



RAIN, MUD AND BAREFOOT

The Effects of the Flood in Adana Plain on Seasonal Migratory
Agricultural Workers and Their Children
Case Study



Çankaya Mah. Üsküp Cad.
16/14 / Çankaya - Ankara
(541) 457 31 90

 www.ka.org.tr
 info@ka.org.tr

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Prepared by Ayşe ÖZSOY
Nevin KÜÇÜK
Aslı ŞAHANKAYA ADAR
İhsan İZNEBİOĞLU
Ertan KARABIYIK

Contributors Özlem ZEHİR
Cemre YAŞKEÇELİ
Buse Ceren OTAÇ

Programme Manager Cemre YAŞKEÇELİ

**Administrative and
Financial Officer** Buse Ceren OTAÇ

Graphic Design Karaşın Grafik

Cover Illustration Helin SANIR

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Acronyms

AADKK	Disaster and Emergency Coordination Board
AADYM	Disaster and Emergency Management Centre
AFAD	Disaster and Emergency Management Presidency
CSO	Civil Society Organization
DSİ	State Hydraulic Works
ILO	International Labour Organization
IOM	International Organization for Migration
IPCC	Intergovernmental Panel on Climate Change
METİP	Project for Improving the Working and Social Lives of Seasonal Migratory Agricultural Workers
SYDV	Social Assistance and Solidarity Foundation
TAMP	Turkish Disaster Intervention Plan
UN	United Nations
UNFPA	United Nations Population Fund

Acknowledgment

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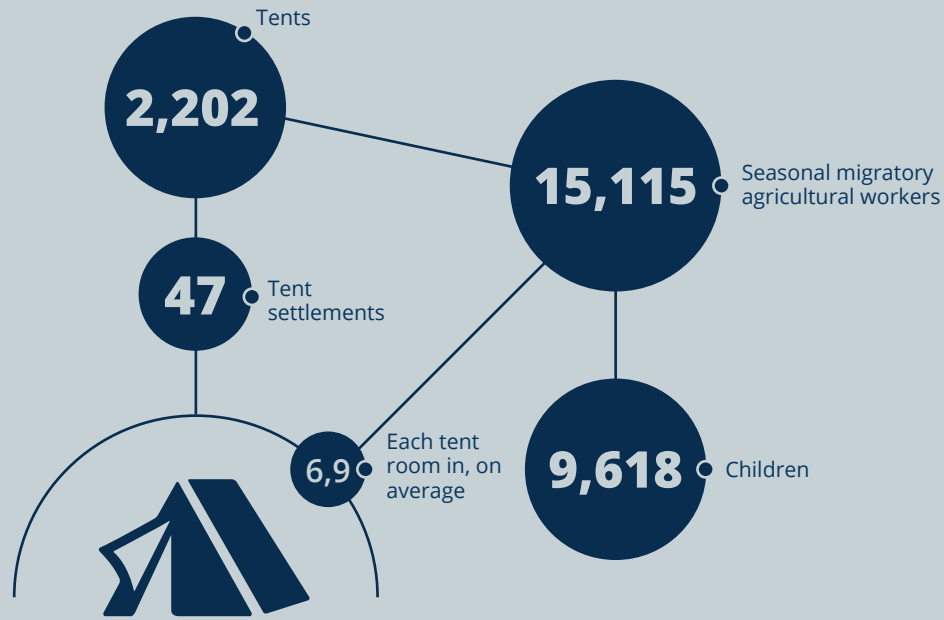
We are also grateful to the UNICEF Office in Turkey for their technical and financial support that made it possible to come up with this survey in a relatively short period of time.

Foreword

The report “Current State of Seasonal Migratory Agricultural Workers” prepared by the Development Workshop exposed the living and working conditions of seasonal migratory agricultural workers and their children in Turkey (Development Workshop, 2019).

In this report, the number and locations of temporary tent camps in Adana are presented in a map, and information about demographic characteristics of tent dwellers as well as their living conditions and working practices are addressed in detail.

In 47 tent settlements identified in Karataş, Seyhan, Yumurtalık and Yüreğir districts, all in the Adana plain, there are 2,202 tents, and 15,115 seasonal migratory agricultural workers including 9,618 children live in these places. Each tent room in, on average, 6.9 persons and since almost all tents are made of canvas and nylon (Development Workshop, 2019) they are highly vulnerable to such events as heavy rains, flood and torrent.



Seasonal migratory agricultural workers and their children constitute a highly vulnerable group with respect to their working and living conditions and this vulnerability assumes even worse dimensions in the face of natural disasters which they are prone to. As a remedy, there is need for a well-planned and sustainable counter-disaster programme accompanied by policy changes and advocacy work geared to awareness building. Hence, problems encountered by seasonal migratory agricultural workers during and after natural disasters must be identified and analysis of these problems must be the basis of advocacy work. Other needs include delivery of services and assistance through a human rights-based approach and development of specific programmes responding to the needs of seasonal migratory agricultural workers, their families and children.

Shortly after overflowing in the Adana plain, the Development Workshop visited the area and prepared a report based on field observations that was shared with relevant authorities and organizations. The Development Workshop also took steps to mobilize those actors who could extend assistance to seasonal migratory workers affected by the event. The aim was to mitigate hazard and risks for vulnerable groups by adopting an integrated approach including information building, advocacy and humanitarian assistance.

The objective of the Case Study “Rain, Mud and Barefoot” is to make visible the vulnerable state of seasonal migratory agricultural workers living in tent settlements on the Adana plain by exposing how their lives and working conditions and psychology were affected by the event of flood taking place in December 2019. This study on the event of flood seeks to identify the specific needs of seasonal migratory agricultural workers within the framework of intervention and preparedness plans for emergencies and disasters. The study also covers the experience of seasonal migratory agricultural workers in past emergencies and disasters and their suggestions on what must and can be done; as such, the study can be considered as a first in its field. It is expected that this study is regarded as a start paving the way for other studies in this particular field.

Seasonal migratory agricultural worker: A person who leaves his habitual residence (province, district, village, neighborhood) to earn economic income and moves to another settlement and participates in agricultural production processes for at least one day in the places he goes.

Executive Summary

Given the events of flood and torrent that emerged as a result of heavy rains starting midnight on 24 December 2019 and continuing for two weeks with some pauses, the objective of this study assesses the impact of this event on migratory agricultural workers living in sent settlements in the selected districts of Karataş, Seyhan, Yumurtalık and Yüreğir which are on the plain, problems that led to their victimization and to develop suggestions for problems identified in this context.



Field Work
4-11 December 2020

For the case analysis on the effects of flood on physical conditions and psychological state of seasonal migratory agricultural workers and their children and possible solutions to mitigate these effects, field work was carried out from 4 to 11 August 2020 with in-depth interviews with seasonal migratory agricultural workers and focus group meetings with civil society organizations. In the first part, 10 seasonal workers were interviewed on how the natural disaster affected their living spaces, incomes, employment status and their daily routines while focus group meetings on psychological effects covered 18 workers including 5 children. In-depth interviews with governmental agencies issues like interventions during and after the disaster, whether these interventions were sufficient and what kind of problems were faced during this process. In focus group meeting with civil society organizations, information was sought about their preparations for seasonal migratory agricultural workers who were prone to the effects of natural disaster, intervention programmes after the disas-



ter and possible new forms of cooperation. In addition to these, field work carried out by the Development Workshop 48 hours after the start of the flood and associated observations “The Effects of the Flood in Adana Plain on Seasonal Migratory Agricultural Workers and Their Children” was among the major sources of the Case Analysis.

The present study addresses the life of seasonal migratory agricultural workers in temporary tent settlements on the Adana plain¹ which is vulner-

¹ The ‘Adana Plain’ is the geographical area to the south of the city of Adana covering administrative districts of Karataş, Seyhan, Yüreğir and Yumurtalık.

able to such events as flood and how heavy rains starting on 24 December 2019 and ensuing flood affected their life in four sections. The first section is about how flood happened and its effects on seasonal migratory agricultural workers. The second section deals with problems of infrastructure and institutional working as well as problems that workers experienced after the flood and their methods of coping up on the basis of findings from the field work. As Case Analysis assessment, the third section introduces four basic categories as *visibility*, *resilience*, *vulnerability* and *sustainability*. While identifying these categories, special attention was paid

to the problems that seasonal migratory agricultural experiences faced during and after the flood and to what extent these problems were solved.



An assessment is that one of the factors making interventions difficult in the process following the natural event is the invisibility of seasonal migratory agricultural workers. The term “invisibility” here refers to limited access to sociodemographic data such as where exactly these workers live and their population including women and children in numbers. It is for this reason that one of the suggestions made is to launch a dynamic mapping work through which sociodemographic data on seasonal migratory workers and their children are updated in regular intervals.

It is common knowledge that floods and torrents have had their varying effects on Adana in the recent history of this province. It must be added, however, that such events are becoming more frequent un-

der the impact of global climate change.² In the face of this, areas where seasonal migratory agricultural workers set up their tent camps and available infrastructure in these areas have their specific importance. The category ‘*resilience*’ in this context refers to the need to develop risk maps for living spaces of seasonal migratory agricultural workers and consequent infrastructure works in safer locations while introducing necessary improvements in already existing camp areas.

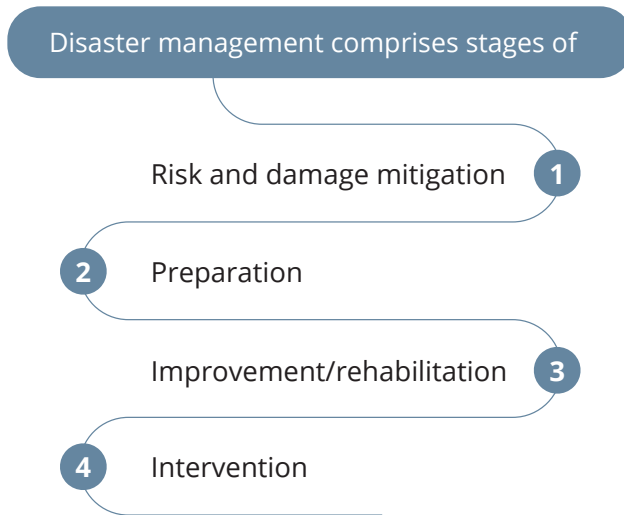
Another point is that households inhabiting temporary tent settlements are more vulnerable to disasters relative to city dwellers. This ‘*vulnerability*’ refers to both physical conditions in these settlements and income losses incurred as a result of disasters and emergencies. It is clear that seasonal migratory agricultural workers and their families will be in need of in kind and cash assistance in such situations and now a coordination and cooperation map is being developed on with whom to cooperate and seek support for this assistance.

Apart from suggestions given above, the fourth and the last section addresses measures that must

² According to records of the General Directorate of Meteorology 331 events of flood took place in 2018. Hence 2018 was the year in which events of flood were the highest since 1940. Records suggest that there are serious increase in events of flood starting from the 2000s. Ministry of Agriculture and Forestry Research Department (2019) “Meteorological Disasters -2018”

www.mgm.gov.tr/FILES/genel/kitaplar/2018MeteorolojikAfetlerDerlendirmesi.pdf

be adopted in order to minimize the effects of possible future floods and other natural events on seasonal migratory agricultural workers and their children. These measures are designed so as to suit to Disaster Management System processes. In this context, it is considered as proper to develop relevant suggestions under a “Disaster Management System.”



Hence, suggestions related to structural problems of flood experienced in Adana and socioeconomic problems experienced by seasonal migratory agricultural workers will be presented as classified under these four stages.

The Case Analysis “Effects of the Flood in Adana Plain on Seasonal Migratory Agricultural Workers and Their Children” took the case of seasonal migratory agricultural workers affected by this event and aimed to make visible the vulnerable situation of seasonal migratory agricultural workers in this respect not only in Adana but also in many other parts of Turkey. Indeed, while preparations for the Case Analysis was going on two more nature events took place in other parts of the country further confirming the need for interventions. The first one was the overflowing of Elekçi Stream in Ordu-Fatsa in August 2020 and the second one was the sandstorm breaking out in Polatlı-Ankara on 12-13 September 2020. These two events happening within the same year clearly show the urgent need to launch initiatives for interventions and improvements regarding the conditions of seasonal migratory agricultural workers.

