The influence of collaborative emergency management on the community resilience in the case of emergency situations

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RSA Winter Conference 2018
15-16 Novembre 2018, London, UK

Dilemmas regarding emergency management

Conventional bureaucratic systems
- Routine tasks
- Rigid plans
- Exact decision protocols
- Formal relationships that assume uninterrupted communications

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Emergency, non-routine situations
- Situations are unclear and volatile
- Flexible decision making
- Capacity to assess and adapt rapidly
- Restore and enhance disrupted or inadequate communications

Dilemmas regarding emergency management

Centralized emergency policies ⟷ Decentralized emergency policies

Standard operating procedures, chain of command, formal rules ⟷ Pure collaboration networks whose members have developed common understanding
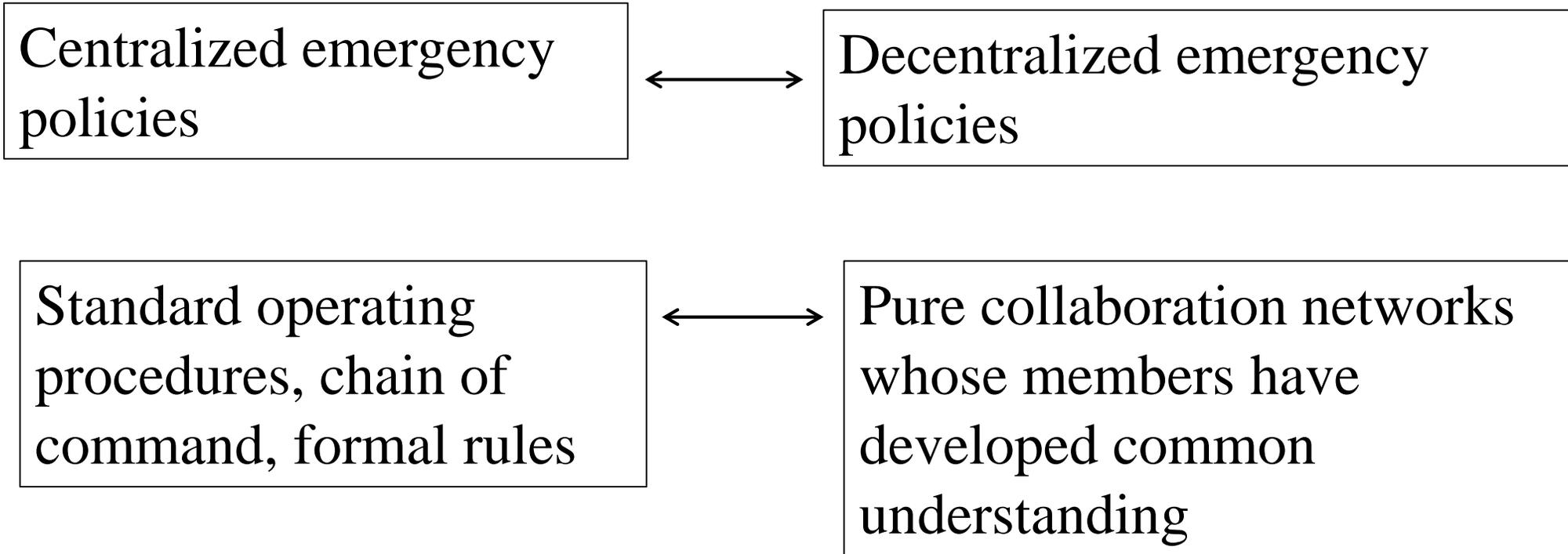
Paradigms for management of emergency situations

- **Surprise management theory** (Ali Farazmand, 2007)
- **Adaptive governance** – resilient organizations
  - Resilience – the ability to respond positively to exogenous shocks
  - Polycentric institutions – multiple governance units exist at multiple scales
  - Institutional entrepreneurship
- **Collaborative emergency management**
  - Integration of governmental, nongovernmental and private stakeholders
  - Trust, consensus
  - Horizontal and vertical communication and coordination
  - Information sharing
  - Disasters exceeds a single jurisdiction or entity's ability or resources
- **Network-based organizational system**
  - Network players have established roles

