Chernobyl Exclusion Zone from a network governance perspective: Organizational actors, networks, and communication

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Mapping the bureaucratic hierarchy and position titles

Sta	te Management Organizations					
	Ministry of Ecology & Natural Resources					
	State Agency of Ukraine on Exclusion Zone Management					
1	State Specialized Enterprise – Pivnichna Pushcha	16				
	Chief forest district ranger					
	Chief forest district ranger					
	Chief forest district ranger					
	Chief forest district ranger of Kotovske forestry					
	Chief of Denysovska forest fire station					
	Chief of Lubyanka forest fire station					
	Chief of Opachyvska forest fire station					
	Chief of Paryshiv forest fire station					
	Deputy chief forest fire station					
	Deputy chief forest fire station					
	Deputy head of Fire Department					
	Deputy chief of Lubyanka forest fire station					
	Deputy chief of Parishivske forest fire station					
	Engineer of safety, radiation and fire safety					
	Fire Prevention Officer					
	Head of safety and protection of forests and rapid response					
2	Sector for Civil Protection and Techno Security	3				
	Head forest and land manager					
	Head of department of safety and fire protection					
	Senior Engineer					
	Ministry of Agrarian Policy & Food					
3	State Forest Resources Agency					
	Deputy head of security and protection of forests					
	Chief Specialist of safety and protection of forests					
4	State Nuclear Regulatory Inspectorate					
	Compliance officer with radiation safety and emergency preparedness and response					
	Ministry of Interior of Ukraine					

