Final report: Kiribati DHS 2018 Work Plan for Pacific Community (SPC)

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Introduction

Under the Implementing Partner Agreement between UNFPA and SPC for creating work plans relating to the 2018-2022 UNFPA sub-regional programme for Pacific Island countries and territories, UNFPA and SPC established a work plan (GPS ID 103104; Project SRP06KIR) for activities in Kiribati and Vanuatu. This report is written to consolidate and submit all relevant outputs.

The work plan activities in Kiribati related to the updating of the listing of all households and institutions in Kiribati to produce a sex and age disaggregated[1] population count that forms the basis for a sampling frame for the upcoming Social Indicator Survey (SIS)[2] and Household Income and Expenditure Survey (HIES). It also serves the purpose of digitalising and harmonising enumeration areas (EAs) to facilitate random sampling[3] and census planning. To achieve this, SPC was engaged to conducted the following activities:

   i.   *Planning and budgeting:* prepare a comprehensive plan and budget for the household listing.
   ii. *Mapping:* prepare field maps to be used in the listing; digitalise EA boundaries and harmonisation of new EA framework; training and capacity building of the Ministry of Environment, Lands and Agricultural Development; prepare maps for the selected EAs in the SIS.
   iii. *Listing questionnaire design, enumerator training and technology:* develop a tablet-based[4] household listing questionnaire and associated training resources, and set up of technology (e.g., server, tablet interviewer application, backup protocols); support Kiribati's National Statistics Office (KI-NSO) to conduct training of enumerators in all aspects of the collection; and administer South-South[5] support to Kiribati for the duration of the listing.
   iv. *Sample design:* design the sample and field plan for the SIS; and build capacity of KI-NSO in sample design and field work planning.

These activities were implemented under UNFPA's theme of "availability, analysis and utilization of ICPD/SDG-related data".

The activities in Vanuatu related to the preparation of Vanuatu's report to the International Conference on Population and Development (ICPD) and the Asia-Pacific Ministerial Declaration on Population and Development (APPC). This activity was implemented under UNFPA's theme of "data use for policy and advocacy".

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[1] This was required to ensure that the Social Indicator Survey had a sufficiently representative sample of children and women of reproductive age.
[2] An integrated Demographic and Health Survey, and Multiple Indicator Cluster Survey.
[3] Probability proportional to size.
[4] Data were collected using computer assisted personal interview (CAPI)
[5] It is noted that the Work Plan indicated that Vanuatu would provide South-South support, however due to the unavailability of Vanuatu staff, South-South support was provided by Tuvalu's Central Statistics Division who recently conducted a CAPI Population and Housing Census.

Work plan outputs

All outputs can be downloaded via the following link: https://spccloud-my.sharepoint.com/:f:/g/personal/michaels_spc_int/Ev2FxAm6eYBNqTRZSsjHiP0BqCCgVP-Q7L7DVA5JW41H0w?e=FShRnh

For each Project/Activity ID, the following outputs were produced.

Project / Activity ID	Output	File reference
SRP06KIR / DHSPCPPLANNING	1. Project document 2. Project plan and budget	1. DHSSPCPLANNING_KIR_ProjectDocument.docx 2. DHSSPCPLANNING_KIR_ProjectPlan&Budget.xlsx
SRP06KIR / DHSPCPMAPPING	3. Listing maps 4. SIS maps 5. Capacity building	3. DHSPCPMAPPING_KIR_ListingMaps 4. DHSPCPMAPPING_KIR_SISMaps 5. DHSPCPMAPPING_KIR_AttachmentReport.docx
SRP06KIR / DHSPCPTRAINING	6. Mission report 7. Training resources 8. CAPI questionnaire 9. South-South report	6. DHSSPCTRAINING_KIR_Mission&SouthSouthReport.docx 7. DHSSPCTRAINING_KIR_Training 8. DHSSPCTRAINING_KIR_Questionnaire.pdf 9. DHSSPCTRAINING_KIR_Mission&SouthSouthReport.docx
SRP06KIR / DHSPCPSAMPLE	10. Mission report 11. SIS sample design	10. DHSSPCSAMPLE_KIR_MissionReport.docx 11. DHSSPCSAMPLE_KIR_SampleDesign.pdf
SRP06VUT / ICPDREPORT	12. ICPD/APPC report 13. ICPD/APPC charts	12. ICPDREPORT_VUT_APPCReport.docx 13. ICPDREPORT_VUT_APPCDataCharts.xlsx

