Assessment of the Early Action and Early Response of 2022 Floods

Nepal Red Cross Society

DANISH
RED
CROSS

**handicap
international**

**Climate
Centre**

KEY FINDINGS

Health: There is a clear distinction in the impact of flood on people's health and properties between the control and intervention group. 83% said they have no effect on their health in the intervention area while 57% said they suffered from psychological distress in the control area.

Property: In the control area, 72% of respondents said they had suffered from some loss in property, in contrary 83% of respondent from intervention area said they did not suffer from any damages.

Coping mechanism: In both groups, respondents have reported to opted for negative coping mechanisms to recover from the flood. This included taking loans from neighbours, relatives etc., taking up extra work, migrating for work, and selling of properties.

Feeling of safety: The types of relief supported received by the respondents and the collection mechanism can have direct impact on the feeling safety among them. As majority of the respondents in the intervention group received cash at their banks, the collection and spending process was more private which could lead to their feeling of safety as only 4% reported to feeling unsafe due to the relief distribution. However, 24% reported to feeling unsafe in the control group where majority reported to have received in kind relief support such as shelter and Ready to Eat food to collect which they have to stand in queue.

Early warning system: Reach of the risk messages prompting people to take early actions has increased with the use of multiple sources of communication. Compared to the control group, 13% more respondents reported to have received the early warning messages in the intervention group. Also, 26% more respondents felt that they understood the messages in intervention group than the control group.

FORECAST-BASED ACTION AND SHOCK RESPONSIVE SOCIAL PROTECTION (FBA-SRSP) IN SUDURPASHCHIM AND LUMBINI PROVINCES, NEPAL (2020-2022)

Objective: To strengthen the capacity of the government to meet the needs of disaster-affected population – by acting in anticipation of floods and cold waves based on scientifically determined weather forecasts with the support of a social protection system that is more responsive to shocks.
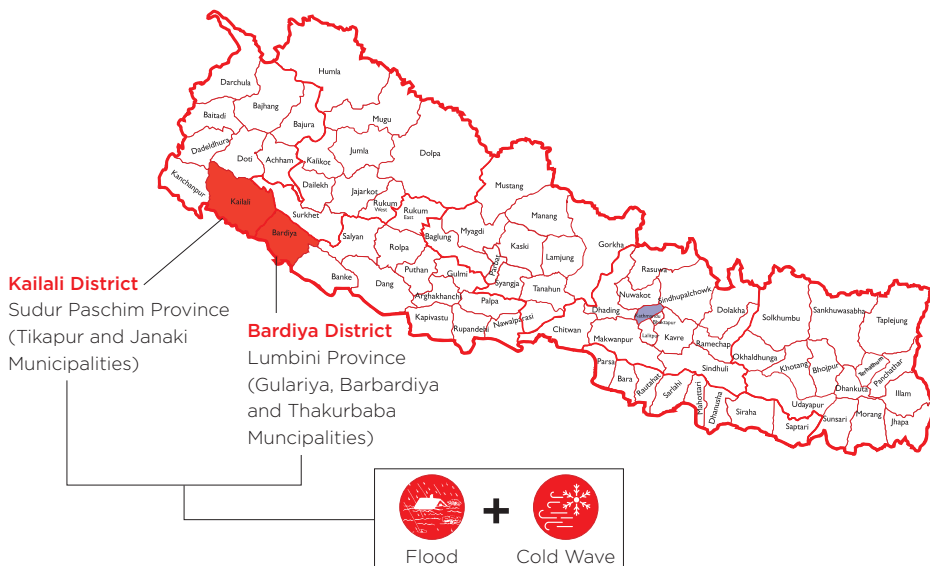
Targeted area: Five municipalities in Babai and Karnali river basins. In Bardiya district: Gulariya, Barabardiya and Thakurbaba. In Kailali district: Tikapur and Janaki.

Financial partner: The European Union Civil Protection and Humanitarian Aid Operations

Consortium partner: Danish Red Cross, Handicap International, Red Cross Red Crescent Climate Centre

Implementing partner: Nepal Red Cross Society

Budget: € 1,176,450

Kailali District
Sudur Paschim Province
(Tikapur and Janaki
Municipalities)

Bardiya District
Lumbini Province
(Gulariya, Barbardiya
and Thakurbaba
Muncipalities)

Flood   +   Cold Wave

CONTENTS

01
BACKGROUND

Nepal Red Cross Society (NRCS) jointly with the Municipalities developed the Early Action Framework (EAF) in five target municipalities (Barbardiya, Thakurbaba and Gularriya in Bardiya district, Janaki and Tikapur in Kailali district). Considering this as a working document, it has been tested through simulation exercises to refine it. Lessons from rolling out the framework during the floods has also been used to refine it. For two consecutive years in 2021 and 2022, the targeted areas have been impacted by unseasonal floods. Informed by weather forecast, the EAF was implemented in both the years. This work is the Forecast based Action and Shock Responsive Social Protection (FbA-SRSP) in Lumbini and Sudhur Paschim provinces project which was financially supported by the European Union Civil Protection and Humanitarian Aid Operations, implemented by the NRCS with consortium lead by the Danish Red Cross together with Handicap International and Red Cross Red Crescent Climate Centre.

The project has taken a targeted approach for early actions. When a warning signal for a possibility of a flood is received, life and property saving support should be provided, prioritising individuals and families who are already vulnerable. This way, the impacts of a disaster does not have a compounding effect on those who already have pre-existing vulnerabilities. With this rationale, the EAF was implemented during the 2022 floods when preidentified early actions and early response were taken. This included dissemination of early warning messages to

the communities through multiple communication channels, clearing of canals to allow the increased water flow to pass through, supporting for early evacuation, preregistration of beneficiaries for Multi-Purpose Cash (MPC) transfers in flood exposed area etc.

