

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – OS01

- 1 **Date:** June 9, 2018
- 2 **Site:** Ostional, Nicaragua
- 3 **Key:**
- 4       ... - Incomplete Sentence
- 5       xx – Not audible
- 6       CAPITAL WORDS – Loud sounds/words
- 7 **Interviewers:** Interviewer 1, Interviewer 2, Interviewer 3, **Native Spanish Speaker**
- 8 **Responder:** OS01
- 9 **Survey Begins**
- 10 **Interviewer 1:** What is your name?
- 11 **OS01:** My name is [OS01] and I was born in Ostional. I am 38 years old. I started our diner with help  
12 from my maternal grandma. She was 15 years old when she had children. They left the light of and with  
13 the world
- 14 **Interviewer 1:** These questions are about Tropical Storm Nate.
- 15 **OS01:** Uh huh, Tropical Storm Nate. Good. Tropical Storm Nate began at 7 at night. It began to rain.
- 16 **Interviewer 1:** And how tall was the flood?
- 17 **OS01:** Yes. The flood was little by little about the door and it set that is the huge window.
- 18 **Interviewer 1:** It is two meters?
- 19 **OS01:** Yes.
- 20 **Interviewer 1:** And how long did the flood last?
- 21 **OS01:** Well it lasted until 4 in the morning. It was stopping. From 7 at night the rain began a little, a little  
22 later it started to get worse and it lasted until 4 in the morning, it started to go down. It was huge all  
23 night. When I know too much. He made too much water.
- 24 **Interviewer 1:** And when did the flood end?
- 25 **Native Spanish Speaker:** When did it return to normal, tell us?
- 26 **OS01:** Already 5, already rain, but already more melodic. On the 5<sup>th</sup> was the whole disaster.
- 27 **Interviewer 1:** And do you remember a similar situation to the flood or is this the worst?
- 28 **Native Spanish Speaker:** It is if you remember a similar flood or.... If there has been another flood?

29    **OS01:** No. Never in my life, because my grandma told me she told me it never happened at all  
30    throughout her life and in the world, women who are older. The first time. For the first time.  
31    **Interviewer 1:** Wow. This is all. Very well.  
32    **OS01:** Yes.  
33    **Interviewer 1:** Good. Good.

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – OS02

1 **Date:** June 10, 2018

2 **Site:** Ostional, Nicaragua

3 **Key:**

4 ... - Incomplete Sentence

5 xx – Not audible

6 CAPITAL WORDS – Loud sounds/words

7 **Interviewers:** Interviewer 1, Interviewer 2, Interviewer 3, Native Spanish Speaker

8 **Responder:** OS02

9 **Survey Begins**

10 **Interviewer 1:** I would also like to have the opportunity to interview for, um, to have access to this  
11 information in the future. The information from our conversation will be used for um- for to understand  
12 the magnitude of the flood relationship. Thank you very much for your participation.

13 **OS02:** So, she wants to know what we went through, right? These Octobers the ... xx.

14 **Interviewer 3:** Yes, of course.

15 **OS02:** Yes.

16 **Interviewer 1:** ...very strong.

17 **OS02:** Of course, here it previously it- the wintertime without having a storm or nothing strongly  
18 affected the month of September and the month of October. Normal rain sometimes eight days, daily  
19 we were without light, without water, without road access, we could not go to San Juan del Sur, nor to  
20 the river, without anything, without- without um we were left without food, the children without milk,  
21 without water because it damaged enough but it was a normal winter, the rivers swelled there was no  
22 crossing at all the busses still did not have bridges.

23 **Interviewer 3:** In the winter xxx normal winter.

24 **OS02:** Yes, normal.

25 **Interviewer 3:** It is like it's-its like this year.

26 **OS02:** The years like that way before the bridges were built Now that the bridges were already built, it  
27 grew in October. It was the flood that there was so it started around 3 in the afternoon. It had already  
28 been raining for two days strong, strong, strong. That was the rain. The rain and from the first of  
29 October it began. Since the - As on September 30 it was raining, after on September 31, October 1<sup>st</sup>, 2, 3,  
30 and on the 4<sup>th</sup> was the great filled that began to grow and grow and grow. That-that gully there was  
31 filled with that stick it was brought by who knows where and there is a gully there-

32 **Interviewer 3:** Yes-yes.

33 **OSO2:** That ravine reached here.

34 **Interviewer 3:** Uh huh

35 **OSO2:** Up to here it came to the slope, true? And the- this other creek went over there to the business  
36 where you are going to eat. Where [Elena] got that creek, that creek that passed there ripped off the  
37 entire corridor, the entire roof. Where you are coming to eat is where [Elena], right? She is my niece,  
38 that creek got there, it passes strong strong strong and it was united with another creek coming from  
39 next to the- the park courts. It was joined with that other one.

40 And then the bridge from here they already went to the bridge, right? The straight bridge that passes  
41 next to the border, you already saw it, right?

42 **Interviewer 3:** Yes, yes.

43 **OSO2:** That bridge grew, that-that-that river so strong that it all overflowed and, then all these houses  
44 filled up. It got into about 20 houses from there on the edge of the bridge and then filled the part of the  
45 health center there. That is the health center and one already carried the water here at 12:00 midnight.  
46 1:00 in the morning and the people who were on the seashore also filled up.

47 The man who has a fishery stockpile center there at the sea. Have they gone there to the sea, to the  
48 beach? There is a fishery there he started and the cooperative also had a stockpile of fish here that from  
49 that the people that fish survive. Then they had a fishery stockpile. They bought the fish there. The  
50 people who came to buy from the south of Maunabo took that fish. It tore it up. The houses were going  
51 from the flood so strong it made, it took them.

52 We were 7 days.. 10 days without electricity. The cables fell. Without water. Without food no longer in  
53 the grocery stores. The wells were already contaminated. We had nowhere to go. There was no drinking  
54 water. You just had to draw water from the wells. We couldn't because the children and all of them with  
55 stomach sickness due to a lot of uncleanness already from the...

56 **Interviewer 3:** Yes, yes.

57 **OSO2:** From the very dirty water and we did not have food to eat a little and the grocery stores no  
58 longer had any and- and this some people like you in another country helped. They came to us to give us  
59 food, nourishment.

60 **Interviewer 3:** Yes, water.

61 **OSO2:** Enough water, they brought enough vehicles with water. Milk to the children.

62 **Interviewer 3:** In a boat or, or, or xx.

63 **OSO2:** No the bridge was fine. It had only broke a little. The last bridge here broke a little, but they  
64 diverted down a road and there the vehicles crossed. Then foreign people just like you. This one seems  
65 to collect this. They asked their country for help and they brought milk to the children, diapers, they  
66 brought cooked food.

67 **Interviewer 3:** But after 10 days.

68 **OSO2:** After 10 days we managed-managed to cross, yes. And this one and they brought enough water  
69 because there was not. And this one, blankets because some people left everything. The beds, clothes  
70 because there was enough families left homeless. Yes two fishery stockpiles, those two fishery  
71 stockpiles were taken there. Only one was rebuilt which is the last one.

72 **Interviewer 3:** Yes, yes, yes.

73 **OSO2:** But all the front part it took it where they had the house, but this- the man there tried again. He  
74 has already made a smaller house, a fishery stockpile, and he is buying fish again there. But this one,  
75 when it rains like this, this one, long enough, we run out of food because this road is damaged too much  
76 and it is not possible. The bus costs.

77 And now this time in October we went out until 10 days and until 10 days they brought us food. Yes-yes  
78 they brought us this. They brought us water. They brought diapers to the children. They brought milk,  
79 clothes and on part of the government, this, some people just brought it. This, some nourishment, but  
80 other people in Managua, this, the universities gave them. They asked- they asked other people and as  
81 they were watching they were sent xxx. They are looking at the emergency there was. Then they came  
82 to also give nourishment, food, yes.

83 But this here, we get this reported when there is enough rain from September onwards. Yes, from  
84 September onwards you have to save water, and you have to save this to the- where there are children,  
85 milk, diapers because no-no the grocery store can no longer, this, fill many things because everything  
86 ends, yes, no.

87 And since most of the people here live off fishing, so when it rains the more the water gets dirty. They  
88 can't take lobsters, octopuses and little fish because it is, uh, very dirty. And also when the road is  
89 damaged it cannot come. This, they cannot come. That time two came. Two trucks with fish because  
90 they could not leave due to the rain. The road was damaged and they already had the fish ready to just  
91 take, but this one, it also went wrong because they lost because they already had, this, they already had  
92 the fish product just to take away.

93 **Interviewer 3:** Uh huh.

94 **OSO2:** And here too most the people are agriculturalists. You plant basic grains, maize.

95 **Interviewer 3:** October is a- is a month for- for harvest, uh harvest.

96 **OSO2:** Yes, the harvest is good already in the month of September, October. In November there is  
97 already maize, corn, already has maize, later it is drier.

98 **Interviewer 3:** But no- not for that last year.

99 **OSO2:** A lot of damage, a lot of damage that in-in that-that storm then damaged. It was not a normal  
100 winter. When there is normal winter, people harvest enough beans.

101 **Interviewer 3:** Yes.

102 **OSO2:** Maize.

103 **Interviewer 3:** Uh huh.

104 **OSO2:** But since it was damaged t-t-then there was not. Now this year there was not much harvest.

105 **Interviewer 3:** Ah.

106 **OSO2:** There, see? Yes, people harvest their yucca. They plant yucca, bananas, plantains, casique, and  
 107 this, maize, beans, and rice. But this past year there was no harvest. A lot of rain. It was not a normal  
 108 winter but with a lot storm.

109 **Interviewer 3:** And this year, ah, the people um, rec-recover, recover.

110 **Interviewer 1:** Uh huh.

111 **Interviewer 3:** It is better this year, ah?

112 **Interviewer 1:** Recovers this..xxx.

113 **Interviewer 3:** I do not know agriculture is able to ah is-is better this year?

114 **OSO2:** Yes. Note that after-of-November ... October, November was still raining, plenty of water. So the  
 115 farmers came and planted corn. They planted corn and beans.

116 **Interviewer 3:** Uh huh.

117 **OSO2:** And they have raised a harvest in December.

118 **Interviewer 3:** Mmm, okay.

119 **OSO2:** Some families have raised about 10 quintals of beans.

120 **Interviewer 3:** Uh huh.

121 **OSO2:** You see? Well... because it was a little xxx because it should not be a lot of rain for the beans  
 122 because a lot of rain hurts them.

123 **Interviewer 3:** Uh huh.

124 **OSO2:** And this, and- and they managed to collect their little bit of- of harvest. Yes. Because the majority  
 125 of people here in the communities inside up to an hour or two hours. They live on agriculture. They take  
 126 to Rivas to sell for quintals, the beans.

127 **Interviewer 3:** Well, also the- the water- the water ah, was in your property too. Here in your house?  
 128 And how was it?

129 **OSO2:** It is that the water here it gets into us but it breaks this one, some slopes. It goes over, then we  
 130 have to take out and out and out. But up no- up no. There were other people who were in the other  
 131 accommodation, but we gave them shelter because the river got into them. There, in that- in that  
 132 accommodation the river got into because it was in the back then. They came around 2 in the morning  
 133 because they had another xxx here. So, they walked a lot here, on the beach. So, they came to seek  
 134 refuge here to stay here. We took care of them there. They also stayed there because upstairs there was  
 135 no damage. There was no water like that. Yes, but most homes were affected by the river and the  
 136 streams. Yes, and the houses on the seashore were affected more because the water from the sea

137 enters and the water from the estuary come together. The freshwater of the estuary unites with the sea  
138 water.

139 **Interviewer 3:** Ah, okay.

140 **OSO2:** Because it grows very strong. The rain makes it grow and- and the waves fill up a lot and then  
141 they come together and then the water gets into them, yes.

142 **Interviewer 1:** [To Interviewer 3] Show her the question... xxx

143 **Interviewer 3:** Um, sure. Ah, but—I have- have questions um specific- specifically ah- Do you remember  
144 when the rain started and ended?

145 **OSO2:** It- It- It began eh, it began October 30<sup>th</sup>.

146 **Interviewer 3:** October 30<sup>th</sup>?

147 **OSO2:** Yes.

148 **Interviewer 3:** And a-at 3 in the afternoon?

149 **OSO2:** Yes.

150 **Interviewer 3:** And when did it end?

151 **OSO2:** And on October 3 it made a river flood.

152 **Interviewer 3:** 3?

153 **OSO2:** October 3. Those days it was raining only day and night. Just rain and rain and rain.

154 **Interviewer 3:** 3? October 3?

155 **OSO2:** Well, that day, October 3 it made the flood strong at 11 at night.

156 **Interviewer 3:** But- But the rain-

157 **OSO2:** It was electric that day already.

158 **Interviewer 3:** It began on- on October 3, ah October 3?

159 **OSO2:** No 3, the 3- 3- no. October 3 at 11 at night.

160 **Interviewer 3:** 11 at night?

161 **OSO2:** Yes, it stopped raining until October 5.

162 **Interviewer 3:** Um ok. And ah, how long did it last? I think- I think it is knowing, ah- ah, I think ah, we  
163 know ah, how long did it last?

164 **OSO2:** How many days did it last?

165 **Interviewer 3:** How long did it last?

166 **OSO2:** From 31- from September 30, 30-30, 31, 1, 2, 3, 4, 5. 7 days of rain.

167 **Interviewer 1:** Okay.

168 **Interviewer 3:** And now our question is also, how long did it take to normalize after the river filled in?  
 169 Well let's say it became normal again because you know it made the very big full, then after -

170 **OSO2:** So, on that day it did the growing..

171 **Interviewer 3:** Yes, yes. How many days did it take? An hour, three hours or was it like part time or- or  
 172 until the next day it was normal?

173 **OSO2:** Until the second day. It cleared up already normal. Yes.

174 **Interviewer 3:** Okay..

175 **OSO2:** People were starting to take out the- their- their- some things, some.

176 **Interviewer:** Yes, of course.

177 **OSO2:** They began to take some things out already because already the- the tide was already lowering  
 178 more than the rising. It was already normalizing more.

179 **Interviewer 3:** Yes, and I think that this is a factor here that is dangerous is because the estuary is close  
 180 to the place is- is together. Then the fresh water collides with the- So there is no escape because the sea  
 181 attracts fresh water but it is not easy because it is like a wall.

182 **OSO2:** Yes, good... That is it. And join the streams. The streams unite, unite the river and all that will fall  
 183 into the sea there. All that stuff is going to fall there. Yes.

184 **Interviewer:** Ok. xxx. We already defined when it ended... Ah how much... How much less... how long did  
 185 we have when it ended... we have and... Do you remember a situation similar to the flood?

186 **Interviewer 3:** Like that, right? Similar. Something you remember in your years. For example, it could be  
 187 Mitch, Juana. I was not here for Juana, but Mitch was strong.

188 **OSO2:** Yes. Yes it was quite related as well.

189 **Interviewer 3:** I think Juana is.

190 **OSO2:** Yes.

191 **Interviewer 3:** Juana was deadly.