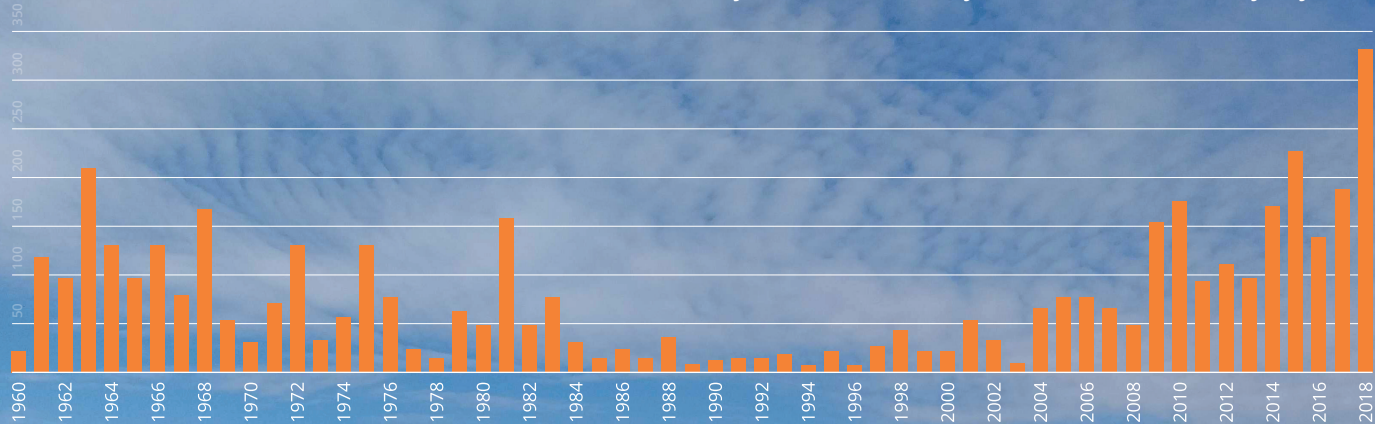
Introduction

Climate change has its effect of increasing the frequency and intensity of extreme weather events globally (IPCC, 2007). Studies reveal that such extreme events doubled within the last two decades (Karapınar 2020). There are studies indicating that Turkey too is adversely affected by these weather events like many other countries in the Mediterranean Basin (Türkeş 2007, Öno1 and Semazzi 2009).

Associated with the effect of climate change on the timing, intensity and the number of rainy days, floods are considered as one of these extreme events and it is stated that the frequency of floods including sudden ones is increasing in time (Tahmisciođlu et al. 2006).

It is known that extreme weather events may lead to serious damage and losses. It is stated that damages caused by climatic events globally quadrupled in the period 1992-2014 (Karapınar et al. 2020). It is added, however, that damage incurred by developing countries such as Turkey is even more (Tayanç et al. 2009). These events further increase possibilities

Şekil 1. 1960-2018 yılları arasındaki sel olay sayısı



Source: www.mgm.gov.tr/FILES/genel/kitaplar/2018MeteorolojikAfetlerDegerlendirmesi.pdf



Development Workshop Archive

of harm and vulnerability for people living in such countries as well as ecosystems (O'Neill et al. 2017) while having their adverse effects on socioeconomic life as well (Doğan and Tüzer 2011). Particularly for economically sensitive and fragile communities, both the way and consequences of exposure to these risks will be inevitably heavier. A study on the effects of overflooding in Bangladesh shows peo-

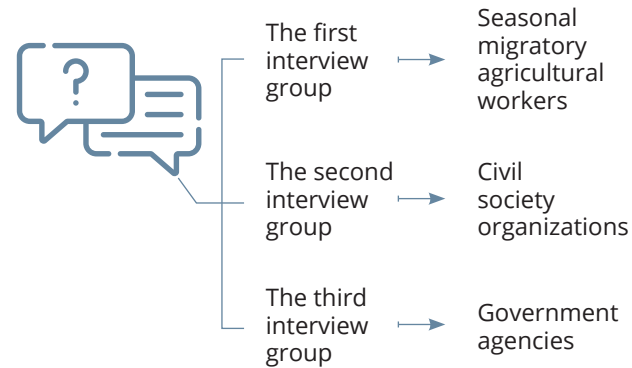
ple living under poverty line are affected more than others above that line (Brouwer et al. 2007). It can therefore be said that given their fragile economic status agricultural workers living in flood prone areas are at higher risk of being affected and damaged by such events as flood and torrent.

The present Case Analysis seeks to make visible the vulnerability of seasonal migratory agricultural workers and their children who are prone to various hazards and risks as a result of extreme weather events against which they are largely unprotected and still invisible. In this context, present risks that workers and their children face in the Adana plain are addressed along with the effects of flood on their present status and living conditions.

The data for the Case Analysis *“Effects of the Flood in Adana Plain on Seasonal Migratory Agricultural Workers and Their Children”* were obtained from in-depth interviews focusing on three different groups and field work carried out by the Development Workshop 48 hours after the flood. During this field work 15 temporary tent settlements within the boundaries of the districts Seyhan, Yüreğir, Karataş and Yumurtalık were visited.

The first interview group was seasonal migratory agricultural workers living in tents. In-depth interviews were conducted with 10 agricultural workers in the period 4-11 August 2020. During these interviews, workers were asked questions about their experiences in these processes and their struggle against some major problems. Psychosocial assessment interviews covered five children and 13 adults.

The second interview group consisted of representa-



tives from civil society organizations¹ and in focus group meetings these persons were asked questions about the role of their organizations in the process.

The third group covered representatives from government agencies.² Interviews focused on to what extent agencies could be considered as effective in their interventions and in particular what kind of interventions they made to temporary tent settlements on the plain.

¹ Needs Map, Hayata Destek, GOAL and Development Workshop

² Institutions interviewed; Adana Metropolitan Municipality Derman Team, Adana Metropolitan Municipality Water and Sewage Administration Department of Studies and Planning, Adana Provincial Directorate of Agriculture, Adana Metropolitan Municipality Department of Assistance and Social Services -Migration and Adaptation Centre, DSI, Seyhan Municipality, Yüreğir District Governorate Project Unit



Limitations and Ethics

The major limitation to the study is related to the fact that it was carried out in August 2020 when the Coronavirus epidemic prevailed. Although there were online and face-to-face interviews with many agencies who assumed active roles in flood intervention the work could not cover all who were active in that period. Also, the date of the field work under the Case Analysis which was six months after the event may have led to insufficient addressing of acute and instant effects of the flood while it also made it difficult to reach some seasonal migratory

agricultural workers who were also victims. Another limitation is that the field study was carried out in a season in which temperatures were extremely high in Adana and some official authorities were on their annual leave. Due to this, interviews with government agencies in particular remained limited. In interviews for understanding the psychosocial effects of the flood, issues taken up could have some traumatizing effects on victims, particularly children. Considering this possibility it became necessary to act more cautiously in timing and planning of the duration and venue of interviews which may be considered as another limiting factor.

The Case Analysis was for understanding how the flood affected seasonal migratory agricultural workers living on the Adana plain. There may be further studies and cross-analyses on the basis of this one. In future studies of this kind there is use in addressing the issue of child labour in a more comprehensive way. There is also use in planning research on psychosocial effects of emergencies and ways of coping up with stress experienced during and after disasters.

The Development Workshop complied with the Field Ethics Guide³ prior to and during the field survey conducted for the purpose of data analysis.

³ Annex 1: Development Workshop Field Ethics Guide





1











Rain,
Mud and
Barefoot

History of Flood on the Adana Plain

There are frequent cases of flood and torrent caused by heavy rainfall in Adana for long years.¹ A more recent one is the flood occurring after rain starting midnight on 24 December 2019 and causing significant damage in what is known as Adana plain comprising the districts of Seyhan, Yüreğir, Yumurtalık and Karataş. On Monday, 23 December 2019, Adana Regional Directorate of Meteorology made an an-

¹ Flood is defined as an event where large volumes of water run and spread uncontrolled in stream beds, valley slopes, hollow grounds and coastal areas. In overflow, streams flow out of their beds and spread over smooth and hollow places as a result of heavy precipitation or sudden melting of ice or snow (Özcan 2006).

Weather conditions for Adana Province 25-29 Dec. 2020

Date	Incident	Prognosed						Past events			
		Temperature (°C)		Humidity (%)		Wind (km/h)		Extreme temperatures (°C)		Ortalama Sıcaklık (°C)	
		Lowest	Highest	Lowest	Highest	Direction	Speed	Lowest	Highest	Lowest	Highest
25 December Wednesday		9	14	87	96		19	-2.8	20.7	5.9	15.7
26 December Thursday		8	14	83	95		14	-1.6	20	6.2	15.5
27 December Friday		6	15	56	92		10	-1	21.6	6.1	14.8
28 December Saturday		6	13	79	90		13	-3	20.6	6.1	15.6
29 December Sunday		6	12	77	94		19	-3.5	20.3	6	15.8

Source: *Regional Directorate of Meteorology*



Photo: onedio.com/haber/son-56-yilin-en-siddetli-yagisi-fotografarla-adana-da-hayati-durma-noktasina-getiren-sel-felaketi-892882

nouncement saying heavy rainfall is expected from 21:00 to 24:00 hours.² Indeed, rain started midnight on 24 December 2019 and affected the city centre as well without stopping for hours. The province of Adana has average annual precipitation of 648 kg (648 mm).³ On 24 December 2019 alone rainfall per square meter was 147 kg (147 mm) which is the highest within the last 56 years.

² According to the classification of rates of precipitation, the rate 76-100 mm per hour is considered as “violent rain.”

³ Precipitation is often measured by pluviometer in Turkey and in other parts of the world and data obtained is used as “base”. Pluviometer expresses annual precipitation in terms of mm, cm and m and daily rainfall in m²/kg. In other words, 1 kg rainfall on 1 m² means water depth of 1 mm.

On Tuesday, 24 December 2019 the meteorology released a second warning saying rains will continue and noted that “very heavy rain” was expected from midnight on 25 December till 18:00 hours on Wednesday⁴. Two days of rainfall on 24-25 December 2019 was, on average, 249 kg (249 mm) which corresponds to 38 percent of annual average figure. Given these, it can be said that heavy rains starting on 24 December 2019 were the strongest of similar showers in recent years. This is also significant in that it points out to recent increase in rainfall even in brief showers.

⁴ According to the classification mentioned above the rate of precipitation of 51-75 mm is considered as heavy rain.

Projected incident	Thunderstorm with a rain shower	Projected Incident	Heavy rainfall
Projected Area	According to the latest evaluations, from tomorrow (Monday) evening on, due to the heavy (60-120 kg/m ²) thundershowers, precautions must be taken against events such as floods, deluges, thunderbolts, disruption of transportation, heavy winds, and the risk of tornados along the coast.	Projected Area	According to the latest evaluations, the heavy rainfall occurring throughout the Adana province (100-200 kg/m ²) are expected to continue until tomorrow's evening hours (Wednesday) and due to additional 40-70 kg of rain expected to fall in addition, it is necessary to be careful and prepared for negative effects such as floods, deluges and disruption of transportation.
Beginning/ Ending	23.12.2019 / 21:00 24.12.2019 / 23:58	Beginning/ Ending	25.12.2019 / 00:00 25.12.2019 / 18:00
The Severity of the Event	Rain showers	The Severity of the Event	Very heavy rainfall
Potential Negative Impact	Disruption of transportation, Flood, Deluge	Potential Negative Impact	Disruption of transportation, Flood, Deluge
The Centre Issuing the Warning	Meteorology 6th District Directorate / ADANA Local Forecast and Warning Centre	The Centre Issuing the Warning	Meteorology 6th District Directorate / ADANA Local Forecast and Warning Centre

Meteorological Warning

Source: General Directorate of Meteorology

The locations in Adana province most seriously affected by the rains mentioned include Gölbaşı, Camuzcu, Sarıhular, Köylüoğlu and Çaputçu to the south of Seyhan district, both sides of irrigation canal in Yüreğir; Şehit Erkut Akbay, 19 Mayıs, Levent and PTT neighbourhoods and locations of Karagöçer, Tuzla, Çavuşlu and Damlapınar in Karataş district. As a result of heavy rains education was suspended in some districts and there were problems in transpor-

ation. The Kozan-Ceyhan road was blocked as Avclar Neighbourhood was overflowed⁵. Local people had to use boats on their overflowed farming lands.⁶

⁵ Karaoğlan, Erol (2019) "Flood blocks Kozan-Ceyhan road in Adana", AA News dated 25.12.2019, www.aa.com.tr/tr/turkiye/adanada-sel-kozan-ceyhan-yolunu-kapat-ti/1683461

⁶ onedio.com/haber/son-56-yilin-en-siddetli-yagisi-fotograflar-la-adana-da-hayati-durma-noktasina-getiren-sel-felaketi-892882

Heavy rainfall in Adana and its districts led to flooding of thousands of houses while an unprecedented overflowing took place on the plain as a result of torrent, clogging in water canals and insufficiency of Ceyhan River and drainage canals in discharging flood water. The Ceyhan River reached a width of 100 metres at some locations and started flowing through orange orchards. As surface waters flowing from north reached the plain and joined with heavy rainfall, soil reached saturation point and surface water pools emerged. The insufficiency of drainage canals in discharging surface water led to inundation of a part of the plain.

