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ASSESSMENT OF THE SOCIAL IMPACT OF FLOODING IN ALBANIA



Project No./Ref.:

00095774

IPA/2015/365-399

Tirana, April 2016

Disclaimer:

This Study was carried out in the framework of the Flood Protection Infrastructure Project; an EU-UNDP-funded project. The project is implemented by United Nations Development Programme (UNDP) Country Office in Albania. The findings and conclusions in this report are those of the authors and do not necessarily represent the views of EU or UNDP.

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ABBREVIATIONS AND ACRONYMS

EU	European Union
FPIP	Flood Protection Infrastructure Project
GDCE	General Directorate of Civil Emergencies
IGEWE	Institute of Geosciences, Energy, Water and Environment
LGU	Local Government Unit
MMS	Military Meteorological Service
PDNA	Post Disaster Needs Assessment
UNDP	United Nations Development Programme

EXECUTIVE SUMMARY

The purpose of this Study is to understand the social impacts of February 2015 flooding that hit southwestern Albania. The assessment is construed as a capacity building exercise, and will interest in particular the flood affected regions of Vlora, Gjirokastra and Berat, where also physical interventions of Flood Protection Infrastructure Project were implemented. The goal is to better connect people, communities and their local authorities by highlighting social aspects of vulnerability to floods, which in turn can instrumental to development of policies to reduce vulnerability and increase resilience towards floods.

The sources of information for this assessment were the affected communities themselves. They were questioned on how floods impacted them, their families, and their community. In addition to a wide range of closed questions, many open questions were asked during interviews to better understand the current state of impact of flooding on communities. Thematic analysis was then conducted to identify the most recurring issues that summarize the views collected under each theme.

The assessment is organized as follows: Section 3 gives an overview of the socio-demographic profile of the affected areas. Section 4 deals with the social impact of flooding by giving an account of households' flood experience, effects on income, perceptions and expectations. Section 5 considers the capacities and needs of Local authorities for dealing with floods. Section 6 analyzes the findings and provides set recommendations on how to plan and act more effectively, in order to reduce human suffering in subsequent floods.

1 – METHODOLOGY OF THE ASSESSMENT

The assessment was conducted using qualitative methodology. The primary data used was collected through structured interviews, designed to elicit the social and economic impacts of the flood on individuals and families. Given the lack of disaggregated data on the most vulnerable groups to disasters, both at national and local level, as well as limited resources available, the identification of households to be interviewed (sampling) was based on key vulnerability drivers: households with minors under 15 years, elderly above 60+, female-headed, living at the proximity of the river, disabled persons, poor, etc. To ensure maximum variation of the sample, households were selected to reflect various combinations of the above variables. Households were interviewed only if they had been affected by the February 2015 floods (through pre-screening), and only if they voluntarily agreed to participate.

The *household interviews* were structured into four sections:

- About you and your household (information on household, housing tenure, household income)
- Impact of flood in household income.
- Experiencing floods (flood warning, individual response to flood , support network , psycho-physical impact)
- Flood risk awareness and measures to be taken to reduce their impact.

Focus group participants were recruited from the household interviews. Focus groups were held with residents being invited to each venue to explore their:

- General attitudes towards flooding and flood risk (the balance of responsibility for mitigating flood losses , individual's attitudes to flood insurance etc)
- Opinions and experiences of flood prevention and flood warning schemes

Semi-structured interviews were organized with institutional stakeholders with both open-ended and close questions in order to collect as much data on:

- Communication and first response to floods
- Identification of risks and preparedness

These issues were discussed then with practitioners at local level and confronted with the information and perceptions collected from interviews with the community.

2 - BACKGROUND INFORMATION

Continuous rainfall that began on January 31, 2015 and lasted a week, led to unprecedented river levels in the southwest Albania. In addition to the above average high rainfall intensity, the fast melting of snow, accumulated in the days before in neighboring Greece, exacerbated the severity of the floods. The flood affected mainly areas along the streams of the Vjosa, Drino, Osumi and Gjanica rivers, with the most serious situation in Vlora and Fieri regions. In a final account, a total of 9 regions and 53 local government jurisdictions (as per the administrative division prior to the June 2015 local elections) were affected by the flood at various extents.

The total number of people affected in all the flooded areas was: in Vlora 15,800, Fier 20,000, Berat, Elbasan, and Gjirokaster in total 6,100 people respectively.

- 850 families have been evacuated.
- Around 2,000 houses were surrounded by water, most of them flooded and seriously damaged: in the areas of Vlore 750 houses, in Fier 720, in Berat 180, in Elbasan 260 and in Gjirokaster 90 houses.
- Around 3,500 heads of livestock killed; around 6,000 animals have been evacuated.
- An area of 17,000 acres of farm land was flooded: in the areas of Vlora 8,000 acres, Fier 7,000 acres, Berat 1,000 acres, Elbasan 600 acres, Gjirokastra 400 acres.

Residents hit by flooding faced damages and losses, even this day continues to suffer the social consequences of the floods of February 2015. A good part of them have not have not received any economical assistance, while seasonal rains remind them the anxiety and fear for the loss of property, livestock or destruction of homes.

The Government, with EU, UN and WB support, embarked on a damage and loss assessment which followed the structure of a simplified post-disaster needs assessment (PDNA). Not intended to be an extensive PDNA, it was proposed to undertake a rapid assessment, covering all relevant sectors and inter-sector linkages, identifying needs in order to reorient, mobilize and budget the appropriate resources and propose appropriate interventions and tackle not only the emerging needs but the underlying factors that, in addition to the severity of the climatic event, caused the unusual level of impact.

Among others, the PDNA noted that *“the impact on affected individual households that have lost livelihoods is rather high ... [and] ... one can foresee an increased vulnerability and a reduced resilience of the households in the short and medium term”*. Indeed, the assessment itself did not delve deep on the less tangible social aspects and impact of floods on the quality of life and community safety. For that purpose, through its second Component, the FPIP project undertook this social impact assessment the February 2015 floods on the most vulnerable groups.

