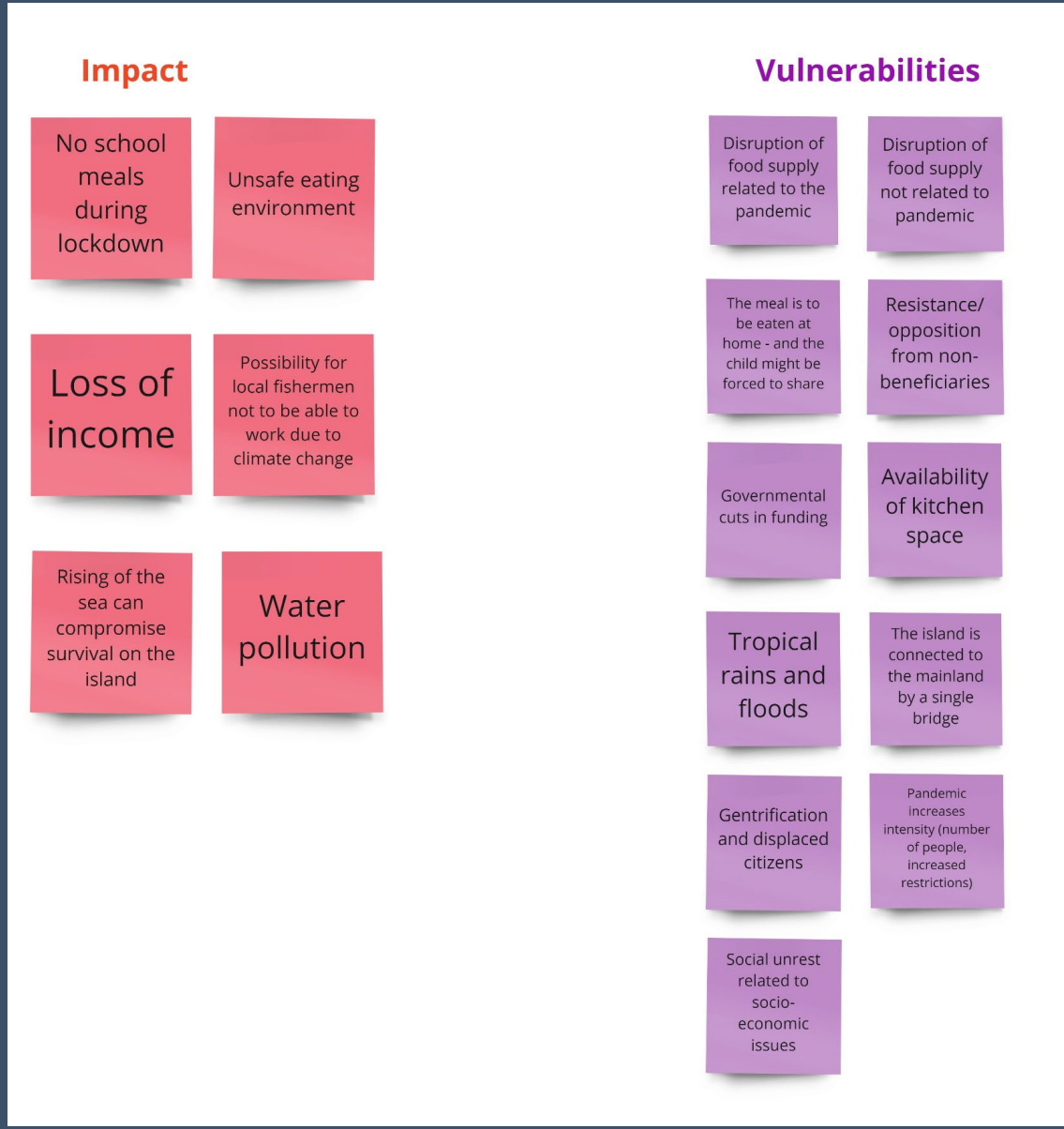
Impacts*

The effects on natural and human systems of physical events, of disasters, and of climate change.

