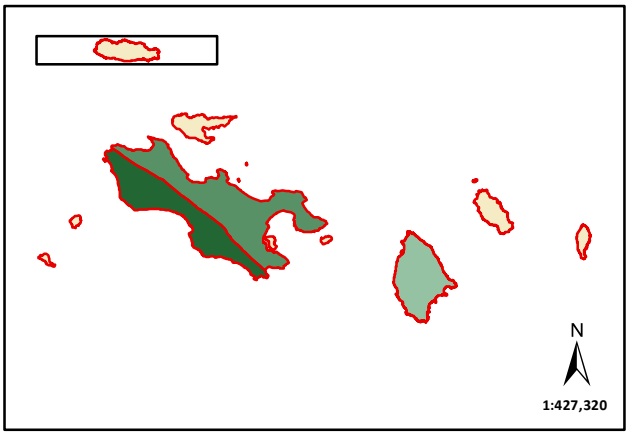

SEYCHELLES CENSUS OF AGRICULTURE 2011

N

1:146,000

Preface

This report presents the main findings of the Census of Agriculture 2011 (CoA 2011) which was the first such census to be conducted in Seychelles. The CoA 2011 was planned over a considerable period of time. It was integrated with the Census of Population and Housing, August 2010 (CoPH 2010), which was used to establish the household frame and to collect data on livestock at the household level. The frame was merged with the list of registered farmers held by the Seychelles Agricultural Agency (SAA) and supplemented by the list of large farms and farms in the non-household sector.

The CoPH 2010 provides its own set of data on agricultural activities at the household level and these are summarised in the report. The CoA 2011 comprised an exhaustive enumeration of all farms and households classified as 'producing mainly for sale' in the CoPH 2010. In addition, a sample of the all other households was enumerated to enable estimates to be made of the contribution of this sector to agriculture and thus complete the picture (household sample listing exercise).

The report is arranged in 4 main sections. The first section outlines the methodology used and the integration of the census of agriculture with the census of population and housing. The second section provides an analysis of the data collected on crops for the non-farm household sector. The third section presents the results of the farm census whilst the fourth section provides national estimates based on the combined data from the farm census and the non-farm household sector (using data from the household sample listing exercise and the CoPH 2010).

The Seychelles Agricultural Agency would like to thank all those farmers and households that contributed so willingly to this Census as well as the team of enumerators that collected the information. Thanks also go to the Staff of the Seychelles Agricultural Agency who acted as supervisors and coordinators for the Farm Census and the staff of the National Bureau of Statistics for their active participation and assistance in conducting the household survey and producing the tables for this report. Technical support was provided by the Food and Agriculture Organization of the United Nations (FAO) for which the Government is extremely grateful.

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SECTION 1: INTRODUCTION, BACKGROUND AND METHODOLOGY

Introduction

1.1 The Republic of Seychelles consists of over 100 islands scattered over 1,374,000 km² of sea in the middle of the Western Indian Ocean. The group comprises 40 granitic islands with a land area of 233 km², the largest and most populated of which is Mahé, and 60 or more coralline islands with a land area of 210 km².

1.2 The granitic islands, which form part of the main group, are centered around Mahé and all lie within a 56 km radius. The islands are of rugged formation and great scenic beauty, some seemingly rising straight out of the sea to great heights, but because of their mountainous nature there is little flat land. Mahé is the most important island and lies between 4 and 5 degrees South and 55 and 56 degrees East. Mahé is some 27 km miles long and up to 11 km wide with a land area of 142 km² and a population of 76,257[1] . A range of mountains runs down its spine rising to nearly 1,000 metres (Morne Seychellois). Two other islands of importance, as regards size and population, are Praslin (38 km² and population 8,374[1]) and La Digue (10 km² and population 2,596[1]). Some 1,084 persons live on the other islands[1]. Amongst the coralline islands, Aldabra is the most significant with a land area similar to that of Mahé. Most of the other coralline islands are very small.

1.3 Tourism is the single most important economic sector. Agriculture, though small in terms of its contribution to GDP (3%), remains an important sector in terms of food production and food security. It is also important in terms of employment and as a means of livelihood.

Background

1.4 In 1978, an agricultural survey was conducted using the 1977 Census of Population and Housing as the frame. Data was collected over a 15-month period, January 1978 to April 1979. Three strata were identified, namely:

- A comprehensive quarterly postal inquiry to all known large farmers
- A 1:4 sample survey of small scale-producers of fruits and vegetables for sale
- A 1:15 sample survey of small scale livestock holders

1.5 Actual coverage rates were lower than the design. The response rate of the postal enquiry of large farms declined from 82% at the start of the survey to 68% at the end. Of the 164 small-scale producers selected out of the total of 634, only 127 were enumerated. For livestock, out of 1,547 livestock holders, 106 were selected and 92 enumerated. There was also a supplementary sample of non-farming households set at 250 (Total 3,758) but the achieved sample size was only 144. The actual sample sizes were, therefore, very small casting some doubt as to the reliability of the estimates generated, particularly where these were disaggregated by region. The survey was conducted by the National Bureau of Statistics (NBS) and the data collected at the same time as the Household Budget Survey. A full report of this agricultural survey is available.

