



Effectiveness of National Irrigation Administration Services to Malibay-Kalawakan Irrigators Association Inc.: An Analysis

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ABSTRACT

This study evaluates the effectiveness of the National Irrigation Administration (NIA) services provided to the Malibay-Kalawakan Irrigators Association, Inc. (MKIA). Specifically, it aims to describe the socio-demographic profile of farmer-respondents, assess their level of satisfaction with NIA's services, and identify challenges affecting service effectiveness. Using a survey questionnaire with a Likert Scale, data was gathered from MKIA members to measure their perceptions and experiences. Findings reveal that MKIA is a well-organized and sustainable association, with farmer members generally expressing high satisfaction with NIA's services. The efficiency, promptness, and quality of service delivery, as well as the positive interpersonal relations of NIA staff, contribute significantly to this satisfaction. However, respondents highlighted the need for additional resources, such as office and farm equipment and fingerlings, to further support their agricultural activities and income generation. Based on these findings, the study recommends that NIA continue strengthening MKIA through additional training and seminars, particularly for new members. Furthermore, the survey serves as an objective measure of farmer satisfaction, providing valuable insights for the planning and implementation of future NIA programs and policies.

Keywords: National Irrigation Administration, Irrigators Association, farmer satisfaction, service effectiveness, agricultural sustainability

INTRODUCTION

The Philippines, as an agricultural nation, relies heavily on farming to support its economy and food security. The agricultural sector contributes significantly to national income and employment, with many rural communities depending on it for their livelihoods. Given this, irrigation plays a crucial role in enhancing agricultural productivity. Access to reliable water sources ensures stable crop production, reducing the risks associated with seasonal droughts and climate variability.

Irrigation systems in the Philippines fall into two categories: national irrigation systems (NIS), managed by government agencies, and communal irrigation systems (CIS), which are operated and maintained by farmer-led organizations. The National Irrigation Administration (NIA) initiated its participatory approach to irrigation management in 1976, beginning with CIS and later extending to joint management of NIS with Irrigators Associations (IAs). Research suggests that farmer involvement in irrigation management improves overall system performance, leading to better water distribution and infrastructure maintenance (Jopillo & de los Reyes, 1988).

Farmers are organized into Irrigators Associations (IA) and strengthened through training activities to make them more effective partners of NIA in irrigation development and management. An IA is a non-sectarian, non-stock, and non-profit organization of farmer-beneficiaries. The formation of an IA starts from the identification and listing of the individual farm lots and the potential beneficiaries who are later on grouped according to hydrologic boundaries and layout of the water distribution system.

The Malibay-Kalawakan Irrigators Association, Inc. (MKIA) operates within the municipalities of San Miguel and Doña Remedios Trinidad in Bulacan. Historically, farmers in these areas relied primarily on rain-fed agriculture, limiting their ability to cultivate rice and other crops year-round. In 2014, the BULO Small River Irrigation Project (SRIP) was funded to support 420 farmers across a 570-hectare service area. As of March 2022, the irrigation infrastructure was completed, and an inauguration was scheduled. MKIA, formally established in 2018, works alongside NIA to ensure sustainable water management.

This study assesses the effectiveness of NIA's services for MKIA, focusing on farmer satisfaction, challenges in service delivery, and areas for improvement. The findings aim to guide NIA in refining its programs and policies to enhance agricultural productivity and sustainability.

Objectives of the Study

The general objective of the study is to evaluate the effectiveness of NIA Services to the Malibay-Kalawakan Irrigators Association.

Specifically, the study aims to:

1. describe the socio-demographic profile of respondents;
2. determine the level of satisfaction of farmers with the services being provided by NIA.
3. determine if there are challenges in obtaining effectivity of the services.

Scope of the Survey

The survey focuses on 45 farmers' respondents of Barangay Malibay in San Miguel and Kalawakan, in Dona Remedios Trinidad in the province of Bulacan.

METHODOLOGY

The researcher used personal interviews through face-to-face conversation as the lone data gathering methodology in this survey. Proper health protocol will follow as per IATF guidelines amid the risks and limitations brought about by the COVID-19 pandemic.