**IPCC, 2012: Glossary of terms. In: Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation [Field, C.B., V. Barros, T.F. Stocker, D. Qin, D.J. Dokken, K.L. Ebi, M.D. Mastrandrea, K.J. Mach, G.-K. Plattner, S.K. Allen, M. Tignor, and P.M. Midgley (eds.)]. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change (IPCC). Cambridge University Press, Cambridge, UK, and New York, NY, USA, pp. 555-564.*

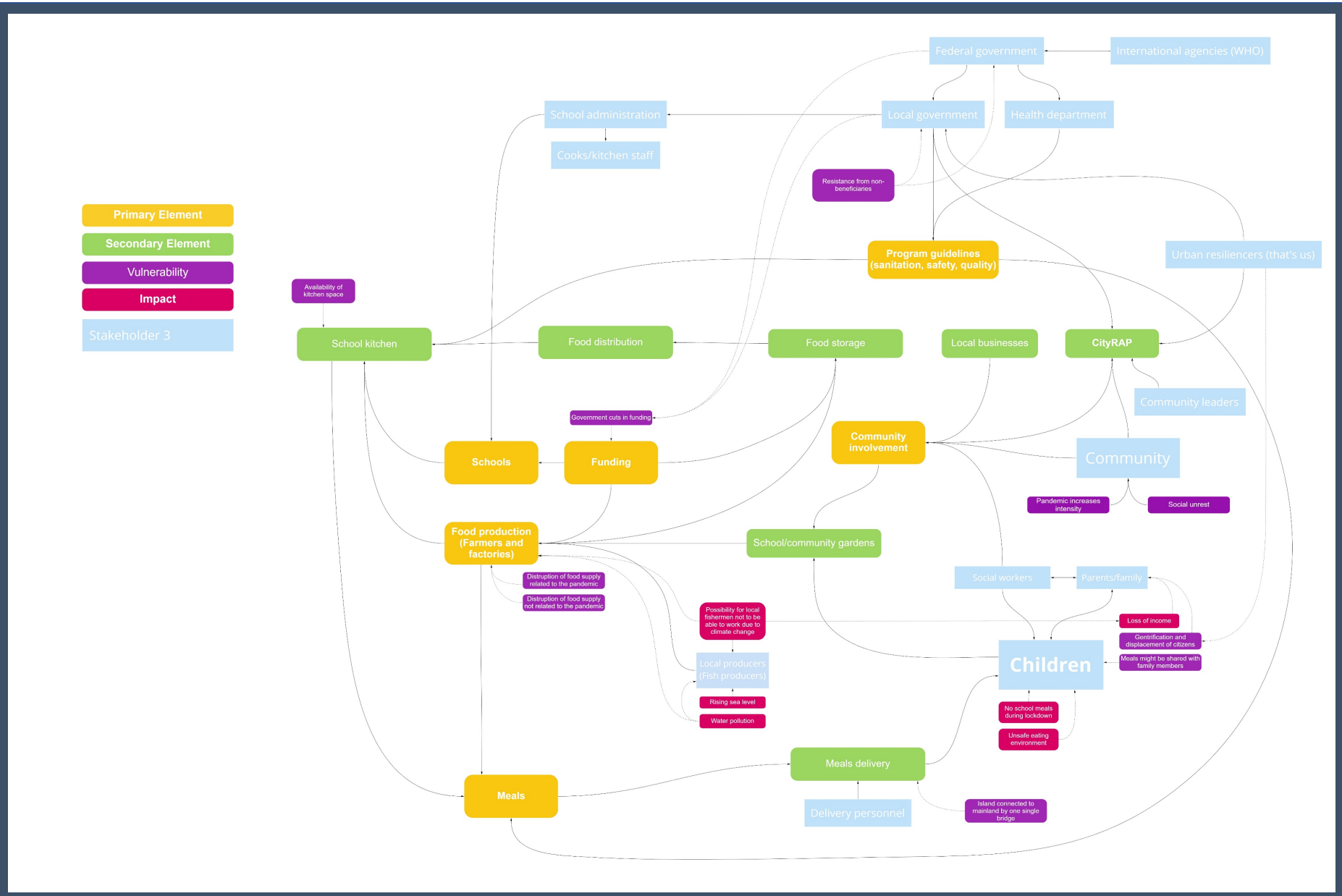
Challenge: Provision of healthy meals for school children during pandemic.

Development of federal programme that aims to provide regular healthy meals to school children during the pandemic. As response to COVID-19, schools are closed and pupils lose the benefit of recieving their regular daily meal.