During the flood, the crisis desk set up on Tuesday, 24 December 2019 under the Governor of Adana started preparations for financial planning and evacuation to intervene together with various institutions.⁷ As a part of intervention, a communication network comprising as many actors as possible was created at local level. Information about situations in neighbourhoods was obtained through crisis desks set up by district municipalities and conveyed to relevant authorities. Assistance was received from

⁷ Adana Governorate AFAD (2019) "Crisis desk headed by governor Mahmut Demirtaş assess the consequences of recent rainfall" adana.afad.gov.tr/valimiz-sn-mahmut-demirtas-baskanliginda-olusturulan-kriz-masasinda-yagislarin-sebebiyet-verdigi-durumlar-degerlendirildi

neighbourhood headmen in Seyhan district to accelerate information flow while teachers and priests were included in field work to proceed in damage assessment work. Under financial intervention component various kinds of assistance were extended to affected families. Food and household items assistance was delivered through urgent intervention teams from Yüreğir Municipality while culture centres and condolence houses were opened to victims to stay while water discharge activities were carried out⁸. The Adana Governorate announced on its official website that schools would be closed on December 24th in Seyhan, Çukurova, Yüreğir and Sarıçam districts⁹ and then extended it to cover December 25th as well.¹⁰

⁸ Küçüksaat.com (2019) "Yüreğir is healing after flood disaster", news dated 27.12.2019 www.kucuksaat.com/yuregirde-sel-felaketinin-yaralari-sariliyor-3571h.htm

⁹ T.C. Adana Governorate (2019) "Press Statement on the Suspension of Education for 1 Day Due to Unfavourable Weather Conditions" www.adana.gov.tr/elverissiz-hava-kosullarindan-dolayi-egitime-1-gun-ara-verilmesi-ile-ilgili-basin-bulteni

¹⁰ T.C. Adana Governorate (2019) "Press Statement on the Suspension of Education for 1 Day Due to Unfavourable Weather Conditions" www.adana.gov.tr/sg-188

Major Events of Flood in Adana within the Last 100 Years

1930

During the flood when Seyhan River reached the depth of 6 meters, Adana Türk Ocağı, Adana Girls' High School, municipal yard and Karşıyaka neighbourhood including Memleket Hospital were all inundated. Upon this, patients receiving treatment in the hospital were transferred to Hotel Cumhuriyet and military hospital with trucks provided by the Gilođo factory. This event showed that in spite of recurrent event of this nature Adana was still unprepared. Besides, the fact that Adana Girls' High School and Memleket Hospital were among the first buildings that were inundated clearly showed that urban development in the city proceeded without paying any heed to the nearby river and possibility of its overflowing.



1931

It is the hardest flood event in Adana after the flood of 1930. It resulted from excessive rainfall in April 1931 and melting of snow up in the Taurus Mountains.

1936



Heavy rains early in December 1936 caused flooding. During the flood, Seyhan river reached the depth of 6 meters and width of 400 meters. The river brought down and flooded over surrounding embankments leaving the city and the plain under water. During the flood the bridge (Taş Köprü) with all arches except two becoming invisible because a of water was closed to traffic upon the possibility of its

collapse. Though reducing flow rate in the river, this measure further aggravated the consequences of this disaster.

The destruction caused by the flood had its effects extending over time. It was because of the magnitude of the flood. Indeed, the event remained fresh in memories with inundated city centre and plain for days, hundreds of buildings demolished and many others that became unusable, some thousand animals perishing and tens of people losing their lives. With all these, this event was recorded as one of the greatest disasters that Adana faced since the Republic. It is also important in that it brought to agenda the search for sustained solutions to the problem of flood in the area. Given damages caused at the centre of the city, efforts to control the flow of the river water gained pace. Water regulator is one of the outcomes of these efforts.



1941

It is the result of heavy rainfall in January 1941 and southward winds causing the melting of snow on Taurus Mountains. Seyhan Park and open summer cinema and buildings of Memleket Hospital, Girls' High School and Sports Directorate were flooded while the regulator and the bridge under construction at the location Dilberler Sekisi were damaged.

1947

It was the result of heavy rains in November 1947. Kocavezir, Döşeme, Denizli and Sakızlar neighbourhoods were inundated. Another event of flood happened in the region at the end of the month. Overflowing in Sarıçam Stream leaved Sakızlar neighbourhood in Karşıyaka under water.



1948

It was the biggest flood in the region after the event in 1936. It was the result of heavy rainfall in February 1948. During the event, Seyhan, Ceyhan and Berdan rivers merged and flew as if a single river.



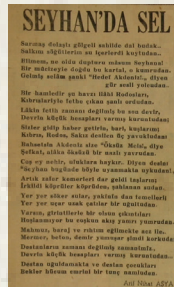
1946

It was the result of heavy rains in Adana in May 1946 which people say not seen in this severity for years. It caused overflowing in many parts of the city and damage in many buildings while inundating streets and roads leading to vineyards and orchards, vicinity of Darülaceze (alms house), neighbourhoods of Hürriyet, İcadiye and İstiklal, old wheat market and Atatürk Park.

1980

While aid and debris clearing works were going on after flood disasters taking place in many locations in central and southern Anatolia, Adana was flooded after the necessary discharge of excess water in Seyhan dam lake.

Similar to what Adana experienced within the last 100 years, excessive precipitation caused by climate crisis now have their impact on Turkey as a whole. According to the records of the General Directorate of Meteorology, 331 events of flood took place within the year 2018. This made 2018 the year of most frequent floods since 1940. Records show there is significant increase in the number of floods starting from the 2000s. This fact points out to the importance of improving and expanding the scope of disaster prevention, intervention and rehabilitation work.



Effects of Flood on Seasonal Migratory Agricultural Workers

While the event in Adana had its negative consequences for many households living in the city as well, when seasonal migratory agricultural families suffered far more. Set up on plain surface with mostly canvas and nylon material it is impossible for tents to stand unharmed against such flooding. As a matter of fact 47 tent settlements on the Adana

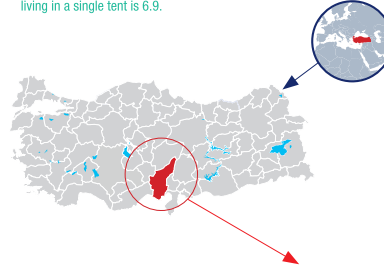


plain together hosting some 15,000 persons were badly affected by the event.

Taking a closer look to the plain we see that tents are like homes of workers while the plain appears as a big neighbourhood comprising tent camps and crop fields where people work. Agricultural workers spending the whole year or most of it in tent settlements can be said to have set up their life there, on this plain and tents. Hence flood in fact affects not only tents but the life of agricultural workers as well. Agricultural intermediaries with their significant role in the routine life of workers are also leading actors in cases of disaster¹¹ and in fact they are de facto headmen of these settlements.

¹¹ Agricultural intermediary: Any real or legal person providing labour force to agricultural employers and jobs to agricultural workers when the farming or harvesting seasons begins

Current Situation Map of Seasonal Migratory Agricultural Workers' Tent Settlement Areas in Adana Province



Karataş

Tuzla	Turkish Citizen	Migratory	TOTAL
Number of Tents	19	50	69
Number of Children	57	229	277
Number of People	153	359	483

Karagöçer	Turkish Citizen	Migratory	TOTAL
Number of Tents	190	60	250
Number of Children	1192	384	1486
Number of People	1520	486	2000

Sirkentli	Turkish Citizen	Migratory	TOTAL
Number of Tents	13	0	13
Number of Children	62	0	62
Number of People	93	0	93

Tuzla	Turkish Citizen	Migratory	TOTAL
Number of Tents	7	26	33
Number of Children	30	109	139
Number of People	49	182	231

Kapı	Turkish Citizen	Migratory	TOTAL
Number of Tents	0	16	16
Number of Children	0	61	61
Number of People	0	96	96

Bahçe	Turkish Citizen	Migratory	TOTAL
Number of Tents	691	96	787
Number of Children	276	479	746
Number of People	414	588	1002

Tabaklar	Turkish Citizen	Migrant	TOTAL
Number of Tents	20	190	210
Number of Children	80	1026	1106
Number of People	140	1330	1470

Cavuşlu	Turkish Citizen	Migrant	TOTAL
Number of Tents	0	125	125
Number of Children	0	425	425
Number of People	0	759	759

Bahçe	Turkish Citizen	Migratory	TOTAL
Number of Tents	0	17	17
Number of Children	0	51	51
Number of People	0	85	85

Domlapanor	Turkish Citizen	Migratory	TOTAL
Number of Tents	6	29	34
Number of Children	23	174	196
Number of People	42	195	238

Cimelli	Turkish Citizen	Migratory	TOTAL
Number of Tents	10	0	10
Number of Children	30	0	30
Number of People	50	0	50

Bahçe	Turkish Citizen	Migrant	TOTAL
Number of Tents	0	75	75
Number of Children	0	435	435
Number of People	0	600	600

Domlapanor	Turkish Citizen	Migratory	TOTAL
Number of Tents	0	5	5
Number of Children	0	18	18
Number of People	0	25	25

İsahacık	Turkish Citizen	Migratory	TOTAL
Number of Tents	0	10	10
Number of Children	0	30	30
Number of People	0	50	50

Yahızlı	Turkish Citizen	Migratory	TOTAL
Number of Tents	24	10	34
Number of Children	146	28	174
Number of People	168	70	238

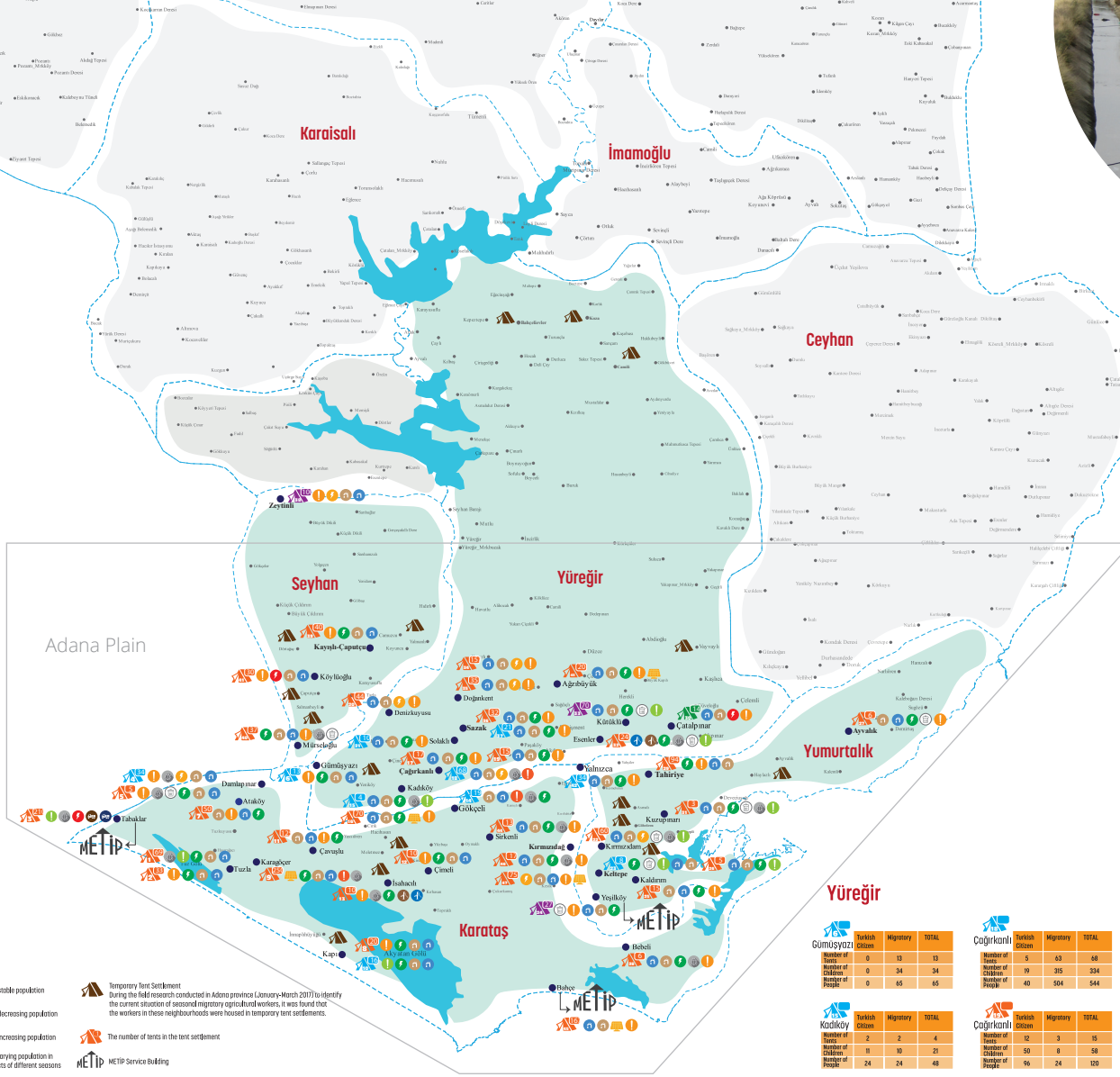
Ataköy	Turkish Citizen	Migratory	TOTAL
Number of Tents	11	39	50
Number of Children	46	281	327
Number of People	100	390	500