Face to Face Interview

The face-to-face interview is a data collection method in which the interviewer directly communicates with the respondent by the prepared questionnaire. This method enables to acquisition of information, consumer evaluations, attitudes, preferences, and other information coming out during the conversation with the respondent. Thus, the face-to-face interview method ensures the quality of the obtained data and increases the response rate. Face-to-face standardized / semi-standardized interview is a quantitative research tool. Therefore, it is applied in national or certain region population inquiries, consumer, and customer or reader surveys. Furthermore, this method is practiced when performing Omnibus and Ad Hoc research. (Sprinter Research, n.d.)

Research Design/Data Gathering Techniques

This study adopts a quantitative research approach to evaluate the effectiveness of NIA services. Data collection was conducted through structured face-to-face interviews using a Likert-scale questionnaire.

Sampling Method

A **systematic sampling technique** was employed to ensure an unbiased selection of respondents. The total population consisted of registered MKIA members, divided into nine sectors. From each sector, five members were randomly selected, resulting in a sample size of 45 farmers.

Data Collection Instrument

The survey questionnaire was designed to measure:

- Farmers' socio-demographic characteristics.
- Satisfaction levels with NIA's services.
- Challenges encountered in service accessibility and implementation.

The **Likert scale**, ranging from *Strongly Agree (5)* to *Strongly Disagree (1)*, was used to quantify respondents' perceptions of NIA's service delivery, responsiveness, and infrastructure support.

RESULTS AND DISCUSSION

- A. Consolidated and summarized the result of part I, respondents' information, and socio-demographic profile of the respondents.

The elements of the socio-demographic profile that were included in this survey consist of gender, civil status, actual ages, age group, educational attainment, and working status.

Table 1a. Socio-Demographic Profile of the Respondents

Gender	Respondents	%
Male	21	46.7
Female	24	53.3
Total	45	100

Age Group		
18-25	2	4.4
26-30	6	13.3
31-35	2	4.4
36-40	6	13.3
41-45	8	17.8
46-50	5	11.1
51-55	5	11.1
56-60	5	11.1
61-65	4	8.9
Above 65	2	4.4
Total	45	100
Civil Status		
Single	13	28.9
Married	24	53.3
Separated	-	-
Widow/Widower	8	17.8
Total	45	100
Educational Attainment		
No formal education	-	-
Some elementary	4	8.9
Completed elementary	14	31.1
Some high school	7	15.6
Completed high school	10	22.2
Some vocational	2	4.4
Completed vocational	2	4.4
Some college	2	4.4
Completed college	3	6.7
Postgraduate	-	-
Total	45	100
Farmer's experience in agriculture		
1-10	7	15.6
11-20	12	26.7
21-30	6	13.3
31-40	15	33.3
41-50	3	6.7
51-60	2	4.4
Total	45	100

To whom do the farmers sell their products?		
Directly to customers	16	35.6
Retailers	10	22.2
Wholesalers	10	22.2
Others (Food consumption)	9	20
Total	45	100

Results reveal that the gender of farmer's respondents was dominated by females with 53.3%, while males comprised only 46.7%. As to the age group of respondents, the age bracket to which most respondents belong is 41-45 with 17.8%. This is followed by the age brackets of 26-40 with 13.3%, followed by 46-60 with 11.1%. Meanwhile, the age brackets of 18-25, 61-65, and above 65 follow with 4.4%, 8.9%, and 4.4% of the total respondents. Results show that our farmer-respondents are all adults; most of them are nearing seniority.

As to the civil status of respondents, most of the farmers are married comprising 53.3%. Meanwhile, 28.9% of the respondents are single and 17.8% are widows/widowers.

As regards the educational attainment of farmer-respondents, all attained some level of education. Most of the respondents (31.1%) *Completed elementary*, followed by *Completed high school* (22.2%), *Some high school* (15.6%), *Some elementary* (8.9%), *Completed college* (6.7%), *Some vocational, completed vocational, and some college* (4.4%). Results show that the highest educational attainment reached by the farmer-respondent is Elementary graduate, while the lowest is some vocation, completed vocational, and some college. Many farmer-respondents belong to the higher bracket of educational attainment. This can be attributed to the fact that the farmer-respondents are officers of the Irrigators Association (IA).

As to farmer-respondents' experience with agriculture, results show that the years' bracket to which most respondents belong is 31-40 years with 33.3%, followed by the year brackets of 11-20 (26.7%), 1-10, (15.6%), 21-30 (13.3%), 41-40 (6.7%), and 51-60 (4.4%). Results show that most of the respondents invest their years in the agricultural sector and engage their whole lives in it.

