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Effects of environmental  
degradation on public health and  
human rights in the Aral Sea  
region, Republic of Uzbekistan

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Astrid Knoblauch & Gulara Afandiyeva



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Context and background

# Uzbekistan



# Aral Sea area



Until 1960, 4<sup>th</sup> largest lake in the world







<10% of its original surface



## Environmental degradation

Heavy fertilizer and  
pesticide use



Depleting water body is  
exposing lake basin  
containing agrochemicals  
and natural salts



Winds carry these hundreds  
of kilometers

## Socio-political dynamics

Loss of livelihoods (esp.  
fishing), out-migration



Vulnerable population left  
behind



Karakalpalstan - semi-  
autonomous region



Frequent states of emergency



## Role of climate change

- Climate change increasingly affects the Aral Sea area
  - Global climate change
  - Microclimatic changes







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Assessment approach

## Assessment

- **Goal:** Assess health and human rights impacts of the environmental degradation in the Aral Sea region
- **Objectives:**
  - Quantify burden of disease and interaction with environment and climate change
  - Assess health staffing, infrastructure and equipment
  - Examine population access to health services
  - Propose investments to MoH and KfW Bank

## Approach

- Literature and data review
- Health facility assessment
- Interviews with health care providers
- Focus group discussions with community members





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Findings



## Disease profile

- **Steady increase of non-communicable diseases**

- Cardiovascular diseases (e.g. hypertension, ischemic heart disease, myocarditis infection)
- Respiratory diseases
- Gastrointestinal diseases
- Cancers (stomach, lung, breast)
- Congenital disorders
- Renal and liver disorders
- Mental health issues

→ Partly caused by inhalation and absorption of harmful substances

## Local perceptions

- Community members perceive these trends to be linked to widespread air, soil and water pollution, high salt content of drinking water, and the poor socio-economic situation of the population
- The social factors include unemployment, poverty and stress related to high levels of migration and dependency on remittances which have been severely disrupted by the pandemic

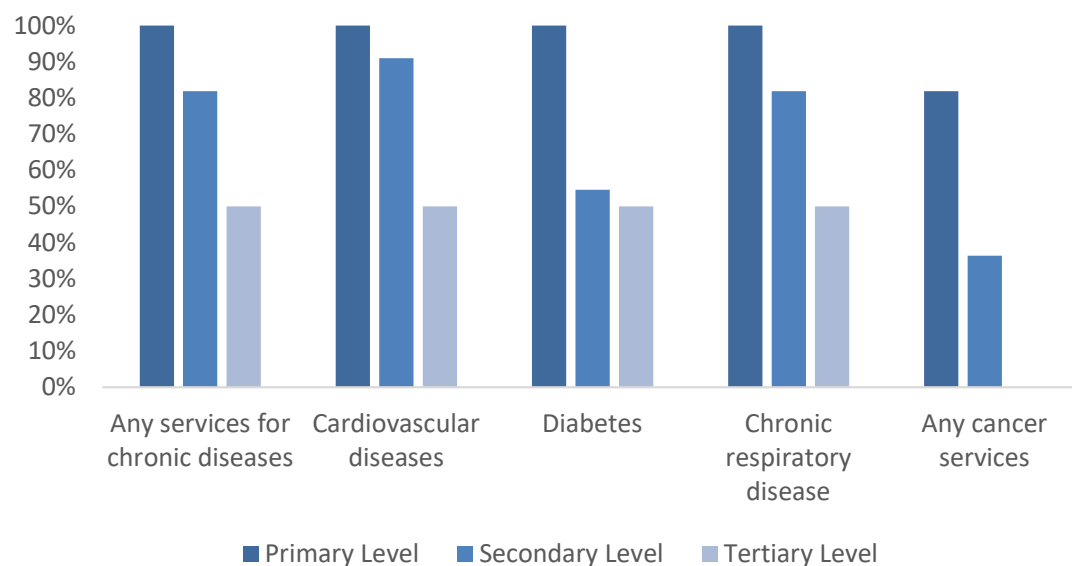
## Health infrastructure

Typical primary level healthcare facility in Republic of Karakalpakstan (Kazakdarya Family Medical Point, Muynok district)

