
بسم الله الرحمن الرحیم
والعصر
ان الانسان لفی خسر
الا الذین آمنوا وعملوا الصالحات وتواصوا بالحق وتواصوا بالصبر

Disaster Management in Iran:
A review on policies, strategies and, plans

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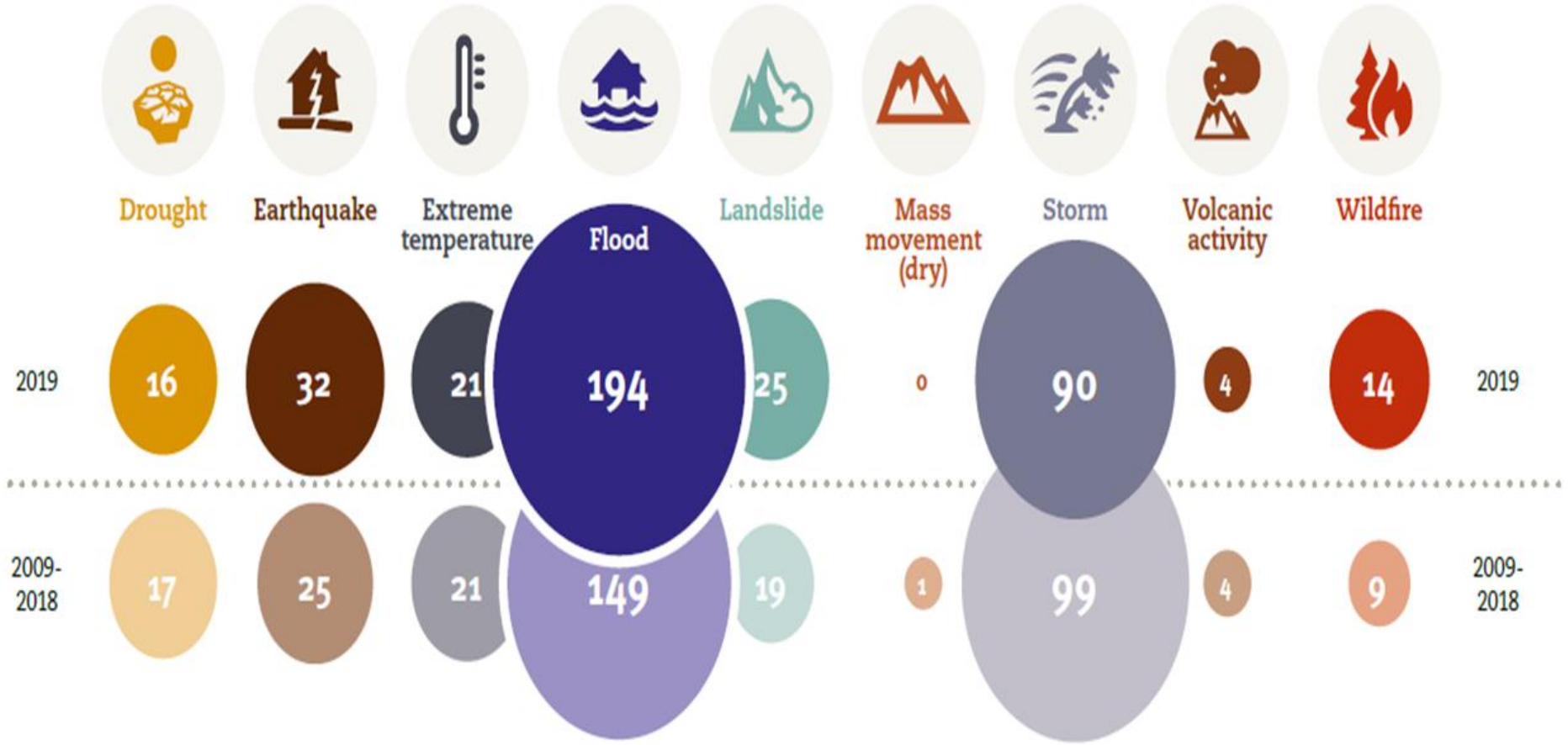
Number of disasters in the world in 2019