Indicator reporting

The following table presents progress towards achieving the Work Plan indicators

Indicator	Baseline	Target	Achieved
Household listing training completed	No	Yes	Yes
Household listing completed	No	Yes	Yes
First narrative report submitted	No	Yes	No[6]
Database ready	No	Yes	Yes
Sample selection and mapping complete	No	Yes	Yes
Final report and financials submitted	No	Yes	Yes
Vanuatu has at least one analytical report linking population to SRH, youth and gender	No	Yes	Yes

Monitoring, evaluation and learning

The update of the listing of all households and institutions, and the resulting sex and gender disaggregated population count, was the first time KI-NSO has used tablet-based technology to collect data. The implementation of a relatively simple census questionnaire presented a great opportunity to expose KI-NSO to the use of tablet technology and associated collection monitoring aspects. This enhanced capacity will be of particular benefit for the upcoming SIS, HIES and census, which are anticipated to be CAPI. It also allowed for the testing of the use of this technology in remote islands where access to internet connectivity and electrification is limited and provided opportunity for SPC to remotely monitor interview completion and to identify whether households and/or EAs were inadvertently missed.

The remote monitoring was identified as a crucial component as a number of households across Kiribati were missed, particularly in the island of Kiritimati.

A number of lessons were drawn, including:

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[6] Aside from face-to-face and email communication with UNFPA focal point, a mid-term report was not prepared.

i.   Only one field worker should operate in an EA so as to avoid over-or-under counts and to assign responsibility to a single field worker.

ii.   Remote monitoring of interview completion is a crucial component to ensure that statistical collections are complete and comprehensive, however lack of internet connectivity in many of the remote islands of Kiribati does not allow the NSO to exploit CAPI survey management functionality. The use of satellite phones to back-up data and monitor survey completion is recommended for surveys where extended periods of time will be spent on isolated islands (i.e., in the HIES).

iii.   Communication with, and management of, teams in the Line Islands is particularly difficult from South Tarawa. A supervisor from the NSO is recommended to be located in Kiritimati during survey field operations.

iv.   Much data were collected on the cost and logistical needs for conducting surveys in Kiribati, with will feed into the improved design and budgeting of the upcoming SIS and HIES.

v.   Suitable training venues need to be identified for training of large numbers of field workers. Increased resources need to be allocated to planning and preparation for field worker training.

vi.   Field workers should be evaluated and the most reliable be retained to work as enumerators in the SIS and HIES.

vii.   More attention needs to be given to financial monitoring and management to ensure that funds are available when needed (i.e., government approval for funding drawdown is given well in advance of when the funds are required).

viii.   Kiribati has relatively low statistical capacity and a large number of data gaps and development partners and donors should coordinate themselves to ensure efficient and effective support is made available to KI-NSO to fill the data gaps.

Overall, the listing exercise was extremely successful and it achieved it's intended objectives in terms of producing the data required and building the statistical capacity of Kiribati.

Acquittal and acknowledgement

Financial acquittals have been submitted separately via Funding Authorization and Certificate of Expenditure (FACE) form.

Acknowledgement is given to the Governments of Kiribati and Australia, for their financial contribution to this project.

The National Statistics Office, Ministry of Finance and Economic Development, is acknowledged for their contribution towards the project. KI-NSO was the lead implementing agency of this challenging national statistical exercise and their hard work, along with that of the field workers, is gratefully acknowledged.

Finally, UNFPA, UNICEF and SPC are acknowledged for their financial and technical contributions and effective cooperation in partnership.

ANNEX 1: SPC and UNFPA formalise partnership and major statistical event already underway

A recently signed Implementing Partner Agreement (IPA) between the Pacific Community (SPC) and the United Nations Population Fund (UNFPA) came into effect in May, 2018. In July, 2018, a UNFPA-SPC Annual Work Plan (AWP) was signed, which is the first official activity between the two organisations under the IPA. The AWP is for activities relating to the digital update of the listing of all households and institutions in the Republic of Kiribati, in collaboration with the National Statistics Office of the Government of Kiribati (KI-NSO), which is an exciting beginning for the partnership between SPC and UNFPA in the delivery of statistical services to the Pacific region.