192 **OSO2:** That was, yes- yes. It was quite.. yes. The only difference that we had now with the time was  
 193 related to the flood of the rivers and that there was that storm. We had bridges. That favored enough  
 194 and the other times there was this, this, so much flooding of water. We had no bridge. There was- there  
 195 was another problem because to go up to San Juan del Sur we walked to the ranch called La Flor to the  
 196 last ranch on foot to catch the bus on the other side of the river. We walked more than an hour on foot  
 197 and the road was very bad there, pure water because the roads were cut because there was no bridge.

198 Yes, sometimes the bus would leave us as far as the brid- as far as the river on the other side. Because I  
 199 could not cross because it was flooding. You see? While there were bridges now, but they were



200 damaged. Some of the great force of water burst some of the walls of the bridge burst, then they had to  
201 be expected to repair them, yes.

202 **Interviewer 1:** I don't know xxx questions?

203 **Interviewer 3:** Oh yes. Okay. Ah ah for- for the- the recording. Ah what is your name?

204 **Interviewer 3:** Your name, she wants to know your name.

205 **OSO2:** [OS02].

206 **Interviewer 2:** [OS02], tha- thank you.

207 **OSO2:** [OS02].

208 **Interviewer 3:** And how- how old- old are you?

209 **OSO2:** Me? 55 years old.

210 **Interviewer 3:** And how many people live in your house?

211 **OSO2:** I had 5 children.

212 **Interviewer 3:** 5 children?

213 **OSO2:** Yes, but it is uh two already no... I have one who lives in Managua and this, my oldest daughter  
214 she already married and has a separate home.

215 **Interviewer 3:** Okay.

216 **OSO2:** My oldest daughter and I have three grandchildren. From my oldest daughter I have this two  
217 granddaughters- two grandchildren. A girl who is... she turned 19 years old and this, and the boy. She  
218 has two and the boy turned 12 years old. And t- this, my other son who was- is here, he lives here.

219 **Interviewer 3:** Uh huh.

220 **OSO2:** And my other daughter uh- is 27, 28 years old. I-I have- I have a grandson who lives here so I have  
221 two women because my tender girls are 16 years old and- and this, and he and my other daughters are  
222 three. And she has, my daughter has a boy named Lucas who lives here.

223 **Interviewer 3:** Ah- I saw his name ah, his name is Lucas.

224 **OSO2:** Ah, [laughs]. There he writes. He's in preschool, yes. He is five years old then, only he is a baby  
225 here and my little girl is 16 years old and so we live, this one, three adults, yes, and they two, yes, yes.

226 **Interviewer 3:** Thank you, thank you very, very much.

227 **OSO2:** Of course, yes [voice interrupted], do you want me to change your bedding now or tomorrow?

228 **Interviewer 3:** Today or tomorrow?

229 **Interviewer 1:** Now, please.

230 **OSO2:** The bedding, do you want me to change the bedding now?

231 **Interviewer 3:** Yes xxx.

232 **OS02:** Yes? It's okay? Okay.

233 **Interviewer 3:** Thank you very much.

234 **OS02:** Of course, it does [laugh]

235 **Interviewer 3:** I think we have all the questions.

236 **OS02:** ..xxx...

237 **Interviewer 1:** Other people.

238 **Interviewer 3:** Oh, oh, other people we can talk to, um, can we talk to about this, about the rain and the  
239 flood?

240 **OS02:** Have you not talked to [xxx]? Because she, this, already suffered two days flooded because she  
241 could not find how to do everything wet because she got the-- talk to her too, she is my niece xxx  
242 because she... xxx all half ...xxx

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – OS03

1   **Date:** June 10, 2018

2   **Site:** Ostional, Nicaragua

3   **Key:**

4   ... - Incomplete sentence

5       xx – Not audible

6       CAPITAL WORDS – Loud sounds/words

7   **Interviewers:** Interviewer 1, Interviewer 2, Interviewer 3, Native Spanish Speaker

8   **Respondent:** OS03

9   **Survey Begins**

10  **Interviewer 1:** Thank you [laughs[... xxx.. okay... okay um...What is your name?

11  **OS03:** [OS03]

12  **Interviewer 1:** Thank you. Um...How old are you?

13  **OS03:** 22.

14  **Interviewer 1:** 22? And how many people... oh no... it's not a house it is a pharmacy... xxx... when did the

15  rain start and end? Do you remember?

16  **OS03:** I remember it was like October 3... yes... and 6 was the strongest.

17  **Interviewer 1:** Do you remember.... Um.. and do you remember... at what time or at what hour?

18  **OS03:** Yes, like around 7 at night.... A little ... was increasing. And saying it was at 11 in the afternoon.

19  **Interviewer 1:** How high was the flood?

20  **OS03:** Here or I don't know?

21  **Interviewer 1:** Yes, here. Here.

22  **OS03:** Here, well it went all the way here [points] because f this it was helpful, but that's how it was

23  xxx.. ago so...

24  **Interviewer 1:** And um how long did the flood last?

25  **Native Spanish Speaker:** How long did it take, tell me two hours or... an hour?

26  **OS03:** And I'm telling you four hours.

27  **Interviewer 1:** And when did the flood end?

28  **Native Spanish Speaker:** What's the same. Let's say the hour when the river was normal.

29    **OSO3:** The next day the rain was already a little stopped. It was just missing that... clean everything.

30    **Interviewer 1:** And do you remember a similar situation as the flood or is it the worst?

31    **OSO3:** No.

32    **Interviewer 1:** Ok. Is there anything else we need to know?

33    **OSO3:** I'm going to say something that you want to know with the map. We are afraid...xxx.

34    **Interviewer 1:** Thank you.

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – OS04

- 1 **Date:** June 10, 2018
- 2 **Site:** Ostional, Nicaragua
- 3 **Key:**
- 4       ... - Incomplete Sentence
- 5       xx – Not audible
- 6       CAPITAL WORDS – Loud sounds/words
- 7 **Interviewers:** Interviewer 1, Interviewer 2, Interviewer 3, Native Spanish Speaker
- 8 **Responder:** OS04
- 9 **Survey Begins**
- 10 **Interviewer 3:** Thank you. What's your name?
- 11 **OS04:** Me, like my mom on TV ... [OS04]
- 12 **Interviewer 3:** My name is [Interviewer 3] and [Interviewer 2 and 1]. Peace together. How older are
- 13 you?
- 14 **OS04:** I'm 64 years old. A lot happens. 34, 40, 40... Almost the entire room.
- 15 **Interviewer 3:** I too am old [laughs]. How many people live in your house?
- 16 **OS04:** 5, 4 hours or more. Are there people who ask questions are close to the girl? Yesterday they
- 17 confirmed to this medium an absence or remembers that part of the image.
- 18 **Interviewer 3:** Do you remember when the rain began and ended? ended?
- 19 **OS04:** The storm was on October 5. That's how xxx was. The rain was like that a... xxx.
- 20 **Interviewer 3:** And how high was the flood?
- 21 **OS04:** Very big. I had xxx water left. All injected with the doctor ... twelve joined them, he said xxx.
- 22 **Interviewer 3:** How long did the flood last?
- 23 **OS04:** Preparing for the day and it ended by hand... it takes xxx. The river of xxx. The water lives.
- 24 **Interviewer:** But you have here.
- 25 **OS04:** Yes. Yes Yes. The river. xxxx
- 26 **Interviewer:** Oh yes.
- 27 **OS04:** That this. It went to everyone.
- 28 **Interviewer 3:** Oh yes. What do we do to look good now? Why is it happening here then?

29 **OS04:** What at the level of water was safe. This a storm come to take over for good. From the bottom  
30 the railing of the day dawned.

31 **Interviewer 3:** When did the flood end? When the river ends... the flood... does it come back in the  
32 river?

33 **Interviewer 1:** Return to normal conditions.

34 **OS04:** I don't remember the term.... About ten days xxx.

35 **Interviewer 3:** Another way to reach the water than from above. That it needs to count from here to  
36 there.

37 **OS04:** So that was all turned around. I left a couple of years ago. Those who had to pour water at all  
38 costs.

39 **Interviewer 3:** And when did it end?

40 **OS04:** We are already in a medium, nothing more. But the truth is that recently in terms of recounts,  
41 land was survived and not to mention as an image of beauty. For between the beach, when it finished  
42 tell her to go, the relationship between two candles returns back in time, Between it it already started  
43 to rain and helped to improve the rain and it returned to the inundation not because there was nothing  
44 on screen.

45 **Interviewer 3:** Do you remember a similar situation before the flood? For example, oh Mitch or Juana?

46 **OS04:** Yes. Xxx Remember, but don't...

47 **Interviewer:** Thank you for your time and your memories...

48 **OS04:** You're welcome.

49 **Interviewer:** That's all. Thank you.

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – OS05

- 1   **Date:** June 10, 2018
- 2   **Site:** Ostional, Nicaragua
- 3   **Key:**
- 4         ... - Incomplete Sentence
- 5         xx – Not audible
- 6         CAPITAL WORDS – Loud sounds/words
- 7   **Interviewers:** Interviewer 1, Interviewer 2, Interviewer 3, Native Spanish Speaker
- 8   **Responder:** OS05
- 9   **Survey Begins (Notes)**
- 10 **Interviewer:** What is your name?
- 11 **OS05:** [OS05]
- 12 **Interviewer:** How old are you?
- 13 **OS05:** 54
- 14 **Interviewer:** How many people live in your house?
- 15 **OS05:** 4
- 16 **Interviewer:** The rain?
- 17 **OS05:** It was about 2 days, 2... 3 days it was.
- 18 **Interviewer:** And how high was the flood?
- 19 **OS05:** Well, the first time in history for us, we got water. It got us by the door. We got in because of the  
20 heavy rain. Yes, we crossed the bridge and we had flooding along the entire coastline below, where we  
21 had damage to seven houses and 56 families were affected.
- 22 **Interviewer:** And how long did the flood last?
- 23 **OS05:** Well the flood itself was about 4 or 5 hours. Our houses were destroyed and we got water all over  
24 the coast.
- 25 **Interviewer:** At night?
- 26 **OS05:** At night, at around 12 midnight and also, 12 to 1.
- 27 **Interviewer:** And when did the flood end? When did it return to normal?
- 28 **OS05:** Normal?

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – OS05

- 29 **Interviewer:** Normal.
- 30 **OS05:** Like 12... 15 days, but we were already affected. The rain itself was 2- 3 hours, but the effects to  
31 maintain a little control was like 15- 16 days. 15 days more or less. Yes, with the rain and the serving  
32 families. It was not only in Ostional, but was in San Antonio, Monte Cristo, in the turtle area, back there  
33 were affected. All along the southern coast we had about 8 or 9 communities affected. Ostional itself  
34 was affected quite a bit, like other communities.
- 35 **Interviewer:** And do you remember a similar situation as the flood?
- 36 **OS05:** No, at least in what I live in Ostional. The first time I think you saw that... that flood so strong.  
37 There have been other normal, but not of great magnitude. This was one of the first big ones.
- 38 **Interviewer:** That is all the questions.
- 39 **OS05:** Okay
- 40 **Interviewer:** Thank you.
- 41 **OS05:** Same, same. We are at your service.
- 42 **Interviewer:** Anything you need.
- 43 **OS05:** Yes, whatever you need I am the community leader, I am the representative of the community.
- 44 **Interviewer:** Yes, okay.
- 45 **OS05:** Anything, we are there.
- 46 **Interviewer:** Thank you.
- 47 **OS05:** They talk to Rafaela. And Rafaela communicates and we are there for that. I'm here to serve you.
- 48 **Interviewer:** Okay, perfect. Many thanks. Thanks for your time and...
- 49 **OS05:** For you, do not worry.



# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – OS06

1   **Date:** June 10, 2018

2   **Site:** Ostional, Nicaragua

3   **Key:**

4         ... - Incomplete Sentence

5         xx – Not audible

6         CAPITAL WORDS – Loud sounds/words

7   **Interviewers:** Interviewer 1, Interviewer 2, **Interviewer 3**, Native Spanish Speaker

8   **Responder:** OS06

9   **Survey Begins**

10  **Interviewer 3:** What is your name?

11  **OS06:** [OS06]

12  **Interviewer 3:** [OS06]?

13  **OS06:** [OS06]

14  **Interviewer 3:** [OS06]. Nice to meet you. How old are you?

15  **OS06:** 36.

16  **Interviewer 3:** And how many people live in your house?

17  **OS06:** Two kids and a baby. We are 5.

18  **Interviewer 3:** These questions are about tropical storm Nate. When did the rain from the storm begin?

19  And approximate date?

20  **OS06:** All the rain on the hill falls on the next October date. Rising and the m.. mm. mm. in full, when it

21  sank in the ravine of the river.

22  **Interviewer 3:** And how high was the flood?

23  **OS06:** It was here the first time it rained.. or never when... it came when it was... gave me water... But I

24  do not know. I said it did it in order.

25  **Interviewer 3:** And what are they up to? To others

26  **OS06:** Well, whoever it took around my house for the first time it got into my house and for the first

27  time it collapse when it looks at a car filled with water. Honestly horrible. They tell me that this year is

28  getting worse, but I do not know that this coming year will be more than the year that just passed. I say I

29  would not want it to happen again.

30  **Interviewer 3:** It was always the first the first time in your life?

31 **OS06:** Yes, because it always came a little behind where that house is. If it got there, it didn't touch  
32 anything here. But that awful day I had never seen that situation.

33 **Interviewer 3:** How very difficult, seriously, how much one would be. And how long did the flood last?

34 **OS06:** Well that. When the last time- The last time it played, it's neck and face were sunk. It started to  
35 rain and it doesn't stop raining. As a good idea, 11 in the night until 5 in the morning, when it was  
36 evacuated. We had to get out of here because we were not going to be with anyone ahead. I don't know  
37 if it is early, but the most flood was 11 for it. And this was the thing. It is that every night, at dawn of my  
38 life, a brother of mine took my child from it and took him out in a place. Surely, we did not write it. They  
39 were there in the water. We have been coming out of the house as it was almost 5 in the morning to  
40 half rest. Because to be standing all night, from there to here, running, getting things from where the  
41 water did not come, we had to be taking it out for good. The most important thing in the papers. We  
42 took one mattress out for the middle to treat the children and at 5 to go forward. It is no longer hot. All  
43 that was left on the coast lied that some who lost things because their beds, one so as not to lose it.  
44 Came halfway through and they used the boats, one with engines on to recover again, that is, thank God  
45 who survived from it. Hopefully this year they are not the ones in it, but you have to be aware of the  
46 danger. When the councilman arrived, he was in what is today a current that had never been seen.

47 **Interviewer 3:** And when did it return to normal conditions?

48 **OS06:** So, after that day they already went down, with what the water does good and high. Looking for  
49 how they can see their house to see that what had been lost, which was not fulfilled. Then from home  
50 and also something that day dawned because everyone was seeing someone who lost a device the  
51 appliance and has gone to find where he uses to increase that was solved.

52 **Interviewer 3:** Your situation was so obvious, well that you are losing and waiting without knowing  
53 whether you will be alive.

54 **OS06:** Fear. Everything you see there it is.

55 **Interviewer 3:** Today, do you have anything that you think we should... we should know about your  
56 experience with the flood?

57 **OS06:** Not anything that I think that is enough.

58 **Interviewer 3:** Thanks for certain. Yes, for your time and for telling us your memories. Many thanks.