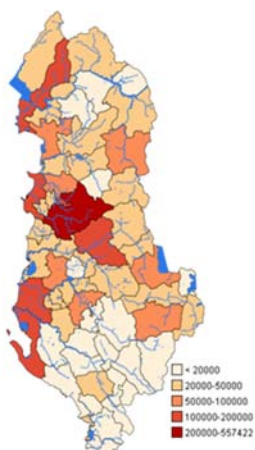
3 – THE SOCIO-DEMOGRAPHIC PROFILE OF FLOODED AREAS

This section provides key data on the demography, major economic activities, employment, and vulnerabilities in the flood-affected areas located in the prefectures of Vlorë, Gjirokastra and Berat.

Demography

In January 1, 2015, Albania's population was 2,89 million. The population has declined by 4,2% since 2005, as shown in Table 1.1 below. The overall population decline in Albania is attributed to continued emigration abroad and decline in birth rates (8% since 2005).

Population per admin reg. & Hydro. network



In addition to a trend of emigration, the total population has declined in all cities since 2005 with the exception of Tirana and Durrës – the capital and the second largest city respectively- which would indicate that a rural to urban migration has occurred during the last decade. The population of all three regions Vlorë, Gjirokastra and Berat has declined by 5%, 28% and 19% respectively.

Prefectures	Total population			Males			Females		
	2005	2015	% Change	2005	2015	% Change	2005	2015	% Change
Berat	176,994	142,679	-19.39	89,321	72,503	-18.83	87,673	70,176	-19.96
Dibër	172,590	136,476	-20.92	87,067	70,419	-19.12	85,523	66,057	-22.76
Durrës	254,243	276,191	8.63	126,033	140,208	11.25	128,210	135,983	6.06
Elbasan	339,461	301,397	-11.21	171,775	153,389	-10.70	167,686	148,008	-11.74
Fier	362,086	315,012	-13.00	181,814	160,663	-11.63	180,272	154,349	-14.38
Gjirokastrë	100,179	72,201	-27.93	50,429	36,756	-27.11	49,750	35,445	-28.75
Korçë	251,918	224,165	-11.02	126,759	114,279	-9.85	125,159	109,886	-12.20
Kukës	103,173	85,461	-17.17	51,673	43,521	-15.78	51,500	41,940	-18.56
Lezhë	152,360	136,814	-10.20	75,267	69,281	-7.95	77,093	67,533	-12.40
Shkodër	245,800	218,523	-11.10	121,179	109,204	-9.88	124,621	109,319	-12.28
Tiranë	667,407	800,986	20.01	329,316	399,163	21.21	338,091	401,823	18.85
Vlorë	193,425	183,100	-5.34	96,257	92,619	-3.78	97,168	90,481	-6.88
TOTAL	3,019,636	2,893,005	-4.19	1,506,890	1,462,005	-2.98	1,512,746	1,431,000	-5.40

Source: Population 2001-2015 by Qarks, INSTAT 2015

The Table 1.2 below shows changes in urban populations of the same regions between 2005-2015. The table shows an overall increase in urban population of Albania of 17.3%, which further corroborates the trend of rural-to-urban migration indicated in the Table above. The increase of urban population is most significant in Durrës (43%), followed by Tirana (36%). Vlorë's urban population increased by 12%, much lower than the national average (17%), whereas the urban population of Gjirokastra and Berat region in the last decade dropped by 12% each.

Prefectures	Total urban population			Males			Females		
	2005	2015	% Change	2005	2015	% Change	2005	2015	% Change
Vlorë	112,373	126,320	12.41	55,651	62,414	12.15	56,722	63,906	12.67
Gjirokastrë	42,521	37,007	-12.97	21,225	18,207	-14.22	21,296	18,800	-11.72
Berat	73,643	63,038	-14.40	36,482	30,828	-15.50	37,161	32,210	-13.32
Tiranë	448,144	610,070	36.13	220,802	292,577	32.51	227,342	317,493	39.65
Durrës	160,103	229,641	43.43	79,071	113,455	43.48	81,032	116,186	43.38
Albania	1,410,810	1,654,797	17.29	697,891	805,049	15.35	712,919	849,748	19.19

Source: Population 2001-2015 by Qarks, INSTAT 2015

On the other side rural population in each of the study regions has dropped by more than one-quarter, which is higher than the national decline in rural population of 23%, as Table 1.3 below shows.

Table nr. 1.3 Rural population changes Albania 2005 - 2015 by gender and region

Prefecture	Total rural population			Males			Females		
	2005	2015	% Change	2005	2015	% Change	2005	2015	% Change
Vlorë	81,052	56,780	-29.95	40,606	30,205	-25.61	40,446	26,575	-34.30
Berat	103,352	79,641	-22.94	52,839	41,675	-21.13	50,513	37,966	-24.84
Gjirokastër	57,658	35,194	-38.96	29,204	18,549	-36.48	28,454	16,645	-41.50
Durrës	94,141	46,550	-50.55	46,963	26,753	-43.03	47,178	19,797	-58.04
Tiranë	219,263	190,916	-12.93	108,514	106,586	-1.78	110,749	84,330	-23.85
Albania	1,608,826	1,238,208	-23.04	808,999	656,956	-18.79	799,827	581,252	-27.33

Table below shows population data for the municipalities and administrative units in the Study area. Vlova municipality is composed of: Vlova city, Orikum, Vlova center, Novoselë and Shushicë. Berat municipality is composed of 5 administrative units: Berat, Velabisht, Otlak, Sinjë dhe Rroshnik. Gjirokastra municipality consists of 7 administrative units: Gjirokastra, Cepo, Lazarat, Picar, Lunxhëri, Odrie and Antigone.