Methodology

- **Research goal**: to analyze the extent of collaborations for the cases of emergency management in Romania and their influence on the level of community resilience

- research was conducted between September and November 2016

- 567 questionnaires were sent by mail to City Halls (mayors or persons responsible with emergency situations)

- the sample of City Halls is representative at the country level

- response rate: 49% (278 questionnaires received back)

- respondents were asked to rate on a 5-point Likert scale different aspects concerning emergency situations (natural disasters, major accidents, terrorist attacks, etc.): frequency, intensity, causes, and impact on communities of emergency situations, the measures and strategies adopted to combat disasters, collaboration with different institutions for preparing for emergency situations, and about the opinion on the involvement of citizens before, during and after a major hazard event

Findings

- Collaboration is rather with institutions from **county level**

- Collaboration is rather influenced by **formal rules and established plans and responsibilities**

		No. of instit.	Percentage
1	County Inspectorate for Emergency Situations	240	98%
2	Police	225	92%
3	Prefect	220	90%
4	Schools	206	84%
5	County Committees for Emergency Situations	172	73%
6	Hospitals	178	73%
7	City Halls of neighboring communities	160	65%
8	Gendarmerie	134	55%
9	Emergency Rescue Service	134	55%
10	De-concentrated institutions	89	36%
11	Red Cross	66	27%
12	Army	53	22%
13	NGOs from inside the community	26	10%
14	Salvamont (Rescue Service for Mountainous Areas)	23	9%
15	NGOs from outside the community	16	7%
16	National Committee for Emergency Situations	15	6%
17	Ministerial Committees for Emergency Situations	5	2%

Findings

- Collaboration consists in training the population, identifying risk situations, drafting plans, sending warnings, rather than in investing in infrastructure

	Types of collaborative activities to prevent emergency situations that are run with other institutions	No. of institutions	Percentage out of total institutions investigated
1	Educate pupils about the risk situations that may exist in the locality	218	89%
2	Identification and analysis of risk situations	210	86%
3	Preparing members of the Local Emergency Committee to intervene in an emergency	209	85%
4	Perform simulations to prepare the population for risk situations	203	84%
5	Warnings about the possibility of an emergency situation	196	80%
6	Drafting plans for the management of emergency situations	188	77%
7	Making investments in infrastructure to prevent the occurrence of an emergency situation	106	43%
8	Carrying out projects to increase the capacity of the community to deal with an emergency situation	66	27%

Findings

- Average no. of institutions with which an institution collaborates is 8.
- Smaller communities collaborate with less institutions (approx. 7) comparatively with larger communities (approx. 11)
- No. significant correlation was found between the number of collaborators and the perception of the risks existing in the community
- However, a weak correlation was found between the number of collaborators and the perception on how prepared a community is to face emergency situations (correlation 0.268, $p < 0.01$)
- Weak correlation exists between the number of collaborators and the perception on how prepared are the members of the Local Volunteer Emergency Units (correlation coefficient 0.158, $p < 0.05$)
  - Weak correlation with the perception on whether the community has the material and technical means to intervene in case of emergency situations (correlation is 0.243, $p < 0.01$)

Findings

- Weak correlation exists between the number of collaborators and the perception on the level of community resilience (correlation coefficient 0.158, $p < 0.05$)

- Weak correlation between the number of activities performed through collaboration and the perception on community resilience (0.213, $p < 0.01$)

- The larger the number of activities on which communities collaborate with other institutions, the higher is the perception that the community is prepared to different risks (correlation coefficient 0.275, $p < 0.01$)

Conclusions

- The more a community collaborates with other institutions on more preparation activities, the higher the level of community resilience in cases of emergency situations

- Smaller communities tend to collaborate less, and therefore

- Collaborative initiatives should be encouraged in order to build trust and create channels of communication

- Enlarging the number of organizations that are involved in collaborative efforts for disaster mitigation

Thank you!

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