Gökçeli	Turkish Citizen	Migratory	TOTAL
Number of Tents	0	19	19
Number of Children	0	65	65
Number of People	0	114	114

Kopa	Turkish Citizen	Migrant	TOTAL
Number of Tents	14	6	20
Number of Children	42	22	64
Number of People	70	88	100

Bebeli	Turkish Citizen	Migratory	TOTAL
Number of Tents	2	4	6
Number of Children	9	11	20
Number of People	12	24	36





Adana Plain

- Temporary tent settlement with stable population
 - Temporary tent settlement with decreasing population
 - Temporary tent settlement with increasing population
 - Temporary tent settlement with varying population in relation to the agricultural products of different seasons
- Sources of Drinking Water
- Tanker
 - Water pump
 - City water supply
 - Channel (river)
 - Sink shaft (seasonal well)
 - Other (earthen with plastic-con, thermal)
- Sources of Water for Consumption
- Tanker
 - Water pump
 - City water supply
 - Channel (river)
 - Sink shaft (seasonal well)
 - Other (earthen with plastic-con, thermal)
- METIP METIP Service Building
- Solar panels are being used
 - Garbage is being collected
 - Environmental sanitation is being carried out
 - Consistent electricity supply
 - Inconsistent electricity supply
 - No electricity supply
 - Other (earthen with plastic-con, thermal)
 - Other (earthen with plastic-con, thermal)
- Risk Level Legend
- 1 Temporary Tent Settlement with Low Risk
 - 2 Temporary Tent Settlement with Moderate Risk
 - 3 Temporary Tent Settlement with High Risk
 - 4 Chronic disease
 - 5 Visibly impaired
 - 6 Hearing impaired
 - 7 Mentally impaired
 - 8 Physically impaired
- | | Turkish Citizen | Migrant | Total |
|---------------------|-----------------|---------|-------|
| Chronic disease | - | - | - |
| Visibly impaired | - | - | - |
| Hearing impaired | - | - | - |
| Mentally impaired | - | - | - |
| Physically impaired | - | - | - |

HOW WAS THIS MAP PREPARED?
 The current situation data collection forms were filled by Child Labour Prevention Unit staff and Development Workshop field expert based on the declaration of the inhabitants of 47 temporary tent settlements which were visited in November, 2019. The collected data and its analysis are reflected on the map.

Seyhan

	Turkish Citizen	Migrant	TOTAL
Zeytinli	100	0	100
Number of Tents	300	0	300
Number of Children	600	0	600

	Turkish Citizen	Migrant	TOTAL
Murşeböğü	17	29	37
Number of Tents	14	76	141
Number of Children	126	160	286

	Turkish Citizen	Migrant	TOTAL
omfapanar	4	36	40
Number of Tents	15	180	195
Number of Children	28	252	280

	Turkish Citizen	Migrant	TOTAL
Köylüoğlu	30	0	30
Number of Tents	102	0	102
Number of Children	240	0	240

Yumurtalık

	Turkish Citizen	Migrant	TOTAL
Kırmızıdam	30	30	60
Number of Tents	66	84	150
Number of Children	200	210	420

	Turkish Citizen	Migrant	TOTAL
Keltepe	3	2	5
Number of Tents	10	5	15
Number of Children	21	14	35

	Turkish Citizen	Migrant	TOTAL
Keltepe	2	6	8
Number of Tents	10	18	28
Number of Children	18	54	72

	Turkish Citizen	Migrant	TOTAL
Ayvalık	0	0	0
Number of Tents	16	0	16
Number of Children	30	0	30

	Turkish Citizen	Migrant	TOTAL
Yesilköy	5	22	27
Number of Tents	15	62	77
Number of Children	25	110	135

	Turkish Citizen	Migrant	TOTAL
Tahriye	2	92	94
Number of Tents	15	276	291
Number of Children	14	644	658

	Turkish Citizen	Migrant	TOTAL
Kaldırım	0	7	7
Number of Tents	26	21	47
Number of Children	48	42	90

	Turkish Citizen	Migrant	TOTAL
Kuzupınarı	3	0	3
Number of Tents	17	0	17
Number of Children	24	0	24

Yüreğir

	Turkish Citizen	Migrant	TOTAL
Günüşyaz	0	13	13
Number of Tents	0	34	34
Number of Children	0	65	65

	Turkish Citizen	Migrant	TOTAL
Çağırkenti	5	63	68
Number of Tents	19	315	334
Number of Children	40	504	544

	Turkish Citizen	Migrant	TOTAL
Kadıköy	2	2	4
Number of Tents	11	10	21
Number of Children	24	24	48

	Turkish Citizen	Migrant	TOTAL
Çağırkenti	12	3	15
Number of Tents	50	8	58
Number of Children	98	24	120

	Turkish Citizen	Migrant	TOTAL
Kadıköy	23	47	70
Number of Tents	101	273	374
Number of Children	207	423	630

	Turkish Citizen	Migrant	TOTAL
Denizkuyusu	6	38	44
Number of Tents	26	152	178
Number of Children	42	266	308

	Turkish Citizen	Migrant	TOTAL
Çağırkenti	0	17	17
Number of Tents	0	44	44
Number of Children	0	68	68

	Turkish Citizen	Migrant	TOTAL
Salaklı	0	10	10
Number of Tents	0	32	32
Number of Children	0	50	50

	Turkish Citizen	Migrant	TOTAL
Çatalpınar	0	0	0
Number of Tents	24	19	43
Number of Children	40	30	70

	Turkish Citizen	Migrant	TOTAL
Esenler	2	22	24
Number of Tents	12	106	118
Number of Children	14	154	168

	Turkish Citizen	Migrant	TOTAL
Kuruköy	30	0	30
Number of Tents	266	0	266
Number of Children	420	0	420

	Turkish Citizen	Migrant	TOTAL
Sazak	4	28	32
Number of Tents	14	84	98
Number of Children	29	140	169

	Turkish Citizen	Migrant	TOTAL
Sazak	0	21	21
Number of Tents	0	80	80
Number of Children	0	105	105

	Turkish Citizen	Migrant	TOTAL
Doğankent	2	33	35
Number of Tents	3	100	103
Number of Children	10	165	175

	Turkish Citizen	Migrant	TOTAL
Doğankent	0	157	157
Number of Tents	0	829	829
Number of Children	0	942	942

	Turkish Citizen	Migrant	TOTAL
Sazak	0	21	21
Number of Tents	0	80	80
Number of Children	0	105	105

	Turkish Citizen	Migrant	TOTAL
Doğankent	0	157	157
Number of Tents	0	829	829
Number of Children	0	942	942

	Turkish Citizen	Migrant	TOTAL
Ağzıbuğuk	20	0	20
Number of Tents	86	0	86
Number of Children	160	0	160

Observations show that tent settlements are located mostly near drainage canals and as a result some of these settlements remained almost 1 meter under water, tents turned unusable and workers faced vital risks. Most of necessary household items kept in patchy canvas and nylon tents were flooded away while those that remained were badly affected by rain and mud. Families could not even cook because of soaked firewood and bushes and with the pooling of floodwater on the plain they had to be absent from work for almost 15 days. As a means for some extra income and family nutrition, households with animal stock were also affected as most of their animals perished in flood.

Compared to a concrete building a tent provides very limited protection from heavy rain. Household items kept inside may get soaked, turn unusable or drifted away since tents cannot resist to events like flood. In sum, the meaning of this event for agricultural workers living on the plain is essential household items lost or turned unusable, not being able to work for some time since their working places remain under water accompanied by corresponding income loss, interruption of their children's education, plus some deep psychological effects and some other problems.

Even in "normal times" seasonal migratory agricultural workers face serious problems such as limited access to health. Education and transportation services, temporary nature of their employment, low

pay, and difficult working conditions. Situations like flood deriving from extreme weather events further worsen things and make them even more vulnerable. The following are the words of a member of the Municipal Council of Adana¹² giving an idea about the situation after the flood:

Struggling in environments deprived of the rights to health, education and housing, agricultural workers were hit the hardest in this natural disaster. They even did not have any place to sleep. On the basis of the concept of socially sensitive municipal administration we have to bring solutions to the problems of agricultural workers working here for the last 10-15 years and living in primitive conditions.

There are several reasons behind this assessment. The first is related to the structure of the land on which seasonal migratory agricultural workers live. The plain lies on a land where Seyhan River continuously changes its bed and where groundwater level is also high.¹³ It is therefore highly probable for the plain to remain under water in case of and torrent

¹² www.haberturk.com/adana-haberleri/74601646-seyhan-belediye-meclisinde-su-baskinlari-konusulduchpli-meclis-uyesi-gongor-gecer-tarim

¹³ Çukurova University Adana Publicity Site (?) "Geographical Position of Adana" adana.cu.edu.tr/cografya.asp

and overflowed. Another reason is the fact that seasonal migratory agricultural workers live in tents in temporary settlements. Almost all tents on the plain are made of plastic canvas (Development Workshop 2019). These tents may provide some level of protection while weather conditions remain normal, but materials they are made of lose their protective characteristics during torrents and floods. Particularly in case of overflowing, these tent “houses” where workers stay become unusable. Finally, while the term “temporary” is widely used, many seasonal workers actually stay in these places “permanently” which means effects of any adversity turn out to be heavier.

Besides mere sheltering, flood had its other negative consequences for seasonal migratory agricul-

tural workers as well including health problems in children and adults as a result of exposure to heavy rain and cold, disruption of established nutrition processes, not being able to go to work, interruption in education and emotional and psychological reactions. Given that with the exception of some animal stock which is also affected negatively by the event workers have no alternative sources of income or any saving, it is clear that the situation will bring along serious problems in subsistence. In many cases families mobilize all their members for work and a means of subsistence and can barely make it. As a matter of fact, interviews with households showed that the whole family works in a way that their children up to 9 years old also participate in the work processes. Not being able to work for a period of time following the flood brings along some oth-





Development Workshop Archive

er serious problems like going into debt. Not going out for work and loss of spaces to cook following the flood means problems of food and proper nutrition for seasonal migratory agricultural workers.

Health-related consequences of flood emerged as flu/cold whose indications were more pronounced among children. Some workers got caught to flood while in their tents where they had to remain in water for some time and unable to change as their reserve clothes were all soaked. During field work children were frequently observed as walking around on wet and muddy ground. Since it was winter, and weather was cold the effects of flood on health status of seasonal migratory agricultural workers were further aggravated. Worsening of hygiene conditions following the flood had its negative health effects as well.

As to psychological effects of the event it appears that children are affected deeper. While concerns of

adults focus on subsistence and sheltering issues, children face problems of fear and panic. As one child living with his seasonal worker family says:

☞ I am still in fear. Our tents are filled with water. What if it starts raining again...

This statement can be taken as a clue to understanding the psychological state of children following the flood. These fears also led to some physiological disturbances in some children. one interviewee said his 8 years old child started to wet his bed at night after the flood. Some children interviewed said they could not sleep at night. The fact that '*miser*' is the word most frequently used by families to describes the state of their children after the event of flood suggests that it had its serious effects on children.





2

Problems Created by Flood and Coping Strategies



The flood in Adana caused many problems that had their negative effects on seasonal migratory agricultural workers. There are two major reasons making the event of flood so heavy for these workers. The first is that since their living and working spaces are both located on the plain their full daily life is deeply affected. The second is that the government sector does not develop long-term policies since it regards tent camps not as steady living spaces but only temporary settlements. These two factors lie at the root of many problems. Some of these problems are those that directly affect daily life practices of sea-

sonal migratory agricultural workers. Others emanate from reasons that may be considered as structural and shortage of information on the nature of tent settlements of the part of authorities in charge of these affairs. This heading addresses separately the structural problems related to institutional working and the problems faced by seasonal migratory agricultural workers. It is also analysed, on the basis of data from the field work, what practices are adopted for solution by seasonal migratory agricultural workers when official or institutional solutions remain insufficient.