As to whom the farmers sell their products, most of the respondents answered directly to customers 35.6%, followed by retailers and wholesalers 22.2%, and 9 of the respondents answered for *food consumption only* with a percentage of 20.

B. Consolidated and summarized result of Part II. Feedback satisfaction, transacting with NIA, execution of service, and overall satisfaction.

This part discusses the number of years farmers have been availing of NIA's services. Also discussed here are the ways on how they do their transaction with NIA, as well as the avenue which they most often use to get information about NIA and its services. The execution of service and overall satisfaction are also discussed.

Table 2a. Dealings and availing of NIA services

Years availing services	Respondents	%
Less than a year	3	6.7
1-2 years	7	15.6
3-5 years	15	33.3
6-10 years	20	44.4
Don't know/refused	-	-
Total	45	100
Dealings with NIA		
Office visit	35	77.8
Phone call	6	13.3
Mail delivery	5	11.1
Text/SMS message	20	44.4
Visit Website	1	2.2
Send email	3	6.7
	40	88.8

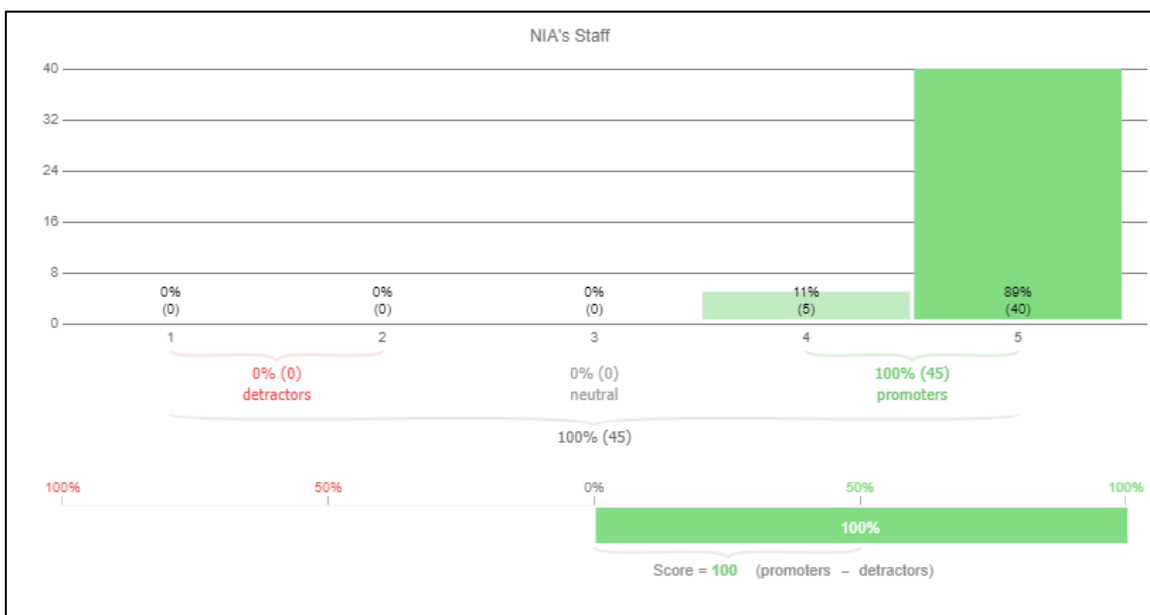
Chat using apps (Viber, WhatsApp, Line, Facebook, Messenger, Skype, etc.)		
Connected to their social media accounts (Facebook, Twitter, LinkedIn, Instagram, etc.)	5	11.1
Others (Meetings, Seminars, Training)	18	40
Information most often taken		
Information desk	5	11.1
Website	1	2.2
Phone/Hotline	20	44.4
Social media (Specify _)	15	33.3
Conferences	9	20
Text/SMS	25	55.5
Bulletins	1	2.2
Others (Sectoral meeting)	10	22.2