59 **OS06:** Thanks to a family friend.

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – OS07

1   **Date:** June 10, 2018

2   **Site:** Ostional, Nicaragua

3   **Key:**

4         ... - Incomplete Sentence

5         xx – Not audible

6         CAPITAL WORDS – Loud sounds/words

7   **Interviewers:** Interviewer 1, Interviewer 2, Interviewer 3, **Native Spanish Speaker**

8   **Responder:** OS07

9   **Survey Begins**

10   **Interviewer 1:** What is your name

11   **OS07:** [OS07]

12   **Interviewer 1:** And how old are you?

13   **OS07:** 81.

14   **Interviewer 1:** And how many people live in your home?

15   **Native Spanish Speaker:** How many people live in your house that you live now- now? How many

16   people do you know?

17   **OS07:** [Points at himself and laughs].

18   **Interviewer 1:** And these questions are about Tropical Storm Nate. When did the rain start?

19   **OS07:** [shrugs] No se.

20   **Native Spanish Speaker:** The date of the day and the exact time the date we know the beginning of the

21   affected night.

22   **OS07:** Date? In October was the start date.

23   **Interviewer:** Do you remember the date in October the rain ended?

24   **OS07:** It didn't happen... happened. The rain started without rain, although we cannot stop. Before it

25   was raining hard, but the day it came out of the river the water started around 10 and at around 12 at

26   night it was flooded, and the water has come for you. We totally went swimming.

27   **Interviewer:** And how long did the flood last?... How long?

28   **OS07:** How long the flood lasted? The- a day or two days and with the badly affected ends. It went so far

29   that it the sea was full in all the water could not come out, but rather it gushed out here. But when the

30   sea dried up, they all became current.

31 **Interviewer:** And do you remember a similar situation, for example, Mitch or Juana?

32 **OS07:** I remember Juana. Flood similar to Nate. Something similar has happened a bit the same. Not one  
33 opened, but about 14 years ago but nothing more. Something deadly, but it was not like this. The one  
34 that was once again at all hours and this Thursday.

35 **Interviewer:** Is there someone else who you can think of that we should talk to about the flood?

36 **OS07:** In terms of were they loss? No, because already.. surely, they will go there. A man lost the house  
37 and lost everything, but the estuary came to the edge of the estuary and much later took it.

38 **Interviewer:** It doesn't seem like anything.

39 **OS07:** It was a loss in terms of one's personal clothing, but it did not work because it did not reach it.

40 **Interviewer:** There was nothing you could do. You have good information and I think that thank you for  
41 your time and for your highly valued memories about the relation to the flood... for your time. It is all  
42 managed for many cases, much more or less. How many more or less?

43 **OS07:** How many ...xxx.? Many thanks.

44 **Interviewer:** Well, I would say that the work of...

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – OS08

1 **Date:** December 9, 2019

2 **Site:** Ostional, Nicaragua

3 **Key:**

4 ... - Incomplete Sentence

5 xx – Not audible

6 CAPITAL WORDS – Loud sounds/words

7 **Interviewers:** Interviewer 1, Interviewer 2, Interviewer 3, Interviewer 4, Native Spanish Speaker

8 **Responder:** OS08

9 **Written Survey Notes**

- 10 • We took a photo of and measured the water line at the neighbor's house.
- 11 • The flood began on October 7
- 12 • The flood peaked from 12 – 1 AM
- 13 • Flood in the south (left) of the river and the neighbors were affected.
- 14 • The respondent was not in Nicaragua during the flood, but their neighbors were here.
- 15 • The respondent bought property in December 2017
- 16 • The respondent has a video of the neighbor during the flood.
- 17 • When the respondent arrived, there was a new bridge built up the river.
- 18 • The respondent also emailed us video evidence of the flood.

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – OS09

1   **Date:** December 9, 2019

2   **Site:** Ostional, Nicaragua

3   **Key:**

4         ... - Incomplete Sentence

5         xx – Not audible

6         CAPITAL WORDS – Loud sounds/words

7   **Interviewers:** Interviewer 1, Interviewer 2, Interviewer 3, Interviewer 4, Native Spanish Speaker

8   **Responder:** OS09

9   **Survey Begins**

10   **Interviewer 1:** What's your name?

11   **OS09:** [OS09].

12   **Interviewer 1:** And how old are you?

13   **OS09:** 30

14   **Interviewer 1:** And how many people live in your house?

15   **OS09:** Four.

16   **Interviewer 1:** And these questions are about Storm Nate. Do you remember the day the flood?

17   **OS09:** October 5th (2017)

18   **Interviewer 1:** When was the highest flood?

19   **OS09:** Start at twelve past one in the morning.

20   **Interviewer 1:** How many days was the rain before the flood?

21   **OS09:** Three days of rain. Too strong. The river was very high and in the street and all houses.

22   **Interviewer 1:** Do you remember when the water came back in the river? When will the river return to

23   normal condition?

24   **OS09:** The next day.

25   **Interviewer 1:** Just one day?

26   **OS09:** Yes, just one day.

27   **Interviewer 1:** Do you remember another stronger storm like this?

28   **OS09:** Not other stronger storm.

# **MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS**

## **TRANSCRIPT**

### **HOUSEHOLD SURVEY – OS09**

29 **Interviewer 1:** Do you know another person that I speak to?

30 **OS09:** [xxx]. Blue house on the sea.

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – OS10

1 **Date:** December 1, 2021

2 **Site:** Ostional, Nicaragua

3 **Key:**

4 ... - Incomplete Sentence

5 xx – Not audible

6 CAPITAL WORDS – Loud sounds/words

7 **Interviewers:** Interviewer 1, Interviewer 2, Interviewer 3

8 **Responder:** OS10

9 **Written Survey Notes**

- 10 • Respondent did not remember the date or time, but that storm and flood happened in October  
11 of 2017.
- 12 • Respondent said flooding from Tropical Storm Nate was about waist high.
- 13 • Flooding was ~3-4 feet, evident with watermark at the bottom of the window (Photo)
- 14 • Respondent also said flooding was unprecedented and cannot remember a similar event.
- 15 • Lost business and livestock in the flood.



# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – MC01

1   **Date:** June 10, 2018

2   **Site:** Monte Cristo, Nicaragua

3   **Key:**

4         ... - Incomplete Sentence

5         xx – Not audible

6         CAPITAL WORDS – Loud sounds/words

7   **Interviewers:** Interviewer 1, Interviewer 2, Interviewer 3, Native Spanish Translator

8   **Responder:** MC01

9   **Interview Begins**

10   **Interviewer 1:** What is your name?

11   **MC01:** [MC01]

12   **Interviewer 1:** And how old are you?

13   **MC01:** 55

14   **Interviewer 1:** And how many people live in your home?

15   **MC01:** 7 are living here

16   **Interviewer 1:** These questions are about Tropical Storm Nate. When did the rain begin before the

17   flood?

18   **MC01:** It started a day earlier. If maybe I could remember the day, let's say the calendar. xxx. Storm. Yes.

19   Yes. The flood was on October 4, for dawn, 5. The rain started on October 4

20   **Interviewer 1:** Did it start raining on October 4?

21   **MC01:** Yes. The day of St. Francisco.

22   **Interviewer 1:** Okay.

23   **Interviewer 2:** Yes.

24   **Interviewer 1:** And how high was the flood?

25   **MC01:** Very high.

26   **Interviewer 1:** How high?

27   **MC01:** It was more or less about 6 meters. It passed through the house, yes, because there it took

28   everything. It took everything there. It did not leave anything.

29 **Interviewer 1:** And how long did the flood last?

30 **MC01:** How long did it last?

31 **Interviewer 1:** How long did it last?

32 **MC01:** Well, from midnight to noon, would it be? No. the whole of the holy day passed on the 5<sup>th</sup>. About  
33 6 in the afternoon it already dropped. Yes. October 6 in the afternoon.

34 **Interviewer 1:** And when did it return to normal conditions? When did the river return to normal?

35 **MC01:** To normal? More or less 8 days. Yes.

36 **Interviewer 1:** 8 days?

37 **MC01:** Yes.

38 **Interviewer 1:** Do you remember the same situation or not? To the flood.

39 **Interviewer 2:** Do you remember something that happened?

40 **MC01:** Earlier?

41 **Interviewer 2:** Yes an event that was equal to Tropical Storm Nate or worse.

42 **MC01:** No. No. Never. Never. First Time.

43 **Interviewer 1:** First time?

44 **MC01:** First time. Yes.

45 **Interviewer 1:** It is all the questions [laughs]. Nothing like it ever [inaudible].

46 **Interviewer 2:** Yes. Those are all the questions, as you can see it was fast. Yes.

47 **MC01:** Okay. Yes [laughs].

48 **Interviewer 1:** xx.

49 **MC01:** That was tough. Yes. That flood. We came to spend, look, carrying water the rest of the night.  
50 Yes. There were four families who spent the whole night carrying water. There where the truck is, there  
51 we woke up carrying water, from 1:30 in the morning. Yes. And we were ... well, at least now we walk  
52 with pants, we were walking around because that was the only thing we had left, a short. Yes. And  
53 afterwards this roof was thanks to God, there we have been little by little, we have obtained those xx  
54 sheets and we are already at least under a roof. We were there for a year, well on October 4 of that. You  
55 don't look at anything, you just look at the mountains where the houses were. We go for a walk.

56 **Interviewer 1:** Yes. Okay. Thank you.

57 **Interviewer 2:** Okay. Thank you.

58 **MC01:** You as well.

59 **Interviewer 1:** Can we measure the water?

60 **MC01:** How?

61 **Interviewer 1:** The door. Close to the door that xx.

62 **Interviewer 2:** Thank you very kindly.

63 **MC01:** ... River. Here was the house. That was a house that xx was built.

64 **Interviewer 1:** OK.

65 **MC01:** logically here was the house. The house was one of those pillars here.

66 **Interviewer 1:** Thank you.

67 **MC01:** Thorns.

68 **Interviewer 1:** Thorns. Ah yes, I don't like them. [foreign].

69 **MC01:** ...xx around. ..xx.. Yes, and from that pillar here was the house. We trust ourselves because like  
70 never xx. ... Here were the beds where we slept. Look, there were all those bags, all that brick we  
71 collected there in those plans that was when my daughter was building. Yes, we had all that brick there.  
72 That well was where we handled the purified water to drink xx... All that there, it took it all, then it was  
73 there. The thing in front xx where we heard music [laughs]. Yes, the rain took it, it took everything xx, a  
74 cold took it there xx, there it looks whitewashed, a xx big, it took everything, yes; and we had all this  
75 piled up there, but then later we collected it those plans that had taken them. xx... Yes. Let's say--

76 **Interviewer 1:** And was it the height?

77 **Interviewer 2:** How far did it go?

78 **MC01:** That height passed more or less on the hook over there with a stick, yes, as it measured here  
79 because there was the sign where it had passed, all this height.

80 **Interviewer 1:** Here?

81 **MC01:** No, higher. More.

82 **Interviewer 1:** More?

83 **MC01:** Yes, higher. Here the water went very high, it was a body and a half or so. xx

84 **Interviewer 1:** Tell me where. Wait. There?

85 **MC01:** Yes, there xx ... Yes .. [crosstalk] [laughs]. This xx no-- All this was on top of the roof of this house,  
86 but when everything happened, we removed it, all this was the frame that was on top. Yes, that well  
87 was [inaudible] because it had water in it. And it was also destroyed, let's say ready, there is nothing to  
88 do. Yes, it left too.

89 **Interviewer 1:** It was bad?

90 **MC01:** We did not use it at all. No, the water is filthy.

91 **Interviewer 1:** Dirty? Was the water dirty?

92 **MC01:** Yes, it is dirty.

93 **Interviewer 1:** During the storm--?

94 **MC01:** Before the storm. Yes, we used it, good water to drink. Yes, but as the dirt entered it, then it  
 95 stayed, of course, cleaning it well-- Yes. It still helps. Yes, there was the little bath, at least the sign  
 96 remained [laughs].

97 **Interviewer 1:** Was this your son's house?

98 **MC01:** No, it was ours.

99 **Interviewer 1:** OK.

100 **MC01:** Yes, and my daughter's was this one that we were building.

101 **Interviewer 1:** OK.

102 **MC01:** Yes, yes, and there where he was - there, another one, of my brother who was up on the hill, was  
 103 the one on the other side, and there my nephew's, he just left the roof up. Yes, then he took everything  
 104 down too. Yes, there were two destroyed, and this one, three, and the one here, four houses were  
 105 destroyed.

106 **Interviewer 1:** This was sad and hard, you know.

107 **MC01:** But thank God, most importantly we are alive. The important thing is that our lives are here.

108 **Interviewer 1:** Yes.

109 **MC01:** Because there were no victims.

110 **Interviewer 1:** There was no victim?

111 **MC01:** No, thank God no [crosstalk] yes--

112 **Interviewer 1:** What is the hardest?

113 **MC01:** He took pig, dog, cat, everything, but [laughs] we didn't [laughs]. Kittens, kittens, kittens,  
 114 [crosstalk]. It is enough. It is quite what God did, right? Don't take us [laughs].

115 **Interviewer 1:** OK. Thank you very much.

116 **Interviewer 2:** Many thanks.

117 **Interviewer 1:** Okay, xxx. Do you know other people you interviewed? Other people who were affected.

118 **MC01:** Well, there is my brother who can go interview him.

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – MC02

- 1   **Date:** June 10, 2018
- 2   **Site:** Monte Cristo, Rivas, Nicaragua
- 3   **Clave:**
- 4         ... - Incomplete Sentence
- 5         xx – Not audible
- 6         CAPITAL WORDS – Loud sounds/words
- 7   **Interviewers:** Interviewer 1, Interviewer 2, Interviewer 3, Native Spanish Translator
- 8   **Responder:** MC02
- 9   **Interview Begins**
- 10   **Interviewer 1:** Okay, what's your name?
- 11   **MC02:** [MC02].
- 12   **Interviewer 1:** And how old are you?
- 13   **MC02:** 55.
- 14   **Interviewer 1:** How many people live in your home?
- 15   **MC02:** Four people live here.
- 16   **Interviewer 1:** Four.
- 17   **MC02:** Yes.
- 18   **Interviewer 1:** Okay. And these questions are about storm Nate.
- 19   **MC02:** Yes.
- 20   **Interviewer 1:** When did the rain start before the storm?
- 21   **MC02:** I forgot?
- 22   **Interviewer 1:** And the next day, date?
- 23   **MC02:** It was exactly on October 4. Um, between 10:00 and 12:00 at night, yes.
- 24   **Interviewer 2:** Ah, very good. Good, thank you.
- 25   **Interviewer 1:** And the flood,
- 26   **Interviewer 2:** Good.
- 27   **Interviewer 1:** How high the flood?

28 **MC02:** Mmm, between 5 and 6 meters high.

29 **Interviewer 1:** And how long did it last? Ah, the flood. How long did it last?

30 **MC02:** The flood was, exactly, strong from 12:00 at night until 10:00 in the morning of the following day.

31 **Interviewer 1:** At what hour?

32 **MC02:** We are talking about 12:00 at night, six ... like ten hours. More or less ten hours? Yes.

33 **Interviewer 2:** Yes, yes.