Flood in Ordu and Samsun Provinces

Many workers and their families fell victims to floods and landslides happening in Samsun, Giresun and Ordu in eastern and central Black Sea region where there are large numbers of seasonal migratory agricultural workers. Upon floods that followed heavy rains starting on 22 August 2020 workers' tents collapsed and roads remained under water. In Ordu where there was whirlwind tents of seasonal migratory agricultural workers were flooded.

Heavy rains starting in Samsun on 22 August 2020 caused flood and landslide in districts of Çarşamba, Salıpazarı and Terme. As rains continued Terme Municipality took some measures considering the possibility of overflowing in Terme stream and local people were warned about this possibility. Seasonal migratory agricultural workers in Akçay Karacalı neighbourhood who were in the area for hazel nut harvesting and got stuck there in their tents were rescued by working machines. Hazel nut produce left out for drying after harvest was also overflowed.

In Ünye district of Ordu roads were flooded as a result of heavy rains. In Fatsa district where the flood was the heaviest



tents of seasonal migratory agricultural workers were flooded and as tents fell down household items were carried away by water. There was also whirlwind off the coast of Altınordu district. Drone images showed 'agricultural workers barely saved from getting carried away by flood'. Interviewed workers said, "Our items, beds, etc. are all soaked. Right now some of us remain in cars and others took shelter in their friends."

The following are some observations made during the interview with the Pikolo Association 'In Ordu spaces allocated to temporary tent settlements of

seasonal migratory agricultural workers are insufficient. As hazel nut orchards are turning into smaller parcels in time farmers recruit their workers from tent settlements and so incoming workers set up their tents in any space they find. Some 30,000 seasonal migratory agricultural workers move to Ordu in hazelnut harvesting season; some of these workers stay in orchard dwellings allocated by farmers while others set up their tents on the banks of streams. One can even see tents right in stream beds which are the first to be affected in case of any flood.'

Source: drive.google.com/drive/u/1/folders/1KhyQXWtelLH-KQJLmepBgvL_E5EkZ8Ca

Structural Problems Related to Institutional Working: Lives Ignored

A structural problems associated with events of flood and torrent on the Adana plain can be listed as address records, infrastructural problems related to drainage canals, recurrent nature of these events and problems confronted in interventions and evacuation of tent dwellers. Of these structural prob-

lems, the major one is not considering tent settlements as formal living spaces. With the exception of the “Present State Mapping of Temporary Tent Settlements of Seasonal Migratory Agricultural Workers in Adana Province” prepared in 2017 and 2019 by the Development Workshop with the support of UNICEF-Turkey, the public administration has no adequate information about how many temporary settlements exist in which areas, how many people live in these places and how their living conditions are, which makes it even more difficult to follow a planned course for first and urgent interventions in case of disasters like flood. We can therefore say that the core of the problem is the invisibility of temporary tent settlements of seasonal migratory agricultural workers and life there. As a matter of fact it is observed that decisions and practices related to interventions and vacation of tents differ for the city centre on the one hand and the plain on the other. While it is government agencies to intervene first at



Photo: İhlas Haber Ajansı

the city centre, it is mostly municipalities and civil society organizations when it comes to interventions on the plain. Let's take the statement made by Adana Governorate:

Fortunately, life safety of our citizens has been ensured and this is a source of motivation for us. There is no problem in this regard. Now there is a crisis centre and relevant commissions. The centre is taking swift decisions now. There is assessment of both damage in crop fields and crops and in houses. If there are problems with household items that our citizens use specific attention is paid to this.

This statement shows that post-flood interventions were made as focused on people living in steadily established dwellings at the city centre and in villages. Indeed, while damage assessments related to established housing sites and houses were going on, tents in some areas were hastily removed by using working machines even without giving time to their dwellers to take out their items and belongings. It is therefore indicative that public authorities do undertake the responsibility of assessing damages and introducing remedies in established housing areas they do not display the same for tent settlements and their dwellers and rather adopt an attitude holding seasonal migratory agricultural workers responsible for what happened. In some, there is dif-

ference in approaches to permanent and temporary settlement areas.

Comparing first responses to and actions taken as intervention and water discharge work we find that they were in quite delay for the plain than for city centres. Indeed, authorities and CSOs interviewed state that the process of intervention to flood on the plain started 2 to 5 days after the event. Authorities explain this delay by difficulty of physical access to the plain following the flood and that urban settlement areas were prioritized. However, the most important reason for this delay is in fact the absence of any comprehensive intervention plan for temporary settlements in case of any disaster. Presently there is uncertainty or lack of any vision on what kind of work needs to be done regarding income losses, reorganization of living spaces and effects on children when seasonal migratory agricultural workers experience a disaster. This makes it difficult to engage in work that would improve the lives of seasonal migratory agricultural worker effectively and in a planned way despite some interventions made after the disaster. A simple example would be the necessity of supplying food that can be consumed without any need for cooking since materials used to build fire were all soaked because of flood.

It is also an important problem that the process of intervention and vacation process on the plain

was not implemented under a comprehensive programme. Indeed, during field work by Development Workshop experts 48 hours after the flood it was observed while vacation was implemented in some tent settlement there was no intervention at all in others. It was also observed some tents were still in water even 4 days after the event and their dwellers faced difficulty in providing for some their most basic needs as food and heating. The decision of Adana Governorate for the vacation of some tent settlements in Karagöçer and Çavuşlu in Karataş district located on a high-risk area near a drainage canal¹ shows that priority is given tent settlements in high-risk groups. Still, it must be said that there is no planned work in these vacations. It is known that Syrian migratorys living in these settlements were

¹ Pekal, Volkan and Seren Elataş (2019) "While Adana Governorate is running down tents agricultural workers want decent and permanent accommodation areas", news dated 27.12.2019, Evrensel Daily

www.evrensel.net/haber/394098/adanada-valilik-cadirlari-yikiyor-tarim-iscileri-kalici-barinma-alanlari-istiyor

placed in refugee camps after their vacation. But there is no plan as to where the remaining worker families are to be transferred/placed. An agricultural worker from Karagöçer says:

Yes, we are the citizens of this country, but nobody helps us. Now they want us to vacate this place. If we had somewhere else to go we would have left anyway. There is no parcel where we can set up our tents. Where can we go? Monthly rentals are from 500 to 1000 TL. It is the same if we go back to our hometowns. It is hard to tell it. There is no running water for the last three days. So, we have to use water from the well. They have to help us. It is too difficult in winter, but we don't pay rental here.

Indeed, the location of Karagöçer where tents were removed is still a permanent place of settlement





for seasonal migratory agricultural workers since 1992 confirming that they actually have no other place to go.

Following the vacation of tent settlements in their districts, Yüreğir and Seyhan municipalities placed seasonal migratory agricultural workers in condolence houses. But there is no definitive information about how many seasonal migratory agricultural workers were located in these houses. An important detail about the vacation process observed during the field work is that while women and children were placed with their relatives, if possible, or in condolence houses men remained in tent camp sites to protect what remained of them. Men say they spend this time in flooded tent or in cars of their friends.

Infrastructure is another persistent problem in settlements. The presence of infrastructure related problems in Adana province is accepted by all institutions and what may happen in case of heavy rains can be envisaged. When the issue is these infrastructure problems lead statements made by relevant authorities include 'poor city infrastructure', 'system where stormwater discharge and sewage systems are combined', 'topographical characteristics of the plain' and openness to urban development of areas which should in fact be considered as within the outer beds of streams according to the Flood Law no. 4373. For example, a kilometre-wide outer bed of Seyhan River was laid down in the period 1940-1950 as a safety zone for cases of flood and overflow. Also embankments were introduced to protect roads from flash floods. It is stated that

the Law no. 4373 on Floods already requires this measure, but the practice is not as envisaged by the legislation. The following statement was made in focus group interviews with CSOs and governmental agencies:

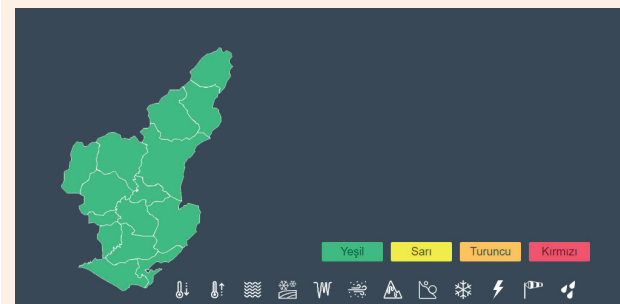
□ The main problem is with infrastructure... There is high risk in drainage canals... The present picture shows that there is no planning including for city centres...They are not prepared for floods and overflows.

Another structural problem is with drainage canals which presently lead to higher flood levels and larger damage. Indeed, insufficient capacity of canals in water discharge is marked as one of the causes of flooding. In interviews, authorities pointed out to clogging of canals as another negative factor. There are other views as well, including by seasonal migratory agricultural workers that there is regular clearing work in canals, but these efforts still remain insufficient. Seasonal migratory agricultural workers say there is no regular collection of wastes in their settlements which forces them to dispose their wastes of in canals that leads to their clogging. Right at this point, it can be said, independently of the reality of flooding, delays or poor work in extending some public services like waste collection to tent settlements further aggravate conditions that emerge as a result of disasters like flooding.

Meteorological Warning

5 January 2020 Sunday / 13:45 Warning Nu.: 5

Projected Incident	Thunderstorm with rain showers
Projected Area	According to the last estimations, due to heavy and, in some places, extremally heavy (100-200 kg/m ²) rainfall and thunderstorms with rain showers to start from tomorrow (Monday) morning to Wednesday morning throughout the Mersin province and in the Western Adana, it is necessary to be careful and prepared for events such as floods, deluge, thunders, heavy winds, and the risk of tornados in the coastal area.
Beginning/ Ending	06.01.2020 / 09:00 08.01.2020 / 06:00
The Severity of the Incident	Heavy Rainfall
Potential Negative Impact	Deluge, flood, thunders, disruption of transportation
The Centre Issuing the Warning	Meteorology 6th District Directorate / ADANA Local Forecast and Warning Centre



Recurrent nature of floods on the plain can be considered as another structural problem. In short-term this recurrency derives from heavy rains that follow one another in two weeks. About one week after the flood that followed heavy rains starting midnight on 24 December 2019, came another period of heavy rain starting on 6 January 2020 that delayed the recession of water. This situation extended the victimized position of seasonal migratory agricultural workers and further deepened its effects. In longer term recurrency, this victimization repeats itself over and over in years which leads workers to think that their situation is just ignored.



Indeed, recurring floods in Adana within the last 100 years bring along the same outcome for seasonal migratory agricultural workers: A plain under water, living spaces becoming unusable and perished animals...

One structural problem pointed out is poor coordination of activities related to interventions during an event and also in damage assessment afterwards. Those engaged in disaster intervention actions stated their experience as follows during interviews conducted as a part of field study:

□ There is no coordination, we were just motivated to help others. Procedures are not working, and all depends on personal initiatives. Procedures are not needed since there are active persons and quick interventions from within.

This problem of “deficiency in coordination” was generally accepted in interviews with official authorities even if some positive sides in interventions were mentioned. The vagueness of the status of seasonal migratory agricultural worker families vis a vis the authority of government agencies points out how crucial coordination is particularly in disaster



intervention processes.

Institutional Tools in Combating Problems

Public agencies and civil society organizations civil society organizations have so far employed many ways and tools to intervene in floods, mitigate their

effects and in post-disaster rehabilitation efforts. These include public warnings to sensitize people, monitoring-evaluation work, and in kind/cash assistance. According to interviews with seasonal migratory agricultural workers, it is gendarme in some settlements and headmen or priests in others who convey tent inhabitants information about expected heavy rain. However, there is not much to do after such warnings in case of tent settlements. In urban dwellings, a family living in a basement may go up to their neighbours after this warning, but there is no such alternative for inhabitants of tent settlements. Such early warnings cannot be said to be actually functional unless there is intervention to prevent the damage or to minimize losses.


Initiatives undertaken by local governments and civil society have their important place in strategies employed in coping up with consequences and damages of flood. For some cases, the importance of coop-

eration by these two sectors in disaster management is more pronounced. An example would be the presence of the Development Workshop in the process from the very start and sharing of its pre-disaster studies with all relevant actors including municipalities in the first place. The “Present State Mapping of Temporary Tent Settlements of Seasonal Migratory Agricultural Workers in Adana Province” prepared by the Development Workshop in 2019 provides detailed information about how many temporary tent settlements there are and where, number of tents and population they room in and demographic characteristic of tent population. When these maps are shared with municipalities, local governments realized the seriousness of the situation and created an effect that led local governments to action.