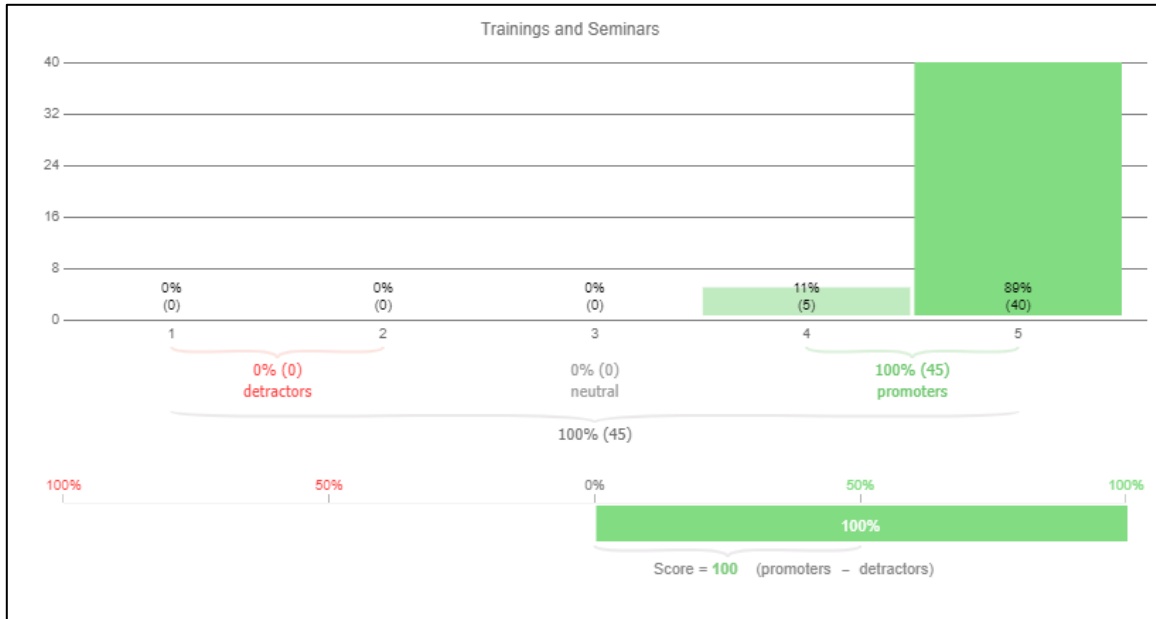
In terms of the number of years availing services, the result shows that the majority (44.4%) of the farmer-respondents belong to the category of 6-10 years, followed by the category of 3-5 years with 33.3%, category 1-2 years and less than a year with 15.6% and 6.7% respectively. Results show that the majority of the respondents have long been doing transactions with NIA and availing of its services in the process.

As regards dealings with NIA, results reveal that farmers primarily transact business with NIA by using chat apps like *Facebook-messenger* as asserted by 40 out of 45 respondents, followed by office visits with 35 out of 45 respondents, text/SMS messages with 20 out of 45 respondents, others (attending trainings and seminars) with 18 out of 45 respondents, Phone call with 6 out of 45 respondents. Mail delivery and Connected to their social media accounts (Facebook, Twitter, etc.) both with 5 out of 45 respondents, send email with 3 out of 45 respondents, and Visit website with 1 out of 45 respondents. These findings provide evidence that the COVID-19 pandemic affects most of the respondents who transact in an online consultation rather than face-to-face because of the protocols and rules to be followed.