34 **MC02:** About 10 hours, yes.

35 **Interviewer 1:** Ah, And, ah, when um, did the river return to normal conditions, cond-, conditions?

36 **MC02:** Look, exactly when we leave and we talk about it, going back to where we were. I returned at

37 5:00 in the morning and there was nothing left, the houses were already.

38 **Interviewer 2:** It was ...

39 **MC02:** already, flooded.

40 **Interviewer 2:** The question is, when do you remember that the river returned to normal?

41 **MC02:** To normal?

42 **Interviewer 2:** Yes.

43 **MC02:** About a month, November.

44 **Interviewer 2:** When was the water level below the ocean.

45 **MC02:** Ah, when it had already gone down to cross it?

46 **Interviewer 2:** Yes, yes, yes.

47 **MC02:** .. and everything? Yes. About five days.

48 **Interviewer 1:** Five days.

49 **MC02:** Yes, like five days.

50 **Interviewer 1:** Eh, um. And the last question is, do you remember an equal situation of the storm Nate

51 or not, in the past? Same or worse?

52 **Interviewer 2:** Yes do you remember an even that was equal or worse than the storm Nate in...

53 **MC02:** No.

54 **Interviewer 2:** .. the past.

55 **MC02:** No, no.

56 **Interviewer 1:** No. Well, those are all the questions.

57 **MC02:** It was, it was. Good.

58 **Interviewer 2:** It was fast.

59 **MC02:** Yes, yes. Thank you.

60 **MC02:** And in this moment, eh, it already had a month- a year in October, the 6<sup>th</sup> of ... October 5. And  
61 we have not been able to recover. That is why we are here, already. In these conditions that.. it is so.  
62 But here we are. And the four families have not been able to locate with other conditions, not not  
63 better, but that we have to already for the children.

64 **MC02:** It is, we had the water. We barely had a month that the water was installed because... the water,  
65 we did not have the water. We went to the river to bathe.

66 **Interviewer 1:** Ah

67 **MC02:** And to drink we went further to bring them to pigs and horses.

68 **Interviewer 1:** But now you already have?

69 **MC02:** Right now we have it. It is what it is.

70 **Interviewer 1:** It is helping.

71 **MC02:** It is helping the water quality because, this- the water has had a bad quality, the river.

72 **Interviewer 2:** Yes.

73 **MC02:** Yes, it is a bad quality, yes. ...xxx...

74 **MC02:** And the four families, none of us have our homes. None, yes. Yes. And those that the  
75 government provided, the 47 houses, none were left for the four families.

76 **Interviewer 2:** Um.

77 **MC02:** Yes, we do not leave soon then... we will not benefit. Because we have where we make it, the  
78 houses.

79 **Interviewer 1:** Uhuh.

80 **MC02:** We have the area –

81 **Interviewer 1:** Uhuh.

82 **MC02:** - but we do not have the economic resources to make the houses. But, yes we do have the area.

83 **Interviewer 1:** Uhuh.

84 **MC02:** Including us and all the families no longer return there.

85 **Interviewer 2:** Yes.

86 **MC02:** We already no longer return.

87 **Interviewer 2:** Yes, no. Very dangerous.

88 **MC02:** We go there xxx. Come together with us. You can't do it anymore there.

89 **Interviewer 2:** No, it is a river.

90 **MC02:** Impossible now. This year it made a full and it happened again.

91 **Interviewer 1:** Ah.

92 **MC02:** But not like-

93 **Interviewer 1:** Like the-

94 **MC02:** the four. Yes, but-

95 **Interviewer 1:** Yes, I see, I see.

96 **MC02:** It came back.

97 **Interviewer 1:** It means that it is there.

98 **MC02:** Yes, already. No you cannot.

99 **MC02:** That day we went out at 12:00 at night. To locate them to that pull stick that is there.

100 **Interviewer 1:** Mmmm.

101 **MC02:** She, the other one who lives there, had her little girl there at 4:00 in the morning. And the girl

102 was no longer responding. So, we decided to grab... down to look where to put her in. xx. Because the

103 girl did not respond from so much water, so cold.

104 **Interviewer 1:** yes.

105 **MC02:** We- we left the houses and the houses remained. Later we found out they were no more.

106 **Interviewer 1:** Yes. Everything was gone.

107 **MC02:** Everything, everything, everything was gone. That was a very tough... Everything was gone.

108 **Interviewer 1:** Yes.

109 **MC02:** This little that remains so. This sitting down with them is because people with good hearts

110 supported us those days, yes. And-- But we are with nothing, with nothing.

111 **Interviewer 1:** nothing?

112 **MC02:** Nothing, nothing here. Everything is gone. And these surveys that you are doing, what is it for?

113 **Interviewer 2:** It is for research that girl is doing. Yes, a research work.

114 **MC02:** Ah. Yes, being storms... Hi, go ahead. And in history it had never happened.

115 **Interviewer 2:** No. That's why it's her interest too, because it hadn't happened.

116 **MC02:** Yes. no, no. It is no, never.

117 **Interviewer 1:** Yes.



118 **MC02:** 55 years of living in this little town... xxx. No, never. Never.

119 **Interviewer 1:** Okay. Eh, ahm what is your name?

120 **MC02.1:** [MC02.1]

121 **Interviewer 1:** And how old are you?

122 **MC02.1:** 61.

123 **Interviewer 1:** Do you remember an equal situation?

124 **Interviewer 2:** Another similar situation?

125 **MC02.1:** No.

126 **Interviewer 2:** You don't remember?

127 **MC02.1:** No, no it is that I do not remember because I am from San Juan del Sur.

128 **Interviewer 1:** Ah. Okay.

129 **MC02.1:** And he is a native from here.

130 **Interviewers:** Ah.

131 **MC02.1:** I came here.

132 **Interviewer 1:** Uh um.

133 **MC02:** But he was telling me during, it rose knowingly.

134 **Interviewer 1:** Uh um.

135 **MC02.1:** -that this has never happened because we would not have built here.

136 **Interviewer 2:** Ah, yes.

137 **Interviewer 1:** Yes.

138 **MC02.1:** - We would not have lived there. If I am-- if-- Although from time to time it passed by, never. It

139 filled, but fast there. It filled up and down.

140 **Interviewer 1:** Uh um.

141 **MC02.1:** Only that time it never came down. Never went down. It went on and on and on.

142 **Interviewer 1:** Thank you for your time.

143 **MC02:** Good. You too.

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – MC03

- 1 **Date:** December 12, 2018
- 2 **Site:** Monte Cristo, Rivas, Nicaragua
- 3 **Key:**
- 4 ... - Incomplete sentence
- 5 xx – Not audible
- 6 CAPITAL WORDS – Loud sounds/words
- 7 **Interviewers:** Interviewer 1, Interviewer 2, Interviewer 3, Native Spanish Translator
- 8 **Respondent:** MC03
- 9 **Interview Begins**
- 10 **Interviewer 1:** What is your name?
- 11 **MC03:** [MC03].
- 12 **Interviewer 1:** And how old are you?
- 13 **MC03:** 14.
- 14 **Interviewer 1:** And how many people live in your home?
- 15 **MC03:** Five.
- 16 **Interviewer 1:** And these questions are about Storm Nate. Ah. When did the rain start before the storm?
- 17 **MC03:** Like everything else, Costa Rica... Ehm.
- 18 **Interviewer 1:** xxx
- 19 **MC03:** Yes. Just like everything else, Costa Rica.
- 20 **Interviewer 1:** But it already retreated well.
- 21 **MC03:** Yes, I came from Costa Rica. I was in-in the shelter in- xxx...
- 22 **Interviewer 1:** Remember the day it started? Or the month?
- 23 **Interviewer 2:** Yes.
- 24 **MC03:** I was a refugee.
- 25 **Interviewer 2:** It's over.
- 26 **MC03:** Wait. Uh- But the-
- 27 **Interviewer 1:** -when was the, uh, the rain that started the storm?

28 **MC03:** In October... xx. The- Almost a year.

29 **Interviewer 3:** And what date?

30 **MC03:** October 5.

31 **Interviewer 1:** Ah, the fifth was...

32 **MC03:** The 5 of October.

33 **Interviewer 1:** And, ah, how high was the flood?

34 **MC03:** Sorry?

35 **Interviewer 3:** How high was the flood? How far did it go? When the river overflowed.

36 **MC03:** But, to my neighbors, they entered. Ah it passed through the whole school.

37 **Interviewer 3:** And, can you more or less say it like two, three, four, five meters?

38 **MC03:** It was until I saw it. I felt that, when I fell asleep, it already at the door. About some five meters.

39 **Interviewer 1:** Five meters.

40 **MC03:** When I woke up the water was entering at this point.

41 **Interviewer 1:** And how long did the flood last?

42 **MC03:** The light went out- uh- the flashlight- three days -and it went dark.

43 **Interviewer 3:** And you guys were trapped here. Why...

44 **MC03:** Totally in water...xxx... No.

45 **Interviewer 3:** And ahm-

46 **MC03:** We stayed there and- ..xxx

47 **Interviewer 3:** -do you remember, ahm-

48 **MC03:** -because we could not cross here.

49 **Interviewer 3:** -the time of the flood-

50 **MC03:** It entered the ravine, entered-

51 **Interviewer 1:** -was it so high?

52 **MC03:** -and it made us xxx. The time?

53 **Interviewer 3:** The hour-

54 **Interviewer 1:** Yes.

55 **Interviewer 3:** -approximate.

56 **Interviewer 1:** More or less, the time.

57 **MC03:** Like at- at 1:00 AM it started. Thank God it did not-

58 **Interviewer 1:** 1:00 AM?

59 **MC03:** Yes. -in Tortuga, yes.

60 **Interviewer 2:** In turtle?

61 **Interviewer 1:** And it ended?

62 **MC03:** Yes. Like a-after three days, like at-- It started to go down to the bottom, how to say at this point.

63 At three days, like at 8:00 AM and something. And it was dry. But- ..xxx

64 **Interviewer 3:** 8:00 AM?

65 **MC03:** Yes.

66 **Interviewer 2:** Oh, okay.

67 **MC03:** The river entered there. Only the mud remained.

68 **Interviewer 1:** In the ...

69 **MC03:** Yes. The pigs-

70 **Interviewer 1:** And, uh, do you remember a similar situation?

71 **Interviewer 3:** Ahm, do you remember a situation similar to the flood?

72 **Interviewer 1:** If you remember- Well that, well I'm think-- I'm thinking.

73 **Interviewer 3:** Ahm. If you remember a situation equal to or that has been equal to or worse than storm

74 Nate?

75 **MC03:** No.

76 **Interviewer 3:** No?

77 **Interviewer 3:** Okay, that is all the questions. [laughs]

78 **Interviewer 2:** Thanks for your time.

79 **Interviewer 1:** Thank you for your time.

80 **Interviewer 3:** [MC03]

81 **Interviewer 2:** -Is that your name written?

82 **MC03:** Yes.

83 **Interviewer 3:** All the time can.

84 **MC03:** Yes, of course.

85 **Interviewer 1:** [laughs]...xx... Um.

86     **Interviewer 2:** Ah.

87     **Interviewer 1:** Do you know another person? ...

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – MC04

- 1   **Date:** December 12, 2018
- 2   **Site:** Monte Cristo, Rivas, Nicaragua
- 3   **Key:**
- 4         ... - Incomplete sentence
- 5         xx – Not audible
- 6         CAPITAL WORDS – Loud sounds/words
- 7   **Interviewers:** Interviewer 1, Interviewer 2, **Interviewer 3**, Native Spanish Translator
- 8   **Respondent:** MC04
- 9   **Interview Begins**
- 10   **Interviewer 2:** Hello.
- 11   **MC04:** Hi. My name is MC04.
- 12   **Interviewer 3:** My name is [Interviewer 3].
- 13   **Interviewer 1:** My name is [Interviewer 1].
- 14   **MC04:** Well, nice to meet you.
- 15   **Interviewer 1:** Nice to meet you. Ahm, I am a student at the University of Denver in the United States
- 16   and I came to ask some questions about the storm Nate last year. Remember? Do you understand? If
- 17   you don't understand me, tell me-
- 18   **MC04:** [laughs] I didn't understand it.
- 19   **Interviewer 3:** Okay, she's a college student-
- 20   **MC04:** Yes, I understood that.
- 21   **Interviewer 3:** She is a student from the University of Denver. Ok. And she is doing research about the
- 22   storm Nate, that happened last year and wants to do ask questions about it. She is just going to ask you
- 23   a few questions about the storm and that's it.
- 24   **MC04:** Uh huh.
- 25   **Interviewer 1:** Yes?
- 26   **Interviewer 3:** Yes.
- 27   **Interviewer 1:** Thank you. [laughs]. Ah, what is your name?
- 28   **MC04:** [MC04]
- 29   **Interviewer 1:** And, how old are you?

30 **MC04:** 40

31 **Interviewer 1:** How many people live in your house?

32 **MC04:** Well, 4 of us are living right now.

33 **Interviewer 1:** 4?

34 **MC04:** Yes, the others are in Costa Rica.

35 **Interviewer 1:** And this question is about the storm Nate. Ah when did the rain begin before the storm?

36 **MC04:** Before the storm? Notice that I forgot [laughs] No, I forgot.

37 **Interviewer 3:** I don't know, at least the month in which you remember what happened.

38 **MC04:** [Partner], when did it start? It's hidden, it's locked. [laughs]. when did the rain, the storm, start? I  
 39 forgot about it. It wasn't in-- Well, yes, it was already for-- Now that just turned one year old.

40 **Interviewer 3:** Yes.

41 **Interviewer 1:** Yes.

42 **MC04:** It turned on year old, but not right now. Yes, more or less. It was about a year ago-

43 **Interviewer 1:** When?

44 **Interviewer 2:** I don't remember.

45 **MC04:** Another one, see. I thought that xx... Yes, but yes, this one it just turned one year old. Right now  
 46 that was a few days ago.

47 **Interviewer 3:** Can I borrow your pen?

48 **Interviewer 1:** Okay, sure. And how high did the flood go? Oh, how tall?

49 **Interviewer 3:** How high was the flood?

50 **MC04:** And what happened is that I, uh, I wasn't there, but up to here, see, it came.

51 **Interviewer 3:** See?

52 **Interviewer 2:** It went through the well there.

53 **MC04:** Up to here, where is that, where is that bare, those sticks, up to there it rose. Up to here it came.  
 54 All this. Yes it got here.

55 **Interviewer 1:** An approximate?

56 **Interviewer 3:** Yes, there.

57 **Interviewer 1:** Yes, look at the height.

58 **Interviewer 3:** Ah, approximately, how many meters do you think it was? An approximate.

59 **MC04:** 1 meter.

60 **Interviewer 3:** Approximately.

61 **Interviewer 1:** Approximately.

62 **MC04:** Like how much? I'm going to say about four, five; got a few meters.

63 **Interviewer 3:** Correct.

64 **MC04:** At least four.

65 **Interviewer 3:** Uh-huh.

66 **MC04:** But here it was less, because here the river begins.

67 **Interviewer 1:** Uh-huh-uh-huh-uh-huh.

68 **MC04:** That's where it came to flood.

69 **Interviewer 3:** And how long did the flood last?

70 **MC04:** It lasted about a week, almost.