Table 1.4: Demographic data for Municipalities and Administrative Units in the Study Area

Prefecture	Administrative Area	Population	Number of households	% of the Study area population	% of Prefecture population	
Vlova	Vlova Municipality	104,827			57.3%	183,100
	Selenice	7,800			4.3%	
	Himare Municipality	5,738			3.1%	
Gjirokastra	Gjirokastra Municipality	54,866	15,046	28.8	18.6	72,201
	Libohova municipality	7,482	2,003	17.5	11.5	
Berat	Velabisht Admin Unit	11,926			8.4%	142,179

The data from each prefecture shows the population to be way higher than the national census data. This is due to the fact that data is collected in different ways; national census collecting data at a point in time, while the local data being collected through civil registry books.

Agriculture

Registered farmers represent 74.804 persons (around 19%) out of the total population of the Study area that amounts 397,316 inhabitants. The overall agriculture area covers 137,666 ha. Cereals and open field crops, including fodder crops are the main types of crop (72.5% of total planted land), followed by orchards (25%), vineyards, medicinal and aromatic plants, and greenhouses.

One can notice the region's specialization in agriculture production. Vlore and Berat have the highest surface of orchards (53%), and almost all the greenhouses are concentrated in Lushnje, Fier and Vlore by decreasing order.

The livestock sub-sector is dominated by poultry, followed by order of importance by small ruminants, beehives, cattle and pigs.

Vlore, Gjirokastra and Berat concentrate 24% of the total number of poultry, and 35% of the total number of pigs, cattle, small ruminants and beehives.

The study areas gather more than 42 % of the total number of small ruminants. Such specialization goes in accordance with the agro-ecological and topographical specificities of the region.

Table 1.5: Livestock in the study area Source: *MARDWA*

Region	Cattle	Small Ruminants	Poultry	Pigs	Beehives
Vlore	25,000	42,200	960,000	8,600	32,050
Berat	17,940	80,683	663,510	3,607	16,223
Gjirokaster	20,000	265,000	268,200	-	22,583
National Total	297,312	922,131	7,933,130	94,423	193,957

Vulnerability

Regional differences in poverty are significant. However both Gjirokastra and Vlora are the least poor regions in Albania, with only 10.6% and 11.1% leaving below poverty line as compared to the national average(14.3%). The families receiving social assistance in Vlora region is about 2% of those in the national scale (2010); at regional level this number s equal to 3.8%.

Poverty by region in 2012				(%)
Regions	Headcount	Depth	Severity	
Berat	12.3	2.3	0.7	
Dibër	12.7	2.3	0.7	
Durrës	16.5	3.6	1.3	
Elbasan	11.3	2.3	0.7	
Fier	17.1	3.4	1.0	
Gjirokastër	10.6	2.4	1.0	
Korçë	12.4	2.5	0.7	
Kukës	22.5	3.8	0.9	
Lezhë	18.4	4.7	1.8	
Shkodër	15.5	3.7	1.6	
Tiranë	13.9	2.7	0.8	
Vlorë	11.1	2.4	0.8	
Total	14.3	3.0	1.0	

Source: LSMS 2012

4 – THE IMPACT OF FLOODING

In order to gather information relating to flood impacts, attitudes, knowledge and awareness, interviews were conducted with flood-affected households. To get a better insight on key issues related to: flood warning, expectations from authorities, their preferences on the nature of warnings, the findings from the household interviews were then further probed and elaborated by focus groups discussions also held in the affected areas.

4.1 FLOOD EXPERIENCE AND PERCEPTIONS BY THE HOUSEHOLDS

Vlora Region

Household data

Almost 45 % of the respondents have completed only primary school while just 39 % have completed high school. Furthermore, 14% has followed only the elementary school and 2% have not attended any class. Overwhelmingly household heads (92%) were married, 6% widowed, and 2% single. The average number of children of the household is three. The type of family is mostly represented by nucleus household with 79% of the total and the rest is households with multi generational members. The majority of households' heads (86%) were male, and 14% women.

Prior notification - The majority of the people interviewed (about 95%) stated that they have received flood warning information. 35% of them were notified by their relatives and neighbors, 40% of them were informed through TV and around 25% were verbally notified from the local public officials. 78% percent of the people were notified 4-6 hours before the floods, 15% were notified 1-3 hours before, while 7% of them stated that they did not remember the time of notification. It should be noted that being an area that is often affected by floods, the notification system has worked, but the people have got the notification far too late to be able to evacuate. In the Administrative Unit of Novosele in Vlora Municipality, about 23% of the families were told to evacuate their houses, due to the proximity with Vjosa River that often floods the area.

First individual response to floods - In the Selenica Municipality an evacuation order was not issued, because in this area only the agricultural land is usually flooded and the households are located far from the at-risk area. The same situation was in Himara Municipality in relation with the Shushica river. In the interviewed families that were affected by floods in the Administrative Unit of Novosela, the following data were gathered: The water flooded the yards and basements of 100% of the households, 87 % of the ground floors were flooded, while only 6% report the level of water being up to the rooftop of reaching the second floor. While in Selenica and Himare Municipalities only the agricultural lands and livestock were flooded. Before the flooding occurred in the Administrative Unit of Novoselë, only minor precautions were taken by moving the electrical appliances and the livestock but those efforts resulted unsuccessful as the majority of the electrical appliances and a considerable amount of livestock could not be saved.

Assistance and support after floods - was largely provided by neighbors and family followed by friends and relatives outside the locality living in the nearby villages. Around 80% of the families were assisted from the local authorities, fire fighters, military forces and around 20% were assisted from the

humanitarian organizations. This situation is reported from the most affected area, in Novosela, while in the municipalities of Selenica and Himara no assistance was offered to the affected households. The majority of the people forced to leave their home were sheltered by their relatives in safe areas. In most cases the children and elderly people were sheltered to their relatives' houses earlier, while the younger people stayed home to take care of the family's belongings and work to turn their households back into the normal conditions. According to the interviewed people after the floods they needed humanitarian organizations to provide them food and water, they needed the help of the military forces to clean and disinfect the area, health care services to help with health issues and indemnification from the public institutions. The trauma related to the floods situation was present at the majority of the households. Anxiety and stress was more present during the flood in children and elderly people, while for the adults it peaked after the flood, when the scale of the damages became clear and families had to deal with the consequences. 75% of the interviewed people reported feeling frequent fear, 63% reported they were nervous and 25% reported insomnia after the floods. In the Administrative Unit of Novoselë, the majority of the people interviewed feel very little supported from the local government to deal with the situation after the floods, while in Selenicë and Himarë municipalities the local authorities did not provide any support.