State Emergency Services 2 Chief specialist of the Department of Fire & Rescue Deputy Head of the Department of Fire & Rescue Chief specialist of the Department of Fire & Rescue Chief						
Deputy Head of the Department of Fire & Rescue Main Directorate of DSNS Kyiv Assistant Chief Assistant shift captain Chief Deputy Brigade Commander Head of Unit Deputy Brigade Commander Head of liaison office Scientific, Monitoring, & Academic Institutions Regional Eastern European Fire Monitoring Center State Ecological Academy Professor Ukrainian Scientific Research Institute of Civil Protection Research Officer	5		Sta	ate Emergency Services	2	
6 Main Directorate of DSNS Kyiv 7 Assistant Chief Assistant shift captain Chief Deputy Chief Head of Coordination Centre Head of Unit Deputy Brigade Commander Head of liaison office Scientific, Monitoring, & Academic Institutions 8 Regional Eastern European Fire Monitoring Center Director Researcher Researcher and Professor 9 State Ecological Academy 1 Professor 10 Ukrainian Scientific Research Institute of Civil Protection 1 Research Officer				Chief specialist of the Department of Fire & Rescue		
Assistant Chief Assistant shift captain Chief Deputy Chief Deputy Chief of Coordination Centre Head of Coordination Center 7 12-DPRZ of Chernobyl 3 Head of unit Deputy Brigade Commander Head of liaison office Scientific, Monitoring, & Academic Institutions 8 Regional Eastern European Fire Monitoring Center 3 Director Researcher Researcher and Professor 9 State Ecological Academy 1 Professor 10 Ukrainian Scientific Research Institute of Civil Protection 1 Research Officer			Deputy Head of the Department of Fire & Rescue			
Assistant shift captain Chief Deputy Chief Deputy Chief Deputy Chief of Coordination Centre Head of Coordination Center 7 12-DPRZ of Chernobyl 3 Head of unit Deputy Brigade Commander Head of liaison office Scientific, Monitoring, & Academic Institutions 8 Regional Eastern European Fire Monitoring Center 3 Director Researcher Researcher and Professor 9 State Ecological Academy 1 Professor 10 Ukrainian Scientific Research Institute of Civil Protection 1 Research Officer	6		Main Directorate of DSNS Kyiv			
Chief Deputy Chief Deputy Chief Deputy Chief of Coordination Centre Head of Coordination Center 7 12-DPRZ of Chernobyl 3 Head of unit Deputy Brigade Commander Head of liaison office Scientific, Monitoring, & Academic Institutions 8 Regional Eastern European Fire Monitoring Center 3 Director Researcher Researcher and Professor 9 State Ecological Academy 1 Professor 10 Ukrainian Scientific Research Institute of Civil Protection 1 Research Officer				Assistant Chief		
Deputy Chief Deputy Chief of Coordination Centre Head of Coordination Center 7 12-DPRZ of Chernobyl 3 Head of unit Deputy Brigade Commander Head of liaison office Scientific, Monitoring, & Academic Institutions 8 Regional Eastern European Fire Monitoring Center 3 Director Researcher Researcher and Professor 9 State Ecological Academy 1 Professor 10 Ukrainian Scientific Research Institute of Civil Protection 1 Research Officer				Assistant shift captain		
Deputy Chief Deputy Chief of Coordination Centre Head of Coordination Center 12-DPRZ of Chernobyl 3 Head of unit Deputy Brigade Commander Head of liaison office Scientific, Monitoring, & Academic Institutions Regional Eastern European Fire Monitoring Center Director Researcher Researcher and Professor State Ecological Academy 1 Professor Ukrainian Scientific Research Institute of Civil Protection Research Officer				Chief		
Deputy Chief of Coordination Centre Head of Coordination Center 7				Deputy Chief		
Head of Coordination Center 7				Deputy Chief		
7				Deputy Chief of Coordination Centre		
Head of unit Deputy Brigade Commander Head of liaison office Scientific, Monitoring, & Academic Institutions Regional Eastern European Fire Monitoring Center Director Researcher Researcher and Professor State Ecological Academy Professor Ukrainian Scientific Research Institute of Civil Protection Research Officer				Head of Coordination Center		
Deputy Brigade Commander Head of liaison office Scientific, Monitoring, & Academic Institutions Regional Eastern European Fire Monitoring Center Director Researcher Researcher and Professor State Ecological Academy Professor Ukrainian Scientific Research Institute of Civil Protection Research Officer	7			12-DPRZ of Chernobyl	3	
Head of liaison office Scientific, Monitoring, & Academic Institutions Regional Eastern European Fire Monitoring Center Director Researcher Researcher and Professor State Ecological Academy Professor Ukrainian Scientific Research Institute of Civil Protection Research Officer				Head of unit		
Scientific, Monitoring, & Academic Institutions 8 Regional Eastern European Fire Monitoring Center Director Researcher Researcher and Professor 9 State Ecological Academy 1 Professor 10 Ukrainian Scientific Research Institute of Civil Protection 1 Research Officer				Deputy Brigade Commander		
8 Regional Eastern European Fire Monitoring Center Director Researcher Researcher and Professor 9 State Ecological Academy 1 Professor 10 Ukrainian Scientific Research Institute of Civil Protection 1 Research Officer				Head of liaison office		
Director Researcher Researcher and Professor 9 State Ecological Academy 1 Professor 10 Ukrainian Scientific Research Institute of Civil Protection 1 Research Officer	Scie	entific	c, N	fonitoring, & Academic Institutions		
Researcher Researcher and Professor 9 State Ecological Academy 1 Professor 10 Ukrainian Scientific Research Institute of Civil Protection 1 Research Officer	8					
Researcher and Professor 9 State Ecological Academy 1 Professor 10 Ukrainian Scientific Research Institute of Civil Protection 1 Research Officer		Director				
9 State Ecological Academy 1 Professor 10 Ukrainian Scientific Research Institute of Civil Protection 1 Research Officer		Researcher				
Professor 10 Ukrainian Scientific Research Institute of Civil Protection Research Officer		Researcher and Professor				
10 Ukrainian Scientific Research Institute of Civil Protection 1 Research Officer	9	State Ecological Academy				
Research Officer		Pro	fes	sor		
	10	Ukrainian Scientific Research Institute of Civil Protection			1	
		Research Officer				
Total Interviews 39				Total Interviews	39	