71 **[Partner]:** It started in the morning, it grew, the next day two, three, like four. Saying five days it was still  
72 strong, yes.

73 **MC04:** Yes, because I didn't cross it, I stayed on the other side, from the other houses and I crossed  
74 three days later. And-- but with- tied up, with, ahm, with-with rope, thus tied up I crossed paths.

75 **Interviewer 3:** Three-

76 **MC04:** It was still deep.

77 **Interviewer 3:** -Three days, then? Three?

78 **MC04:** Yes, it was still high.

79 **[Partner]:** Or at-at-at the third and fourth it already passed more deeply, but-

80 **MC04:** Yes, it was already more passable there.

81 **Interviewer 1:** And at night, do you remember, ah, what time did it start?

82 **MC04:** When this was-- When we woke up, it was at 2:00 AM, it was already here.

83 **Interviewer 3:** 12- 2:00 AM?

84 **[Partner]:** Then from there. There at the doors of the street, there from the river it came to – too early.  
85 How could one go out with- with so much rain.

86 **MC04:** Like at- like at 12:00 AM, maybe, it was very full there. Well, well it was full. I got up there and it  
87 was already going into the houses, where we were and we left there.

88 **Interviewer 1:** Um. And when - when did it return to- to normal conditions- conditions return to normal  
89 in the river? When re- ah, did the water go back into the river?



90 **Interviewer 3:** When did the river return to normal?

91 **MC04:** Back to normal?

92 **Interviewer 3:** After how many days?

93 **MC04:** After the, uh-

94 **[Partner]:** Yes, after four days.

95 **MC04:** After four days-

96 **Interviewer 1:** Yeah, yes.

97 **Interviewer 3:** Uh-huh.

98 **MC04:** -It was already normal.

99 **Interviewer 1:** Okay.

100 **Interviewer 3:** Uh-huh.

101 **Interviewer 1:** Yeah, yeah, aha. And do you remember a similar event? Ah, from the-- I don't know if a--

102 Ah, or worse, uh-

103 **Interviewer 3:** Uh-huh.

104 **Interviewer 1:** You-- Okay.

105 **Interviewer 3:** If you remember an event equal to or worse than Storm Nate that happened before?

106 **MC04:** I think that was the worst there was. No-no, I don't remember. Well yes. [laughs] No, well, yes, I

107 think that's the one that was - that was worse than the other one, as there have always been, but more

108 passable. Yes.

109 **Interviewer 1:** Uh-huh.

110 **MC04:** Yes, because it had never taken houses and it took houses. There it took all those houses from

111 there. Yes, it was worse.

112 **Interviewer 1:** Okay. It's all questions.

113 **Interviewer 3:** Those are all questions.

114 **MC04:** Yes.

115 **Interviewer 3:** It was the questions.

116 **Interviewer 1:** Thank you very much for your time.

117 **MC04:** Good.

118 **Interviewer 1:** Do you know another place that we can go?

119 **Interviewer 3:** No.

120 **Interviewer 1:** Do you know another person you interview?

121 **Interviewer 3:** Do you know of any other person who has also been affected and we can interview?

122 **MC04:** Wait for me.

123 **Interviewer 2:** Up there in the house.

124 **MC04:** From-from here haven't you gone? For here.

125 **Interviewer 1:** We come from [this person's place].

126 **MC04:** Ah, you already came. Ah well yes, there yes.

127 **Interviewer 2:** Ah. To-to-to down from the bridge.

128 **MC04:** It has to be down.

129 **Interviewer 3:** Down here?

130 **MC04:** Yes, down here there is more-

131 **Interviewer 2:** Yes. There it is - the plaza, there are some houses that it also got into, around the school.

132 **MC04:** That's where the-

133 **Interviewer 3:** At a school?

134 **Interviewer 2:** Yes, there is the school.

135 **MC04:** Because of the school that's there-

136 **Interviewer 3:** Okay.

137 **MC04:** -from -from there.

138 **Interviewer 3:** Near to the school.

139 **MC04:** -from Monte Cristo.

140 **Interviewer 3:** Uh-huh.

141 **MC04:** That school that is there, this way, that's where the river got into a house.

142 **Interviewer 3:** Ah, okay.

143 **Interviewer 2:** Okay.

144 **MC04:** There is the house.

145 **Interviewer 1:** Thank you very much.

146 **MC04:** Good.

147 **Interviewer 3:** Thank you very much.

148 **MC04:** Good.

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – MC05

- 1 **Date:** December 12, 2018
- 2 **Site:** Monte Cristo, Rivas, Nicaragua
- 3 **Key:**
- 4       ... - Incomplete sentence
- 5       xx – Not audible
- 6       CAPITAL WORDS – Loud sounds/words
- 7 **Interviewers:** Interviewer 1, **Interviewer 2**, **Interviewer 3**, Native Spanish Speaker
- 8 **Respondent:** MC05
- 9 **Interview Begins**
- 10 **Interviewer 2:** What is your name?
- 11 **MC05:** [MC05]
- 12 **Interviewer 2:** And how.. How old are you?
- 13 **MC05:** 36.
- 14 **Interviewer 2:** 36. How many people live in your house?
- 15 **MC05:** 6.
- 16 **Interviewer 2:** When does the rain start and end? Although these questions from now on are the storm
- 17 Nate.
- 18 **MC05:** Yes hehehehehe.
- 19 **Interviewer 2:** And when do you remember when the rain started and ended?
- 20 **MC05:** Before the storm arrived, it already had almost a day of rain all day long.
- 21 **Interviewer 2:** Maybe now you remember the hour it had begun and the hour it ended?
- 22 **MC05:** October 13. It arrived on October 13. As for 12 o'clock in the day, it began yesterday. Yesterday it
- 23 did not leave the day since morning. Thursday morning.
- 24 **Interviewer 2:** How high was the flood?
- 25 **MC05:** Well, more or less I do not know, but almost here the cases here almost no. There all the tangle.
- 26 About 2 meters
- 27 **Interviewer 2:** How long did the flood last?
- 28 **MC05:** It was when it woke us up. It was about 2 in the morning to 5 in the morning it arrived.

29 **Interviewer 2:** And do you remember when it returned to normal?

30 **MC05:** It dilated so much that it took a day. 2 days to lower the waters of the river.

31 **Interviewer 2:** Do you remember, do you remember a situation like the flood?

32 **Interviewer 3:** If you remember a situation that happened that was the same or worse.

33 **MC05:** I don't remember bad. This is good for everyone and there is not much to have a good day. This

34 year.

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – MC06

- 1 **Date:** December 12, 2018
- 2 **Site:** Monte Cristo, Rivas, Nicaragua
- 3 **Key:**
- 4       ... - Incomplete Sentence
- 5       xx – Not audible
- 6       CAPITAL WORDS – Loud sounds/words
- 7 **Interviewers:** Interviewer 1, **Interviewer 2**, **Interviewer 3**, Native Spanish Speaker
- 8 **Responder:** MC06
- 9 **Interview Begins**
- 10 **Interviewer 2:** What is your name?
- 11 **MC06:** [MC06]
- 12 **Interviewer 2:** How old are you?
- 13 **MC06:** 34
- 14 **Interviewer 2:** How many people live in your house?
- 15 **MC06:** 6
- 16 **Interviewer 2:** 6. Um these questions are about? About the storm Nate.
- 17 **MC06:** Uh hum.
- 18 **Interviewer 2:** Before the flood, when did the rain begin? The approximate date?
- 19 **MC06:** It began October 4.
- 20 **Interviewer 2 & 3:** Okay.
- 21 **MC06:** It ended the 6<sup>th</sup>. It was already a little less but the strongest was on October 4.
- 22 **Interviewer 3:** Okay.
- 23 **Interviewer 2:** How high was the flood?
- 24 **MC06:** Oh Oh. Very big it was, it was big—
- 25 **Interviewer 2:** Can you say maybe 2.3 meters? I don't know.
- 26 **MC06:** Well, around here at my house it didn't go so high, but around here it was higher.
- 27 **Interviewer 2:** There.

28 **Interviewer 3:** Ah, okay. Ah, one meter?

29 **Interviewer 2:** What did you say?

30 **Interviewer 3:** One meter.

31 **Interviewer 2:** Oh, one meter.

32 **Interviewer 3:** Yes.

33 **Interviewer 2:** Um, how long did the flood last?

34 **MC06:** We were here for three days.

35 **Interviewer 3:** It lasted three days.

36 **MC06:** A comm-- A communi-

37 **Interviewer 3:** Oh, okay.

38 **MC06:** -Three days later they began to respond to the people who began to come with aid.

39 **Interviewer 2:** Uhm.

40 **Interviewer 3:** Okay.

41 **MC06:** Yes.

42 **Interviewer 2:** When did it end, uh--?

43 **Interviewer 3:** What? What is it?

44 **Interviewer 2:** "When", what is that?

45 **Interviewer 3:** "When did it end."

46 **Interviewer 2:** Oh, when did the flood end? Um, um--

47 **Interviewer 3:** me?

48 **Interviewer 2:** Yeah, I-- you read it.

49 **Interviewer 3:** Yeah, yeah. When did it end or when did the river return to normal? ...xx.. It's the same

50 question.

51 **MC06:** Oh yeah.

52 **Interviewer 2:** Yeah, I jus-- Okay, yeah.

53 **MC06:** Yes, back to normality, we already saw it in the month of November.

54 **Interviewer 3:** No-- In the month of November.

55 **MC06:** Yes.

56 **Interviewer 2:** Okay.

57 **MC06:** Because it was always dirty, less so, but dirty, but it was back to normal in November.

58 **Interviewer 3:** Okay.

59 **Interviewer 2:** And do you remember an ev-- Event-

60 **Interviewer 3:** Event.

61 **Interviewer 2:** -or the same or worse situation, ah, with the flood?

62 **Interviewer 3:** Do you understand? Did you understand?

63 **MC06:** If I had seen anything like that-

64 **Interviewer 3:** Yes, I mean if-

65 **MC06:** -so in other times.

66 **Interviewer 3:** -have you seen a-- In here on this site something worse or--

67 **MC06:** Oh, no, no, unique.

68 **Interviewer 3:** Unique.

69 **MC06:** Just that once.

70 **Interviewer 2:** Alright.

71 **Interviewer 3:** Okay. Eh, let it go [laughs], that was all, eh, you saw that it was super short and super

72 easy.

73 **MC06:** Umm, good.

74 **Interviewer 3:** Thank you very much.

75 **Interviewer 2:** Thank you very much.

76 **MC06:** Well, to you, good afternoon.

77 **Interviewer 3:** Good afternoon, thank you very much for your time.

78 **Interviewer 2:** Have a nice day.

79 **MC06:** Well, same.

80 **Interviewer 2:** Thank you.

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – MC07

1   **Date:** December 12, 2018

2   **Site:** Monte Cristo, Rivas, Nicaragua

3   **Key:**

4         ... - Incomplete Sentence

5         xx – Not audible

6         CAPITAL WORDS – Loud sounds/words

7   **Interviewers:** Interviewer 1, **Interviewer 2**, **Interviewer 3**, Native Spanish Speaker

8   **Responder:** MC07

9   **Interview Begins**

10  **Interviewer 2:** What is your name?

11  **MC07:** [MC07]

12  **Interviewer 2:** How old are you?

13  **MC07:** 27

14  **Interviewer 2:** How many people live in your house?

15  **MC07:** 6

16  **Interviewer 2:** These questions are about the storm. Even when? When did the rain start and end?

17  **MC07:** Well, the rain started around eleven at night. In short, it intensified during the course of the night

18  and the most terrible occurred at about twelve o'clock in the morning and afternoon. On day 5 it was

19  quite a flood. In the houses there were houses that had to remove people because they were very high

20  through the pipe of approximately three meters high.

21  **Interviewer 2:** How long did the flood last?

22  **MC07:** More or less two to three days, because the water went down, but always somewhat.

23  **Interviewer 2:** When did the flood end, when were the conditions less normal until the more normal

24  time?

25  **MC07:** But yes, let's say that by the water it's over. It finished at about 4, 5 in the morning. It stops

26  raining. Then it took two or three days for the water levels to drop, more or less five days for it to take.

27  They searched. I am going to transit because not only the La Plata bridge remained, which had not

28  passed a meter or an equal or worse situation with the flood. Not even with the hurricane was there a

29  similar situation, like this time.

30  **Interviewer 2:** Thank you.



- 31    **MC07:** It's true.
- 32    **Interviewer 1:** Have a good day.
- 33    **MC07:** Likewise.

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEYS – MC08

**Date:** December 12, 2018

**Site:** Monte Cristo, Rivas, Nicaragua

**Key:**

... - Incomplete Sentence

xx – Not audible

CAPITAL WORDS – Loud sounds/words

**Interviewers:** Interviewer 1, **Interviewer 2**, **Interviewer 3**, Native Spanish Speaker

**Respondent:** MC08

#### Interview Begins

**Interviewer 2:** Well, ahm, the reason we're here is because we're doing an interview about what Storm Nate was like and, well, if they're-if they're willing to be interviewed.

**MC08:** Which one? The miss...

**Interviewer 2:** No, the storm Nate

**MC08:** The one from last year.

**Interviewer 2:** Yes, the one from last year

**MC08:** Correct.

**Interviewer 2:** Where you here? Remember?

**MC08:** Yes.

**Interviewer 2:** Yes?

**MC08:** The river passed here, look.

**Interviewer 2:** Oh, really?

**MC08:** Yes, and it got in there, it swept everything away, we lived over there, over there in the little house.

**Interviewer 2:** Wow.

**MC08:** But, here it's a bit higher--

**Interviewer 2:** Yes-yes-yes.

**MC08:** We retreat here.

**Interviewer 2:** Mm-hmm.

**Interviewer 3:** Okay, ah, well, the interview is going to be short--

**MC08:** Yes, it's fine.

**Interviewer 3:** ..xx.. So, I don't know which of the two can--

**MC08:** I don't know if xx.

**Interviewer 3:** Oh, they both talk, it doesn't matter, [laughs] well, he's going to ask the questions—

**MC08:** You ask the questions and we answer.

**Interviewer 3:** Yes, that's right, okay, yes, that's right.

**Interviewer 2:** Yes, super easy. [laughs]

**Interviewer 3:** thank you, okay.

**MC08:** Be careful if you fall, it's very close to there.

**Interviewer 3:** Oh thank you. Surely. [laughs]

**Interviewer 2:** Ahm, okay, what's your name?

**MC08:** [MC08]

**Interviewer 2:** Okay, how old are you?

**MC08:** 73.

**Interviewer 2:** How many people live in your house?

**MC08:** Four, but, well, those of us here, right? But my children are more, they always come to visit on weekends, there are four more.

**Interviewer 2:** Ah.

**MC08:** Yes, but those of us who are here permanently are—we are four.

**Interviewer 2:** Okay.

**Interviewer 2:** Okay, and, these questions are about the storm Nate and, um, okay, the- first question, um, when did the rain start and stop?