Berat region

Household data

Households selected to be interviewed were all living in flood risk areas in Bilca and Veterrik villages very close to Osumi river and directly affected by 2015 floods in agricultural production, livestock and business. 77 % of households were male -headed, 13% female. 27% of households were headed by persons over 65 years old, 20% of households included at least one adult more than 65 year old , 13% of households included at least one child 0-5 years, 33% of households included at least one minor 5-14 years.

Asked about emotions and feelings while experiencing flood they recalled the words : "fear", "panic", "insecurity", "powerless."

"I was totally under shock , i tried to realize where my family members were at that moment , I was expecting the river to come and defeat the house , I felt powerless in front of all this , that house was my everything , the worst did not happen that day , but the fear remained , we live with the fear , this is the worst a man can experience "

" I spent all of that day prowling ,the river was near the fence , then it took the fence , then it began to swallow a little bit of my yard , like morsels , I saw massive of soil slide into water and I couldn't do anything , I just stood there !"

"I don't want to remember that day , I am concerned whenever it bears in my mind , look , i'm still crying , I still can hear that river noise , it was terrible!"

Personal stories, Berat

Education: 18.8 % of respondents have completed elementary education, 56% have completed secondary education and 25 % have completed high school .

Housing tenure and property type: 94% of all houses were of one-floor building and all were legal owners of their houses.

Prior notification - 81% of respondents stated that they had not received notification of any kind on the approach or the possibility of flooding. They claimed that none of the local authorities felt the

responsibility to inform the community regarding potential risks from flooding. Local government officials usually go to visit the ground after floods have occurred just to control the situation and made damage assessment. 14% said they were aware of the possibility of flooding after being informed by national TV forecasts of weather and through conversations with neighbors on the coming of high density rainfall in the area at least 12 hours prior to flooding, while 5% admitted that they were informed by local officials (alderman and chairman of the administrative unit) 3-6 hours prior flooding. Local authorities had communicated the order for immediate evacuation for only 2 of the families of the area where interviews were conducted. Only one of these families had obeyed the order for evacuation being moved at relatives in the same neighborhood. The other family disobeyed the order as there was no alternative for accommodation and officials had not proposed any solution.

First individual response to floods – 31% of households stated that their family members did not take any action to avoid damage from floods because only agricultural production was threatened and there is nothing that could be done to save it. Other respondents explained that their first reaction was immediate relocation of livestock to higher places and seldom sending for several hours family members to neighbors or relatives. Residents affected by flooding in fact when asked if they had information or if they were trained sometimes by specialists of civil emergencies on how to respond to floods situations responded that they had no information and they do not even knew that such services can be provided by public or nonpublic institutions.

Assistance and support during the floods - One-third of respondents said they had not had any kind of support during the floods while the majority said they had found support mainly in relatives and neighbors.

Assistance and support after floods - Residents affected by flooding in January-February 2015 stated that after flooding had no proper attention from local authorities which have been focused more on areas where the damages were in flats and buildings. In the areas of Veterrik and Bilce, damages caused were mainly in agricultural products and less in livestock & business. However residents of Bilca expressed that in the aftermath of the flooding they needed more assistance from local government to repair damaged water supply. In addition, damage assessment process was carried out in a fragmented way and almost no family is indemnified. Almost 100% of respondents said they need more assistance from municipality in terms of easing of taxes on land ownership that continue to pay despite being flooded. After the flood there wasn't any support or humanitarian aid for some of the families that the community considers as the most vulnerable.

Psycho-physical symptoms manifested after the last flood: 88% of respondents stated that at least one of the members of their families have experienced psycho-physical symptoms after the last flooding

as described in the attached graphics, although they do not necessarily associate the emergence of these symptoms with the effect of floods.

Gjirokastra region

Household data

All the interviews were held in the households located near the Drino, Kardhiq and Suha rivers in Gjirokastra and Libohova municipalities and affected by the 2015 floods. 85% of the households were male-headed whereas the rest by a female. 67% of households were headed by persons over 65 years old, 35% of households included at least one adult more than 65 years old. More than 15% of the households included at least one child 0-5 years old, whereas 42% of them included at least one minor 5-14 years old.

Education: 14% of respondents had completed elementary education, 23% had completed secondary education, 58% had completed high school and only 5% had a university degree.

Housing tenure and property type: 86% of the houses were one-floor buildings and the rest two or three-floor buildings. All of the houses were legally owned.

Prior notification - All people interviewed stated that they have not received any warning from the local authorities. The only warning has been the weather forecast broadcasted in the national TV stations and through the information got by their relatives and neighbors.

First individual response to floods- By far the largest source of assistance was from neighbors and family followed by friends outside the locality and their relatives living in the nearby villages or in Libohova and Gjirokastra towns. 70% of the flooded households had the necessary information on preliminary measure to be taken in cases of flood. Hence, in their gardens they had stored bags with sand and other equipments to be used in case of flood. 35% of them also reported that they used the sand bags to protect their houses from water entering inside the buildings. More than 80% of the interviewed people being flooded stated that they removed all the electrical appliances and other items from the first to the second floor of the houses to protect them from the water. The rest could not save their appliances either because they were not at home or taken unprepared and shocked by seeing the water entering their house.

The majority of those forced to leave their home stayed with their relatives. In most cases the children and elderly people were removed to their relatives since the first moment, whereas the youngest couple stayed home to take care and turn it back into the normal conditions.