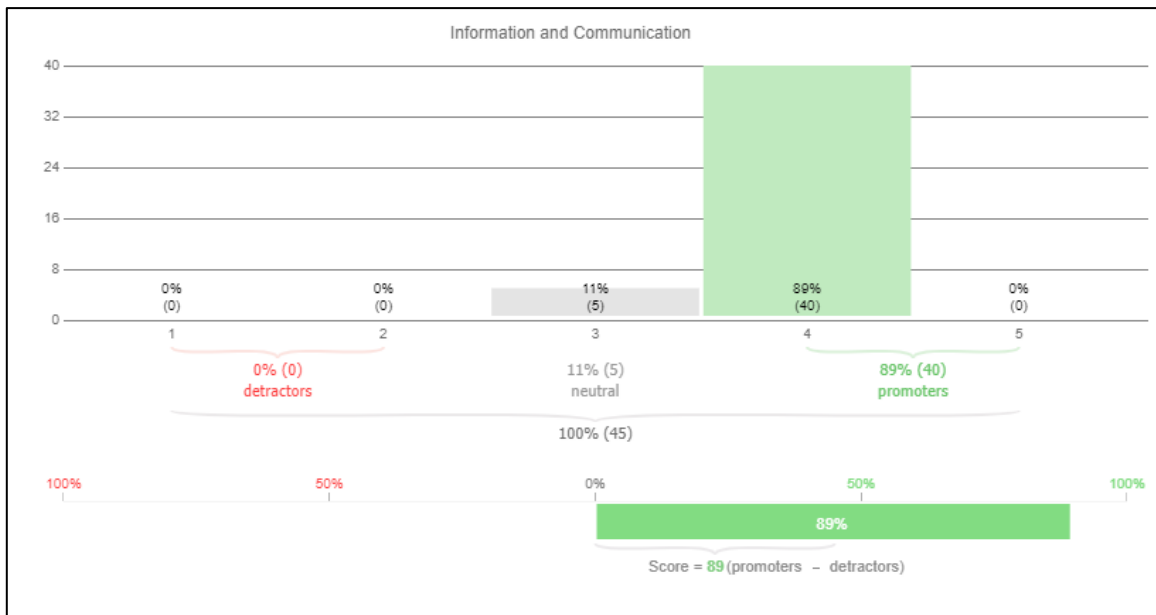
Meanwhile, on Information most often taken, results show that many farmer-respondents (55.6%) through text/SMS messages, followed by phone/hotline (44.4%), social media (33.3%), others (sectoral meeting/personnel visit to the area) with 22.2%, followed by conferences (20%), information desk (11.1%), website and bulletins with 2.2%.