Following the flood, one of the most important steps taken in the context of disaster prevention for seasonal migratory agricultural workers is the establishment in January 2020 of the “*Commission for the Investigation and Identification of the Problems of Agricultural workers*” in Seyhan Municipal Council. The commission composed of representatives from all political parties in the council visited agricultural workers in crop fields and orchards where they work and in temporary tent settlements. During these visits workers requested supply of blankets which was then provided by Seyhan Municipality. Visiting commission members also took notes about problems as expressed by workers including in such areas as health, hygiene, housing and heating.



Stressing the importance of having the problem investigated by all political parties for possible solutions, the Commission Head made the following statement.²

 Our objective is to bring sustained solutions to the problems of agricultural workers. Our commission is engaged in serious work for this purpose. We included in this work the Seyhan City Council representing its own urban dynamics. When the report of this work is ready we'll focus on solutions together with the Governorate and Adana Metropolitan Municipality.

Monitoring-evaluation is another activity carried out in this process. Visiting the plain right after the flood, the Development Workshop prepared and shared reports on the present situation, effects of flood on seasonal migratory agricultural workers, and what needs to be supplied urgently. The Hayata Destek (life support) Association and the Human Rights Association too prepared similar reports on the issue.³ Such studies and their dissemination is

² CNN Türk (2019) "Joint commission in Seyhan seeks solutions to the problems of agricultural workers", news dated 26.01.2020 www.cnntrk.com/yerel-haberler/adana/merkez/seyhanda-ortak-komisyon-tarim-iscilerinin-sorunlarina-cozum-oluyor-1477881

³ www.ihd.org.tr/wp-content/uploads/2020/01/IHDAAdanaSube_KarataslIcesiiKaragocerKoyuTarimiscilerininCadirlarininSokulmesi-

important in drawing the attention of relevant agencies and the public and improving the visibility of seasonal migratory agricultural workers. Visiting the Adana Plain in the context of intervention to psychological effects of flood on seasonal migratory agricultural workers, the *Hayata Destek Association Child Protection Programme*, *Goal International* and *United Nations Population Fund* (UNFPA) implement special psychosocial support programmes of the *Rural Health Services Project* and Red Crescent. Though these programmes may be effective in the case of seasonal migratory agricultural workers, it must be added that there is yet no sufficient work in issues like emergency preparedness and rehabilitation and damage mitigation after.

Workers are extended in-kind and cash assistance as a part of coping strategies given the consequences of flood on the plain. As far as tent settlements are concerned it can be said that government agencies, local governments and CSOs had the lead in in-kind assistance. Assistance extended to the affected area includes Red Crescent's new tent supply to some areas, emergency food packs distributed by the Derman Team of Adana Metropolitan Municipality, cash support given jointly by the Municipality and UN Organization for Migration without any condition of recorded address and various forms of assistance by the Social Assistance and Solidarity Foundation (SYDV). In-kind assistance (i.e. food,



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blanket, mattress, sofa bed, rugs, etc.) by Red Crescent and Disaster and Emergency Management (AFAD) continued for a month. Material assistance is extended by municipalities and CSOs in cooperation. It was learned from focus group meetings with CSOs that municipalities extend cash support with the support of the International Organization for Migration (IOM). However, it was observed that there are difficulties in ensuring that this assistance actually reaches seasonal migratory agricultural workers since there are problems deriving from a rather chaotic situation. It can therefore be concluded institutions develop short-term or palliative solutions in coping up with structural problems while they act rather slow in taking steps to eliminate or at least minimize these problems.

Problems Experienced by Seasonal Migratory Agricultural Workers: Permanent Vulnerabilities, Temporary Solutions

As a result of overflowing caused by 3 days long heavy rains starting on 24 December 2019 and repeating on 6 January 2020, seasonal migratory agricultural workers had to face many short and long-term problems. Housing, health, nutrition, job/income, education, and psychological problems are among examples that can be given. While some of these problems are the outcomes of structural problems mentioned above, others emerged directly as a result of flood.



Problem of Housing

Sheltering is one of the most important problems for seasonal migratory agricultural workers who adopt canvas/plastic made patchy tents as “home”. While some seasonal migratory agricultural workers on the Adana plain are from other places temporarily here for some seasonal works others seem to have permanently settled in tent camps. What happened during the vacation of some tent settlements after the flood clarifies the situation. During field work it was witnessed workers whose tents were removed were told to move to safer places without pointing out to any specific place and consequently workers tried to find other places randomly without any pri-

or information. It was a rather difficult process of relocation for workers in many respects while rains were still going on and everywhere was covered with mud. Upon the vacation of tents in Karagöçer, many seasonal migratory agricultural workers had no other place to go but their relatives or condolence houses shown by the municipality. According to the newspaper Evrensel, the housing problem of seasonal migratory agricultural workers is stated as:

☞ An agricultural worker in Çavuşlu, “The state says pack up your things and leave... but where can we go? I have my house which is merely a tent. How can we survive in the city without any income; are we expected to steal or beg?”

In interviews with seasonal migratory agricultural workers, they say officials come and tell them to va-



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cate their places and go somewhere else they keep staying in these places as they have no other place to go. An agricultural intermediary says the following about this problem of seasonal migratory agricultural workers:

☞ All household items were gone or badly damaged. They had no sleep for two nights; those who have their cars stayed in and others moved to dwellings or houses of their acquaintances.

Seasonal migratory agricultural workers say they could not enter into their tents for 2-3 days for not being able to discharge water fully. During interviews it was said that some tents set up on relatively lower locations became unusable after the flood while others, although also flooded, were still usable despite the problem of wetness in most household items. Tents that were not surrounded by sandbags suffered more damage. In all cases, however, a large part of belongings in tents were so badly damaged to turn unusable. Responses given to questions about their priority problems indicate that housing is a serious problem for seasonal migratory agricultural workers: “We have no place to sleep”; “our living spaces are demolished”; “We’ve got stuck in mud”... A seasonal migratory agricultural worker says the following about their situation:

Men from State Hydraulic Works came and told us to leave, but they did not show us another place where we can stay. So we stayed. And then they came again with their working machines and drove into tents not minding whether there were people and some household goods in. We sent our children off and stayed to prevent further damage.

Another worker:

Rain came so suddenly... what people had was all soaked and damaged. Many just threw their things out and waited for days to have them dried.

Along with having no place to go and damage to household items, another problem that derives from the mode of sheltering of is related to nutrition and daily dietary practices. Seasonal migratory agricultural workers mostly cook their bread and meals or fuelwood fire they build near their tents. After wood and bushes got soaked after heavy rains and flood they could not do this for some period of time. There was also problem in their limited food storage too since it was also damaged by rains and flood.





Problem of Health

The reason for focusing on health problems is the fact that conditions in temporary tent settlements that were already unfavourable in terms of health considerations were further deteriorated as a result of flooding. As a result of difficulties faced in discharging flood water and continuing rain which delayed the recession of water forced workers to remain in flooded areas. As stated above, delay in interventions to the plain led workers to discharge water on their own means and efforts and thus remain in water up to their knees for long period of

time. Since the event took place in late December (2019) and early January (2020) cold weather and winds made it even more difficult. It was observed during field work that while waiting their soaked mattresses and quilts dry, workers were trying to build fire to get warm which was a difficult endeavour with wet wood and wooden pieces. Some interviewees complain about serious abdominal and waist pains.

The statement by the Project Unit of Adana Metropolitan Municipality too draws attention to serious

problem of hygiene that emerges particularly with flood in temporary tent settlements:

It is hard to do all that is needed. We are working together with CSOs that are out in the field. The fire squad is working to drain flood water. Crop fields too are inundated. There is urgent need for food, hygiene kits and clothes.

It is observed that health problems that emerged following the event affect children more. It was frequently observed during the field work that children walk around on soaked ground barefoot even without socks. During interviews it was said children have indications of cold and many of them have never had any health examination. As stated by a deputy from Adana visiting the area⁴:

Children sleep in wet beds in their tents.

Health problems emerging after flood are not limited to cases of cold due to remaining in water. In addition to cold, various other health problems emerged too since workers had to live in unhygienic conditions as a result of water flooding. Indeed, workers frequently mentioned such problems as

⁴ Evrensel Daily (2019) "Children of agricultural workers in Adana sleep in wet beds", 31.12.2019, www.evrensel.net/haber/394374/adanada-tarim-iscilerinin-cocuklari-islak-yataklarda-uyuyor



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mosquitoes and bad odour during interviews. Further problems in drinking water supply and toilet use emerging with and after the flood increase the risk of hygiene-related diseases. This risk gets more acute when such needs as soap, shampoo, detergent, ped and diapers cannot be met.

Job and Income Loss

Seasonal migratory agricultural workers mostly subsist on what they earn as daily wage. There are very few workers who are also engaged in stock breeding on the plain, but still daily wage work in seasonal crops is their major source of income. Hence, income of seasonal migratory agricultural workers too is open to seasonal effects. Overflooding of orchards making citrus fruit harvesting almost impossible caused workers loss of work for periods varying from 10 to 30 days. According to information given by interviewed agricultural intermediaries daily wage is 54 TL in crop field work



in Tuzla neighbourhood of Karataş district (4 TL is for the intermediary), 60 TL around Yumurtalık district (6 TL is for the intermediary and 88 TL for citrus fruit harvesting (8 TL is for the intermediary). Evaluating these data by adding the number of persons working in the household we find that days not worked for any reason makes income and subsistence extremely precarious. In fact, people living the whole year in these tent settlements can work longer only during harvesting seasons. During interviews workers say they could not go to work because of flood and having no other income they are under stress:

It was citrus fruit harvesting time. We could not go to work for almost a month. We had to spend from what we could save or run into debt.


Some interviewees who are engaged in sheep farming say most of their animals perished in torrent. A man working as a shepherd says the following:

I lost my animals; the damage I suffered is around 10,000 TL.


This is an amount hard to compensate for a farmer. Event of torrent has its effect of further jeopardizing the subsistence of seasonal migratory agricultural workers.

Psychological Effects

It is observed that the event of flood give rise to differing concerns in adults and children and thus its psychological effects too differ. In adults, related concerns are indirectly related to the event itself while it is direct in the case of children. In other words, as appeared in interviews conducted with children they have the common fear of losing their lives, falling in and getting drowned in canals whereas adults are more concerned about losing their jobs and income and the future of their children. An interviewee says the following while expressing concerns about the future of her children:


 I was in fear for my children. They were under the water. Every space was overflowed and we had no means. I was crying and thinking where to take my children.

It can be said that psychological implications of the event of overflowing are felt more deeply by children and they are affected more, which places them at the top as a risk group. As a matter of fact, comments made during interviews confirm that children are affected more. As stated by an interviewee:

 It was children who experienced the hardship most; they were under psychological stress. Adults can understand what flood

is, but it was particularly a fearful event for children. I can still recall the flood I experienced when I was 5.

Some common post-disaster psychological symptoms among children include insomnia, dreams of getting downed and crying while bedwetting is also the case with some children. The following was said by a child interviewed:

 In my dream we were getting drowned in flood. Our tents were flooded. I had this dream several times.

During interviews it was found out that there were few children placed in some other households after tent camps were vacated. These children say they want to return to their old tents as soon as possible, worry about their family members and have difficulty in sleeping. Though these children did not remain apart from families for a long time and thus suffered not so heavily they still express their concerns about possible recurrence of such events.

Probably the most important psychological effect of flood on children is their taking up of their families' social and economic struggle while they are themselves are in school and play ages. It is known that children of seasonal migratory agricultural workers help their families in both agricultural and household works if they are out of school (Development



Workshop 2016a, Development Workshop 2016b). In this case again, children were observed as making efforts to litigate the burden on their parents after witnessing their despair during and after the event of flood.

Problem of Education

School attendance which is one of the fundamental problems when the children of seasonal migratory agricultural workers are concerned became more apparent with the flood. The rates of school enrol-

ment and attendance of children on the plain are quite low. According to the present state study conducted by the Development Workshop in November 2019 11 percent of children with Turkish citizenship and only 2 percent refugee children in tent settlements inhabited by seasonal migratory agricultural workers attend school (Development Workshop 2019). Though education was suspended for 2 days at the city centre, education of children living on the plain was interrupted for 15 days. This longer interruption had various reasons including the transfer of children concerned temporarily to another area, their active participation to restoration works in and around tents, temporary closure of some schools because of flood weakening of families' interest in education under the impact of the event.

These interruptions in education had its effects on school attendance rate to some degree and it was observed that there were problems in returning to school for some children. In interviews made with children they say they face various problems in their schools anyway. Problems expressed by children in their normal school life include the distance of schools to their living spaces, facing peer bullying in schools and difficulties of adaptation to school activities by children with physical disabilities or chronic diseases (i.e. glass bone disease). When girls are concerned, heavy involvement in household chores after school makes it more difficult for them to keep up with their homework.