Assistance and support during the floods - The majority of the respondents (about 80% of them) said that they were mainly supported by their nearby neighbors. Others stated that some of their relatives from the Gjirokastra town came to support them some hours after the flood, mainly to help them remove the soil entering their gardens and houses as there was nothing to be done to the flooded fields. 100% of the interviewed people settled by the river in Valare village expressed their indignation to the negligence of the local authorities, who did not do anything at all to support them during the flood. There was no specialist from the health, social services or emergency departments present in the area during the first most dramatic moments of the flood to provide any kind of assistance to the elderly people, children, women and also to the rest of the affected people.

Assistance and support after floods - was mainly provided by the relatives and friends living in the upper part of the villages or coming from the Libohova and Gjirokastra towns. 20% of the respondents said that the specialists of the communes approached them some days after the flood was over to estimate the damage on livestock, houses and land. They expressed their disappointment on the long process on their compensation by the state, which to them will never materialize. 45% of the respondents living in Gerhot and Valare village suffered lack of the electricity for several days due to damages caused by the rain to the electricity sub-station in Gjirokastra, which deteriorated their recovering momentum. 25% of the interviewed people were feeling neglected and irritated by the information publicized by the local media that the local authorities had mobilized some funds and aids by different donors and sponsors, but they did not benefit anything at all, as this aid was distributed in other areas. Some of the households located near the Drino River stated that they approached the specialists of the Gjirokastra municipality, long after the flood, asking them to come and assess the damages and infrastructural investments needs such as: improvement in the irrigation and drainage system, reconstruction of the riverbanks, into their budget lines. They further added that this did not happen so far and the only major investment carried out was the EU FPIP Programme. All respondents were skeptic on the efficiency of the public institutions on the management of floods, hence they stated that a possible solution might be to come together and put more pressure to the public institutions to be more responsible in the future.

Psycho-physical symptoms manifested after the last flood - The trauma of being flooded and its immediate aftermath was stated to be present at almost 70% of the households which had an elderly person or a child. Anxiety and stress often peaked after the flood, when the scale of disruption became clearer and families had to deal with the damages caused by the flood. Furthermore, the long stay with their relatives brought stress not only to the elderly and children that were away from their house but also to the young that had to visit them time and again until when the whole family re-joined.

4.2 FLOODS EFFECTS ON THE HOUSEHOLDS INCOME

Overall, the main source of households' income in the affected areas was reported agriculture and livestock activities (Vlora 68%, Berat 81%, Gjirokastra 78%). Secondary sources of household income reported were:

- remittances from abroad
- benefits from social protection schemes
- paid occupation
- family small businesses

Respondents were asked how their households' current financial situation compared to that before floods. The vast majority of households (97% of respondents in Vlora, 92% in Gjirokastra, and 56% in Berat) reported worse income. As most of the affected population was rural, the primary causes cited for the loss of household income were the loss of crops and animals.

In *Vlora* mean household income the month prior to the floods reported to be: 82% earned about ALL 30.000-40.000, 8% earned about ALL 20.000-30.000 and 10% earned more than ALL 40.000.

In the month after the floods, 45% of the families earned ALL 0-10.000, 38% earned ALL 10.000-20.000, while the rest earned ALL 20.000-30.000. Deterioration of the economic conditions due to floods is confirmed even by the drop of revenues in absolute amount. Once again, revenues from livestock - considered as the highest revenue prior to the floods - have more than halved. Also revenues from agriculture have significantly decreased, by approx. 80%.

In *Berat* region, mean monthly household income prior to the flood was ALL 20.000 with 25.0% of the population living on less than ALL 10.000 monthly (this category doesn't report change of income after flooding) .75 % of the category of households living with ALL 10.000-20.000 reported worse of income to ALL 0-10.000.50% of households living with ALL 20.000-30.000 reported worse of income to ALL 10.000-20.000.

When asked how they financially coped with the aftermath of the floods, a considerable number of the families in Vlora region reported borrowing money from their relatives or remittances from their relatives. None of them reports to have taken loans from financial institutions.

Whereas, 18% of respondents in Berat reported being forced to borrow small amounts ALL 50,000-120,000 from relatives or receive microcredit financing, after floods. As for the way this financing was used the main reason cited was for repaying outstanding debts and for the purchase of daily food.

In Gjirokastra, in 87% of the cases, respondents said that they covered the damages with their savings, 9% said that they were financially supported by their relatives, and the rest did nothing but try to save what remained after the floods.

4.3 COMMUNITY AWARENESS ON FLOOD RISK AND MITIGATION MEASURES

In all areas of the study, none of the households interviewed had their property insured. Overwhelmingly the primary reason stated was that they could not afford flood insurance, followed by lack of trust in the insurance companies, and lack of interest. Another common disincentive to insure was reported the expectation for compensation from the authorities, as it has been the case in the recent years following each flood.

The perception of respondents and the whole community in general is that FPIP Investments have increased sense of security among residents even if the feeling of security varies among people living in different segments along the river. People are somewhat skeptical however, as to whether the flooded lands can be recovered back into agricultural land. Further worrying problem still remains cleaning and arrangement of drainage canals which often cause flooding from streams.

When asked about who should hold the responsibility for flood protection, the majority said local institutions should be either *responsible* for the first warning, or for the first response or further support. When asked to list their *priorities*, on what should be done to reduce flood risk in the future they quoted: maintenance of irrigation and drainage channels, reinforcement of river embankments, and timely receipt of flood warnings.

All the respondents accepted that, while receiving a warning increases their confidence in dealing with the flood, it has also to be associated with other informative measures necessary to cope the situation. Also they need instructions and trainings on how to manage the situation before, during and after the floods. Although the aid of the government was quoted essential in case of flooding, practical instruction on the management of flood were considered very helpful.

When asked to pick three most preferred methods for receiving flood warnings the interviewed households stated that they would prefer to get the first warning as unified warning from the local authorities, as well as SMS, or local TV-s as the fastest means available.