Table 2b. Execution of service

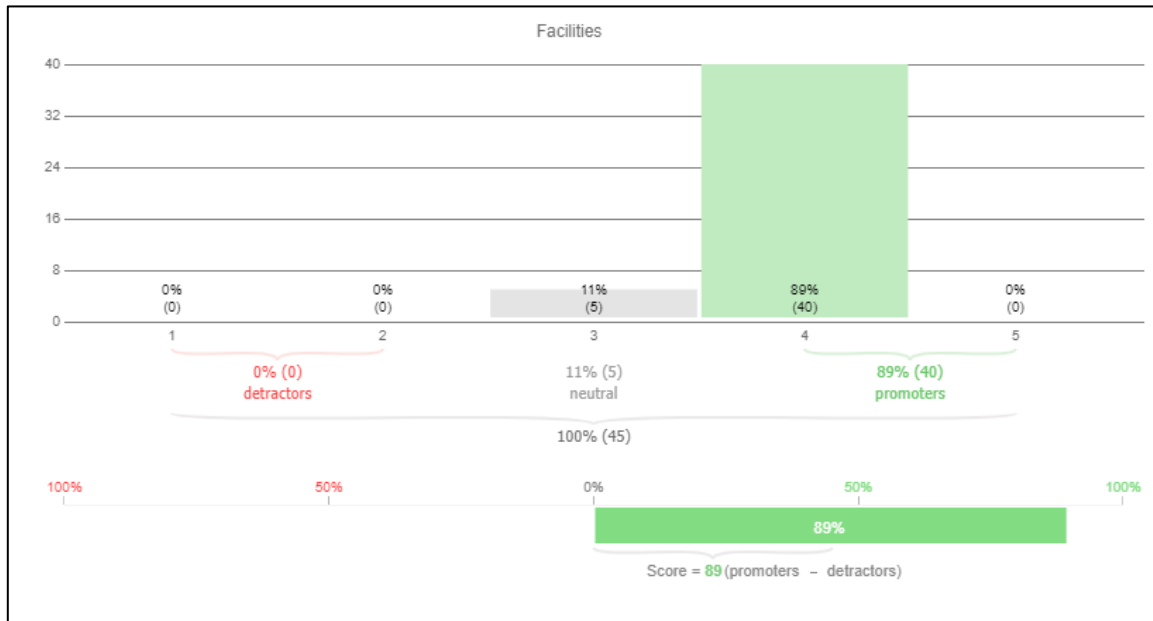




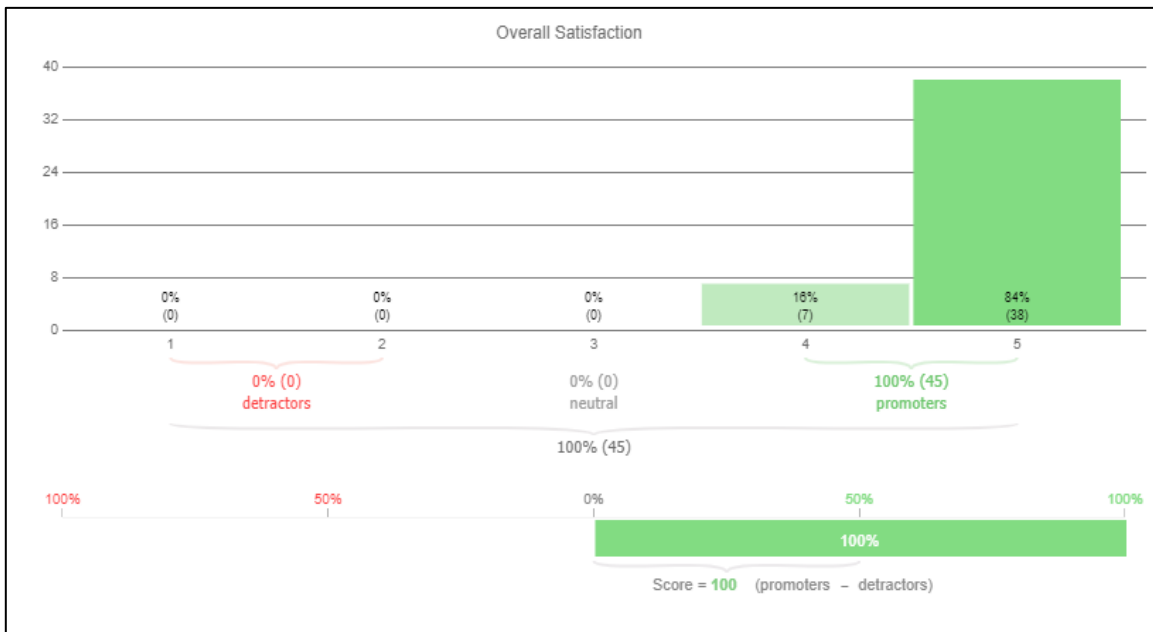
In terms of execution of service, it shows that 89% of farmer-respondents strongly agree with the services of NIA’s staff, the conduct of training and seminars, and NIA’s complaints handling and records keeping.



As regards Information and communication, it shows that 40 out of 45 farmer-respondents agree to the services of NIA. While 11% of farmer-respondents are neutral, the results show that some of them are not able to visit NIA’s website online due to a lack of knowledge of using smartphones or other gadgets.



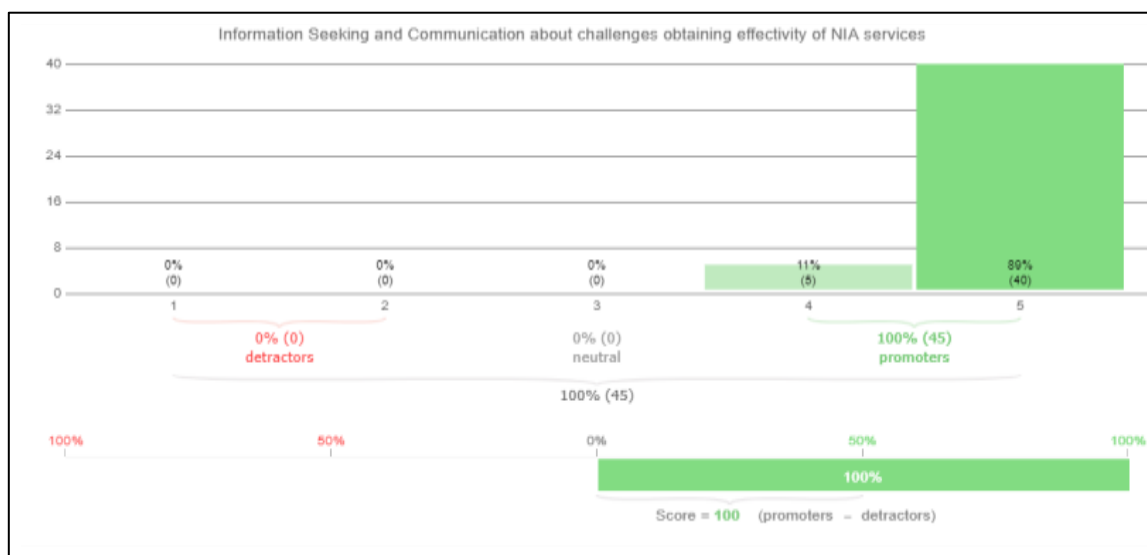
As regards NIA’s facilities/offices, 40 out of 45 farmer-respondents agree to the services given by the agency.