The recently signed IPA is an overarching governing agreement between SPC and UNFPA that guides the relationship and respective responsibility of each organisation. It forms the basis for the development of AWPs to facilitate partnering in synergistic collaborative opportunities. This is an exciting development, generously funded by the Department of Foreign Affairs and Trade (DFAT), Government of Australia, which will greatly facilitate partnership-based approaches to statistical development in the Pacific region.

The execution of the IPA and the partnership between SPC and UNFPA is in response to recommendation made by the 5th Conference of Heads of Planning and Statistics in November, 2017, which endorsed the proposal to increase coordination among development Pacific Island countries and territories (PICTs), technical development partners and donors. This recommendation was made in order to coordinate PICTs, technical assistance providers and donors to achieve the common goal of statistical development in the Pacific region.

Dr Ofa Ketuu, Director, Statistics for Development Division, SPC, says "this Agreement showcases how development partners can achieve more through partnership. SPC is supportive of taking a partnership approach toward technical support to statistics programs in the region".

The AWP between SPC and UNFPA that was signed this week is for a statistical exercise that will list all households and institutions across the 23 inhabited islands of the Republic of Kiribati. The activity – which is being lead and implemented by KI-NSO with funding support from the Government of Kiribati – will collect GPS locations and household composition (age, gender and religious affiliation) in order to digitally update the sampling frame for two upcoming national surveys and the 2020 Population and Housing Census (PHC).

The update of the household listing in Kiribati will serve to digitalise geospatial locations of households and institutions and to update administrative area boundaries to facilitate statistical collections, such as census and surveys. The listing will be done using tablets and the GPS locations will be used to allocate a three-word address (ref: what3words.com) to all households and institutions in Kiribati to facilitate disaster response, postal services and infrastructure planning and management.

2018 Kiribati Household Listing Supervisor Map

Village Name: Betio_West / Village code: 716

Figure 1: Administrative area boundaries in high population density village, Betio West, Tarawa Atoll, Kiribati

In terms of using the listing data for statistical activities, there are two planned national surveys that will occur in Kiribati in 2018 and 2019, which use the data from the updated household listing to draw the sample from.

The first is a Social Indicator Survey (SIS), which is an integrated Demographic and Health Survey (DHS) and a Multiple Indicator Cluster Survey (MICS). The SIS will occur in late-2018 and is being conducted in partnership with the Government of Kiribati, SPC, UNFPA and the United Nations Children's Fund (UNICEF). The SIS will provide a rich sociodemographic data set that will populate around one-fifth of the Pacific Sustainable Development Goal (SDG) Indicators.

The second is a Household Income and Expenditure Survey (HIES), which will occur from early-2019 through to early-2020 in collaboration with the World Bank. The HIES is a multi-sector survey with the data being used for national economic purposes, to conduct poverty analysis, to estimate the prevalence of over and under nutrition and food insecurity, and to feed socioeconomic data for the use in policy formation across multiple sectors.

Together, the SIS and HIES will populate around 40 of the 132 Pacific SDG Indicators.

The listing will also be used in order to plan the complex logistics and workload for conducting the 2020 population and housing census in 2020 across all 23 diverse islands of Kiribati, including the highly populated urban area of South Tarawa and the remote atolls in the Gilbert, Line and Phoenix Islands.

As the listing will be conducted using digital tablets to collect data, it will also serve to enhance the capacity of Kiribati's Nationals Statistics Office (NSO) in using technology to efficiently collect high quality data, which will be used in the upcoming SIS, HIES and PHC.

Figure 2: Administrative areas on Abaiang Atoll, Gilbert Islands, Kiribati

The recently executed AWP aligns to the United Nations Pacific Strategy priority outcomes of: gender equality; sustainable and inclusive economic empowerment; equitable basic services; and governance and community engagement.