The purpose of this assessment is to evaluate effectiveness of the early action and early response especially from the target household's perspectives and share the lessons from this experience to the wider practitioner community who can use this while designing their own programs and policies. This assessment was based on a comparative analysis between control group (Bhajani, Kailari municipality) and intervention group (Tikapur, Janaki, and municipality) of Kailali district. Two different geographical areas were taken: one was an intervention group where the red cross had been working since 2020 to develop the EAF and the other was a control group which was also affected by the 2022 floods and is also similar to the interventions in terms of its socio-economic and geographical conditions, but which were not part of the interventions. Quantitative household survey was conducted in areas affected by the floods and Key informant interviews were done with DRR focal persons of respective municipalities. Research questions revolved around:

1. Did the early actions/early response undertaken reduce losses and damages to the lives, health and properties of the targeted households?
2. Did the early actions/early response undertaken reduce negative coping mechanisms for the targeted households?
3. Did the early actions/early response undertaken have any impact on the feeling of safety on the respondents?
4. Did the targeted households receive the early warning messages on time and did they understand those messages?

02
METHODOLOGY

Data collection methods: The assessment was done using both Qualitative and Quantitative method. Quantitative information was collected from household survey while for qualitative information Key informant interview (KII) was conducted with the DRR focal persons from all four municipalities. A one-day orientation was organized for the NRCS volunteers to conduct the household surveys. Data was collected through mobile application "KOBO". In total, there were 39 questions for the household survey. In total there were 120 respondents, 30 respondents from each municipality.

Sampling area: The assessment covered four municipalities of Kailali district, Tikapur and Janaki are project intervention areas while Kailari and Bhajani are adjoining municipalities without project intervention. Flood exposed wards were selected within these municipalities.

Table 1: sampling area

Group	Municipalities/Rural Municipalities	Wards
Intervention	Tikapur	7,8,9
	Janaki	3,6,9
Control	Bhajani	3,5,9
	Kailari	3,5,7,8

Selection criteria for respondent: For the assessment, purposive sampling was used as this was experimental assessment comparing two groups; control and intervention group. Purposive sampling method was used to integrate vulnerable individuals and households such as senior citizens, persons with disabilities, single and widowed women, marginalised communities etc. were selected.

03

SOCIAL DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

Of the 120 respondents, 50% were from control and intervention group each. In the chart below, they have been categorised as per gender, age, education level and disability. The respondents were strategically selected so the socio-demographic characteristics of the control and intervention group would be as similar as possible and therefore comparable. Respondents (83%) were also specifically selected from locations that were from the flood exposed areas (100-200 mt from the river). Their characteristics (age, gender, education level and disability) when overlayed with their geographical exposure to the flood compounds their risk to the disaster and adds to their vulnerability. Hence, they are deemed to be the most vulnerable households and are also the target group of this action.
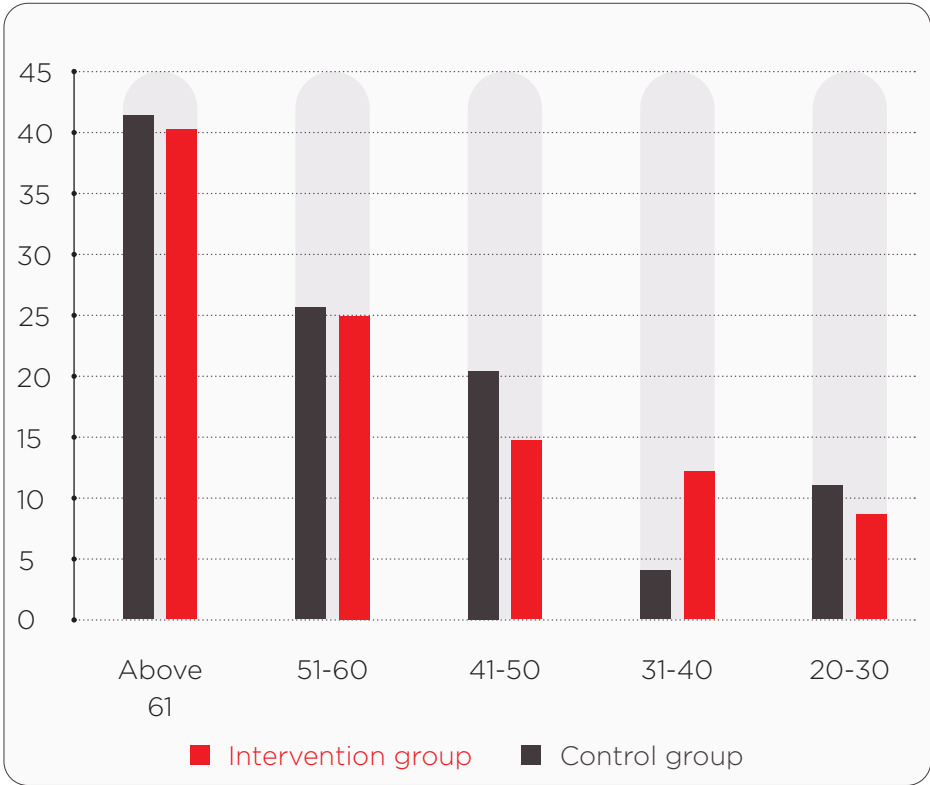
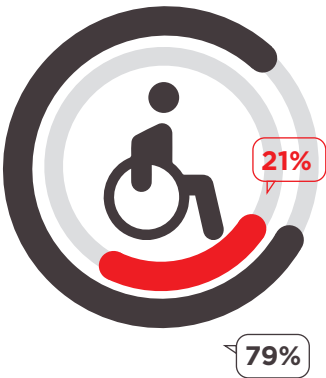### Reported gender of responents in intervention group

30%

Male

70%

Female

Reported gender of responents in control group

32%

Male

68%

Female

Age of respondent

	Above 61	51-60	41-50	31-40	20-30
Control group	41.5	25.7	20.5	4	11
Intervention group	40.3	25	14.8	12.2	8.9

■ Intervention group   ■ Control group

Person with disabilities

21%

79%

- Intervention group
- Control group

Family with persons with disabilities

	Intervention group	Control group
Yes		
No		

Education Level

Cannot read and write · Didn't go to school but can read and write · Grade 1-8 · Grade 9-12