Focus Group Discussions

After the completion of the households interviews focus groups were held to further probe and elaborate the above findings. In Berat were held 2 focus group discussions (Bica and Veterrik), in Vlore 6 focus group discussions (Fitore, Bishan, Poro, Novoselë, Selenicë and Armen); and in Gjirokastra 5 (Lunxheri, Cepo, Libohove, Valare and market). Around 60 people participated in each of these focus group discussions with heads of villages and people directly affected by the flood.

Flood experience

The *experiencing* of the floods varied considerably in each region, from person to person, depending also to a great extent on where they lived. Those close to a river and those who have been flooded more than once, generally appear to accept the eventuality of future flooding. They raised a range of issues, mostly related to the measures that the local authorities have to undertake to improve the situation i.e. they were fully aware by the fact that their households or agricultural land might not be flooded by the overtopping of the river bed any more due to the investment done, but they insisted on the flooding of their properties due to the malfunctioning of the irrigation systems, illegal constructions that have blocked the disposal systems, blocking of drainage channels, out-bursting of the mountainous springs due to lack of interventions to them etc. In Selenica (Vlora) for e.g. key factor identified was the erosion of the river bed. In Gjirokastra municipality's areas (Valare, Mashkullore, Palokaster villages) the participants stated that if such measures will not be taken by the local institutions, the floods will continue to happen in their areas caused not just by the river but poor maintenance of urban water courses. Hence, participants stated that they have to advocate their needs to their administrative units in order to push them plan and invest accordingly for the improvement of the above mentioned issues.

Flood protection responsibility

In Gjirokastra, few of householders accepted that the main responsibility for flood defence lay with themselves as owners or their landlords. Many felt that the main responsibility should lie with their local authority or the regional institutions that have the responsibility to take preliminary measures in order to avoid floods in their areas. In Vlora, most focus group members acknowledged a degree of personal responsibility in dealing with floods but this was tempered with blame attached to local authorities for alleged failings both during and after floods.

In Berat, respondents also placed the main responsibility to prevent and respond to flooding on the public authorities. Whereas, individual responsibility stands only on the fact that people should be more accountable while investing for their houses, businesses and properties in order to protect their families and to avoid damages, by investing in areas that are more exposed to the risk of floods.

Flood warnings

In Vlora, participants reported that there is a lack of communication between the community members and the responsible institutions. In 40% of the cases participants said that they get this information either by their relatives who are in contact with the local TV stations which warn in their news announce measures to be taken in such cases expressed by the experts invited in their studios, or by the local observers based on previous flood history. Although many focus group participants were quick to complain at either not receiving a warning or not getting sufficient warning of a flood, the limitations on

the interventions from the public institutions to deal with the aftermath make them even more sceptical about the benefits of flood warnings. The only way out for them is their own preparation and vigilance in cases of floods and proper equipment to be at place to save their properties either by support of the neighbours or their relatives. Other participants (Gjirokastra) agreed with the fact that in cases of serious floods they have been supported by the Emergency Units of prefecture and/or by the Police, which has responded to their emergency calls on time. Other participants reported feeling let down by not having been given sufficient warning and information on what to do to prepare for the flood.

Whereas in Berat, residents expressed that the warnings they received were just fragmented information or rather “an alert” not associated with specific guidelines for measures that can be taken in response to the risk of floods. The participants believed that the warning is a way to raise concern within the community members in order to get prepared and react by taking precautions. Still, there is a problem with the warning system- the credibility; the information in order to be taken into consideration should be disseminated by authorized public servants in order to not spread panic or unnecessary fear.

Climate risks

In terms of assessing the longer term risk faced, some focus group participants appeared quite well informed about climate change and the possible impact on flooding, but they were sceptic about the proper functioning of the state instruments on protecting their properties. They stated that the apathetic attitude shown so far makes them feel uncertain about the way that the local or central government will manage the next flooding and their level of confidence is low related to the measures the government will undertake.

They cited the need for the establishment of proper communication mechanisms between the community and public institutions. They said that the empowerment of the role of the head of the village and village commissions must be a priority in the future. Due to the new territorial and administrative division they feel to be neglected because of the long distance from the centre of the municipality and they also feel underrepresented to the decision making bodies. They proposed to empower the community members and build advocating mechanisms to transmit the concerns and be part of the municipal meetings in order to push the municipalities to properly plan the local budget.

5- LOCAL INSTITUTIONS AND FLOODS

This section considers institutional stakeholders and intends to: assess gaps and needs of the local authorities in relation to floods preparedness, response and prevention, investments needs, flood risk drivers, how warning system works at local level, and the coordination and collaboration among the relevant institutions. The interviews were conducted with institutional stakeholders involved in emergency management such as: prefectures, qarks, municipalities, local administrators, fire service, drainage boards, and regional agriculture directorates.

5.1 Dissemination, communication and response to floods

As far as warnings is concerned, Gjirokastra prefecture reports receiving weather bulletins from the Military Meteorological Service, Vlora from IGEWE , Berat prefecture from both IGEWE, MMS and GDCE. Upon receipt of such bulletins, based on Albanian civil emergency legislation, Local Emergency Commissions convene.

Communication of flood risk

In Vlora Prefecture, representatives stated they have received the first information from the Department of Civil Emergencies, National Operating Center of Civil Emergencies, Department of Water Supply in Tepelena, observation points along the river Vjose in Tepelena. The Regional Council received the information from the civil emergencies department three days before the floods occurred and from the observers on Vjosa river (hydro thermal points) from Gjirokastra Region. Meanwhile the Drainage Board has received this information during the monitoring of the territory. The Prefecture of Vlora received notification on the floods more than 6 hours before floods occurred.

Flood Warning dissemination

The Prefecture of Vlora stated that they had the opportunity to inform the community about the risk of flooding. Specifically their staff notified the community through phone.

The Regional Council of Vlora also reports the same: they notified and advised people on the risk. The announcements were made through local televisions, the staff of the administrative unit and community meetings.

Representatives of the Prefecture of Vlora explained that practically the announcement that they made was notifying the work group and the Administrative Unit of Novoselë.