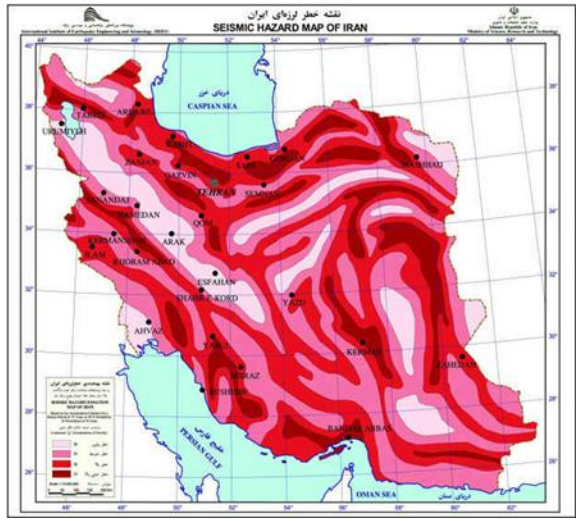


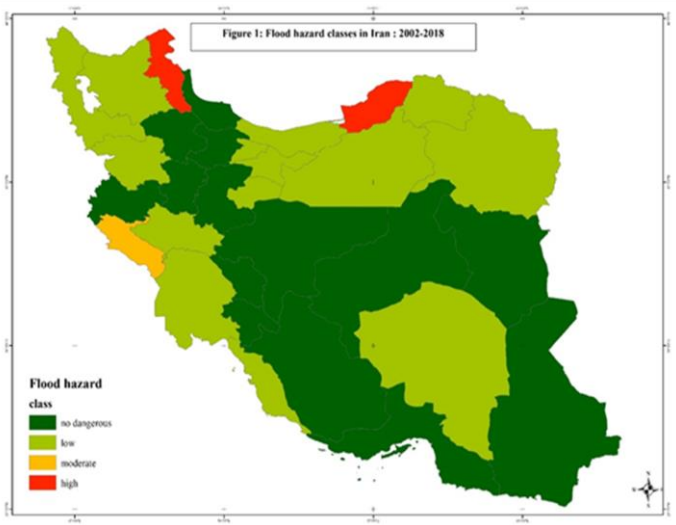
Major Disasters in the world in 2019

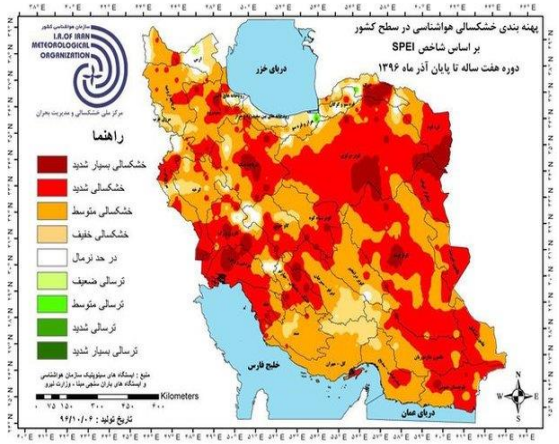
India	Cyclone Fani	20.0 million
Korea (the Democratic People's Republic of)	Drought	10.1 million
Iran (Islamic Republic of)	Flood	10.0 million
Zimbabwe	Drought	7.6 million
Pakistan	Drought	4.7 million

Islamic Republic of Iran

- The level of Risk: 8 out of 10
- The most common natural hazards:
  - Earthquake
  - Flood
  - Drought







Iran's Disaster Risk Policies

Issued in 2005

1. Improvement of education, awareness and safety culture among citizens and authorities to prepare for, and response to disasters especially earthquake, meteorological, and climatic disasters.