- Intervention group
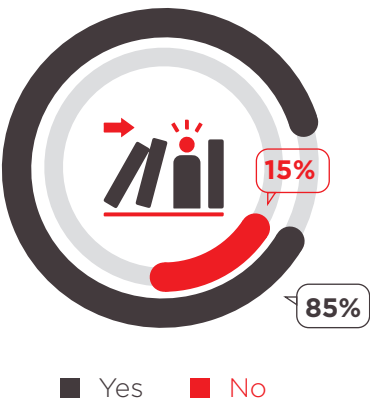- Control group
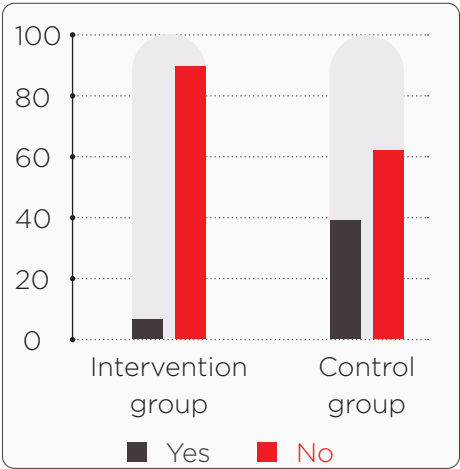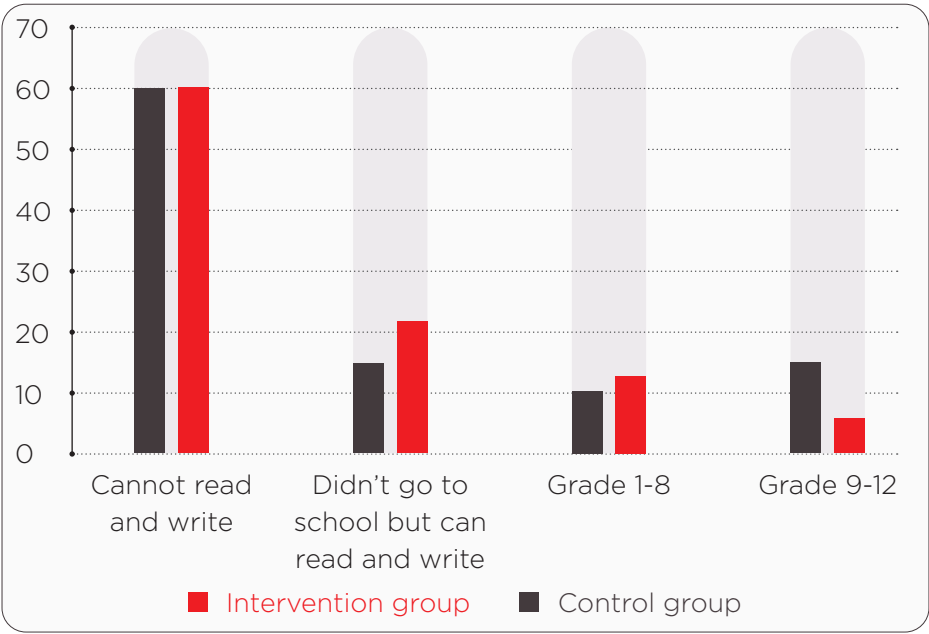
# 04

FINDINGS

i. Early warning communications

The action has developed a communication channel that has mapped out existing community based organizations, groups, key actors and elected representatives who have been oriented on their responsibility to go from door to door to deliver early warning messages by prioritising households who are the most vulnerable and therefore might not have access to mainstream means of communication. Due to this work, we can clearly see that 13% more respondents reported to have received the early warning messages in the intervention group. Also, 26% more respondents felt that they understood the messages in intervention group than the control group. Reach of the risk messages prompting people to take early actions has increased with the use of multiple sources of communication as you can see that more sources of communications has been used in the intervention group than in the control group.

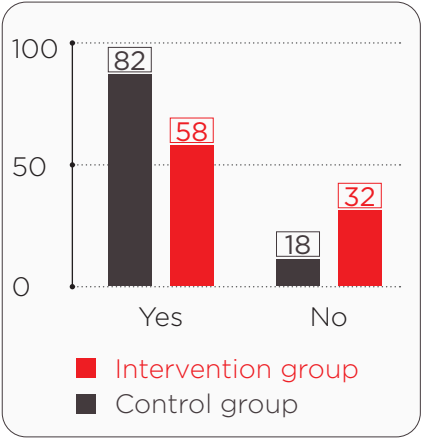# Did you receive an early warning message during the 2022 flood ?
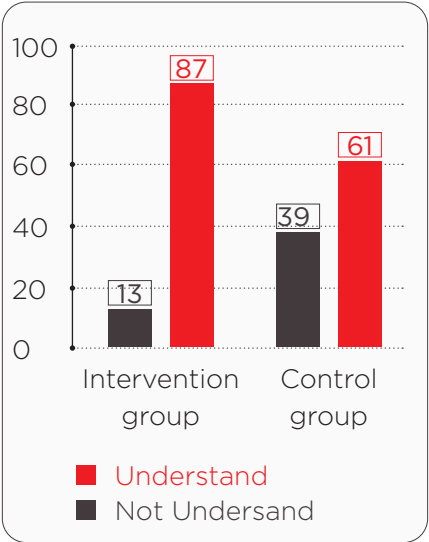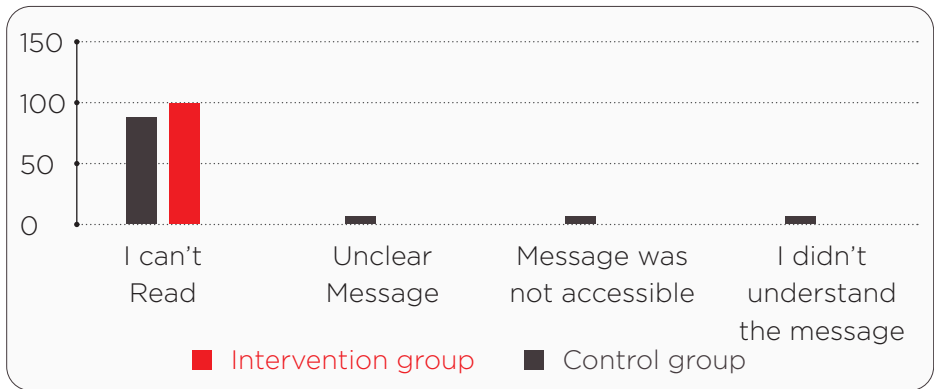
Intervention Group

15%

85%

■ Yes ■ No

Control Group

28%

72%

■ Yes ■ No
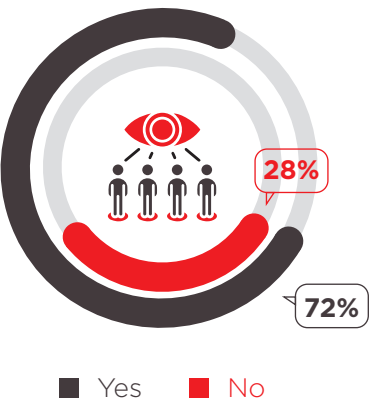
Did you receive the information on time ?

