

Supporting Statement B - OMB No. 0596-0246

US Department of Agriculture Forest Service

Post-Hurricane Research and Assessment of Agriculture, Forestry, and Rural Communities in the U.S. Caribbean

Note: This request is for the renewal of the previously approved information collection OMB 0596-0246, Post-Hurricane Research and Assessment of Agriculture, Forestry, and Rural Communities in the U.S. Caribbean. The USDA Forest Service requests approval from OMB to continue the collection of information from farmers, forest owners, and others directly involved in agriculture and forestry in the U.S. Caribbean. This request for renewal includes revision of previously approved information collection instruments, shifting from focus group and interview guides to a researcher administered questionnaire that has been developed based on new knowledge gained under the previously approved collection.

B. STATISTICAL METHODS

This information collection request involves qualitative research that does not use statistics to make inferences about the populations of interest. This research involves a non-probability, purposively selected sample of individuals who own, lease, or otherwise actively manage agricultural and forest land in Puerto Rico and the U.S. Virgin Islands through a researcher administered questionnaire. This questionnaire builds from the previously approved information collection instruments and outcomes and will permit the collection of more quantifiable and comparative within sample data from larger segments of the populations of interest, while reducing the burden of time on individual participants. With this approval, we do not aim to test hypotheses about the broader population but will continue our exploratory approach to develop a better understanding of the recovery of farms, forests, and rural communities from the effects and associated impacts of hurricanes Irma and Maria and more broadly about agriculture and forest sector hurricane vulnerabilities, mitigation, adaptation, readiness, and resilience in the U.S. Caribbean.

- 1. Describe (including a numerical estimate) the potential respondent universe and any sampling or other respondent selection method to be used. Data on the number of entities (e.g., establishments, State and local government units, households, or persons) in the universe covered by the collection and in the corresponding sample are to be provided in tabular form for the universe as a whole and for each of the strata in the proposed sample. Indicate expected response rates for the collection as a whole. If the collection had been conducted previously, include the actual response rate achieved during the last collection.**

The potential respondent universe for this information collection includes individuals or entities who own, lease, or otherwise actively manage agricultural and forest land in Puerto Rico and the U.S. Virgin Islands. A complete, reliable, and accessible sampling frame of the population of interest is not available at present. Therefore, we will select a non-probability, purposive sample for this research. Available data on the agriculture and forest sectors in Puerto Rico and the U.S. Virgin Islands will be used by researchers to identify major production sectors (e.g., coffee, bananas/plantains, row crops, poultry,

livestock, etc.), range in total landholding area held by farm and forest owners and tenants (e.g., from data from USDA Agriculture Census, USDA FS Forest Inventory and Analysis, Puerto Rico Dept. of Agriculture, Virgin Islands Dept. of Agriculture), and other key criteria for selecting respondents. Researchers will use farm and forest owner and operator databases maintained by USDA agencies, Puerto Rico Department of Agriculture and Department of Natural and Environmental Resources, and U.S. Virgin Islands Department of Agriculture to purposively draw the sample of potential respondents, seeking representation across subregional geographies, production sectors, landholding size, and other key factors. Although data from a nonprobability sample cannot be used to make statistical inferences or generalizations about the populations of interest, planned variation among participants is designed to capture a broad range of characteristics and perspectives approximating these populations.

Because this is a new information collection method submitted with the request for renewal approval of a previously approved information collection 0596-0246, we do not have direct estimates of response rates for the researcher administered questionnaire. Recent survey research carried out in the agricultural and disaster management sectors in Puerto Rico, including some utilizing researcher/contractor administered surveys have yielded response rates ranging from (42% - 87%) (see for example: Gladkihk et al. 2019; Orengo-Aguayo et al. 2019; Rodriguez-Cruz et al. 2021; see also Wagenaar 2005). Therefore, we expect a response rate of approximately 55 percent. We will contact up to 400 individuals per year of the approved collection from the compiled lists and databases noted above. Based on a response rate of 55 percent, we expect approximately 220 individuals or entities annually to agree to respond to the researcher administered questionnaire. We estimate an additional 180 individuals will be asked to participate in the research or will read a public announcement about the opportunity to participate but will not choose to be involved.

2. Describe the procedures for the collection of information including:

- **Statistical methodology for stratification and sample selection,**
- **Estimation procedure,**
- **Degree of accuracy needed for the purpose described in the justification,**
- **Unusual problems requiring specialized sampling procedures, and**
- **Any use of periodic (less frequent than annual) data collection cycles to reduce burden.**

Research participants will be chosen purposively in line with the research objectives, seeking a representative cross-section of the population of interest, including individuals or entities who own, lease, or otherwise actively manage agricultural and forest land in Puerto Rico and the U.S. Virgin Islands drawn from the lists and other sources described above. This approach involves a non-probability sample of the population and therefore cannot be used to make generalizations about the larger target population with a known degree of accuracy. Nevertheless, purposively selecting respondents that represent the expected or known range in key characteristics of the population of interest is intended to approximate the target population.