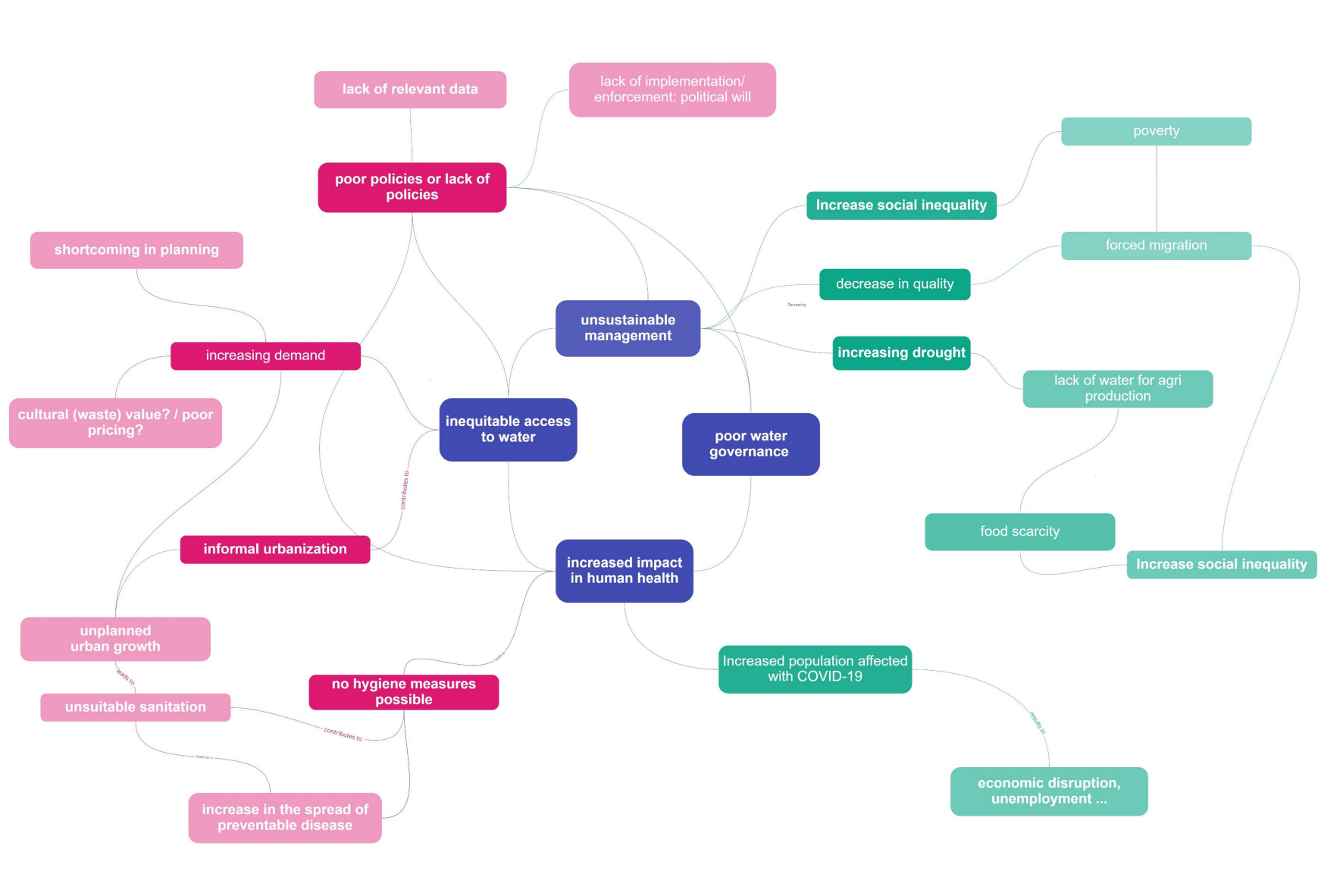
System maps

Challenge: Provision of healthy meals for school children during pandemic.



System maps

Challenge:
Poor water accessibility.



PART B EXERCISE

STEP 6
List actions to intervene for enhancing local resilience of your project

STEP 7
Define criteria for prioritization of the actions (e.g. finance, technical capacity including considerations on temporal and spatial scales).

STEP 8
Prioritize actions.

STEP 9
Outline co-benefits generated by the action.

STEP 10
Define capacity building needs for different stakeholders to implement the action.