Meanwhile, it is shown that 84% of the farmer-respondents are very satisfied with the services provided by NIA; it only shows that the existing services of NIA are significant and important to farmers in their farming activities.

- C. Consolidated and summarized result of Part III. Information seeking and communication about challenges obtaining effectiveness of NIA services.

Table 3a. Irrigators Association



As regards the challenge of obtaining the effectivity of NIA services, it shows that 89% of farmer-respondents strongly agree to participate in activities of NIA and IA.

CONCLUSIONS AND RECOMMENDATIONS

Malibay-Kalawakan IA is an existing and organized association that continues to be a sustainable and viable irrigators association. Farmer-respondents of MKIA are generally satisfied with the services that the agency delivers. The respondents have also a high degree of appreciation towards it.

In like manner, the farmers' reasons for satisfaction with NIA's services are rooted in the efficient and prompt delivery of quality services, and the amicable interpersonal relations/warm-heartedness of NIA's staff established with the farmers.

In terms of suggestions for the improvement of NIA services, most of the respondents want to have more equipment for their office and farm and also to have fingerlings in order to have additional income for them.

Based on the findings of this survey, the following recommendations are hereby offered:

- It is recommended for NIA to continue strengthening the association by giving them more training and seminars knowing that some of them are new members of the association.
- An objective testament of farmer-customer satisfaction, this survey may serve as a guideline and specification in the planning and execution of future programs and policies.

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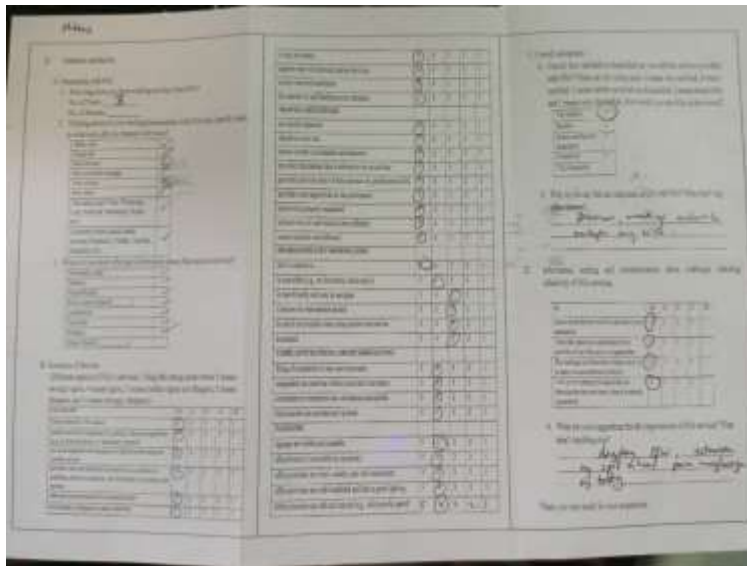
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SURVEY QUESTIONNAIRE



I. Respondents' Information and Socio-Demographic Profile

1.1 Name: _____

1.2 Barangay/Province: _____

1.3 Phone number: _____

1.4 Age of the farmer: _____

1.5 Gender: _____

1.6 Civil status: _____

1.7 Occupation: _____

1.8 Educational attainment:

- | | | | |
|----------------------|--------------------------|----------------------|--------------------------|
| No formal education | <input type="checkbox"/> | Some vocational | <input type="checkbox"/> |
| Some elementary | <input type="checkbox"/> | Completed vocational | <input type="checkbox"/> |
| Completed elementary | <input type="checkbox"/> | Some college | <input type="checkbox"/> |
| Some high schools | <input type="checkbox"/> | Complete college | <input type="checkbox"/> |
| Completed highschool | <input type="checkbox"/> | Postgraduate | <input type="checkbox"/> |

1.9 Current size of farmer's household (Current number of people living in your house): _____

1.10 Farmer's experience in agriculture (years): _____

1.11 Total land property of the farmer:

a. Owned: _____

b. Rented: _____

1.12 Have you experienced calamities in the past years/months?

1.13 How much do you earn from farming? _____

1.14 To whom do you sell your products?

- Directly to consumers
- Retailers
- Wholesalers
- Others

II. Feedback Satisfaction

A. Transacting with NIA

1. How long have you been availing services from NIA?

No. of Years: _____

No. of Months: _____

2. Thinking about all your dealings/transactions with NIA last (specify year), in what ways did you transact with them?

Office visit	
Phone call	
Mail delivery	
Send text/SMS messages.	
Visit Website	
Send email	
Chat using apps (Viber, WhatsApp, Line, Facebook, Messenger, Skype, etc.)	
Connected to their social media accounts (Facebook, Twitter, LinkedIn, Instagram, etc.)	