Role in CEZ wildfire management

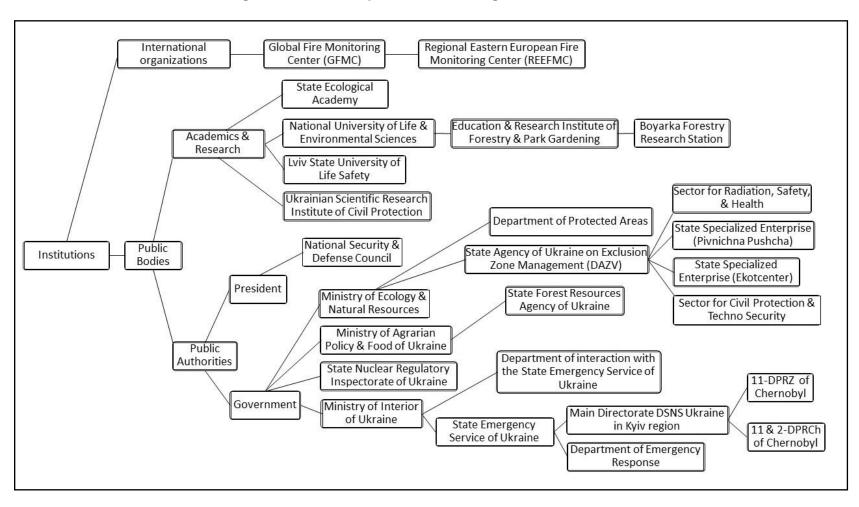
A. Primary Role in CEZ wildfire	Number of		Number	
management	Respondents	Percentage	Organizations	Percentage
Pre-fire Preparation	9	23%		
Fire Prevention	4	10%	2	20%
Incident Management and Response	16	41%	3	30%
Radiation Exposure Reduction	1	3%		
Research and/or Monitoring	5	13%	1	10%
Other	4	10%		
Mixed*			4	40%
Total	39	100%	10	100%

Organizations			
The Ukrainian Scientific Research Institute of			
Civil Protection the State Ecological Academy			
Main Directorate of DSNS Kyiv			
State Emergency Services			
State Nuclear Regulatory Inspectorate			
Regional Eastern European Fire Monitoring Center			
State Specialized Enterprise – Pivnichna Pushcha			
Sector for Civil Protection and Techno Security			
State Forest Resources Agency			
12-DPRZ of Chernobyl			

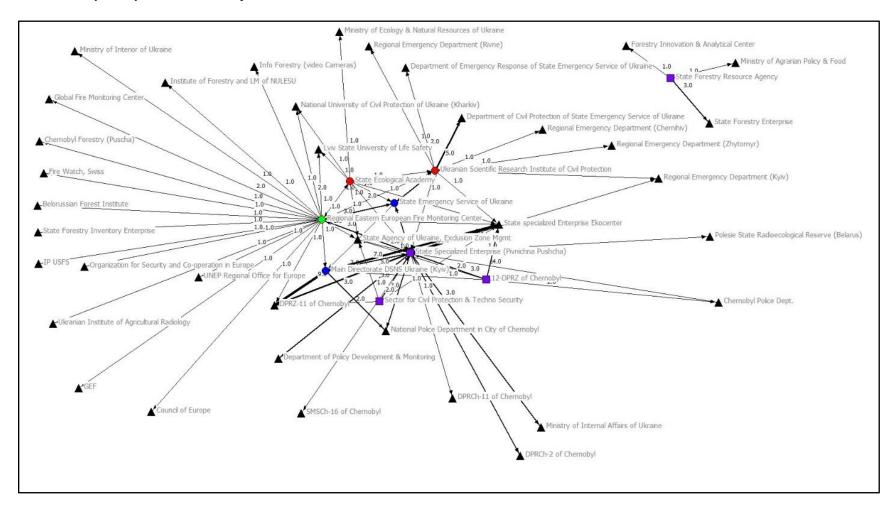
- Head of Fire Department of State Specialized Enterprise Pivnichna Pushcha
- Chief of forest fire station (PP, Chernobyl Forestry)
- Chief of fire management service (PP, Chernobyl Forestry)
- Chief forest district ranger (PP, Chernobyl Forestry)
- Chief of DSNS in Kyiv region
- Deputy Chief of DSNS in Kyiv region
- Director Department of Emergency Response, State Emergency Service
- Brigade Commander, 12-DPRZ of Chernobyl
- Deputy Brigade Commander, 12-DPRZ of Chernobyl