Coping Strategies of Seasonal Migratory Agricultural Workers

As a result of the insufficiency of aid coming from government agencies, municipalities and CSOs as well as delays in their arrival, seasonal migratory agricultural workers had to develop their own coping strategies. In this process, it is observed that they are trying to find solutions to their problems by giving priority to housing and nutrition, health, income and job loss, psychological health and education.

Having no other place to stay at that time their priority was discharging water from tents and saving what remained as usable. In water discharge efforts, it is stated during interviews that workers had to do this with their own means given delays in intervention and assistance by authorities.

☞ We could not drain the water off; we waited until it goes. We could not use our tents for 2-3 days.

Finding a shelter became an important problem for seasonal workers given delays in water discharging work and vacation of some tents. The problem is that public authorities deciding to vacate tent camps proposed no plan for the relocation of workers after vacation and thus workers had to find their ways and use their own means. Some workers moved to their relatives' places while others were assisted by local people. These defects in planning





for relocation were also touched upon during interviews made with workers. Some services that were not delivered by government agencies during the process of vacation of workers after the flood were provided by the private sector (i.e. farmers that employ these workers) in some areas. This is a good example pointing out to the importance of cooperation/division of labour between actors in efforts to improve living conditions. A worker tells the following:

□ Villages and firms opened up their vacated buildings to workers. Farm owners did the same with their silos and unused storage facilities.

It was a part of information obtained during interviews that long absence from work as a result of crop fields remaining under water forced some workers to spend their savings to provide for their basic needs and others without any saving had to borrow from agricultural intermediaries. Borrowing from intermediaries means, for seasonal migratory

agricultural workers, getting future work's pay in advance which may lead to continuous state of indebtedness.

During interviews workers said agricultural intermediaries extended food support to those workers who could not go to work or cook their meals after the flood and workers created among themselves a solidarity and assistance network (particularly in nutrition and food supply). Besides, assistance by civil society organizations, local governments and government agencies prevented the emergence of serious crisis in access to basic food items.

It is observed that school and education life is quite important in helping children cope up with psychological problems emerging in this process. Indeed, interviews suggest that return to school and being able to play with peers has its positive effects on the psychological well-being of children. As to adults, it appears that a sense of unity and sharing problems with others brings some relief and adults try to leave this process behind by supporting each other.





3

What Flood Left Behind: A Brief Evaluation

This study aiming to expose the effects of climatic events on seasonal migratory agricultural workers living on the Adana plain through a Case Analysis focusing on flood is based on four categories of assessment.



While identifying these categories particular consideration was given to problems that workers faced during and after the event and the extent to which these problems are solved.



Gaining Visibility

Visibility confronts us as an important problem in the case of seasonal migratory agricultural workers. This problem is even more palpable for seasonal migratory agricultural workers who do not permanently reside on the Adana plain but move to different places during the year for different crops. Indeed, their seasonal migration patterns may vary from year to year depending on their needs and income status. Consequently a family staling in one of the tent settlements on Adana plain in one year may not be there in the next year. This residential variability or uncertainty curbs the effect of activities geared to intervening in extreme climatic events. The permanency of seasonal agricultural employment while worker groups may change makes it necessary to find solution to this residence problem.

For the event of flood on Adana plain examined, it was found that no other data existed on the number seasonal migratory agricultural workers in tent settlements, but data included in in the “Present State of Child Labour in Seasonal Agricultural Production in Adana Province and Implementation Programme” prepared by the Development Workshop in 2019.

This situation directly affects the scope of intervention that must be planned within a short period of time. For example, it is important to have these

figures available in planning how many people will be re-located upon the removal of temporary tent settlements and where these people will be transferred. One difficulty is that many migratory workers have no registered addresses.

Another important point is that the relevant legislation envisages different interventions in cases of *disaster* and *emergency*. It is crucial to identify the nature of the situation confronted and launch quick interventions by delineating the area affected. Yet, there is no clarity as to whether the event of flood in Adana was a case of disaster or emergency.

During an interview with an AFAD official, reference was made to the relevant regulation¹ where it is stated that a case of *disaster* can be declared only when “*life in general is affected*” and when the event affects at least 10 percent of the population resident in the area concerned (i.e., neighbourhood, district or province). Hence, since the event did not affect this proportion of population in Adana province it was considered as *flood and torrent*.

However, there are statements qualifying torrent as *natural disaster*. The Adana Regional Directorate of Meteorology says the following about the torrent examined in this study:

¹ Regulation on Basic Rules Related to the Impact of Disasters on Normal Life (21 September 1968) Official Gazette (No: 13007), www.resmigazete.gov.tr/arsiv/13007.pdf

A meteorological event is considered as disaster in meteorological terms only with respect to its consequences. In this context, according to the extraordinary event report sent to our office by Adana Meydan and Adana Meteorology Regional Directorates, rainfall happening on 23-24-25 December 2019 can be considered as natural disaster in meteorological terms with respect to its consequences.

* Afet ve Acil Durum Yönetim Merkezleri Yönetmeliği (No:2011/1377)
www.mevzuat.gov.tr/MevzuatMetin/3.5.20111377.pdf

□ A meteorological event is considered as disaster in meteorological terms only with respect to its consequences. In this context, according to the extraordinary event report sent to our office by Adana Meydan and Adana Meteorology Regional Directorates, rainfall happening on 23-24-25 December 2019 can be considered as natural disaster in meteorological terms with respect to its consequences.”

The statement made by Adana Metropolitan Municipality on intervention efforts drew attention to the dimension of rainfall that “*assumed dimensions of*

natural disaster".² This kind of absence of consensus what should be considered as what has the effect of blurring the problems faced by seasonal migratory agricultural workers and further decreasing their visibility.

Resilience

Smooth topography of the Adana plain makes floods inevitable in cases of extreme precipitation along with overflowing of temporary tent settlements located on the plain. The difficulty of discharging flood water due to insufficient drainage weakens the resilience of the area to climatic events. Since efforts to increase the number of drainage canals and ensure their cleanliness are yet not sufficient interventions become more difficult in the face of any disaster. During interviews with authorities it was stressed that interventions after disaster remain short and consequences get heavier mainly for *'doing nothing until disaster strikes.'* 'Poor city infrastructure', system where stormwater discharge and sewage systems are combined', 'topographical characteristics of the plain' and openness to urban development of areas which should in fact be considered as within the outer beds of streams according to the Flood Law no. 4373 were mentioned as major problems during interviews.

² adana.bel.tr/haber/baskan-zeydan-karalar--selden-magdur-olan-vatandaslarin-kurtarilmasi-operasyonlarina-bizzat-katildi

Taking a look at spatial distribution of temporary tent settlements of seasonal migratory agricultural workers we see that these settlements are often located near water drainage canals and main roads. In fact, it was stated during interviews with authorities that this is the main reason for adversities that seasonal migratory agricultural workers had to suffer in the flood of December 2019. It was underlined that seasonal migratory agricultural workers set up their tents in 'wrong' locations and this is stated as the reason why some tents were removed in an unplanned and disorderly way. However, the core problem here is that seasonal migratory agricultural workers were not shown 'correct' and 'safe' places to settle and decently provide for their needs. It can therefore be said that authorities adopt an erroneous perspective to the location of tent camps which weakens the resilience of seasonal migratory agricultural workers.

Vulnerability

The burden of flood is placed on shoulders of seasonal migratory agricultural worker households as indispensable actors of agricultural production majority of whom live in tents. Since they have no regular income and provide for their daily needs with their daily earnings, a day not worked on means a serious income loss. In interviews with seasonal migratory agricultural workers who experienced

the flood in December 2019 it was stated that this meant the loss of a month's income. It is an amount that is too difficult to remedy for an average family on the plain. It is therefore clear that flood has its effect of making seasonal migratory agricultural workers even more vulnerable in terms of income and subsistence.

Sheltering conditions is another factor related to vulnerability. Having a settled life on the plain and having no other place to go in case of flooding, some seasonal migratory agricultural had to keep staying in their inundated tents. Some Syrian refugees also living in tents were relocated to refugee camps, but no alternative was shown to other workers who were also vacated. These workers could find a shelter only when local farmers and other employers opened their warehouses to these people. These charitable and humanistic practices further underline the insufficiency of social policies. For instance, seasonal migratory agricultural workers said in interviews that their misery could be avoided if they were provided containers to stay in.

The psychological state of seasonal migratory agricultural workers became more unstable with the flood. It was stated in all interviews that children in particular were more affected by the situation. While families are deeply worried about their children, the latter could not overcome the fear and anxiety for a long time. Given that children constitute a half of the population of migratory worker

population on the plain, it must be at the top of the list of needs that intervention teams implement programmes geared to improving the psychological state of children and mitigating the traumatic effects of the flood.

Sustainability

What is meant to underline with the issue of sustainability is the importance of seasonal migratory agricultural labour for agricultural production in Turkey and the need to improve circumstances surrounding this kind of labour. The persistent exposure of seasonal migratory agricultural workers to now more frequent climatic events and multiple impact of this exposure on workers and their families is a factor directly associated with uninterrupted agricultural problems with minimum problems faced. In this respect, given the present living and working conditions of seasonal migratory agricultural workers on the Adana plain it is difficult to speak about decent life and incessant production. This means that the importance attached to agricultural production today must be addressed again in a way to bring about improvements in housing, employment security, remuneration, health and education issues related to agricultural workers.

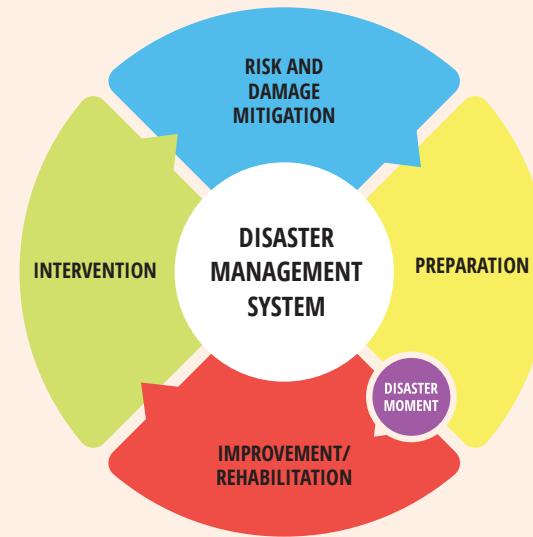




4

Suggestions for Covering Seasonal Migratory Agricultural Workers in Disaster Management

Even if the flood on the Adana plain is not classified as a disaster, there is no dispute that it is still experienced as such given its effects on seasonal migratory agricultural workers and their children in particular. In this context, it is considered as proper to develop relevant suggestions under a “Disaster Management System.” Disaster management comprises stages of (1) risk and damage mitigation, (2) preparation, (3) improvement/rehabilitation and (4) intervention. Hence, suggestions related to structural problems of flood experienced in Adana and socio-economic problems experienced by seasonal migratory agricultural workers will be presented as classified under these four stages.



Risk and Damage Mitigation

- In provinces like Adana where heavy rains and consequent floods and torrents are experienced every year there is need to conduct a risk analysis for tent settlements where seasonal migratory agricultural workers live. In this risk analysis, it must be laid down first what needs to be done to minimize risks that include extreme rainfall, wind, dust storm, lightning, drought, extreme heat and frost as well as their effects on agricultural workers. Though total elimination of risks may not be possible there may be a risk assessment and mapping group composed of field experts to minimize the effects of these risks on agricultural workers.
- Making temporary tent settlements more resistant to disasters and relocation of settlements where risks are high is also a need. There must be living spaces for seasonal migratory agricultural workers where they can have regular access to such facilities as water and electricity. Since seasonal agricultural works have their dynamic character where workers may be in different places in different times of the year, basic services too must be approached through flexible planning responding to this mobility.
- One of the problems related to the flood event occurring in Adana in December 2019 is the sta-

tus of water drainage canals. These canals must be regularly checked and cleaned against any clogging. Also, it is an urgency to find a solution to the problem of garbage collection in temporary tent settlements in order to mitigate possible damages in case any flood occurs.

- A mapping work must be done to identify places where seasonal migratory agricultural workers settled in provinces/districts. This need is confirmed by the fact that governmental agencies used the present state map prepared by the Development Workshop in their interventions on the plain. Hence, work must start with marking on the map where worker groups set up their tents and in which months. This must be followed by collecting data relating to all households in tent settlements. These data must cover demographic information, education and health status of individuals, infrastructure facilities in living spaces, risks that are particularly relevant to children and conditions in working environments. Additionally, there is also need to identify on which crops there is work in the province/districts, in which months and for how long.
- e-METiP data by the Ministry of Family, Labour and Social Services which give the present state and mobility of seasonal migratory workers and their children can be used effectively in pre-disaster planning and post-disaster interventions

by sharing these data at local level with relevant agencies.