3. Where do you most often get information about NIA and its services?

Information desk	
Website	
Phone/Hotline	
Social media (Specify _____)	
Conferences	
Text/SMS	
Bulletins	
Others (Specify _____)	

B. Execution of Service

(Different aspects of NIA's services. Using this rating scale where 5 means strongly agree, 4 means agree, 3 means neither agree nor disagree, 2 means disagree, and 1 means strongly disagree.)

NIA'S STAFF	SA	A	N	D	SD
treats customers with respect	5	4	3	2	1
strictly and fairly implements the policies, rules, and regulations (e.g. no discrimination, no "palakasan" system?)	5	4	3	2	1
are knowledgeable and competent or skilled in delivering the needed services	5	4	3	2	1
provides clear and sufficient information (i.e., solutions to problems, answers to inquiries, and information on products and services	5	4	3	2	1
addresses queries/concerns in a prompt manner	5	4	3	2	1
demonstrates a willingness to assist customers	5	4	3	2	1
is easy to contact	5	4	3	2	1
appears neat, well-dressed, and professional	5	4	3	2	1

coveys trust and confidence	5	4	3	2	1
the number of staff/facilitators is adequate	5	4	3	2	1
TRAINING AND SEMINARS					
are clearly explained	5	4	3	2	1
objectives were met	5	4	3	2	1
course content is substantial and extensive	5	4	3	2	1
provided information that is relevant to my actual duty	5	4	3	2	1
provided activities that will help advance my professional skills	5	4	3	2	1
activities were appropriate to the participants	5	4	3	2	1
topics were properly sequenced	5	4	3	2	1
allotted time for each session was sufficient	5	4	3	2	1
the course schedule was followed	5	4	3	2	1
INFORMATION AND COMMUNICATION					
NIA's website is...	5	4	3	2	1
is accessible (e.g., no downtime, loads easily)	5	4	3	2	1
is user-friendly and easy to navigate	5	4	3	2	1
Contains the information needed	5	4	3	2	1
is useful and reliable when doing the desired transaction	5	4	3	2	1
is secured	5	4	3	2	1
COMPLAINTS HANDLING AND RECORDS KEEPING					
filing of complaints is easy and systematic	5	4	3	2	1
complaints are resolved within the prescribed timeframe	5	4	3	2	1
resolutions to complaints are satisfactory/acceptable	5	4	3	2	1
files/records are accurate and updated	5	4	3	2	1
FACILITIES					
signage is visible and readable	5	4	3	2	1
office/branch is accessible to customers	5	4	3	2	1
office premises are clean, orderly, and well-maintained	5	4	3	2	1
office premises are well-ventilated and have good lighting	5	4	3	2	1
Office premises are safe and secure (e.g., with security guard)					

C. Overall satisfaction

4. Overall, how satisfied or dissatisfied are you with the services provided by NIA? Please use this rating scale, 5 means very satisfied, 4 means satisfied, 3 means neither satisfied nor dissatisfied, 2 means dissatisfied and 1 means very dissatisfied. How would you rate NIA on the overall?

Very satisfied	5
Satisfied	4
Neither satisfied Nor dissatisfied	3
Dissatisfied	2

Very dissatisfied	1
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5. Why do you say that is (response in Q4) with NIA? What else? Any other reasons?

III. Information seeking and communication about challenges obtaining effectiveness of NIA services.

IA	SA	A	N	D	SD
I know about the services NIA provides to our association	5	4	3	2	1
I have the intention to participate in the activities of the NIA and our organization	5	4	3	2	1
The training and discussions helped me a lot to make our association a viable IA	5	4	3	2	1
I will join in paying the annual fee and cleaning the dam and canal when it is already operational.	5	4	3	2	1

6. What are your suggestions for the improvement of NIA services? What else? Anything else?

Thank you very much for your cooperation.

Documentation