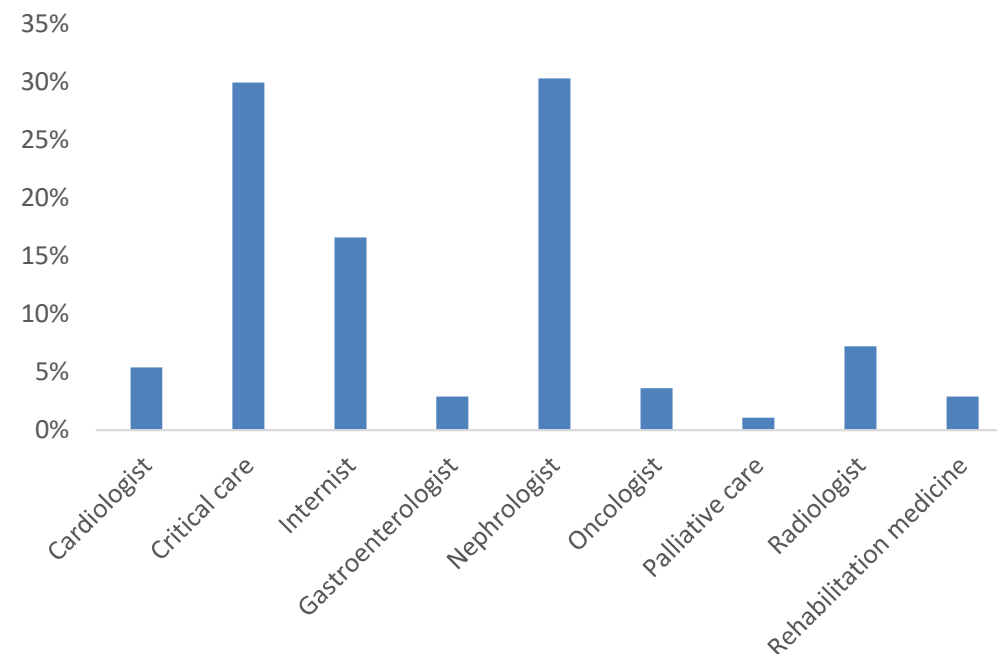


# Health infrastructure: medical services and health personnel

Karakalpakstan - NCD services



Karakalpakstan - specialist doctors



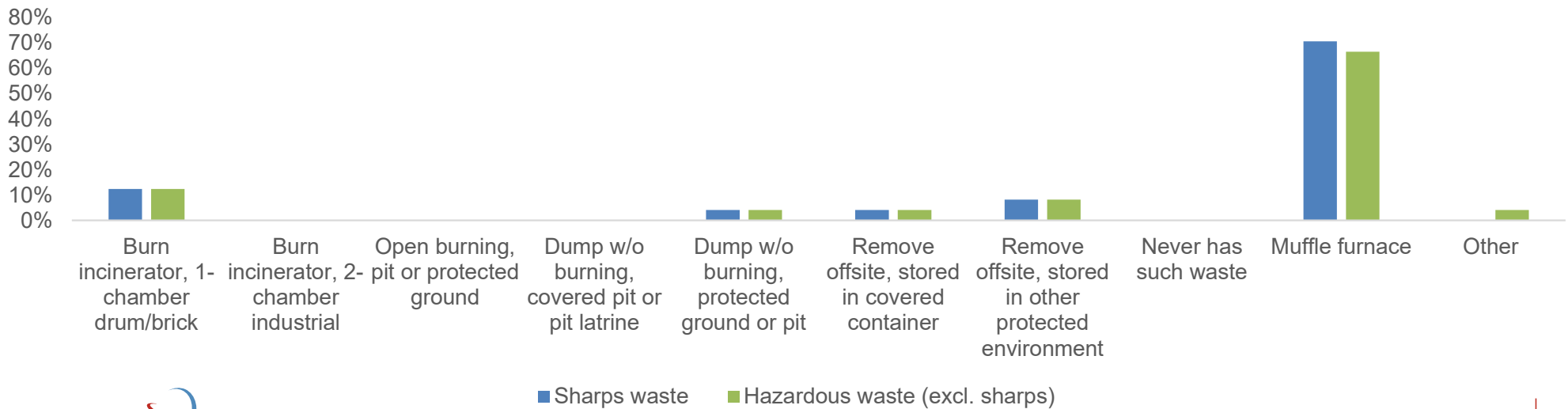


# Health infrastructure: water sources & waste management

Karakalpakstan - Water Source



Waste disposal: Karakalpakstan



# Health infrastructure

Typical waste disposal method in Aral sea region





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Conclusion and outlook

## Output of the assessment

In response to the environmental and societal (incl. health), the assessment recommended:

- Focus on NCDs
- Strengthening of specialized services on secondary and tertiary levels
- Focus on primary health care and integrated care
- Focus on human rights: making health care more accessible



## Conclusions

- Environmental degradation, climate change, economic hardship, social and political issues are all interlinked and represent a complex challenge for the Aral Sea region
- Access to health care – a human right – is not guaranteed
- Outlook: international efforts, reform processes and heavy international investments

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Thank you for your attention!