2. Development of disaster risk investigations and research centers.

3. Unified commanding for effective response to disasters focusing on Disaster Information Management Systems (DIMS)

Iran's Disaster Risk Policies

Issued in 2005

4. Development of comprehensive and evidence-based plans for recovery (reconstruction and rehabilitation).

5. Development of disaster risk transfer mechanism (National Disasters Found).

6. Prevention and mitigation of earthquake

- Land use
- Building codes

Iran's Disaster Risk Policies

Issued in 2005

7. Identification of climatic and meteorological phenomena via:

- Providing of national natural hazards atlas
- Implementing of national integrated monitoring and early warning systems by using advanced technologies

8. Development of national development plans based on climate adaptation approach in all levels

What we did

Teheran University of Medical Sciences

School of Public Health

A dissertation submitted as partial fulfillment of the requirements for Doctor of Philosophy (PhD) Degree in Health in disasters and emergencies

By: Arefeh Mousavi

Supervisors: Dr. Ali Ardalan, Dr. Amirhossein Takian

Consultants: Dr. Abbas Ostadtaghizadeh, Dr. Kazem Naddafi, Dr. Alireza Massah Bavani

Analysis for policy making for evidence-informed implementation of Paris agreement on climate change in health system of I.R.Iran

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BMC Public Health

RESEARCH ARTICLE Open Access

Health system plan for implementation of Paris agreement on climate change (COP 21): a qualitative study in Iran

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Abstract

Background: Ensuring public health is crucial in any policy debate on climate change. Paris Agreement on climate change is a global contract, through which countries have committed themselves to a public health treaty. The agreement has laid the foundation for mitigation and adaptation. This study was conducted to provide an evidence-based framework for policy-making in the health system of Iran in order to reduce the adverse effects of climate change on public health and to increase the adaptation of the health system as a result.

Methods: This is a qualitative study. We first used Delphi method to extract the components of Paris Agreement on climate change that were related to the functions and policymaking of health system in Iran. Twenty-three experts in health and climate change were identified purposefully and through snowball sampling as participants in Delphi. Data collection instrument was a structured questionnaire. We used SPSS software version 25 for data analysis based on the descriptive indices including the mean, the percentage of consensus above 75%, and the Kendall coordination coefficient.

Results: Seventy-nine components classified within nine categories were extracted. The most important examples of the implementation of Paris Agreement on climate change in the health system of Iran were: participation in the formulation of strategies for mitigation and adaptation, identifying vulnerable groups, assessing vulnerability, increasing the capacity of health services delivery during extreme events, using early warning systems, using new technologies to increase the adaptation, evaluation of interventions, financial support, increasing the number of researches, increasing the knowledge and skills of staff, and finally public awareness.

(Continued on next page)

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What we did

Measurement and experiences for sand and dust storm adaptation in Ahvaz

"A dissertation submitted as partial fulfillment of the requirements for Doctor of Philosophy (PhD) Degree"