1.6 In 1998 a second attempt was made to conduct an agricultural survey to update the 1978 database. This was not particularly successful and only limited, generally qualitative, data was generated. The main weakness was poor response. A report is available.

[1] Census of Population and Housing, August 2010, NBS

1.7 As part of its on-going programme on agricultural statistics, the Seychelles Agricultural Agency (SAA) collects data from the main livestock producers, on a regular basis. No regular data collection, however, is undertaken for the small livestock producers. The SAA has a list of registered farmers and crop area and production data is collected from these on an 'ad hoc' basis making the data difficult to analyse and interpret.

Agricultural Data from the Population and Housing Census

1.8 Data on agricultural activity at the household level has been collected as part of the Census of Population and Housing since 1977. This information, whilst extremely useful, only covers the household sector and does not include agricultural businesses and enterprises outside the household sector. Questions on whether or not households were engaged in crop growing, livestock raising and fishing, as well as the numbers of livestock kept, were asked. A separate paper documenting the history of agricultural statistics, as recorded in the population and housing census, is available.

1.9 One feature to emerge from the analysis of the data was the interpretation of crop growing. In many instances the fact that fruit trees were growing around the dwelling was not considered to be 'crop growing' and so many households with such trees were recorded as <u>not</u> growing crops. This was highlighted in the sample listing exercise of households other than those producing mainly for sale, which was conducted as part of the CoA 2011. Whereas the CoPH 2010 recorded 37% of households as growing crops, the CoA 2011 recorded some 70% - almost double.

Methodology

1.10 The 2011 National Agricultural Survey Programme was conceived as two distinct phases. Phase I was a Census of Agriculture and Phase II an Agricultural Survey Programme, with focus on crop production, carried out over a 12 month period.

1.11 The CoPH 2010 provided the frame for the household sector whilst the Seychelles Agricultural Agency (SAA) provided the frame of large farms and registered farmers. As with previous censuses of population and housing, in the CoPH 2010, households were classified as producing mainly for sale, selling surplus or producing mainly for subsistence. In total, 24,770 households were enumerated with 8,662 classified as farming and 15,748 non-farming households (360 non-response). Of those farming, 503 were producing primarily for sale, 477 were selling surplus and 7,469 were producing mainly for own consumption (214 non-response). Interestingly, a separate question on whether the household had sold <u>any</u> agricultural produce in the last 12 months identified a number of households in the categories producing for sale and selling surplus that had not sold anything in the last 12 months as well as 741 households producing mainly for own consumption which had sold produce in the last 12 months. This indicates a definitional problem in the purpose of production and in future CoPHs only two categories should be identified 'producing mainly for sale' and 'producing mainly for own consumption'. The question on sales of agricultural produce in the last 12 months should be maintained and this question should be used to identify those selling surplus.

1.12 The Phase I (Census of Agriculture) comprised two separate but complimentary exercises. The first was a complete enumeration of farmers registered with SAA or households indicating they were producing mainly for sale in the CoPH 2010 on the islands of Mahé, Praslin and La Digue and their immediate satellite islands. The second was a sample survey of all other households. Both exercises were conducted as a single visit enumeration. As well as the 503 households identified in the CoPH 2010 as producing mainly for sale, the SAA list of large farms and registered farmers was

also found to be around 500. These two lists were first matched for duplication and some 343 households on the National Bureau of Statistics (NBS) list were also found to be on the SAA list although, interestingly, not all such households were recorded as producing mainly for sale. In fact, only some 234 of the matched households met the criteria of producing mainly for sale. The final list of farms numbered 768 and was composed of:

- 234 households identified on the CoPH 2010 list as producing mainly for sale and also on the SAA list,
- 71 households on the CoPH 2010 list producing mainly for own consumption, also on the SAA list
- 38 households on the CoPH 2010 list selling surplus, also on the SAA list
- 287 households identified on the CoPH list as producing mainly for sale and not on the SAA list
- 138 registered farms/large farms on the SAA list not matched with households on the CoPH 2010 list

Reasons why not more records matched include:

- The CoPH 2010 recorded 'head of household' whilst the SAA lists were of farmers all of whom may not have been heads of household
- The SAA list was known not to be completely up-to-date despite the best efforts of the staff concerned
- Some duplication of farms may have existed where owners were recorded as operating a farm as well as the farm manager.

1.13 Other difficulties encountered in compiling the list related to the location of the SAA farms. Enumeration Area numbers were assigned to each such farm but it was clear from a comparison between the EA number and the location given for the farm that there were a number of inconsistencies. This complicated the enumeration to some degree but the supervisors were generally able to resolve these issues.

1.14 All households/farms on this list were enumerated by a team of enumerators (18) under the supervision of the SAA. Lists were compiled by District showing the EA number, the house number given in the CoPH 2010, the name, location and phone number, where available. In addition, EA maps were provided, identifying the EA boundaries and the location of the houses numbered within each EA. Each enumerator was expected to cover approximately 40 farms/households in a 2 week

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