	Yes	No
Intervention group	58	32
Control group	82	18

■ Intervention group
■ Control group

Did you understand the message ?

	Intervention group	Control group
Understand	87	61
Not Undersand	13	39

■ Understand
■ Not Undersand

What was the reason that you did not understand the message ?

150
100
50
0

| I can't Read | Unclear Message | Message was not accessible | I didn't understand the message |

■ Intervention group   ■ Control group

How did you receive the early warning message ?

60
50
40
30
20
10
0

Social media — 2, 7
Local government — 17
Community radio/TV — 7, 33
Mobile sms — 55, 45
Door to door visits — 20, 50

■ Intervention group   ■ Control group
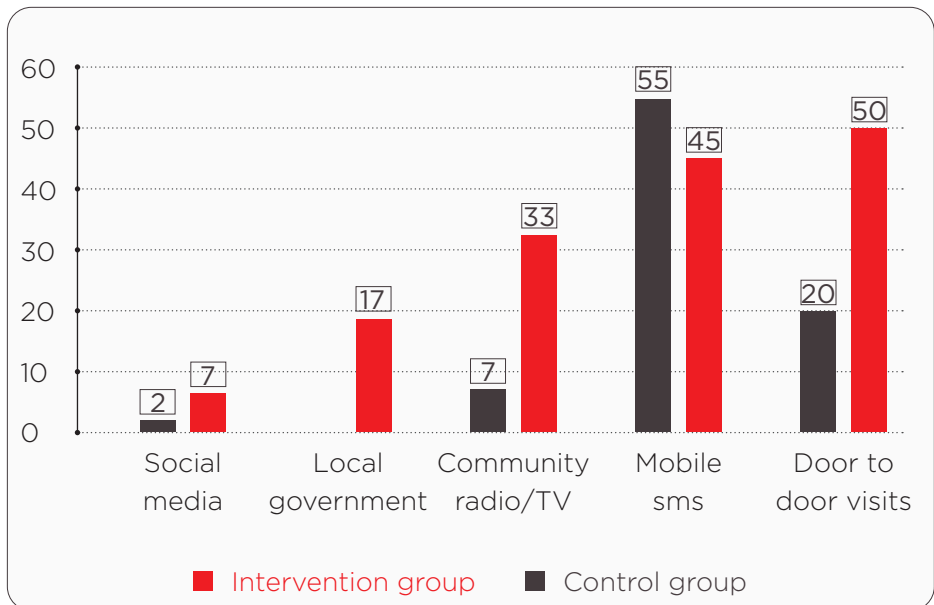
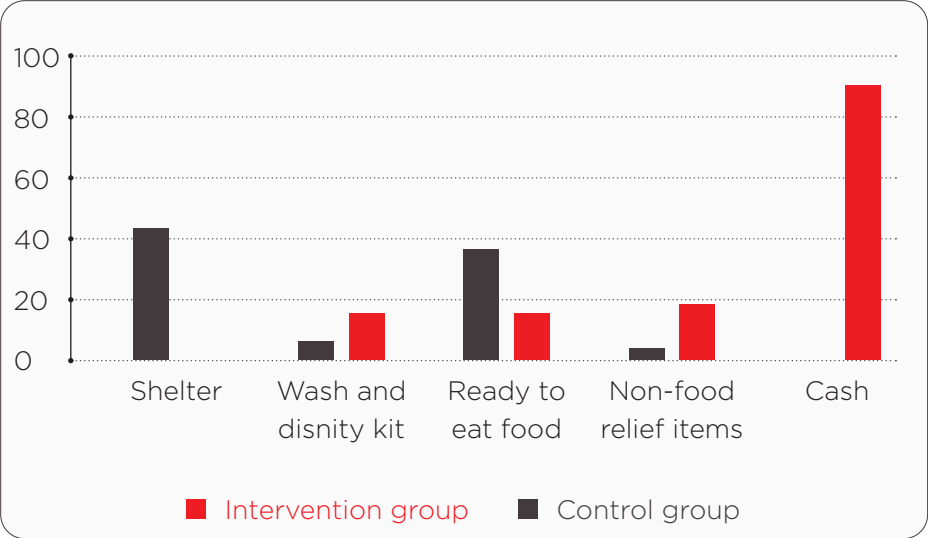## ii. Early action and early response support received

In response to the 2023 floods, 92% of the respondents from the intervention group and 77% from the control group reported to have received relief support. However, 38% from the control group and 8% from the intervention group have reported to not have received any support.