Response

Prefecture of *Vlora* declared that they ordered the evacuation of the residents but not everyone responded to it. The reasons quoted were various, but the fear for loss of property and valuables and the lack of another shelter held them back. The Regional Council of Vlora said that an evacuation order was issued from the Local Civil Emergencies department, but people did not obey to this order. The main reason was fear of damages on property. The Prefecture of Vlora stated that before the floods occurred they raised the Civil Emergencies Commission that had several meetings. The Regional Council of Vlora declared that before the floods they organized working groups, called all the available structures on the situation and contracted private companies to assist. Vlora Drainage Board stated the precautions that were taken were the notification of the units, working on the pumping station and necessary precautions like cleaning of the drainage channels.

5.2 Flood risk identification and preparedness

5.2.1 Berat region

The warning system to date consists of mobilization of local human resources especially in areas considered at high risk of flooding. In FPIP intervention areas many of respondents stated they hadn't receive any warning prior flooding by local authorities although they think this is a task to be implemented by them. Members of coordination action against floods stated that a regional flood warning strategy is needed in order to maximize the social benefit by covering many more areas at risk. Also, it is necessary a mandatory duty on emergency planning groups to assimilate a community risk register. This duty may provide a useful database for assessing those at flood risk. Responsible authorities should also identify and reduce the vulnerability of existing infrastructures and all networks located in flood-prone areas (water supplies, energy systems, transportation and communication networks, public facilities, etc), and particularly transport network which may suffer massive interruptions or hinder the evacuation and the arrival of emergency services.

One of the main reasons quoted to have caused frequent flooding the recent years was "loss of control on the territory" as stated by representative of the Municipality. Construction of residential buildings in proximity to the river but also blockage of drainage canals or other public works with building has lead to the current situation. Controlling construction development in the immediate areas at-risk of floods, land-slides or dam failures is an unacceptable risk to human lives or material damage exist, should be regulated.

Currently, disaster management programmes and community awareness activities are inexistent. Constraints faced include lack of equipment, rescue, communications and flood warning literature; inadequate funding; legislative gaps; and qualified personnel. The interviewed local authority staff often

anticipated the receipt of a flood warning based on a combination of severe weather forecasts and their own river monitoring.

The general perception of the members of civil emergencies committee is that the system works even though it lacks funding and human resources. Most of institutions are operating with very little budgets. The Municipality of Berat for the year 2016 has a total budget of 5.000.000 ALL for civil emergencies of all types. In addition there are 10,000 liters of fuel procured in case of big emergencies that can allow the municipality to make use of vehicles not belonging to the Municipality. Other institutions don't have specific budgets, the Fire's Department has an annual budget approved by the line Ministry mainly for fuel and vehicles maintenance. All respondents highlighted the importance of communication strategies in order to inform and raise awareness among the communities at risk of flooding. Information campaigns with the community are seen as a very efficient tool but still financial means are missing. Some efforts are being made in this direction from the county prefecture in terms of the publication of information bulletins and practical advisory manuals for community response in case of flooding with the support of local donors. Usually, local authorities use mass communication tools like TV or social media to inform communities on the possibility of flooding.

The majority of the interviewed think that FPIP infrastructure can prevent at a large extent the risk of flooding in the intervention areas. On the other hand, the main concerns addressed by the community representatives were as follows:

- Full compensation of damages caused by floods and more incentives for the development of agricultural areas
- Construction of embankments and other protective works
- Consistent maintenance and cleaning of collectors and drainage network
- Monitoring of river beds and operation of dams in catchments

5.2.2 Vlora region

The local institutions interviewed report that they have a plan for managing the civil emergencies. The Prefecture and Regional Council stated they had an inventory of the administrative unit and the Civil Emergencies for the at-risk households and for the entire area. As for the identification of vulnerable groups such as persons with disabilities, women heads of households, etc. The Regional Council has such information, while the Prefecture stated that this is kept by the local government.

Regarding the measures taken after floods for the reallocation of public infrastructure the Regional Council said they have no physical opportunity to do this because of the lack of staff, the Prefecture answered that they had a plan and it was reviewed after the floods of February 2015.

The local institutions have a plan for the reallocation or protection of the public infrastructure under the priority measures to be undertaken for protection from the risk of flooding which are:

1. Maintenance and cleaning of drainage channels
2. Strengthening of embankments
3. Maintenance of pumping stations
4. Maintenance of the bed of the river delta.
5. Improving the notification system
6. Informing the public
7. Provision of electricity supply.
8. Detailing the plan of civil emergencies

Asked how the local institutions intend to provide funding for the implementation of the measures they answered that generally the centralized state funds are placed at the for the floods infrastructure maintenance work. Also different donors can support the needs of the local institutions for the implementation of these measures. The budget planned for civil emergencies is not enough to respond to the needs of investments and maintenance of the infrastructure on flood protection. The planned budget of the Regional Council for civil emergencies for the year 2016 is 4,000,000 ALL for two districts, the budget of the Drainage Board is 5,200,000 ALL and the prefecture has no funds allocated. It is not in the competencies of the Prefecture to manage the aid. It only orients and manages the situation in cases of flooding and also directs the Emergencies Council. Lobbying was done to find funds in order to support families in need also by the Regional Council in parallel.

The local institutions stated the infrastructure interventions are insufficient. Prefecture and the Regional Council say despite interventions are being realized on the embankment of the river, the infrastructure, the people and lands continue to be unsafe and not fully protected. The Drainage Board believes that if work is completed under the project the security will increase.

In all cases, public consultation and participation while dealing with the floods was recognized as essential from the public representatives. They expressed the need for concrete mechanism for establishing a notification system and increase emergency response capability.

5.2.3 Gjirokastra region

Authorities in Gjirokastra quoted various means at their disposal to disseminate warnings. They inform the public via local TV stations, by communication with the representatives in the villages and neighborhood, by phone calls and door to door notifications.