In
Department of Health in Emergencies and Disasters

By
Shiva Salehi

Supervisor (s)
Dr.Ali Ardalan
Dr. Gholamreza Garmaroudi

Consultant(s)
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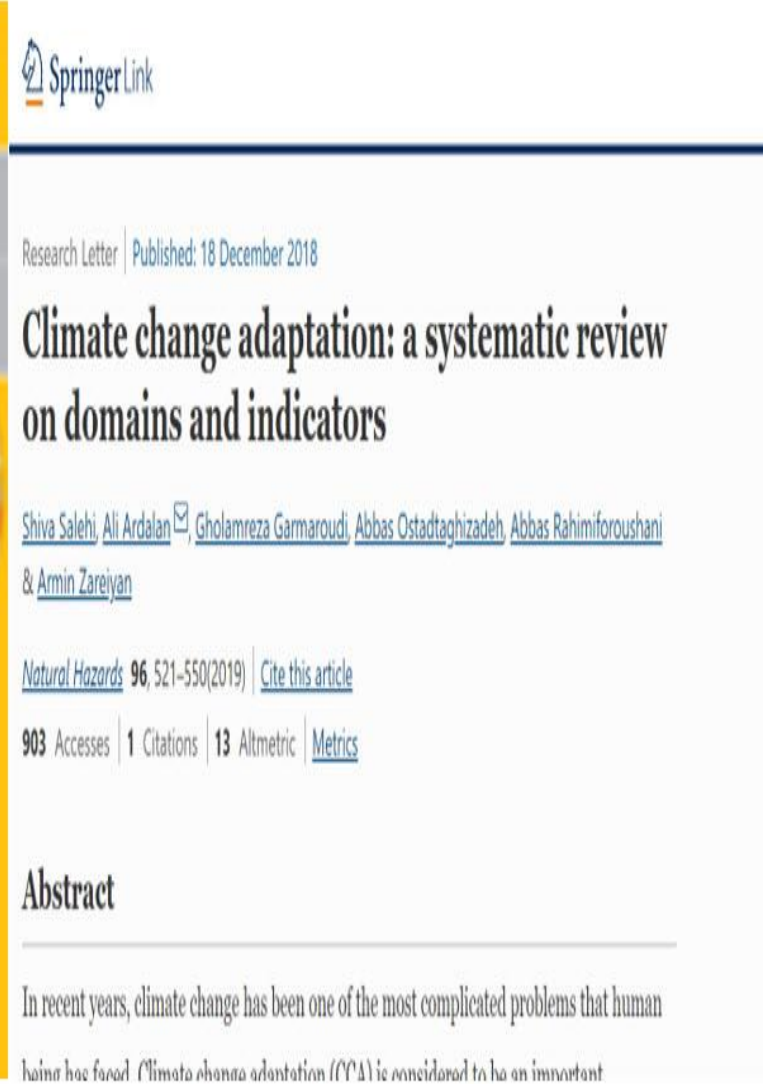
Dr. Armin Zareiyan
Dr. Abbas Rahimiforoushani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Climate change adaptation: a systematic review on domains and indicators

Shiva Salehi, Ali Ardalan, Gholamreza Garmaroudi, Abbas Ostadtaghizadeh, Abbas Rahimiforoushani & Armin Zareiyan

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Abstract

In recent years, climate change has been one of the most complicated problems that human


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RESEARCH ARTICLE

Conceptual definition and framework of climate change and dust storm adaptation: a qualitative study

Shiva Salehi[1,2], Ali Ardalan[1,2,3], Abbas Ostadtaghizadeh[1,2], Gholamreza Garmaroudi[4], Armin Zareiyan[5], Abbas Rahimiforoushani[6]

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Abstract

Climate Change Adaptation (CCA) is a complex, multi-disciplinary, and culture-dependent concept. This study aims to explore a conceptual definition, the subjective framework of CCA including its domains, attributes, and consequences. The approach of qualitative conventional content analysis was considered for the explanation of the subjective concept, and at the same time as the collection process, data analysis was performed using Zhang and Wildemuth's method. The interview method was semi-structured and sampling was targeted and with maximum diversity. The interview was conducted with 22 qualified experts. The accuracy and validity of the data were ensured using Guba and Lincoln scientific accuracy criteria. Six main categories including "sustainability, productivity, stability, empowerment, transformation, and flexibility" were conceptualized in the theme of adaptation characteristics. "Sustainable development, life improvement, response coordination and integration, creativity and innovation, resilience promotion, vulnerability reduction, effective management, and independence" were the main categories in the theme of the adaptation consequences. According to the results, the following conceptual-functional definition can be presented for adaptation to climate change: "CCA refers to the ability of system instability, sustainability, empowerment, productivity, flexibility, and transformation to climate change through the optimal use of resources, resistance, and coping, capacity building and opportunity creation". This definition is conceptual, it means that includes the main features of climate-adaptation and is also functional that is, includes adaptation strategies for climate change.

Keywords Adaptation · Conceptual framework · Climate change · Dust storm · Qualitative research

Introduction

Across the globe, climate change has been considered as one of the serious threats to sustainable development in various dimensions of health, economics, natural resources, infra-structure and food security [15, 39].