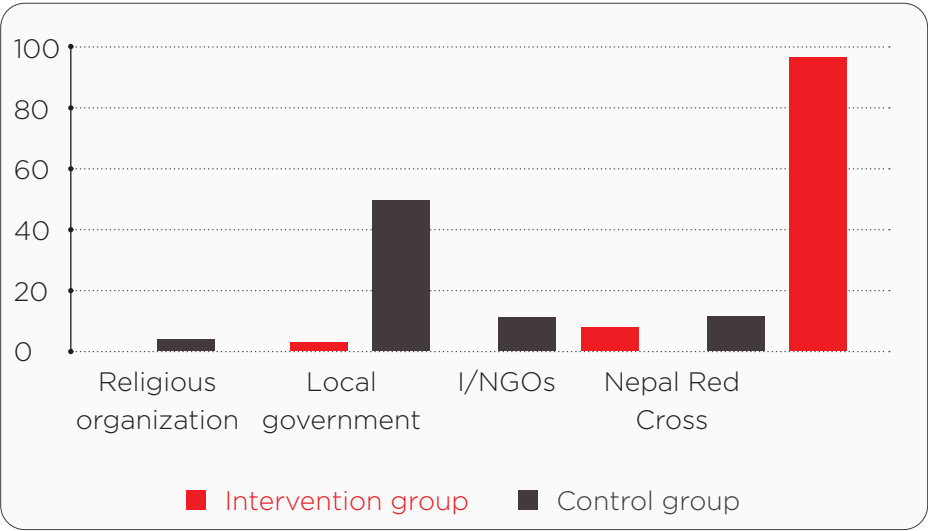### Did you receive any support in response to 2022 flood ?
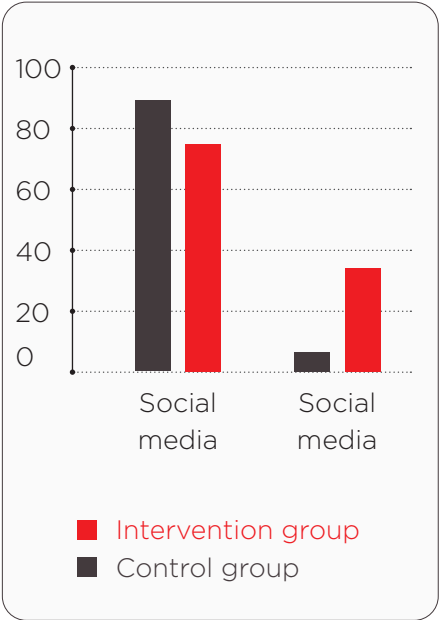
It is interesting to note that the respondents have received a variety of relief support in response to the flood. Only intervention group have received cash which was distributed by NRCS through financial support from DRC (Janaki) and WFP (Tikapur and Janaki). Although this group has reported to not have received any shelter support, this information was cross verified with the field team, and it was revealed that shelters in smaller numbers were distributed in these areas. However, this might not have included specifically the respondents of this assessment.
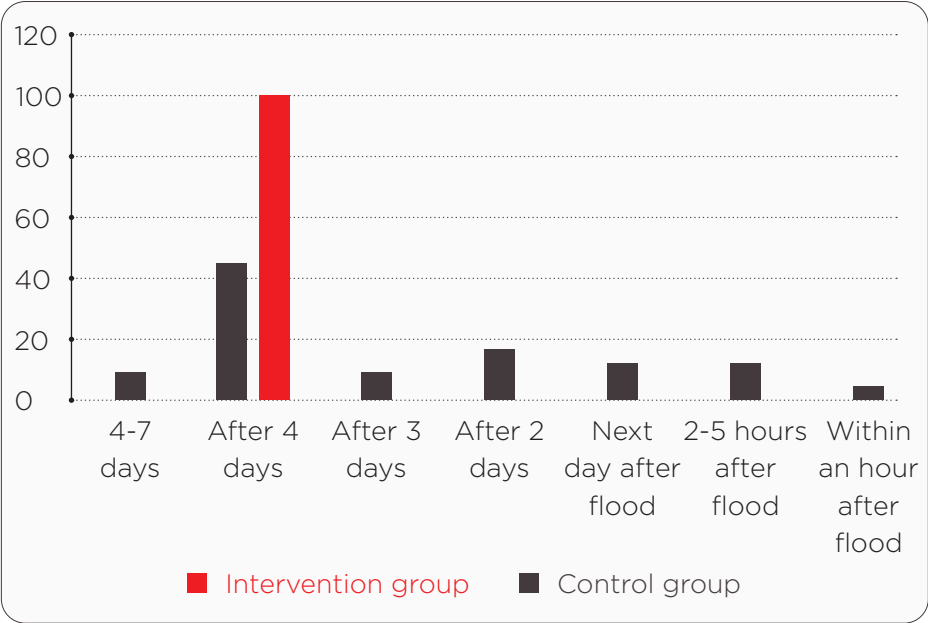
What types of support did you receive during the 2022 flood ?

Bar chart showing types of support. Categories: Shelter, Wash and disnity kit, Ready to eat food, Non-food relief items, Cash.
- Shelter: Control group ~43
- Wash and disnity kit: Control group ~6, Intervention group ~15
- Ready to eat food: Control group ~36, Intervention group ~15
- Non-food relief items: Control group ~4, Intervention group ~18
- Cash: Intervention group ~90

Legend: Intervention group, Control group

Where did you reveive it from ?

Bar chart showing source of support. Categories: Religious organization, Local government, I/NGOs, Nepal Red Cross.
- Religious organization: Control group ~4
- Local government: Intervention group ~3, Control group ~49
- I/NGOs: Control group ~11
- Nepal Red Cross: Intervention group ~8, Control group ~12, Intervention group ~96
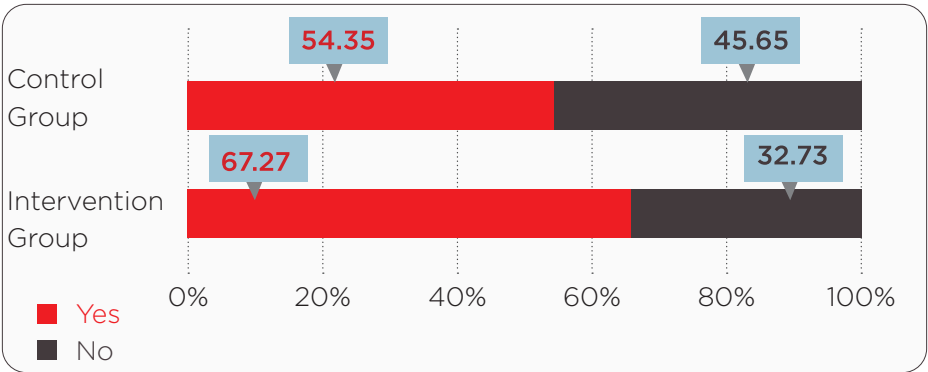
Legend: Intervention group, Control group

## How soon after the flood did you receive the support ?

In the intervention group, 67% of the respondents felt that the response was faster this year compared to previous years. This is considered as one of the outcomes of this action.