**Interviewer 3:** Before the floods, when do you remember--

**MC08:** It's that--

**Interviewer 2:** Did it start to rain?

**MC08:** The six. The fourth was the-the storm, from 4 to 5, eh--

**Interviewer 2:** Of what?

**MC08:** October.

**Interviewer 2:** October.

**MC08:** The whole day began here on-the fourth, it happened in the rain when it was 4:00 PM, the river was quite full, all that wall and- this, up to there was the level. Then it calmed down a bit, when it was 7:00 PM the rain started again and then the power went out, well, um, it's always raining, we went to bed-

**Interviewer 2:** Mm-hmm.

**MC08:** -and when it was 1:00 AM, all this was already full of water, so we went out and climbed the hill. From there, we got off there around-- 5:00 AM... 5:30 AM, because all of this was flooded here, the house, all of this still had plenty of water.

**Interviewer 2:** Ahm, how high was the flood?

**Interviewer 3:** If you could tell us how many meters, like this--

**MC08:** Well, from there in the center, where the current passes-

**Interviewer 2:** Mm-hmm.

**MC08:** -about five meters high.

**Interviewer 2:** Okay.

**MC08:** Yes.

**Interviewer 2:** How long-- How long did the flood last?

**MC08:** Well, it was all from 1:00 AM to 5:00 AM, right, the river was longer- a little lower, but always with plenty of water.

**Interviewer 3:** Uh hum.

**Interviewer 2:** Uhm.

**MC08:** Always with enough, but the truth is that, it-it was-- What I want to tell you is that it didn't continue anymore.

**Interviewer 2:** Mm-hmm.

**MC08:** Yes, it was a while, a few hours, few, but the water was very strong--

**Interviewer 2:** Mm-hmm.

**MC08:** And here is how I tell you, it came there and climbed up here, look, all the beds, the mattresses, everything got wet. It was horrible. [laughs] The mattresses, the beds, everything got wet there, they floated.

**Interviewer 2:** Yes?

**MC08:** Yes, and since we were there in that house, we already lost everything, television, refrigerator, everything-- Everything-everything material. Yes.

**Interviewer 2:** I'm very sorry.

**MC08:** We lost everything, our clothes, a little clothes, because they helped us-

**Interviewer 2:** Mm-hmm.

**MC08:** -yes, they came, they helped us, but here we completely lost everything-everything, because they told us that-- We found the clothes, but it was pure earth, sand and they told us not to use it, because it was contaminated. Too contaminated. So, I-what we did was burn it, when it dried up we burned it and there they gave us- and there we went little by little-

**Interviewer 2:** Recovering.

**MC08:** -recovering, we bought a small television, well, there, a small refrigerator that our children work in San Juan del Sur, they helped us, it was theirs, because where are we going to find resources here.

**Interviewer 2:** Mm-hmm.

**MC08:** And they bought us the little things, what we had [unintelligible 00:05:15] stay still.

**Interviewer 2:** When did the flood end? Ah, when did it return to normal condition in the- in the river?

**Interviewer 2:** It was like--

**Interviewer 3:** When they were able to maybe cross or something.

**MC08:** Like two days maybe.

**Interviewer 2:** Two days?

**MC08:** Yes. Yes, there.

**Interviewer:** Do you remember, um, an event, uh, the same or worse situation with the flood?

**MC08:** Counting the 19 years that we have been here- being here xx... some scares. [laughs]

**Interviewer 2:** No, it's if here in- here in this area like this something never happened--

**MC08:** Well, the river has always gotten in, but up to that point, this is, how shall I say? no danger, it's not that it got into the house-- Not the same. Not the same, yes, but nobody expected this, it was something that took everyone by surprise-

**Interviewer 2:** Mm-hmm.

**MC08:** -because we were calm. [laughs]. The only thing that didn't- didn't find them was asleep, because whenever we see those heavy rains, we come and-- Here- We were waiting. -yes, watching-watching, that's how we were that day, if we've been asleep, God save-- Yes, also—Devastation. From so much rain a-a tree fell and broke the wall and everything, no, it was something terrible. Yes, since the wall there is made of brick, it hit like that and broke everything.

**Interviewer 2:** Could it be that you allow me to take a picture of that wall? Only to say--

**MC08:** No, for la-la--

**Interviewer 2:** Was the water level here?

**MC08:** Oh okay, yes because-- Oh? I thought it was the wall.

**Interviewer 2:** No-no-no-no. [laughs]

**MC08:** Yes, it's fine.

**Interviewer 2:** It's just to say here.

**MC08:** That stick of mine from months ago, that stick was the one that fell from above, look, that stick was up, over there, it was, look, on top of the palms over there, do you remember? It came and broke the entire wall, that's why we rebuilt it-rebuild it ourselves, that-that tree, look.

**Interviewer 2:** Okay-okay. You can show them-- Was the water level below the window there, through the window?

**MC08:** Yes, there-there.

**Interviewer:** Yeah, no.

**MC08:** There-there-there.

**Interviewer 3:** No, there. OK.

**Interviewer 2:** Okay, it's the end.

**Interviewer 3:** Yeah, that was short as I told you.

**MC08:** Thank you.

**Interviewer 2:** And, well, thank you very much for your time.

**MC08:** Same-same.

**Interviewer 3:** Thank you and--

**Interviewer 2:** Have a nice day.

**Interviewer 3:** Have a good day.

**MC08:** -for the visit.

**Interviewer 2:** Bye.

# MIXED METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – SA01

1   **Date:** June 10, 2018

2   **Site:** San Antonio, Nicaragua

3   **Key:**

4         ... - Incomplete Sentence

5         xx – Not audible

6         CAPITAL WORDS – Loud sounds/words

7   **Interviewers:** Interviewer 1, Interviewer 2, Interviewer 3, Native Spanish Speaker

8   **Responder:** OS01

9   **Survey Begins**

10   **Interviewer 1:** What is your name?

11   **SA01:** [SA01]

12   **Interviewer 1:** And how old are you?

13   **SA01:** 38

14   **Interviewer 1:** And how many people live in your house? How many people live with you?

15   **SA01:** 10 [laughs]

16   **Interviewer 1:** Ah, yes. And these questions are about the storm Nate... only 5 questions. [laughs] When

17   did the rain begin?

18   **SA01:** I do not remember the day anymore [laughs], but I do remember the time, because we... the rain

19   started around 10 at night and what was the flood that spread and the river came like 1 in the morning.

20   **Interviewer 1:** And it ended?

21   **SA01:** Well, it spent the whole day raining and the river went down like.. what happened here reached

22   the steps.

23   **Interviewer 1:** Okay, but did it not reach up here?

24   **SA01:** It only broke them back there, not on the trip, that's the only way it happened.

25   **Interviewer 1:** Okay, okay, okay, okay, okay.

26   **SA01:** And it came down like around 5 in the morning which was here.

27   **Interviewer 2:** Did you start to wade?

28   **SA01:** Yes.

29 **Interviewer 1:** xxx...The highest was say, to the--?

30 **SA01:** At 1. At 1 everything was thrown away.

31 **Interviewer 2:** Already. And how long did the flood last? A day? Tell me.

32 **SA01:** It lasted a day, that is, it was strong all day. It happened that you could not go anywhere. We  
33 could not go through.

34 **Interviewer 1:** And when did the flood end? xxx. the river returned.

35 **Interviewer 2:** When was it normal?

36 **SA01:** Normal, yes. Like 3 days. Normal, normal, no... passable when 1 passed, since the current... I had  
37 access. We already had access that we could cross the river.

38 **Interviewer 1:** 3 days.

39 **SA01:** 3 days.

40 **Interviewer 1:** Alright. And do you remember a situation similar to the flood?

41 **SA01:** Never, during... never. No, nor... it had never happened when we lived here.

42 **Interviewer 1:** Thank you very much. And do you know another person we can speak to?

43 **SA01:** The neighbor here, she also went ...but... that is, because we all live the same here but she lost  
44 everything, she lost the house, everything. Here were four lost houses, that girl, the one she had there,  
45 me, the neighbor here, that was a house. There where a house where that well is. That was broken  
46 because the river passed like that. So, there where those mangos are, there was a house, there was  
47 another, and more there, they went like this in a line, like this, crossed, there was another. Then, it took  
48 the four of them like this because the river passed like that. The four houses were destroyed. Nothing  
49 was left, nothing, nothing, but nothing. Only the man there was left with what you can see there. It  
50 stayed just as it is and if it was the other one it didn't stay, there was nothing left, but nothing, nothing,  
51 nothing. It took everything.

52 **Interviewer 1:** Wow.

53 **SA01:** And it had never been seen, it passed here and water passed, but it was dead water when... a  
54 little, just here we got wet, but it had never happened this.

55 **Interviewer 2:** It was brutal.

56 **SA01:** Yes.

57 **Interviewer 2:** Okay, I think that it is all our questions. Thank you.

58 **SA01:** At your service.

59 **Interviewer 1:** Thank you very much for the time.



# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – SA02

- 1 **Date:** June 10, 2018
- 2 **Site:** San Antonio, Rivas, Nicaragua
- 3 **Clave:**
- 4       ... - Incomplete Sentence
- 5       xx – Not audible
- 6       CAPITAL WORDS – Loud sounds/words
- 7 **Interviewers:** Interviewer 1, Interviewer 2, Interviewer 3, Native Spanish Speaker
- 8 **Responder:** SA02
- 9 **Survey Begins**
- 10 **Interviewer 1:** .... Oh... What's your name?
- 11 **SA02:** [SA02]
- 12 **Interviewer 1:** How old are you?
- 13 **SA02:** 27
- 14 **Interviewer 1:** And how many people live in your house?
- 15 **SA02:** 7. 5... 5 adults and 2 children.
- 16 **Interviewer 1:** And these questions about Storm Nate. Um... When did the rain start?
- 17 **SA02:** When did the storm start?
- 18 **Interviewer 1:** For example, uhm... the date or time that you remember?
- 19 **SA02:** I remember the flood... no... xxx. On 3 of October raining.... October. I saw the impact. On the 5<sup>th</sup>
- 20 day. Friday, October 9th, they were...
- 21 **Interviewer 1:** And... How high was the flood?
- 22 **SA02:** It was quite high because the water got here. Yes, there was plenty of water. Imagine how many
- 23 year dad has never seen that and he is 52 years old, and he had never said that about the river that
- 24 went through the houses and it came straight on the street. There was lots of talk.
- 25 **Interviewer 1:** And how long did the flood last? ...
- 26 **Interviewer 2:** How much?
- 27 **SA02:** Yes, I saw almost all night, there was rain most of the night. It did not stop. Yes, and the river so
- 28 that it could go down to be a little bit, it spent all day to be able to go down a little bit.
- 29 **Interviewer 1:** And how long until the flood ended? It come back to the..

30 **SA02:** Was it normal?

31 **Interviewer 1:** Normal, yes.

32 **SA02:** Like four days. Yes.

33 **Interviewer 1:** And do you remember another similar situation to the flood that happened?

34 **SA02:** No. I'm not telling you that in my dad's 40 or 52 years I had never seen anything like it. It was  
35 alarming what happened. Remember another similar situation... like the one that happened.

36 **Interviewer 1:** That's all.

37 **Interviewer 2:** Are there other things that uhm, that you think we should know about the flood or rain  
38 that you did not give us, we ask?

39 **SA02:** No. He thinks that three houses that women had were damaged, because they have small  
40 children, they took everything and their son, the fruit from us, because we went out and went to help  
41 and there was nothing from the house. The other house was left over there and there was nothing  
42 anymore. Nor was I given things to do here on the street. Pasty clothes, rehash. It is that people, even  
43 now, when it is already shining and there is rain, they are already afraid, with that fear that they think it  
44 will happen again then, since. Who knows?

45 **Interviewer 2:** Thank you very much for... for your time. As grace deserves.

46 **SA02:** Thank you very much.

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – SA03

- 1 **Date:** June 10, 2018
- 2 **Site:** San Antonio, Rivas, Nicaragua
- 3 **Key:**
- 4 ... - Incomplete sentence
- 5 xx – Not audible
- 6 CAPITAL WORDS – Loud sounds/words
- 7 **Interviewers:** Interviewer 1, Interviewer 2, **Interviewer 3, Native Spanish Speaker**
- 8 **Respondent:** SA03
- 9 **Survey Begins**
- 10 **SA03:** ...the river.
- 11 **Interviewer 3:** Yes
- 12 **SA03:** Yes, the flood was great. Then it was emptied for the house. At least it left me homeless for doing
- 13 it, or I don't have my wife and three children. One fourteen and another eight and one four, little boy
- 14 four.
- 15 **Interviewer 3:** So, there are four people in your house.
- 16 **SA03:** Two adults and the three children.
- 17 **Interviewer 3:** Ok. Ok.
- 18 **Native Spanish Speaker:** 5. Children – 3 - 3 children.
- 19 **Interviewer 3:** Okay perfect, thank you.
- 20 **SA03:** Well, trying to get us out of there because I'm putting in a house that was left there to one side.
- 21 Then there will be a single house and it is not mine. There they hosted me in my struggle. It is wanting to
- 22 make a ranch to help me cross with my family. And can no longer do it there and look for how to do it
- 23 elsewhere, because I have a little bit... But that was too big. The flood hurt many people...
- 24 **Interviewer 3:** Yes Yes Yes. And do you remember when uhm when the rain started?
- 25 **SA03:** When it started? Well, the rain started with part of the day and all night. The big crescent that
- 26 managed to come was already like 12 and half past 1 in the morning. When it emptied on the houses.
- 27 **Interviewer 3:** And do you know the date too?
- 28 **SA03:** October 5.
- 29 **Interviewer 3:** And do you remember when the rain ended?

30 **SA03:** Yes, I was already searching, the rain stopped looking for 3 or 4 in the morning. The water has  
31 already started and take refuge to leave the houses.

32 **Interviewer 3:** How high was the flood?

33 **SA03:** Well, the truth is that there has been a large growth, but that one never seen before. That river,  
34 at least at that height, rose because the one on the road passed over the road. Here it came out, it was  
35 emptied to the top and you could already see things going by.

36 **Interviewer 3:** But not here to the house of the house.

37 **SA03:** In the house, no. Yes, there it is, looking for the gate. There are the rules, the rules ruled. It was  
38 already there. And since there was so much water then quite a lot of rain. If water, then from so much  
39 rain... Then the bath water came in.

40 **Interviewer 3:** And um... how long did the flood last?

41 **SA03:** Well, like it was going down for about 2 days.. or 2 days. It lasted. What is the highest from here  
42 to be able to spend 2 or 3 days almost to pass to another side.

43 **Interviewer 3:** And when did the flood end? When did it not pass to better conditions?

44 **SA03:** It is not known, since it will be 3... 4 days. The river was almost normal.