Information will be collected through a researcher administered questionnaire that includes mostly closed and multiple choice questions. Participants will have the option to participate through an in-person meeting, by telephone, or by video conference, conducted in English or Spanish, at an agreed date, time, and location. A member of the research team will note participant responses to the questionnaire, using pen and paper. The meeting will be audio recorded with participant permission to

accurately capture participant responses, facilitate subsequent data analysis, and reduce response burden on participants. Recordings will only be accessible to and used by the research team to ensure the accuracy of questionnaire responses noted by the researcher who administers the questionnaire. No personal identifiable information will be collected, and research participants will be provided a statement of confidentiality protecting their anonymity in any reported results. After the meeting has concluded, participant responses to the questionnaire will be digitized by the researcher and entered into an electronic database, maintained and accessible only to the research team.

No unusual problems requiring specialized sampling procedures will be used.

The information will be collected one time from each research participant.

3. Describe methods to maximize response rates and to deal with issues of non-response. The accuracy and reliability of information collected must be shown to be adequate for intended uses. For collections based on sampling, a special justification must be provided for any collection that will not yield "reliable" data that can be generalized to the universe studied.

To maximize the response rate and reduce nonresponse for the researcher administered questionnaire, we will follow standard accepted practices, such as those described in Krueger and Casey (2009), Patton (2002), and Dillman et al (2014), including the use of public announcement materials, pre-notifications to potential participants, personalized invitations, and follow-up. These strategies and techniques aid in the establishment of trust and minimization of social costs. Potential participants will be contacted by phone or by email; informed of the study, its aims and objectives, and invited to participate in the researcher administered questionnaire in an in-person interview, by telephone, or by video conference. All potential and confirmed participants will be informed that their participation is completely voluntary and that any information that they provide is confidential. All materials, correspondence, and communication will be available in English and in Spanish.

Respondents will be offered multiple modes of participation, including in-person at an agreed location (e.g., their farm/forest, their place of business, USDA FS IITF headquarters, etc.), by telephone, or by video conference. Respondents will have the option to participate in English or Spanish. Altogether, these aspects are expected to reduce costs to potential participants and increase response rate. Researcher administered questionnaires tend to have higher response rates than self-administered surveys (Wagenaar 2005). This mode also allows for the researcher to clarify any questions that the respondent may have about the questionnaire, its implementation, its aims and objectives, or otherwise. Costs to participants by developing focus group and interview guides that are as brief as possible, easy to understand, and do not involve any sensitive questions.

As described above, researcher administered questionnaire participants will be purposively selected aiming for a representative cross-section of the population of interest. Because this research is not based on a probability sample, systematic evaluation of non-response is not possible. Nevertheless, when possible, we will document non-respondents by sector and other basic criteria and assess the associated information to better understand our population of interest and to identify potential gaps in understanding from this exploratory research. The accuracy, reliability, and applicability of the results of these qualitative methods are considered to be adequate for our research aims and objectives.

- 4. Describe any tests or procedures or methods to be undertaken. Testing is encouraged as an effective means of refining collections of information to minimize burden and improve utility. Tests must be approved if they call for answers to identical questions from 10 or more respondents. A proposed test or set of tests may be submitted for approval separately or in combination with the main collection of information.**

The questionnaire and related materials have been reviewed and tested by four internal staff, two external colleagues, and two key stakeholders directly involved in agriculture, forestry, and rural communities in the region. Reviewers were asked to evaluate the instrument for clarity, content, and appropriateness of language and terminology. They also were asked for overall impressions and specific feedback on the instructions, wording, and structure. The questionnaire has been edited and adjusted to address these review comments and feedback.

- 5. Provide the name and telephone number of individuals consulted on statistical aspects of the design and the name of the agency unit, contractor(s), grantee(s), or other person(s) who will actually collect and/or analyze the information for the agency.**

Since statistical methods are not a part of this qualitative research, we have not consulted on statistical aspects of the design, but we have consulted experts on the qualitative analysis aspects of the project and overall research design with the following individuals. Furthermore, experts at USDA/NASS also reviewed and provided input.

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In addition, other experts have provided input and advice on select portions of the interview and focus group guides as relative to their interest and expertise.

Kathleen McGinley, USDA Forest Service, International Institute of Tropical Forestry, Research Social Scientist, 919-600-3108, is responsible for the design, implementation, and analysis of this information collection.