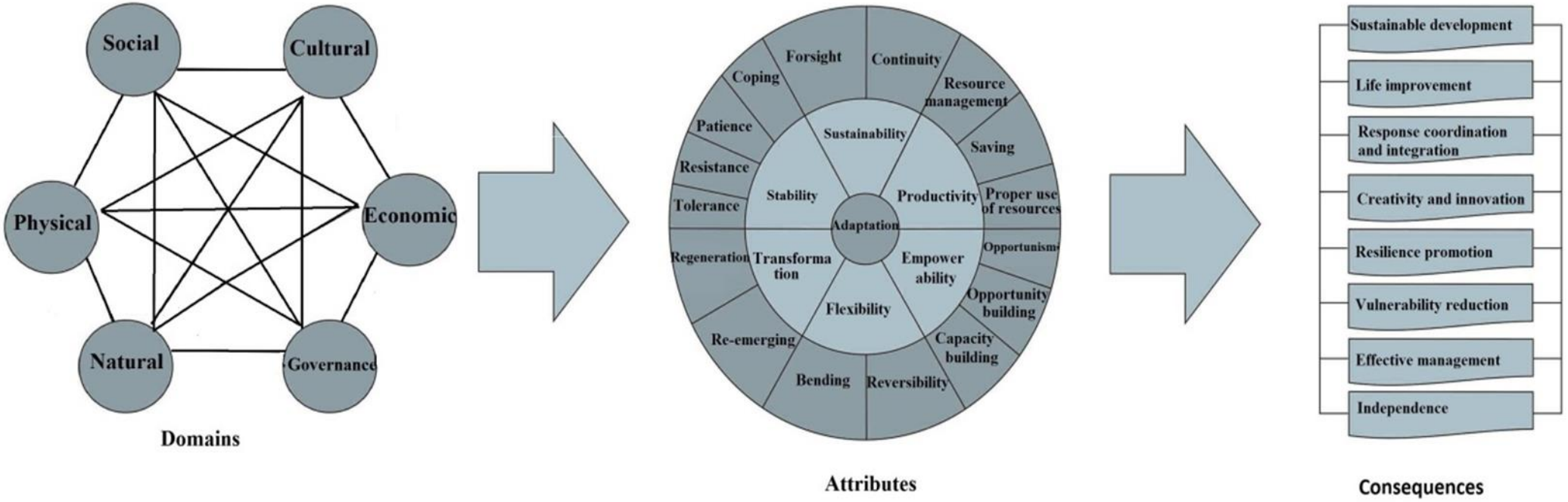
Over the past 20 years, natural hazards have been rising, among which the most important are the meteorological haz-ards and hydrological hazards [3].

In 2017, out of a total of 318 natural disasters and 122 affected countries, 9503 people were killed, 96 million affect-ed and 314 billion US $ economic damage was imposed and

Salehi, S., Ardalan, A., Ostadtaghizadeh, A., Garmaroudi, G., Zareiyan, A. and Rahimiforoushani, A., 2019. Conceptual definition and framework of climate change and dust storm adaptation: a qualitative study. *Journal of Environmental Health Science and Engineering*, *17*(2), pp.797-810.

Salehi, S., Ardalan, A., Garmaroudi, G., Ostadtaghizadeh, A., Rahimiforoushani, A. and Zareiyan, A., 2019. Climate change adaptation: a systematic review on domains and indicators. *Natural Hazards*, *96*(1), pp.521-550.

Adaptation conceptual framework



Sand and dust storm adaptation strategies

Sand and dust (S&D) adaptation strategies

» Strategy 1: Educational development

A: Developing and implementing a comprehensive plan of public education

B: Designing a public S&D early warning system

C: Developing of academic activities for S&D adaptation

» Strategy 2: public participation

A: Developing and organizing of NGO's networks

B: Developing local organizations and counsels

C: Developing community- based initiatives for S&D adaptation

» Strategy 3: Inter-sectorial coordination

A: Developing integrated S&D operational plans

B: Implementing of unified interventional systems

» Strategy 4: Institutional development

A: Capacity building in governmental structures

B: Developing of resilient and adaptive infrastructures

C: Developing and implementing an adaptive resource manage

D: Revising and approving adaptive rules and regulations

» Strategy 5: Environmental preservation:

A: Developing of using renewable energies

B: Using of land and soil stabilization mechanisms

S&D adaptation assessment matters

Development of an assessment tool for S&D adaptation in cities:

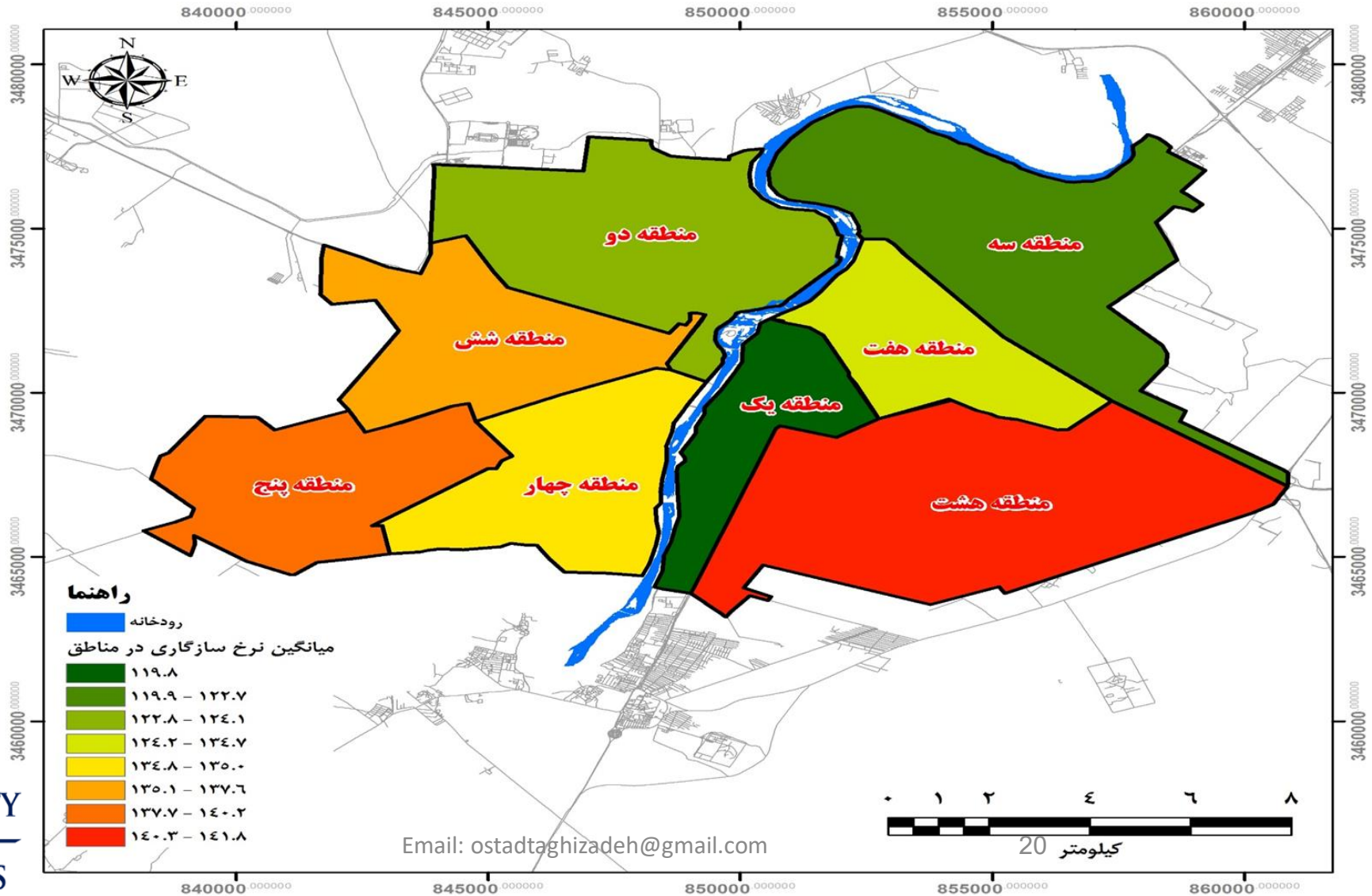
1. Optimistic capacity

2. Adjustment capacity

3. Coping capacity

4. Response capacity

The level of S&D adaptation in Ahvaz regions



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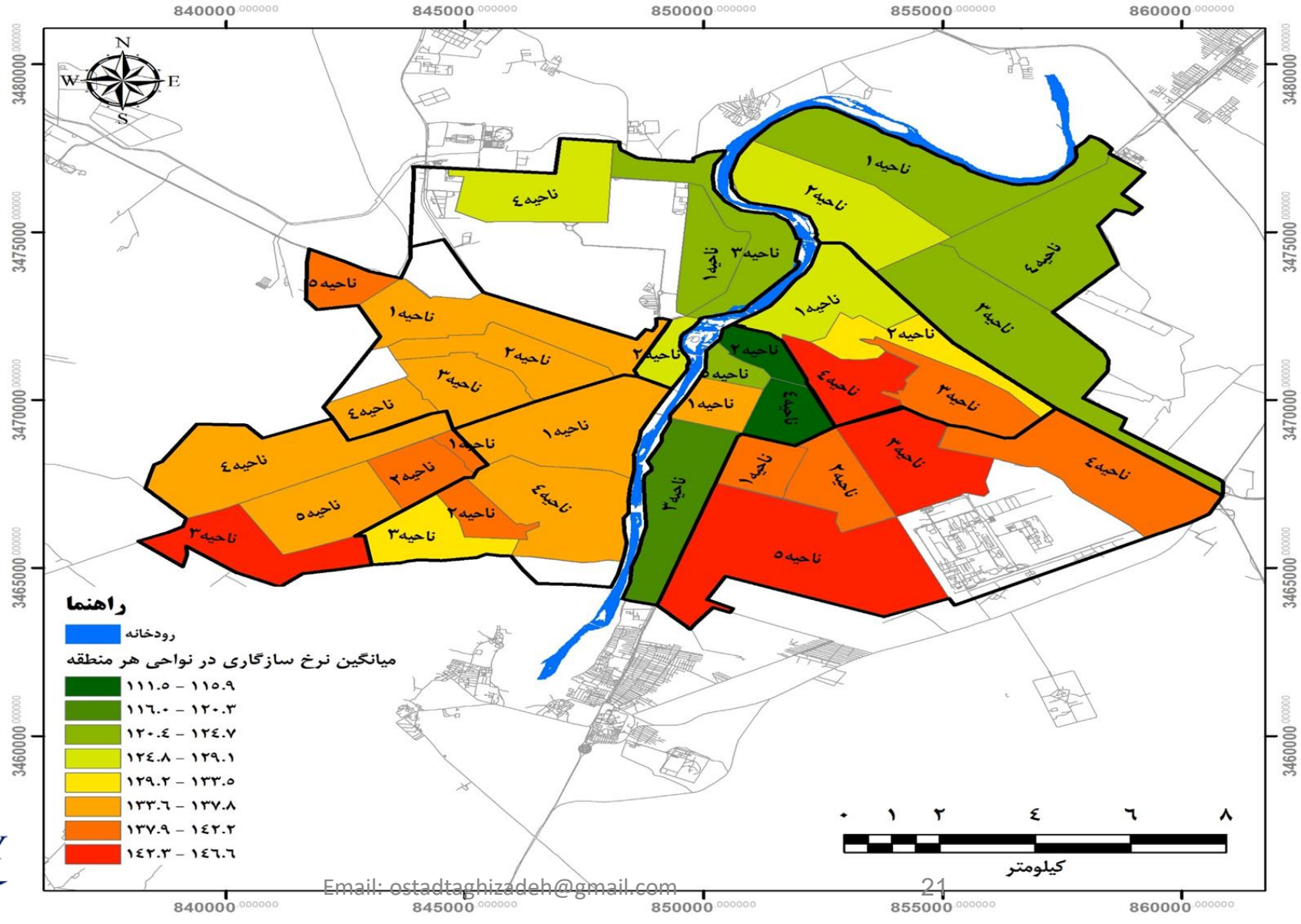
The level of S&D adaptation in Ahvaz districts



Challenges for implementation of COP 21 in Iran

- 1. Polarization of Climate change
- 2. Lack of climatic risk perception
- 3. Lack of evidence based decision making

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Thank you for your kind attention

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