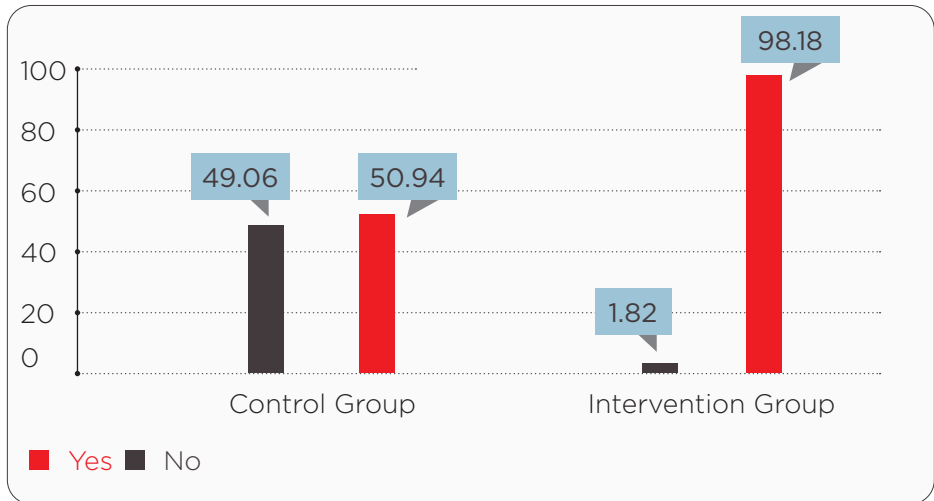## Was the support faster or delayed compared to previous years ?

It is important to note that 96.43% of the respondents have reported that the support was helpful to address their immediate needs. This can be directly linked to the type of support they received i.e., MPC as it gives the recipients the freedom to make their own decisions as per their own priority. This is much lower in the control group, only 51%. This perception is also reflected in their perceived satisfaction level i.e., 92.73% in the intervention group and 49% in the control group

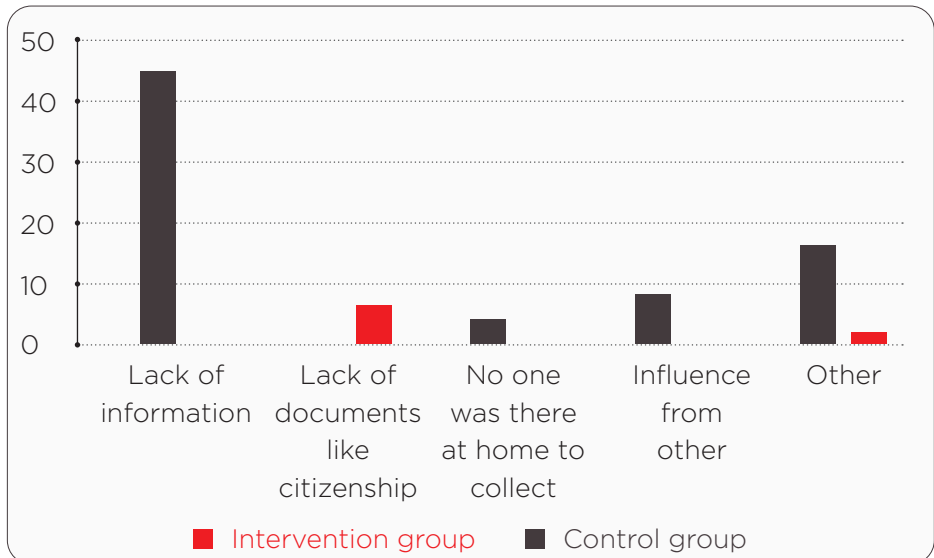## Did the support meet your immediate needs ?
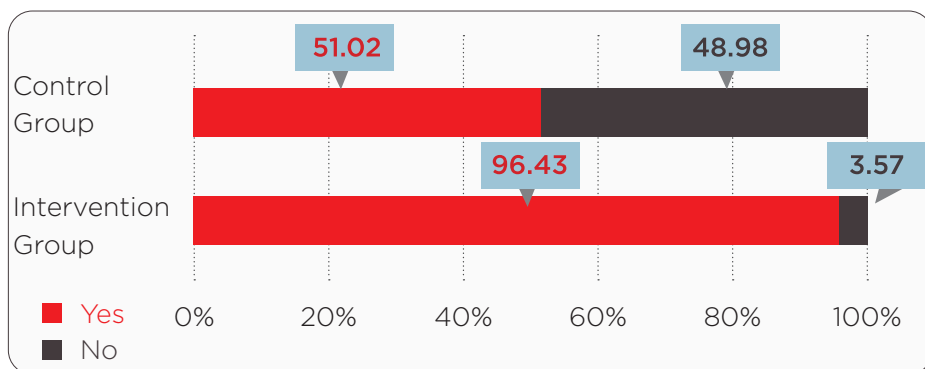
Respondents in the intervention group also have improved access to the support, 98% which is much lower in the control group, 51%. The improved access could be because the MPCs in Janaki (intervention group) was deposited directly into their bank accounts. Since the banks and markets were fully functional even after the floods, people could access the MPC and expend it to meet their immediate needs.

Were you able to access the support easily ?

Chart: Bar chart comparing Control Group and Intervention Group responses.

Control Group — No: 49.06, Yes: 50.94
Intervention Group — No: 1.82, Yes: 98.18

Legend: ■ Yes ■ No

If you did not receive support easily then what might be the reason ?

Chart: Bar chart showing reasons by category.

Categories: Lack of information, Lack of documents like citizenship, No one was there at home to collect, Influence from other, Other

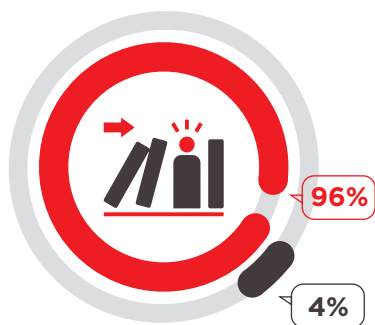Legend: ■ Intervention group ■ Control group

Major barrier to access the support was reported as lack of information regarding the relief distribution. Other barriers were lack of documentation, distribution point being too far, no one being at home to collect the support and a conflict at the distribution point which stopped the distribution.

iii. Safety of respondent

The types of relief supported received by the respondents and the collection mechanism can have direct impact on the feeling safety among them. Only 4% reported to feeling unsafe in the intervention group while 24% reported the same in the control group. As most of the respondents received cash at their banks, the collection and spending process was more private rather than standing in queue to collect in kind relief support such as shelter and Ready to Eat food which was mostly received in the control group.