Bruce Campbell, UNFPA's Representative and chair of the Pacific UN Country Team's Data Monitoring and Evaluation Group says "we are very pleased to be engaged with this pragmatic effort to build national capacity to produce and analyze the fundamental data that can be generated from national surveys. And even more importantly, we are pleased to see steadily increasing utilization of the data to guide critical policy and programming decisions across the development spectrum."

The AWP aligns to SPC's Statistics for Development Division's priority outcomes of: coordinated governance and stakeholder collaboration within the Pacific statistical system; delivery of technical support to censuses and surveys through a regional technical assistance program using standardised method, systems and processes; and collaboration among technical partners and national statistical agencies to deliver on the Ten Year Pacific Statistics Strategy.

The signing of the IPA between SPC and UNFPA presents an exciting opportunity for statistical development in the Pacific region, particularly in the areas of PHC and DHS. The current AWP of activities in Kiribati will set a necessary foundation for implementation of the upcoming SIS, HIES and PHC, which will produce data to populate national, regional and global priority indicators and will feed information for planning and policy formation.

ANNEX 2: Population tables

Table 1: Population by island and sex

Island	Person sex Male	Female	Total
01 – Banaba	194	151	345
02 – Makin	888	898	1,786
03 – Butaritari	1,534	1,553	3,087
04 – Marakei	1,394	1,391	2,785
05 – Abaiang	2,777	2,794	5,571
06 – NTarawa	3,347	3,509	6,856
07 – STarawa	29,026	31,143	60,169
08 – Maiana	986	1,016	2,002
09 – Abemama	1,724	1,865	3,589
10 – Kuria	568	531	1,099
11 – Aranuka	573	592	1,165
12 – Nonouti	1,504	1,466	2,970
13 – NTabiteuea	1,983	1,999	3,982
14 – STabiteuea	637	606	1,243
15 – Beru	1,151	1,104	2,255
16 – Nikunau	1,059	980	2,039
17 – Onotoa	758	721	1,479
18 – Tamana	388	414	802
19 – Arorae	541	542	1,083
20 – Teeraina	849	720	1,569
21 – Tabuaeran	1,012	905	1,917
22 – Kiritimati	2,731	2,539	5,270
23 – Kanton	21	16	37
Total	55,645	57,455	113,100

Table 2: Population by age group and sex

Age group	Person sex Male	Female	Total
0 to 4	6,804	6,315	13,119
5 to 9	7,476	6,868	14,344
10 to 14	5,799	5,777	11,576
15 to 19	5,323	5,328	10,651
20 to 24	5,560	5,510	11,070
25 to 29	4,975	5,066	10,041
30 to 34	4,144	4,483	8,627
35 to 39	3,610	3,752	7,362
40 to 44	2,509	2,740	5,249
45 to 49	2,444	2,671	5,115
50 to 54	2,332	2,731	5,063
55 to 59	1,791	2,125	3,916
60 to 64	1,130	1,319	2,449
65 to 69	834	1,170	2,004
70 to 74	454	746	1,200
75 to 79	257	483	740
80 to 84	80	184	264
90 to 94	7	25	32
95+	7	12	19
.	109	150	259
Total	55,645	57,455	113,100