The mayors of the municipalities are members of the Regional Emergency Commission and they are obliged by law to set up Local Emergency Commissions in their municipalities. This structure goes

further at the community level, where the head of the village and other active members are part of the village emergency commission. Hence, the warning passes from the Regional Emergency Commission to the community commissions, obligating everyone to get the responsibility on warning each and every person being at risk of flood.

Municipalities, on the other hand do not have enough funds and technical necessary assets to protect people in case of emergencies. They have also planned a little money in their local budgets for infrastructural investments related to the improvement of riverbeds, drainage and irrigation systems. This is a challenge that remains to be addressed by them in the near future.

The Civil Emergency and Fire Department are the key institutions on the management of the floods. Even though they have a limited budget they have build up a network of communication with the public through the free line 128, which is open for 24 hours, different publications that refer to different precautions and also detailed steps how the households have to deal in cases of fires, floods etc. But, they mentioned the fact that there are also are in need of many other instruments to increase the awareness and knowledge of the community members and modernize the equipment and tools that must be an essential asset for floods management.

With the new territorial and administrative changes, the local authorities will be much more concentrated and this will bring a better coordination of the efforts and budgets as well. From January 2016, municipalities will have under their administration the civil emergencies Directorate that deals with the prevention, protection and from the natural disasters and fires, and it will also deal with the management of the civil emergencies. Meantime, in the new structure of the municipalities the number of staff at the service department will increase, which will also affect the policies and strategies on regard to the civil emergency management. These are expected to improve the communication means with the public and the quality of service in case of emergencies.

When being asked about their experience of promoting flood alleviation schemes or other flood prevention programmes, the representatives of the local public institutions answered that they have tried different programs and investments to improve the situation on the rivers and also on the irrigation and drainage systems. But they admitted that the limited financial sources make it impossible to keep continuously under control the whole situation with the risk of floods.

There was no database on the families being at risk of flood by any of the local institutions. When asked they gave a general response by giving an approximate number, but they accepted that they do not have a register in their localities of the most vulnerable or risked groups. They possessed the lists with the families that were flooded and needed compensation after the February 2015 flood, but they did not

have detailed information on families that are exposed at risk of flood in order to be used as an orientation point for future improvement.

In all cases, extensive public consultation and participation while dealing with the floods was recognized as essential from the public representatives. They expressed the need for building up a new culture on regard to the management of emergencies with the involvement not only of the public institutions but of the community members as well.

The public institutions' respondents shared their concern that in the majority of cases people are reluctant to assist in emergency cases as they think that this is a responsibility only of the public institutions. There is not such a culture build among community members to voluntarily assist on overcoming hazards in the region. Hence they judged that enhancing awareness must be one of the priorities of the Regional Emergency Commission on ensuring sustainable flood management in the near future.

6–Conclusions and Recommendations

This chapter draws together the findings from the household interviews and focus group discussions (Chapter 4) and the interviews with key institutional stakeholders (Chapter 5).

This assessment was carried out with the purpose of understanding the social impact of floods on most vulnerable groups following February 2015 flooding that hit south-western Albania. The assessment found out that as result of floods over 90% of households in the most affected areas reported lower incomes. Being that the primary source of income in the affected areas was cited agriculture and livestock, this lower income could be largely attributed to loss of crop and livestock.

Considering the importance of the preparedness in flood risk reduction, the assessment then reviewed how *flood alerts and warnings were disseminated* from authorities to the population. It found out that, that there are no unified channels for communicating flood risk (as not two regions report same sources) thus leading to fragmented, unclear and unusable information by the population. Hence reduced response time and higher damages and losses both in moveable properties and livestock. This could also explain why evacuation orders issued by authorities were largely ignored.

Then the assessment considered the preparedness of households by gathering their accounts of the *individual responses* following flood warning. With the exception of Gjirokastra, where its reported that 70% of families had the necessary information on preliminary measures to be taken in case of floods (sandbags and removal of appliances), most of households said they neither had information nor they were trained by civil emergencies specialists. In fact, they were not even aware that such services can be provided by public or non public institutions.

During and after the floods, the households did not rely on their respective local authorities for *assistance and support*, but rather on their neighbours and/or their closest relatives. There was a persisting scepticism among the households of each of the affected regions on authorities' capacities and resources to assist them in the event of flood. Indeed, inadequate funding of local emergency services and drainage boards was reported in all three regions, thus severely limiting prevention and response efforts in the event of floods. The households' disappointment was further fuelled by the slow-paced damage and needs assessment process and the remoteness of the possibility for compensation by authorities. Strikingly, with the exception of just a few households who recognised that the main responsibility for flood defence lay with themselves as owners, the majority felt that it should lay with local or national authorities instead. The reasons behind such lack of sense of ownership of flood risk management deserve further analysis.

Last but not least, none of the affected regions' authorities had a registry or information of the most vulnerable individuals and households to floods in their respective areas. Having such data is critical not only for identification of intra and inter-regional patterning in how each flood affects vulnerable groups, but also for better targeting flood recovery efforts.

Recommendations

Given the above findings and drawing on the discussion, the following recommendations are being made. They will contribute to inform development of flood risk reduction policies through better preparedness, response and recovery activities.

- Encourage coordination between national, regional and local stakeholders with a view to assessing and anticipating the potential economic and social impacts of floods
- Develop, update periodically and disseminate, location-based flood risk information, including risk maps, to regional and local authorities and the communities at risk of flood
- Invest in, develop, maintain and strengthen a people-centered flood forecasting and warning system, tailored to the needs of users, in particular the most vulnerable.
- Review and periodically update flood preparedness and contingency plans, and with the involvement of all stakeholders, considering also climate change scenarios and their impact on flood risk
- Increase technical emergency response capacities at local level through better funding and training
- Enhance collaboration among people at the local level to increase flood risk awareness through the involvement of community-based organizations and non-governmental organizations.
- Promote the mainstreaming of flood risk assessments into land-use policy development and implementation, including urban planning