Did you feel that your safety was threatened in any way due to the support?
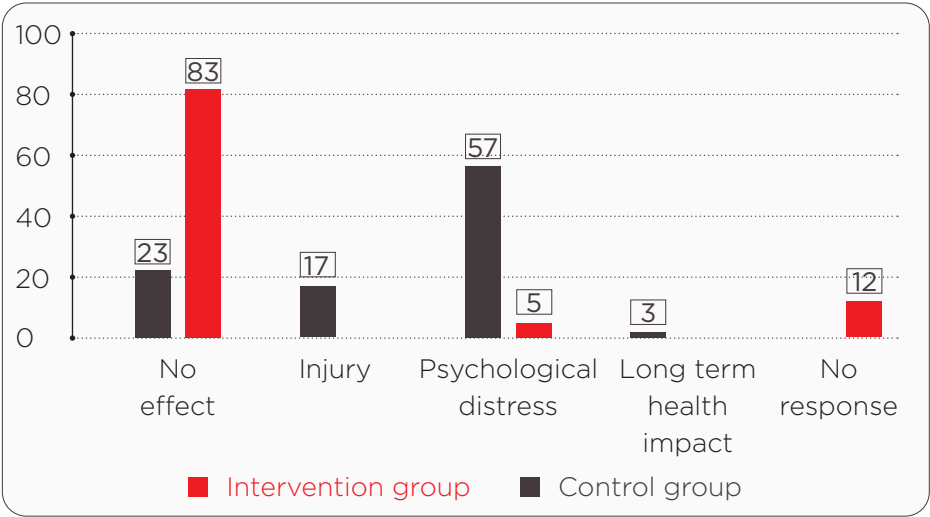
Intervention Group   **Control Group**

96%

4%

■ Yes   ■ No

76%

24%

■ Yes   ■ No
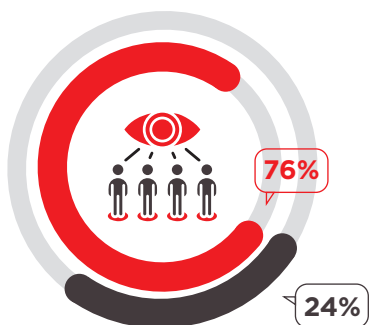
iv. Injury and psychological health impact

Respondents from the intervention area reported that they suffered lesser negative health impact because of the floods compared to the control group, 83% said they have no effect on their health in the intervention area while 57% said they suffered from psychological distress in the control area. It is evident that when communities are informed ahead of time regarding the risk and the possible early actions that can be taken, it results in lesser psychological distress and physical injuries.

Was there any fatality or injury in your family during the 2022 flood ?
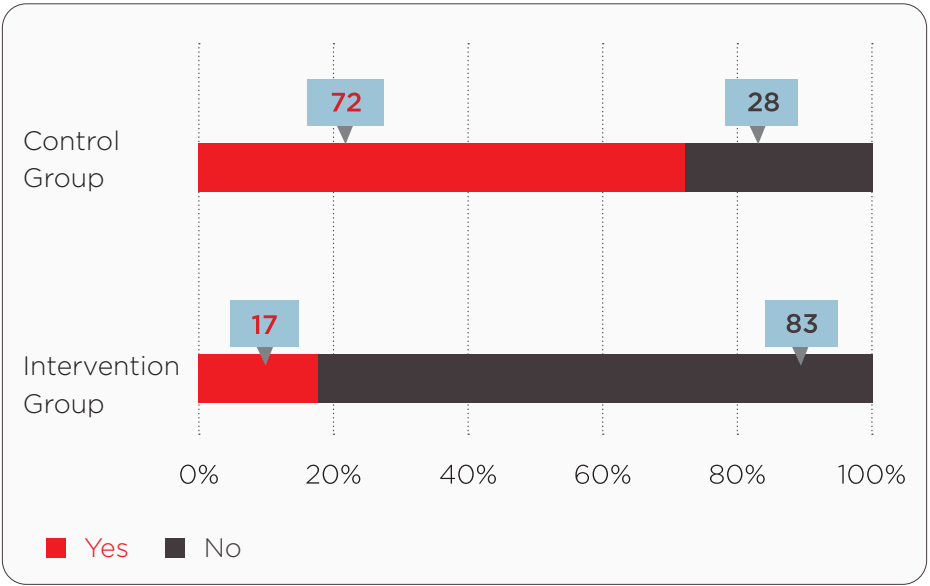

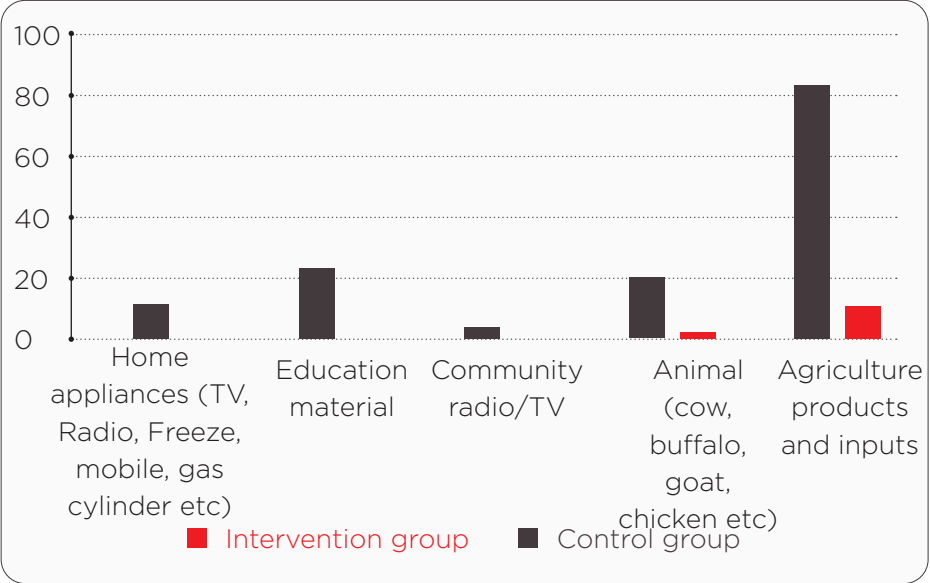## v. Loss and damages of properties

There is a clear distinction in the impact of flood on people's health and properties between the control and intervention group. This can be attributed to early actions done in anticipation of the flood in the target areas. In the control area, 72% of respondents said they had suffered from some loss in property, in contrary 83% of respondent from intervention area said they did not suffer from any damages. Majority of the properties that were damaged were agriculture inputs such as

seeds and pesticides, livestock, and children's educational materials such as textbooks and uniforms. In the intervention area, majority of the respondents attributed the timely receipt of the early warning information to have contributed to minimizing their losses and damages to the properties. When the floods hit, many had already evacuated vulnerable family members to safe places. Due to this they were able to evacuate their properties when water started entering their village. Hence, improving access to such information is critical to effective early actions in the communities.