Table 3: Population by age group, island and sex

Island and Person sex

Age group	01 - Bana Male	01 - Bana Female	02 - Maki Male	02 - Maki Female	03 - Buta Male	03 - Buta Female	04 - Mara Male	04 - Mara Female	05 - Abai Male	05 - Abai Female	06 - NTar Male	06 - NTar Female	07 - STar Male	07 - STar Female	08 - Maia Male	08 - Maia Female
0 to 4	23	20	124	104	206	185	165	155	349	303	428	423	3,474	3,308	113	112
5 to 9	28	20	169	136	234	236	219	204	395	427	495	400	3,750	3,478	147	146
10 to 14	32	15	104	135	200	171	163	196	315	299	344	370	2,740	2,747	119	118
15 to 19	8	4	79	44	116	99	125	78	385	377	363	410	2,681	2,978	59	29
20 to 24	13	5	43	55	134	115	123	109	194	171	325	320	3,273	3,483	74	86
25 to 29	17	12	50	77	102	124	97	91	188	197	276	277	2,927	3,068	80	66
30 to 34	16	14	65	66	110	112	86	103	193	195	227	272	2,294	2,574	69	71
35 to 39	14	15	56	51	98	93	78	95	166	172	191	226	1,973	2,056	73	90
40 to 44	5	3	38	36	58	80	72	68	107	124	144	168	1,366	1,485	52	53
45 to 49	12	7	35	37	59	67	67	62	111	124	158	167	1,237	1,404	56	55
50 to 54	2	11	41	43	57	72	56	66	101	117	145	145	1,117	1,382	53	56
55 to 59	4	14	27	37	65	61	56	49	108	98	99	108	826	1,103	37	43
60 to 64	10	8	19	23	29	38	32	33	72	61	66	70	572	705	15	25
65 to 69	7	2	19	20	23	44	25	26	47	58	46	80	398	596	21	24
70 to 74	2	.	12	18	17	29	17	27	22	33	22	31	210	380	8	16
75 to 79	.	.	5	11	9	11	9	14	11	27	12	22	110	232	7	11
80 to 84	1	.	1	.	6	10	2	9	5	2	1	11	33	81	1	8
90 to 94	.	.	.	1	.	1	.	.	2	3	.	1	3	12	.	.
95+	.	.	.	.	.	1	.	.	.	.	.	1	3	5	.	1
Total	194	150	887	894	1,523	1,549	1,392	1,385	2,771	2,788	3,342	3,502	28,987	31,077	984	1,010

Island and Person sex

Age group	09 - Abem Male	09 - Abem Female	10 - Kuri Male	10 - Kuri Female	11 - Aran Male	11 - Aran Female	12 - Nono Male	12 - Nono Female	13 - NTab Male	13 - NTab Female	14 - STab Male	14 - STab Female	15 - Beru Male	15 - Beru Female	16 - Niku Male	16 - Niku Female
0 to 4	195	172	84	73	81	70	193	175	258	223	74	76	103	101	124	110
5 to 9	199	192	84	66	93	84	202	166	279	241	78	79	133	128	157	142
10 to 14	189	187	73	61	73	72	168	173	220	219	98	85	105	105	131	133
15 to 19	285	382	32	16	44	37	143	124	256	273	40	24	181	125	84	42
20 to 24	139	123	42	40	49	45	143	104	169	145	55	43	93	72	91	75
25 to 29	118	118	55	42	43	35	114	110	132	143	48	42	84	90	72	76
30 to 34	122	134	37	50	32	45	109	92	136	129	48	38	76	78	81	73
35 to 39	106	119	38	35	31	39	79	109	128	120	45	44	65	69	71	57
40 to 44	82	85	24	28	20	36	69	82	75	80	29	34	39	44	49	43
45 to 49	78	66	24	23	29	32	77	76	74	84	33	35	55	72	47	46
50 to 54	61	94	27	19	24	33	77	81	92	121	32	30	72	74	45	57
55 to 59	51	65	16	25	17	15	46	47	63	85	24	21	72	47	42	50
60 to 64	36	46	10	17	11	15	29	37	36	49	12	13	26	26	23	23
65 to 69	33	40	7	8	10	14	25	38	36	33	8	19	16	29	19	18
70 to 74	19	17	5	17	5	7	14	24	17	20	5	8	15	25	11	19
75 to 79	7	14	7	7	3	8	7	16	9	14	4	10	10	10	10	10
80 to 84	1	5	2	3	3	2	6	8	1	11	1	3	5	4	1	5
90 to 94	.	1	1	.	.	.	.	3	.	2	1	.	.	.	.	.
95+	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
Total	1,721	1,860	568	530	568	589	1,501	1,465	1,981	1,993	635	604	1,150	1,099	1,058	979