Networks of CEZ organizations

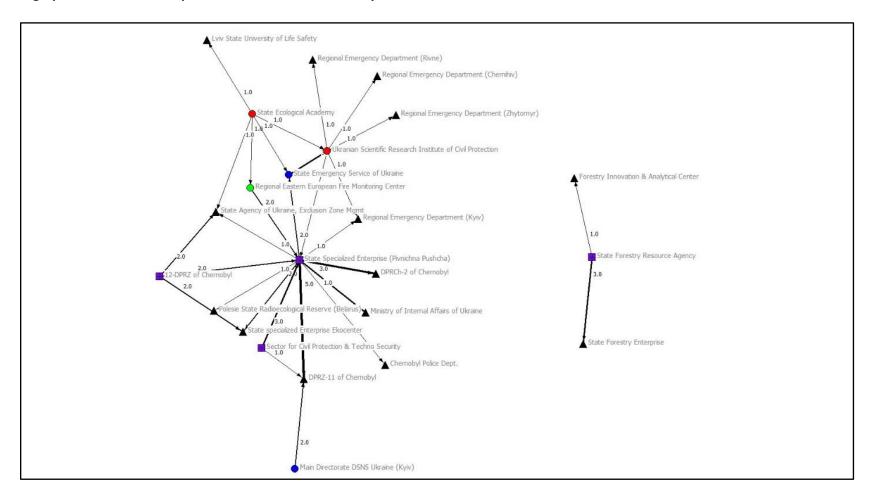
Organizational chart of organizations working on wildfire and radiation risk in the Chernobyl Exclusion Zone as illustrated by experts within the US Forest Service and Regional Eastern European Fire Monitoring Center.



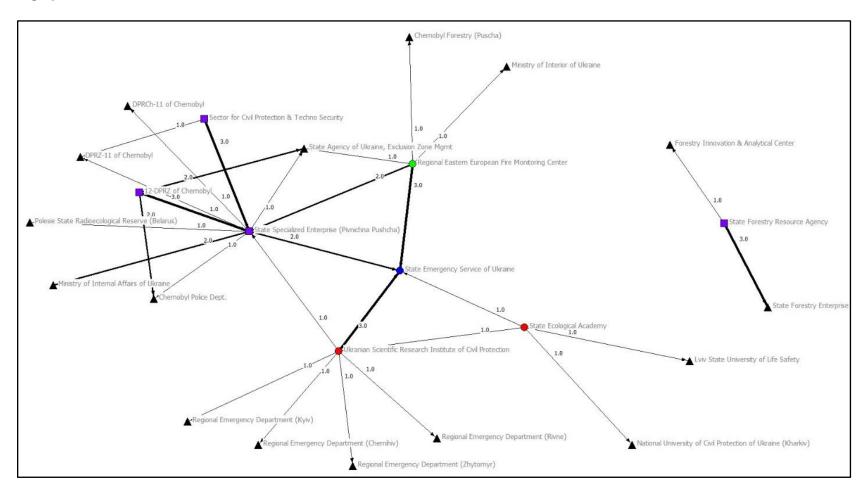
Digraph of the organizational network: (1) red indicates fire prevention, (2) blue indicates incident management and response, (3) green indicates research and monitoring, (4) purple indicates mixed responsibilities, and (5) black identifies that respondents identified but that did not participate in the survey.



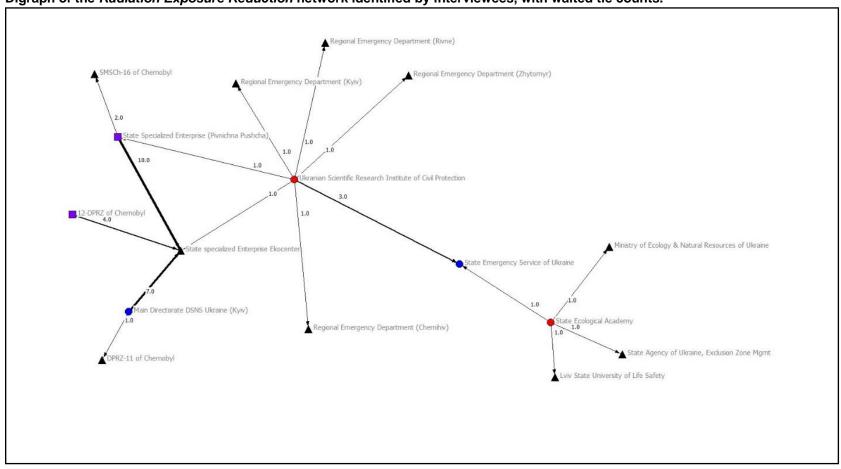
Digraph of the Pre-Fire Preparation network i identified by interviewees, with waited tie



Digraph of the Fire Prevention network



Digraph of the Radiation Exposure Reduction network identified by interviewees, with waited tie counts.



Room for improvement available