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – SA04

- 1 **Date:** June, 10 2018
- 2 **Site:** San Antonio, Rivas, Nicaragua
- 3 **Key:**
- 4       ... - Incomplete sentence
- 5       xx – Not audible
- 6       CAPITAL WORDS – Loud sounds/words
- 7 **Interviewers:** Interviewer 1, Interviewer 2, Interviewer 3, Native Spanish Speaker
- 8 **Respondent:** SA04
- 9 **Survey Begins**
- 10 *Field notes: His house (on the riverbank) was destroyed. He lost his home, and the water entered his*
- 11 *yard.*
- 12 **Interviewer 1:** What is your name?
- 13 **SA04:** [SA04]
- 14 **Interviewer 1:** How old are you?
- 15 **SA04:** 59
- 16 **Interviewer 1:** How many people live in your house?
- 17 **SA04:** 1
- 18 **Interviewer 1:** Questions about Storm Nate. before the flood, when did the rain start? (approximate
- 19 date)
- 20 **SA04:** October 5
- 21 **Interviewer 1:** How high was the flood?
- 22 **SA04:** 2 or 3 meters
- 23 **Interviewer 1:** How long did the flood last?
- 24 **SA04:** 3 days and came all night
- 25 **Interviewer 1:** Do you remember the time the river returned to normal?
- 26 **SA04:** No
- 27 **Interviewer 1:** Do you remember a situation equal to the flood?
- 28 **SA04:** No, never in his life

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – SA05

1   **Date:** June, 10 2018

2   **Site:** San Antonio, Rivas, Nicaragua

3   **Key:**

4         ... - Incomplete sentence

5         xx – Not audible

6         CAPITAL WORDS – Loud sounds/words

7   **Interviewers:** Interviewer 1, Interviewer 2, **Interviewer 3**, Native Spanish Speaker

8   **Respondent:** SA05 (Phone video)

9   **Survey Begins**

10   **Interviewer 1:** My name is [Interviewer 1].

11   **SA05:** [Interviewer 1].

12   **Native Spanish Speaker:** And I am [Native Spanish Speaker].

13   **Interviewer 3:** Uhm... What's your name... I'm sorry... what's your name.

14   **SA05:** [SA05]

15   **Native Spanish Speaker:** [SA05].

16   **Interviewer 3:** [SA05]. And how old are you?

17   **SA05:** 24.

18   **Interviewer 3:** And how many people live in your house?

19   **SA05:** 5.

20   **Interviewer 3:** 5 people. And these questions are about uh the storm Nate. When did the rain start?

21   **Interviewer 1:** Remember?

22   **SA05:** It's... two days. Like the three. The third of October. And it is from when it increased what did I say

23   to October 5th.

24   **Interviewer 3:** Uh huh.

25   **SA05:** What do I say the little house. It is the house for the children...xx.

26   **Interviewer 3:** Ah okay.

27   **SA05:** ...xxx Across six other houses.

28   **Native Spanish Speaker:** So what? why? It's in the past I heard it was normal so why so much that year?

29 **SA05:** Yes. This house here because it was already devastated it was flooded ...xxx it is funny to me I  
30 already lost another here ..xx...

31 **Native Spanish Speaker:** That is a lot of work.

32 **SA05:** Yes. I only work here.

33 **Native Spanish Speaker:** Yes but ...xxx.. There was a lot of sand that was too full in the house.

34 **Interviewer 1:** Oh my gosh.

35 **SA05:** Yes. And we came out to this.

36 **Native Spanish Speaker:** Yes. And that is the problem at night.

37 **SA05:** At night, yes like 1 or 12.

38 **Interviewer 3:** Do you remember when the rain finished?

39 **SA05:** Yes, yes, two in the morning.

40 **Interviewer 3:** How high was the flood?

41 **SA05:** It was up to here. Four meters...xxx...si..

42 **Interviewer 1:** Oh my God. Oh my God.

43 **SA05:** ...xxx...

44 **Interviewer 3:** When did the uh flood last? When did the flood last?

45 **SA05:** Several days.

46 **Interviewer 3:** When did the flood end? When did conditions return?

47 **SA05:** When the river...

48 **Native Spanish Speaker:** When did the river get below the banks?

49 **SA05:** Four days.

50 **Interviewer 3:** Is there something else you want us to know?

51 **SA05:** ...xxx...We are scared every time it rains here...xxx.

52 **Interviewer 3:** Thank you very much.

53 **Interviewer 1:** Thank you. Very kind.

54 **SA05:** Aright. Have a good day.

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – SA06

- 1   **Date:** June 10, 2018
- 2   **Site:** San Antonio, Rivas, Nicaragua
- 3   **Key:**
- 4         ... - Incomplete Sentence
- 5         xx – Not audible
- 6         CAPITAL WORDS – Loud sounds/words
- 7   **Interviewers:** Interviewer 1, Interviewer 2, **Interviewer 3**, Native Spanish Speaker
- 8   **Responder:** SA06
- 9   **Survey Begins** Notes
- 10   **Interviewer 3:** What is it called?
- 11   **SA06:** [SA06]
- 12   **Interviewer 3:** How old are you?
- 13   **SA06:** 35
- 14   **Interviewer 3:** How many people live in your house?
- 15   **SA06:** 4 people
- 16   **Interviewer 3:** When did the rain start?
- 17   **SA06:** 5 in the afternoon. It rained all night.
- 18   **Interviewer 3:** How long did the flood last?
- 19   **SA06:** 2-3 days
- 20   **Interviewer 3:** How high is the flood?
- 21   **SA06:** 2 meters
- 22   **Interviewer 3:** Do you remember a situation similar to the flood?
- 23   **SA06:** No, nothing. Trieste... I lost everything. The people were sick. Floods in the past, but not that bad.



# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – SA07

- 1   **Date:** June 10, 2018
- 2   **Site:** San Antonio, Rivas, Nicaragua
- 3   **Key:**
- 4         ... - Incomplete Sentence
- 5         xx – Not audible
- 6         CAPITAL WORDS – Loud sounds/words
- 7   **Interviewers:** Interviewer 1, Interviewer 2, Interviewer 3, Native Spanish Speaker
- 8   **Responder:** SA07
- 9   **Survey Begins**
- 10   **SA07:** Already... It didn't directly retreat here. But it already grabbed water. It already walked through  
11   the other alley. There I pass another alley to the old river.
- 12   **Interviewer 1:** Uh huh.
- 13   **SA07:** Yes, the day before, although they did. And there I walked, oh, there it was thrown and the next  
14   normal day, here it was thrown on both sides because we can't stand being surrounded on both sides or  
15   on both sides. And it already broke. If when the storm made here it got in from two sides. Here, we save  
16   it. Of course, the...
- 17   **Interviewer 2:** Yes, she has these questions...
- 18   **Interviewer 1:** Yes. Little ah questions. What is your name?
- 19   **SA07:** [SA07].
- 20   **Interviewer 1:** And how old are you?
- 21   **SA07:** 52. Something yes.
- 22   **Interviewer 1:** And how many people live in your house?
- 23   **SA07:** uh... Well, three live here. When they are on vacation, the little ones come to visit me too.
- 24   **Interviewer 1:** And these questions are about the storm Nate. When did the rain start...
- 25   **SA07:** Alright...
- 26   **Interviewer 1:** ... from the storm?
- 27   **SA07:** I told her when it started. He says that I don't do very well. I don't remember it, it's fair because I  
28   remember the scare because I scared until... xx...what it can be to be a woman... And at six in the  
29   evening. So when the rain started, the storm didn't start. And that he didn't handle it very well.
- 30   **Interviewer 1:** How long did the flood last?

31 **SA07:** Like a month.

32 **Interviewer 1:** And when... or conditional returns to normal?

33 **SA07:** Normal?

34 **Interviewer 1:** Uh huh.

35 **SA07:** It's been about like... later, about a month. It was already when the people put a cloth that was  
36 impassable in Volcaban, all the children had fallen into the water. Then it would come in, but there  
37 already, like after a month, it already normalized.

38 **Interviewer 1:** And do you remember a similar situation with the flood? Or not?

39 **SA07:** Yes, I remember. No, I do not remember. What I do remember If I don't remember very clear. And  
40 he lists that we were going through and they had to take us out. But I think that they are a great disaster  
41 of nature, I have many classes that are very sweet.

42 **Interviewer 1:** Thank you very much.

43 **Interviewer 2:** Yes, very kind.

44 **SA07:** Although it is the fault line, because the ravine will be provisional while things happen and we run  
45 into everything yes...

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – SA08

1   **Date:** June 10, 2018

2   **Site:** San Antonio, Rivas, Nicaragua

3   **Key:**

4         ... - Incomplete Sentence

5         xx – Not audible

6         CAPITAL WORDS – Loud sounds/words

7   **Interviewers:** Interviewer 1, Interviewer 2, Interviewer 3, Native Spanish Speaker

8   **Responder:** SA08

9   **Survey Begins**

10   **Interviewer 1:** One more time please? What is your name?

11   **SA08:** [SA08]

12   **Interviewer 1:** How old are you?

13   **SA08:** 70.

14   **Interviewer 1:** Oh. And... ah... how many people live here?

15   **SA08:** Seven of us.

16   **Interviewer 1:** Ah yes, many. And these questions are about Storm Nate last summer. Oh.. uh.. in

17   October. When did it start to rain?

18   **SA08:** It began at 6 in the afternoon.

19   **Interviewer 1:** And the date?

20   **SA08:** October 5th.

21   **Interviewer 2:** October 5.

22   **SA08:** Yes.

23   **Interviewer 1:** And how high was the flood in the river?

24   **SA08:** The flood started at nine o'clock at night.

25   **Interviewer 1:** And how long did it last?

26   **SA08:** Until twelve at night. Yes, what the rain falls. But let's say, the river stayed three days that we

27   were there.

28   **Interviewer 3:** How was it?

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – SA08

29 **SA08:** My father always called me to be just for...

30 **Interviewer 3:** Phone.

31 **SA08:** Telephone. That that was what it is time for these to say, but we did not have access to anything.

32 **Interviewer 1:** Uh huh. For three days?

33 **SA08:** Yes, three days. the strong crest grew from the river. Do you understand?

34 **Interviewer 1:** Uh huh.

35 **SA08:** But then the rain continued, like normal, but it didn't last long, from six in the afternoon it stayed  
36 wet until twelve at night and it dried up got better when the speed of things, but the river that is three  
37 days that did not leave us. Circular...

38 **Interviewer 1:** And when did the flood end? To return to normal the conditionals.

39 **SA08:** When did it finish?

40 **Interviewer 1:** Uh huh.

41 **SA08:** When did the flood end.

42 **Interviewer 1:** Ah... when will conditions return to normal in the river?

43 **SA08:** Return after three days. Already...

44 **Interviewer 1:** Below.

45 **SA08:** If we had, it had happened. Talk to us a.. normal the normal. Do you understand? We dealt with it  
46 for three days. It began to see another... xxx... So it was our concern, we didn't have access, to go see  
47 how it was doing...for three days xxx. the day after the river, he expressed that it flies up. Swimming  
48 past.

49 **Interviewer 1:** And do you remember a similar situation with the flood? Or not? A similar flood  
50 situation. Uhm... past... for example Mitch or Juana or... A storm...

51 **SA08:** Yes. A storm was strong. The storm was strong.

52 **Interviewer 3:** Stronger than Mitch? Stronger than Juana?

53 **SA08:** Yes, yes, I think so. If we talk about previous years, about the flood from before. In the history of  
54 this sector here, there had not been anything like today. Do you understand?

55 **Interviewer 1:** Uh huh.

56 **SA08:** Because it was not next to Hurricane Mitch, Hurricane Juana and all that, not not even close...  
57 Well, we can talk, we can talk to you or talk about a normal level. Do you understand? But it was in this  
58 one.

59 **Native Spanish Speaker:** Crazy.

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – SA08

60 **SA08:** Too much. Well yes, in this period last year. But to those behind, as I say, it was not a thing for  
61 aids. Everyone was the same as the natives here. It has done so. Ask that it is a time of attraction that  
62 never in the life that there has been up to now in history. They can be like a story. You know that with  
63 nature no one always dominates it perfectly. We always have the floor since what seems to be done in  
64 another way is done.

65 **Interviewer 1:** It's all the questions. Good. Thank you so much.

66 **SA08:** Yes we are in order. [laughs]

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – SA09

- 1   **Date:** June 10, 2018
- 2   **Site:** San Antonio, Rivas, Nicaragua
- 3   **Key:**
- 4         ... - Incomplete Sentence
- 5         xx – Not audible
- 6         CAPITAL WORDS – Loud sounds/words
- 7   **Interviewers:** Interviewer 1, Interviewer 2, **Interviewer 3**, Native Spanish Speaker
- 8   **Responder:** SA09
- 9   **Survey Begins**
- 10   **Interviewer 3:** xxx... Is there one more. Please, your name?
- 11   **SA09:** [SA09]
- 12   **Interviewer 3:** And how old are you?
- 13   **SA09:** 33.
- 14   **Interviewer 3:** Oh and... how many people live in your house?
- 15   **SA09:** We are... three... four... seven.
- 16   **Interviewer 3:** Seven. And these questions are about the storm. Ah... when did the rain start?
- 17   **SA09:** The rain started three days before the storm. Three days before.
- 18   **Interviewer 32:** And... how do you remember the date?
- 19   **SA09:** No... he says that I'm not cold that my dad remembers because he's the one with the mind, but I
- 20   don't remember myself very well.
- 21   **Interviewer 3:** Okay.
- 22   **SA09:** Yes.
- 23   **Interviewer 3:** And when did the rain stop?
- 24   **SA9:** The rain passed three days to three days. The fourth day that there was the storm.
- 25   **Interviewer 3:** October 4? Yeah?
- 26   **SA09:** Yes. October 4 was a storm. Yeah.
- 27   **Interviewer 3:** And, oh, how high was the flood?

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – SA09

28 **Interviewer 3:** Well, we stayed on the street. It took a lot of all... xxx... the houses that were there. My  
29 house was taken away by...

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – SA10

**Date:** December 12, 2018

**Site:** San Antonio, Rivas, Nicaragua

**Key:**

... - Incomplete Sentence

xx – Not audible

CAPITAL WORDS – Loud sounds/words

**Interviewers:** Interviewer 1, Interviewer 2, Interviewer 3, Native Spanish Speaker

**Responder:** SA10

#### Survey Begins

**Interviewer 3:** Yes, well. Yes?... Maybe yes....xxx...

**Interviewer 1:** Just... just eight questions. Ah.. k. What is your name?

**SA10:** [SA10]

**Interviewer 1:** How old are you?

**SA10:** 37.

**Interviewer 1:** How many people live in your house?

**SA10:** 5.

**Interviewer 1:** Five. Thank you. These questions are about Storm Nate.

**SA10:** Yes.

**Interviewer:** Before the flood, when did the rain start? Before the Flood. Do you remember the approximate date?

**SA10:** It's just that it starts to rain a bit and then it starts to rain again. But if it started before everything is nothing. It started to rain around nine o'clock at night. In the morning.

**Interviewer 1:** But... does the next date remind you?

**SA10:** The rain was in October. If the month reminds me. Well, not exactly, no, what they remember is that... yes, in October the entire month of October was practically raining. The rainiest month.

**Interviewer 1:** And uhm... how high was the flood?

**Interviewer 3:** How high was the flooding where it was going here?

**SA10:** At what height, a little higher than the railings.



# **MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS**

## **TRANSCRIPT**

### **HOUSEHOLD SURVEY – SA10**

**Interviewer 1:** Is it about two meters, or not?

**SA10:** If you approach about two meters take... xxx.... Here at home, a little higher than the railings, about two meters....