Island and Person sex

Age group	17 - Onot Male	17 - Onot Female	18 - Tama Male	18 - Tama Female	19 - Aror Male	19 - Aror Female	20 - Teer Male	20 - Teer Female	21 - Tabu Male	21 - Tabu Female	22 - Kiri Male	22 - Kiri Female	23 - Kant Male	23 - Kant Female
0 to 4	103	82	38	39	47	40	124	89	146	116	349	338	3	1
5 to 9	71	73	50	34	70	61	144	127	146	126	330	298	3	4
10 to 14	80	78	47	60	82	71	109	83	129	115	275	281	3	3
15 to 19	56	30	18	19	39	19	53	38	66	25	210	155	.	.
20 to 24	87	78	39	30	41	38	77	47	84	72	269	254	3	.
25 to 29	57	44	30	18	51	42	72	58	93	81	269	254	.	1
30 to 34	60	58	28	36	29	37	50	56	66	67	208	181	2	2
35 to 39	45	39	22	18	24	30	54	46	55	63	197	166	1	.
40 to 44	25	38	20	31	28	28	44	35	42	42	120	116	1	1
45 to 49	43	38	17	25	22	37	33	44	55	48	121	122	1	.
50 to 54	44	52	23	32	37	39	33	38	42	44	149	122	2	3
55 to 59	35	34	18	21	28	30	18	23	40	44	97	104	2	1
60 to 64	19	18	11	15	19	14	15	13	27	22	41	48	.	.
65 to 69	13	28	10	14	14	19	11	8	12	12	34	40	.	.
70 to 74	11	14	6	8	7	15	5	4	5	12	19	22	.	.
75 to 79	8	10	9	7	2	12	4	8	2	11	12	18	.	.
80 to 84	1	3	1	3	1	7	2	1	.	3	5	5	.	.
90 to 94	.	.	.	1	.	.	.	.	.	.	.	.	.	.
95+	.	.	.	.	.	2	.	.	.	.	4	1	.	.
Total	758	717	387	411	541	541	848	718	1,010	903	2,709	2,525	21	16

Table 4: Population by age group, island and sex

| Age group | RECODE of island (Island) and Person sex | | | | | | | | | | | | | | |
| | ─── Sth. Tarawa ─── | | | ─── Northern ─── | | | ─── Central ─── | | | ─── Southern ─── | | | ─ Line Is. & Phoen ─ | | |
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0 to 4	3,474	3,308	6,782	1,272	1,170	2,442	496	447	943	940	846	1,786	622	544	1,166
5 to 9	3,750	3,478	7,228	1,512	1,403	2,915	551	508	1,059	1,040	924	1,964	623	555	1,178
10 to 14	2,740	2,747	5,487	1,126	1,171	2,297	486	453	939	931	924	1,855	516	482	998
15 to 19	2,681	2,978	5,659	1,068	1,008	2,076	428	468	896	817	656	1,473	329	218	547
20 to 24	3,273	3,483	6,756	819	770	1,589	317	299	616	718	585	1,303	433	373	806
25 to 29	2,927	3,068	5,995	713	766	1,479	313	273	586	588	565	1,153	434	394	828
30 to 34	2,294	2,574	4,868	681	748	1,429	276	314	590	567	541	1,108	326	306	632
35 to 39	1,973	2,056	4,029	589	637	1,226	262	298	560	479	486	965	307	275	582
40 to 44	1,366	1,485	2,851	419	476	895	183	205	388	334	380	714	207	194	401
45 to 49	1,237	1,404	2,641	430	457	887	199	183	382	368	413	781	210	214	424
50 to 54	1,117	1,382	2,499	400	443	843	167	213	380	422	486	908	226	207	433
55 to 59	826	1,103	1,929	355	353	708	125	162	287	328	335	663	157	172	329
60 to 64	572	705	1,277	218	225	443	82	111	193	175	195	370	83	83	166
65 to 69	398	596	994	160	228	388	78	88	166	141	198	339	57	60	117
70 to 74	210	380	590	90	138	228	39	57	96	86	133	219	29	38	67
75 to 79	110	232	342	46	85	131	24	40	64	59	89	148	18	37	55
80 to 84	33	81	114	15	32	47	8	18	26	17	44	61	7	9	16
90 to 94	3	12	15	2	6	8	1	1	2	1	6	7	.	.	.
95+	3	5	8	.	2	2	.	1	1	.	3	3	4	1	5
Total	28,987	31,077	60,064	9,915	10,118	20,033	4,035	4,139	8,174	8,011	7,809	15,820	4,588	4,162	8,750