Have you lost any properties during this year floos ?

Control Group: Yes 72, No 28
Intervention Group: Yes 17, No 83

0% 20% 40% 60% 80% 100%

■ Yes   ■ No

Have you lost any properties during this year floods ?


Intervention group   Control group

vi. Coping mechanisms

To recover from the negative impacts of the flood, affected families have resorted to first taking loans from financial institutions such as banks and cooperatives and second taking loans from neighbours, relatives etc. This is followed by taking up extra work and even migrating for work, and few respondents even reported to have sold properties. This clearly shows how repeated disasters such as floods has compounding effects on people's vulnerabilities.

The assessment shows that respondents who have had to rely on the negative coping mechanisms in intervention group opted to take informal loans from neighbours, relatives etc. This could be due to lack of access to financial institutions. However, such informal loans often charge exorbitant rates which traps the borrowers into cycle of poverty. In the control group, respondents have relied to other negative

coping mechanisms such as selling their property and reducing food consumption. Such drastic measures could be due to the fact that they suffered huge loss in the flood.

Coping mechanism adopted to recover from the losses suffered from the flood
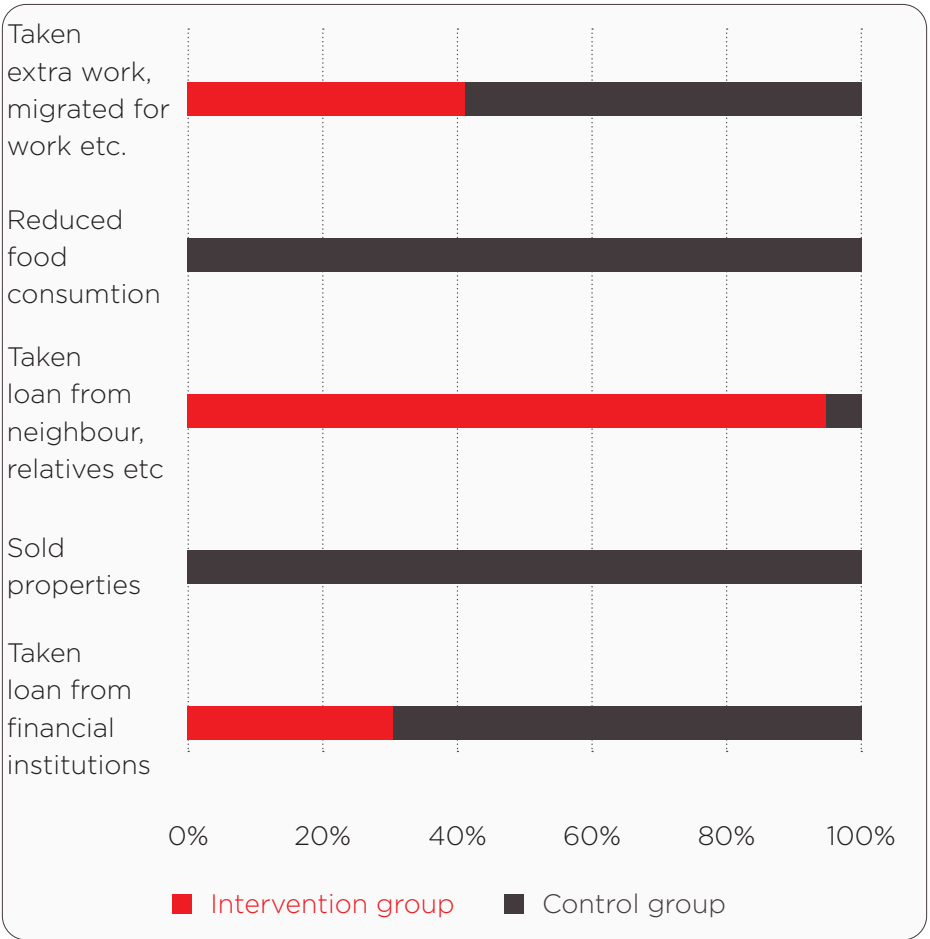
ANNEX

01

QUESTIONNAIRE

A. Demographic

1. Name of respondent
2. Address
3. Contact number:
4. Recipient of MPC (Yes/No):
5. Disability and types:
6. Caste/ethnicity:
7. Age of Respondent (year completed):
8. Gender:
9. Education:
10. Marital status:
11. How many people are in your family (indicate the number)?
12. Is there any one in your family who is persons with disabilities?
13. If yes, then types of disabilities
14. Distance from the house from the river:

B. Experience of early action/early response

15. What Kind of support you received and by whom?
16. How do you understand the flood?
17. When did you received su pport? Before the flood trigger or after the flood peaked up.
18. If after flood, then how long it took to get the support.
19. Was the support faster or delayed compared to previous years?
20. Did the support meet your immediate needs?

21. Was it easier to get support? If not easy, then what was the reason?
22. Did you feel that your safety was threatened in any way due to the support
23. If you feel unsafe, then where was it?

C. Early warning messages

24. Have you received flood early warning message?
25. If yes, how did you received flood early warning message
26. Was that information on time for you to prepare?
27. Did you understand the messages
28. IF you have not understood the messages then what was the reason

D. Loss and Damage

29. Was there any fatality or injury or any effect in your family during the 2022 flood?
30. Have you lost any properties during this year flood?
31. If yes, then what? If not, then what was the reason

E. Coping Mechanism

32. How did you recover the loss and damage suffered during the 2022 flood?
33. Did you suffer from any psycho-social related behaviour change after the 2022 flood
34. If yes, then what kind of behaviour change?

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handicap international

Climate Centre