

new panel of households. While the combined sample generally maintains both national and Zonal representativeness of the original GHS-Panel sample, the security situation in the North East of Nigeria prevented full coverage of the Zone. Due to security concerns, rural areas of Borno state were fully excluded from the refresh sample and some inaccessible urban areas were also excluded. Security concerns also prevented interviewers from visiting some communities in other parts of the country where conflict events were occurring. Refresh EAs that could not be accessed³ were replaced with another randomly selected EA in the Zone so as not to compromise the sample size. As a result, the combined sample is representative of areas of Nigeria that were accessible during 2018/19. The sample will not reflect conditions in areas that were undergoing conflict during that period. This compromise was necessary to ensure the safety of interviewers.

Table 3.1 Shows the detailed breakdown of the Wave 4 sample across the refresh and long panel samples. The sample shown in the table is the ultimate sample of households that was successfully interviewed in both Wave 4 visits. The final sample consisted of 4,976 households of which 1,425 were from the long panel sample and 3,551 from the refresh sample. Although 159 long panel and 360 refresh EAs were selected and visited in the post-planting visit, conflict events prevented interviewers from visiting 2 rural EAs in the North West during the post-harvest visit (one EA from the long panel sample and one from the refresh). Therefore, the final number of EAs visited in both post-planting and post-harvest was 158 long panel EAs and 359 refresh EAs.

Table 3.1: Final Sample Composition

Zone		Long Panel Sample		Refresh Sample		Combined Sample	
		# of EAs	#of HH	# of EAs	#of HH	# of EAs	#of HH
<i>NORTH CENTRAL</i>							
	Urban	7	61	18	176	25	237
	Rural	19	181	42	420	61	601
	Total	26	242	60	596	86	838
<i>NORTH EAST</i>							
	Urban	3	28	10	98	13	126
	Rural	21	200	50	500	71	700
	Total	24	228	60	598	84	826
<i>NORTH WEST</i>							
	Urban	5	46	12	120	17	166
	Rural	22	211	47	470	69	681
	Total	27	257	59	590	86	847
<i>SOUTH EAST</i>							
	Urban	7	61	15	146	22	207
	Rural	19	175	45	445	64	620

³ Overall, 34 refresh EAs were inaccessible during the listing period or post-planting visit. The EAs were highly concentrated in the North East and North Central Zones where conflict (insurgency and farmer-herder attacks) were prevalent during this period.

	Total	26	236	60	591	86	827
SOUTH SOUTH							
	Urban	8	63	18	177	26	240
	Rural	18	158	42	416	60	574
	Total	26	221	60	593	86	814
SOUTH WEST							
	Urban	21	179	43	418	64	597
	Rural	8	62	17	165	25	227
	Total	29	241	60	583	89	824
TOTAL							
	Urban	51	438	116	1,135	167	1,573
	Rural	107	987	243	2,416	350	3,403
	TOTAL	158	1,425	359	3,551	517	4,976

3.1 Attrition in the Long Panel Sample

Since Wave 1, every effort has been made to track and interview households that had moved away from their original EA and keep attrition to a minimum. These efforts continued in Wave 4, particularly for the long panel sample. Households that had moved away from their previous location were interviewed in a separate tracking phase following the post-planting and post-harvest visits. Table 3.2 presents information on movement and attrition of long panel households in EAs retained for the Wave 4 sample. Of the 1,590 households interviewed in Wave 1 within these 159 EAs, 1,425 households were successfully interviewed in both visits of Wave 4. This implies an overall attrition rate since 2010 across these EAs of 10.4 percent. However, attrition is highly variable across Zones and sectors. The highest attrition was found in rural EAs in South West (22.5%) and lowest in rural EAs in North Central (4.7%). Attrition was also higher among urban (14.1%) than rural (8.6%) households. The Table further indicates the number of households that were interviewed in their original location and those that had moved and were interviewed in their new location. Overall, 152 long panel households had moved and were interviewed in their new location (over 10% of the sample). The higher number of households that had moved was in urban South West at 46 households (25.7% of the sample).

		Original Sample* (2010)	Successfully Interviewed in W4 (2019)			Attrition (%)
			Original Location	Moved (Tracked)	Total	
NORTH CENTRAL						
	Urban	70	50	11	61	12.9
	Rural	190	176	5	181	4.7
	Total	260	226	16	242	6.9
NORTH EAST						
	Urban	30	24	4	28	6.7