**Interviewer 1:** How long did the flood last?

**SA10:** It was like midnight. And already in the morning it was already normal there.

**Interviewer 1:** Oh yes. And does it remind you next time to return to the river?

**SA10:** Ah... yes. Like six in the morning. Yeah.

**Interviewer 1:** And uhm... do you remember a similar situation of the flood?

**Interviewer 3:** Another flood, remember if... xxx.

**SA10:** Because normally when there has been a flood, on another occasion up there or in dead water here in the patio I had never gone up to.

**Interviewer 1:** It's all questions. Thank you so much.

**Interviewer 3:** Thank you very much.

**Interviewer 2:** Yes, thank you very much for everyone.

**SA10:** Yes.

**Interviewer 1:** Thank you.

**SA10:** Nice to meet you.

**Interviewer 1:** And... a... do you know another person we spoke to?

**SA10:** Good There is another side of the river. There is a....

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – SA11

- 1 **Date:** December 12, 2018
- 2 **Site:** San Antonio, Rivas, Nicaragua
- 3 **Key:**
- 4       ... - Incomplete Sentence
- 5       xx – Not audible
- 6       CAPITAL WORDS – Loud sounds/words
- 7 **Interviewers:** Interviewer 1, Interviewer 2, Interviewer 3, Native Spanish Speaker
- 8 **Responder:** SA11
- 9 **Survey Begins**
- 10 **Interviewer 3:** Good. The first question is what is your name?
- 11 **SA11:** My name [SA11].
- 12 **Interviewer 3:** [SA11]. How old are you?
- 13 **SA11:** 17.
- 14 **Interviewer 3:** How many people live in your house?
- 15 **SA11:** 3.
- 16 **Interviewer 3:** 3.
- 17 **Interviewer 1:** Uh huh.
- 18 **Interviewer 3:** And now the questions I'm going to ask you are about the storm Nate.
- 19 **SA11:** Uh huh.
- 20 **Interviewer 3:** When did the..., did the storm rain start? When do we remember that it started to rain?
- 21 **SA11:** The day the storm came it started to rain early. It rains, it rained all day, but the river was normal.
- 22 But at night it was strange because the electric power went out and it was affected because the river
- 23 was already flowing normally. And electrical energy, no, I don't know. Then later it started to get dark
- 24 very early and it started to rain very hard and it started to rain I kept thinking that it started to rain and
- 25 at twelve o'clock at night and the river began to spend time in the street.
- 26 **Interviewer 1:** [to interviewer 3] You don't have to ask the same question if they already answered. Ask
- 27 them what date.
- 28 **Interviewer 3:** Do you remember exactly the day that everything happened?
- 29 **SA11:** I don't know what I remember, only from November.

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – SA11

- 30 **Interviewer 3:** November.
- 31 **SA11:** But I don't remember.
- 32 **Interviewer 3:** [To Interviewer 1] It's not the correct date.
- 33 **Interviewer 1:** [To Interviewer 3] It's okay that's what I want.
- 34 **Interviewer 3:** Okay [laughs]. Um, and well, when did it end? When do you remember that the water  
35 began to leave?
- 36 **SA11:** Yes, the next day.
- 37 **Interviewer 3:** The next day.
- 38 **SA11:** Well to the crossing, to the crossing, it could not be crossed to the other side. Of course, the next  
39 one it stopped raining.
- 40 **Interviewer 3:** And the last question.
- 41 **Interviewer 1:** Do you remember a similar situation with the situation in, for example, Mitch or Juana...  
42 or....
- 43 **Interviewer 3:** Do you remember another event equal to or worse than Storm Nate?
- 44 **SA11:** No. No, I don't think so.
- 45 **Interviewer 3:** Right?
- 46 **Interviewer 1:** Can we talk to your father?
- 47 **SA11:** No, no he's working.
- 48 **Interviewer 1:** Okay.
- 49 **Interviewer 3:** Thank you very much for your time.
- 50 **SA11:** Thank you, have a great time.
- 51 **Interviewer 3:** Thank you.

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – SA12

**Date:** December 12, 2018

**Site:** San Antonio, Rivas, Nicaragua

**Key:**

... - Incomplete phrase

xx – Not audible

CAPITAL WORDA– Loud sounds/words

**Interviewers:** **Interviewer 1**, Interviewer 2, **Interviewer 3**, Native Spanish Speaker

**Respondent:** SA12

**Survey Begins:**

**Interviewer 1:** What is your name?

**SA12:** [SA12].

**Interviewer 1:** Excuse me?

**SA12:** [SA12].

**Interviewer 1:** How old are you?

**SA12:** 30.

**Interviewer 1:** How many people live in your house?

**SA12:** Well, we are four children and four adults.

**Interviewer 1:** And now these questions about the storm Nate. Ah when ah the rain started uhm before the flood?

**SA12:** Ah last year it had started to xx...

**Interviewer 1:** When did it start to rain before it happened?

**SA12:** I think... in October.

**Interviewer 1:** Do you remember... the day?

**SA12:** I think...in October... That night was a Thursday and Wednesday... xxx...

**Interviewer 1:** Ah okay. And... what month?

**SA12:** In October, a Thursday in the morning to dawn last year.

**Interviewer 2:** And ah... how high was the flood?

**SA12:** There was rain in the morning.

# **MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS**

## **TRANSCRIPT**

### **HOUSEHOLD SURVEY – SA12**

**Interviewer 3:** Uhm No. How high up where did you get to the river?

**SA12:** Oh. We couldn't go out ... Rivas.... xx... high up the rain. The the the..

**Interviewer 3:** And the level of the river, how far did it go?

**SA12:** Well, in as much as in others we went out, because the rain did not reach so high.

The recent one, well... it didn't affect it that much in many cases. Well, we don't say... because it entered the kitchen.

**Interviewer 3:** Yes.

**SA12:** The other time it entered the kitchen.

**Interviewer 3:** [Measures height] More or less than the kitchen table?

**SA12:** Down, like down to the girl's house.

**Interviewer 3:** Here?

**SA12:** Uh huh.

**Interviewer 3:** Okay.

**SA12:** And there we remarked. xxx... underwater... xxx. when so a with...

**Interviewer 2:** [Measures with tape measure] One foot.

**Interviewer 2:** And oh, how long did the flood last? um...

**Interviewer 1:** How long did the flood last?

**SA12:** Ok. It was from one day...

**Interviewer 1:** One day?

**SA12:** Si. One day.

**Interviewer 2:** When did conditions return to normal in the river?

**SA12:** Well, it passed by the way here.

**Interviewer 3:** But is it that when the water already descended, did it return to normal?

**Interviewer 2:** Do you remember the time the river returned to normal?

**SA12:** The next day.

**Interviewer 3:** One day? Okay.

**SA12:** Yes, one day. About 6 or 7.

**Interviewer 2:** In the morning?

# **MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS**

## **TRANSCRIPT**

### **HOUSEHOLD SURVEY – SA12**

**SA12:** Yes, in the morning.

**Interviewer 1:** Ok. And you recreated a similar situation with the flood?

**SA12:** Oh, we ran out and left.

**Interviewer 3:** If you remember any other event that is of equal or greater magnitude? That is more dangerous, that is not?

**SA12:** No, just that one time.

**Interviewer 3:** Only the storm Nate.

**Interviewer 2:** Ok.

**Interviewer 2:** It's all the questions. Thank you very much for the time.

**Interviewer 1:** I know that in the end it will be that we can take just one photo to say well, is the water level up to here?

**SA12:** Yes.

**Interviewer:** Yes?

**Interviewer 2:** I don't want to know your... [foreign]...anything, he's so nice, too kind. [laughs].

**Interviewer:** Thank you.

**Interviewer 2:** Thank you very much for your time.

**SA12:** Don't worry, it's a pleasure.

**Interviewer 2:** I have a good day.

**SA12:** Thanks.

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – SA13

- 1 **Date:** December 12, 2018
- 2 **Site:** San Antonio, Rivas, Nicaragua
- 3 **Key:**
- 4       ... - Incomplete phrase
- 5       xx – Not audible
- 6       CAPITAL WORDA– Loud sounds/words
- 7 **Interviewers:** Interviewer 1, Interviewer 2, Interviewer 3, Native Spanish Speaker
- 8 **Respondent:** SA13
- 9 **Survey Begins:**
- 10 **Interviewer 3:** We have permission to enter. Uum...
- 11 **SA13:** I am [SA13].
- 12 **Interviewer 1:** Nice to meet you, my name is Shannon. And oh I'm a college student from Denver and I
- 13 have questions for a about Storm Nate from last year. remember you? And um it's questions uhm it's
- 14 part of my investigation you storm Nate. And I have only eight questions. There aren't many questions
- 15 to uh to conduct interviews.
- 16 **Native Spanish Speaker:** xxx...
- 17 **Interviewer 1:** It's just for my research.
- 18 **SA13:** Yes.
- 19 **Native Spanish Speaker:** She... xxx.
- 20 *Obtained verbal consent to record.*
- 21 **Interviewer 1:** Thank you very much. Um. How old are you?
- 22 **SA13:** 37.
- 23 **Interviewer 1:** And how many people live in your room?
- 24 **SA13:** 4.
- 25 **Interviewer 1:** And um, these questions about Storm Nate. Uhm, when did the rain start before the
- 26 flood?
- 27 **Interviewer 3:** When did it start to rain, before the flood occurred?
- 28 **SA13:** I don't remember...
- 29 **Interviewer 1:** The next date.

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – SA13

- 30 **SA13:** xxx..October 4, a Wednesday... It left on October 4.
- 31 **Interviewer 3:** A question that was only repeated to me by her companion.
- 32 **SA13:** [SA14].
- 33 **Interviewer 1:** And um, how high was the flood?
- 34 **SA13:** Well, level of mud that reached fifteen or twelve. The muddy water. So in five or six. The level was  
35 12 12 inches 12 inches.
- 36 **Interviewer 1:** Uh um.
- 37 **SA13:** Yes.
- 38 **Interviewer 1:** And uh, how long did the flood last?
- 39 **SA13:** Well, when everything happened. We last five days. That is, cleaning, everything was flooded, but  
40 the flood is to go it was a whole night and a day.
- 41 **Interviewer 3:** One day.
- 42 **SA13:** Yes... One day the cleaning process took a week.
- 43 **Interviewer 1:** And how much returned to normal conditions?
- 44 **Interviewer 3:** And how much have you called conditions for a week?
- 45 **SA13:** Say..
- 46 **Interviewer 1:** Do you remember the time the river returned to normal?
- 47 **SA13:** Two to three days. It took me closer... about two... two or three days.
- 48 **Interviewer 1:** Three days?
- 49 **SA13:** Yes, about three days. But not totally normal there was always something something something  
50 something like in San Antonio. And that it went down because the river was not like that. The river was  
51 deep. There was a wall today. It quelled this level. Yeah. It was not like that.
- 52 **Interviewer 1:** Do you remember a similar situation in the past?
- 53 **Interviewer 3:** Has a similar situation to the storm Nate happened?
- 54 **SA13:** Never, never. According to the men, In San Antonio. Never before was something, something  
55 never stopped.
- 56 **Interviewer 1:** Just.. uh all the questions, thank you very much.
- 57 **Interviewer 3:** Thank you very much.
- 58 **Interviewer 1:** Yes, thank you very much for your time.



# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – SA14

- 1    **Date:** December 12, 2018
- 2    **Site:** San Antonio, Rivas, Nicaragua
- 3    **Key:**
- 4            ... - Incomplete phrase
- 5            xx – Not audible
- 6            CAPITAL WORDA– Loud sounds/words
- 7    **Interviewers:** Interviewer 1, Interviewer 2, **Interviewer 3**, Native Spanish Speaker
- 8    **Respondent:** SA14
- 9    **Survey Begins:**
- 10   **Interviewer 1:** Hello
- 11   **SA14:** Hello...
- 12   **Interviewer 3:** Ok thanks.
- 13   **Interviewer 1:** Because... and this is Andrea. And ah I am a student at the University of Denver in the
- 14   United States. And ahm I conducted an ah an investigation into storm Nate last year.
- 15   **Interviewer 3:** Yes... Information about it. Yes, she's doing research and raising funds...xxx. Last year.
- 16   **SA14:** Uh huh. Something they want to know about the storm.
- 17   **Interviewer 1:** I only have eight questions about Storm Nate and the flood. And...
- 18   **Interviewer 3:** If she asks what is being seen that they can ask it, another question is fine like this, with
- 19   better arguments? Thank you so much.
- 20   **Interviewer 1:** It is only five minutes. Thank you so much. What is your name?
- 21   **SA14:** [SA14]
- 22   **Interviewer 1:** And how old are you?
- 23   **SA14:** 45.
- 24   **Interviewer 1:** And how many people live in your house?
- 25   **SA14:** 3.
- 26   **Interviewer 1:** Oh and these questions are about the Storm Nate. Ah, when did the rain start before the
- 27   flood?
- 28   **Interviewer 3:** Do you remember?

# MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS

## TRANSCRIPT

### HOUSEHOLD SURVEY – SA14

- 29 **SA14:** I had three days.
- 30 **Interviewer 3:** Three days.
- 31 **Interviewer 1:** And.. uhm you don't remember the day it started?
- 32 **SA14:** It started because the storm was in... October. So say...it started like xxx...October. It started like  
33 let's say the rain...
- 34 **Interviewer 3:** 30.
- 35 **SA14:** Rain... 30, 31, 1, 2, 3. On 30, 31 and 1. But it didn't rain here, as well it was raining because it was  
36 raining on the last day, October 3. Dawn 4.
- 37 **Interviewer 1:** How high was the flood?
- 38 **SA14:** How tall.
- 39 **Interviewer 1:** How tall.
- 40 **Interviewer 3:** How high.
- 41 **SA14:** We can say about four meters high or that I had at home.
- 42 **Interviewer 1:** Ahh.
- 43 **SA14:** Yes. My little house in the slew of ravine there. I think they went past the young guy who was  
44 there.
- 45 **Interviewer 1:** Ahh.
- 46 **SA14:** He is my son. And then the entire railing was covered because the river got to me. So...
- 47 **Interviewer 1:** When is the in... when it returned to normal conditions in the river. When ahm... the  
48 water returned...
- 49 **Interviewer 3:** When did the river return to normal?
- 50 **SA14:** Ah.. more or less normal, eh, let's say 4 days. Normal, and people could take four days.
- 51 **Interviewer 1:** And uh, how long... was the flood? You remember?
- 52 **SA14:** It started at twelve o'clock at night. The night... and more or less at six in the morning.
- 53 **Interviewer 1:** Do you remember a situation similar to the flood?
- 54 **Interviewer 3:** Do you remember a similar situation from the Nate storm?
- 55 **SA14:** No. Not ever. On other occasions the river had already grown, but it had never entered the  
56 houses. On other occasions it was quite large, but they had never entered the houses, they had never  
57 made disasters like this year. This is the first time.
- 58 **Interviewer 1:** It's all the questions. Thank you so much.

# **MIXED-METHODS APPROACH TO FLOOD HYDROLOGY IN UNGAUGED CATCHMENTS**

## **TRANSCRIPT**

### **HOUSEHOLD SURVEY – SA14**

59    **SA14:** Same.

60    **Interviewer 1:** Thank you.

61    **SA14:** Almost as long as I do well.

62    **Interviewer 3:** So over there he is waiting. Yeah.

63    **SA14:** Good luck.

64    **Interviewer:** Thank you.