- An independent commission can be set up for improving the conditions of seasonal migratory agricultural workers. In cooperation with local and national actors, this commission can assume a coordinating role in all decisions related to seasonal migratory agricultural and avoid complications and duplication deriving from different procedures and working mechanisms.

Getting Ready for Disasters

- Temporary tent settlements must be included in disaster intervention plans and interventions to these areas must be in synchrony with those in urban centres.
- Ensuring coordination between seasonal agricultural workers and land/orchard owners, agricultural intermediaries have their important role as far as working and living conditions of workers are concerned. Training of intermediaries in disaster intervention processes is important in ensuring their active roles in these processes.
- The number of seasonal migratory agricultural workers in temporary tent settlements, age groups, tent dwellers above age 65, persons with chronic diseases, the number and ages of chil-

dren must be identified and recorded. Applied on a map, these data must be conveyed to government authorities and an urgent planning work must be launched on the basis of these data.

- Seasonal migratory agricultural workers can be informed about possible disasters and emergencies and told what they can do until the arrival of intervention teams. Additionally, all workers together with their families can be given training in first aid to enable them to engage in instant interventions to life-threatening situations in cases of flood.

Post-Disaster Intervention

- The public sector needs to improve its capacity in relation to its disaster intervention initiatives. This can be done by increasing the number of technical support teams engaged in disaster and emergency interventions.
- Independent commission can assume coordination function, in the context of disaster intervention and rehabilitation work, in identifying assistance to be provided to agricultural workers and their families and victims to be reached.
- In disaster intervention initiatives, operations remove seasonal migratory agricultural workers from affected or risky areas must be carried out

in participatory ways in compliance with human rights.

- In intervention activities, programmes to be implemented must be capable of mitigating psychological effects of disaster on seasonal migratory agricultural workers including their children in the first place and handling cases of trauma in ways to prevent its long-term consequences.
- In cooperation with civil society organizations, supportive and remedial education programmes must be introduced in cases where children of seasonal migratory agricultural workers could not attend school during and after disaster.
- Hygiene stands out as one of the most important problem in tents in post-disaster environments. There must be medication in such environments to combat flies.

Improvements

- The lead negative consequence of flood is income loss incurred by seasonal migratory agricultural workers. There must be a map for coordination and cooperation in extending in kind and cash support to seasonal migratory agricultural workers and their families also indicating organizations and agencies to work with and seek support from in such situations. A well-established

and systematic mechanism of aid will ensure that assistance actually reaches all in need.

- A guide also including psychosocial support must be developed and psychosocial support must be provided to children as the group most deeply affected by disaster.
- At present, participation to education by children of seasonal migratory agricultural workers remains quite limited. It gets even worse in cases of disaster. Hence, participation to education of children in affected areas must be closely followed and facilitated.

Bibliography

- Adana Valiliği AFAD (2019) "Valimiz Sn. Mahmut Demirtaş Başkanlığında Oluşturulan Kriz Masasında Yağışların Sebepiyet Verdiği Durumlar Değerlendirildi",



adana.afad.gov.tr/valimiz-sn-mahmut-demirtas-baskanliginda-olusturulan-kriz-masasinda-yagislarin-sebepiyet-verdigi-durumlar-degerlendirildi

- Brouwer, R. Vd. (2007) "Socioeconomic Vulnerability and Adaption to Enviromental Risk: A Case Study of Climate Change and Flooding in Bangladesh", *Risk Analysis*, 27(2): 313-326.

- CNN Türk (2019) "Seyhan'da ortak komisyon tarım işçilerinin sorunlarına çözüm oluyor" 26.01.2020 tarihli haber,



www.cnnturk.com/yemel-haberler/adana/merkez-seyhan-da-ortak-komisyon-tarim-iscilerinin-sorunlarina-cozum-oluyor-1477881

- Çukurova Üniversitesi Adana Tanıtım Sitesi "Adana'nın Coğrafi Konumu",



adana.cukurova.edu.tr/adana.asp

- Doğan, S. ve Tüzer, M. (2011) Küresel İklim Değişikliği ve Potansiyel Etkileri", *C.Ü. İktisadi ve İdari Bilimler Fakültesi Dergisi*, 12(1): 21-34.

- Evrensel gazetesi (2019) "Adana'da tarım işçilerinin çocukları ıslak yataklarda uyuyor", 31.12.2019 tarihli haber,



www.evrensel.net/haber/394374/adanada-tarim-iscilerinin-cocuklari-islak-yataklarda-uyuyor

- Habertürk (2020) "Seyhan Belediye Meclisi'nde su baskınları konuşuldu. CHP'li Meclis Üyesi Güngör Göçer tarım işçilerinin sorunlarını tespit komisyonu kurulmasını teklif etti", 07.01.2020 tarihli haber,



www.haberturk.com/adana-haberleri/74601646-seyhan-belediye-meclisinde-su-baskinlari-konusulduchp-li-meclis-uyesi-gongor-gecer-tarim.

- Kalkınma Atölyesi (2019) Mevsimlik Tarımsal Üretimde Çocuk İşçiliği-Mevcut Durum Raporu ve Uygulama Programı.

- Kalkınma Atölyesi (2016a) Yoksulluk Nöbetinden Yoksulların Rekabetine-Türkiye'de Mevsimlik Tarımsal Üretimde Yabancı Göçmen İşçiler Mevcut Durumu Raporu.

- Kalkınma Atölyesi (2016b) Bereketli Topraklar Zehir Gibi Yaşamlar-Suriyeli Göçmen Mevsimlik Tarım İşçileri Adana Ovası Mevcut Durum Araştırma Raporu.

- Karaoğlan, Erol (2019) "Adana'da sel Kozan-Ceyhan yolunu kapattı", 25.12.2019 tarihli AA Haberi,



www.aa.com.tr/tr/turkiye/adanada-sel-kozan-ceyhan-yolunu-kapatti/1683461

- Kayapınar, B. vd. (2020) İklim Değişikliği Etkisi Altında Tarım Ürün Arzının Sürdürülebilirliği, TÜSİAD Yayını no: T/2020-03/616.

- Küçüksaat.com (2019) "Yüreğir'de sel felaketinin yaraları sarılıyor", 27.12.2019 tarihli haber,



www.kucuksaat.com/yuregirdede-sel-felaketinin-yaralari-sariliyor-3571h.htm

- O'Neill, B. C. vd. (2017) "IPCC reasons for concern regarding climate change risks", *Nature Climate Change*, Vol.7: 28-38.

- Önol, B. ve Semazzi, F. (2009) "Regionalization of climate change simulations over the Eastern Mediterranean", *Journal of Climate*, 22: 1944-1960.

- Özcan, E. (2006) "Sel Olayı ve Türkiye", *GÜ Eğitim Fakültesi Dergisi*, 26(1): 35-50.

- Pekal, Volkan ve Seren Elataş (2019) "Adana'da valilik çadırları yıkıyor, tarım işçileri kalıcı barınma alanları istiyor", 27.12.2019 tarihli haber, *Evrensel gazetesini*,



www.evrensel.net/haber/394098/adanada-valilik-cadirlari-yikiyor-tarim-iscileri-kalici-barinma-alanlari-istiyor

- Tahmiscioğlu, M. S. vd. (2006) "Possible Effect of the Global Climate Change on Water Resources and Floods in Turkey", International Conference on Climate Change and the Middle East Past, Present and Future, 20-23 November, ITU.

- Tarım ve Orman Bakanlığı Meteoroloji Genel Müdürlüğü Araştırma Daire Başkanlığı (2019) "Meteorolojik Afetler-2018",



www.mgm.gov.tr/FILES/genel/kitaplar/2018MeteorolojikAfetlerDegerlendirmesi.pdf

- Tayanç, M. vd. (2009) "Climate change in Turkey for the last half century", *Climate Change*, 94: 483-502.

- Türkeş, M. (2007) "Türkiye'nin Kuraklığa Çöleşmeye Eğilimi ve İklim Değişikliği Açısından Değerlendirilmesi", *Pankobirlik*, 91: 38-47.

Annexes

Annex 1 - Development Workshop's Ethical Guidelines: Principles to be Observed in Surveys Participated by Children

1. It must be borne in mind that children have their right express their opinion on any matter and are competent in participating to studies and surveys.
2. To participate to such events, children must have their parents'/legal guardians' informed consent and express their voluntary participation.
3. While children are asked to state their free will to participate, the objective, phases, content and duration of the survey must be clearly explained in a language that they can fully understand, and they must also be informed that they are free to quit at any time and for any reason.
4. A child cannot be admitted as survey participant in case he/she is willing to participate but parents/legal guardian do not give their consent. A child cannot be admitted also in the case where his/her parents/legal guardian give consent, but the child does not state his/her willingness.
5. The general problem of balance of power between the researcher and participant may assume an additional dimension of adult-child relationship in surveys participated by children. A child participant may volunteer and take part with the conviction that he/she must do so as told by an adult. To avoid this, researchers must always adopt an informal and friendly attitude and keep reminding children that they are free to make their choice for participation or non-participation.
6. The way the survey is conducted, its content and duration must in no way be detrimental to child participant's physical health and psychological development before, during and after the survey and must not force the child beyond his/her age and developmental characteristics.
7. The duration and content of interviews with a child participant must be arranged in a way to be sensitive to the age, cognitive skills, emotional state, surroundings and cultural heritage of the child concerned.
8. During interviews, the interviewer must avoid giving positive or negative feedback verbally or non-verbally in response to what the child has said and any inducement that may affect the outcome of the study.
9. Throughout the survey process there must be absolutely no discrimination in relation to participating children on the basis of age, gender, ethnicity, physical appearance, physical or mental disability or familial status. All children must be treated equally and fairly in all steps and under all circumstances..
10. Child protection strategies must be designed beforehand to avoid or solve problems that may arise before, during and after survey.
11. It is compulsory under the Law no. 6698 on the Protection of Personal Data to keep information about the child confidential (reserving for exceptional cases).
12. In case any child participant expresses his exposure to physical or sexual violence during the interview or indicators of such abuse are observed the team in charge of the survey is obliged to report the case to relevant authorities as required under article 278 of Turkish Penal Code.

Annex 2 - Institutional Interview Questionnaire

During Disaster

- 1 Heavy rains started in Adana during the night connecting December 23rd to December 24th. Can you briefly tell us about the process starting with rains?
- 2 When did you see/were informed that rains would get even heavier and bring along flood?
- 3 When you saw/learned this what did you or your organization do first?
- 4 Did your organization or team have any earlier experience in disaster intervention?

5. If an institution with crisis desk

- 5.1 When was the crisis desk set up? How many hours after?
- 5.2 Which agencies and persons were included?
- 5.3 Was there any professional in mental health?
- 5.4 With which other organizations you were in contact (state agencies, local governments, UN agencies, civil society)
- 5.5 Can you give some explanation about these contacts?
- 5.6 From which other organizations did you request support?
- 5.7 What was the composition of the intervention team?

- 5.8 What kind of intervention system did you set up? How did you decide what to do?
- 5.9 How many people in your area of responsibility were affected by the disaster?
- 5.10 How many people could you reach in your area of responsibility?
- 5.11 As crisis desk what did you do in the process?
- 5.12 for how long it was operational?

After disaster

- 6 How do you evaluate the effectiveness of crisis desk?
- 7 What did you do when rains stopped, and flood started to recede?
- 8 What else did you do in the first month of flood?
- 9 Was there any work related to people's mental health status?
- 10 What was the most difficult part of intervention processes?
- 11 What would you do differently in case an event like this happens again?
- 12 What did this event teach you/your organization?

Annex 3 - Seasonal Migratory Agricultural Workers Interview Questionnaire

1. Tent Camp in Adana where They were Staying during the Disaster:
2. Elements of Risk (i.e. proximity to a drainage canal, etc.):
3. Family Members:
4. How Many Wage Earners are there in the Family?
5. How many workers you work with (if agricultural intermediary)?
6. Which crops:
7. Were you aware of meteorology warnings before the flood disaster? How?
8. What did you do first when rains started, and you noticed that it would bring flood?
9. How did you try to protect yourself?
10. Did intervention teams come to your rescue during the flood?
11. If yes, who were they?
12. What did they do after arriving?
13. To what extent your boarding place (tent) was damaged?
14. What kinds of problems did you experience in the flood in December 2019?
15. You mentioned about some problems, which one is the most important? Why?
16. How do these problems you mention affect you?
17. Who do you think was affected the most by the flood in your environment?
18. How do you think the children felt? How did they behave?
19. What do you think the cause of this flood is?
20. What are the outcomes of flood for other people?



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