

Farmers' Satisfaction on National Irrigation Administration (NIA) Services in Sorsogon

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Abstract: Clientele satisfaction must be a vital concern to government offices. The farmer's satisfaction feedback has an immense significance to understand the level of service quality that NIA provides to its major stakeholders. This descriptive method of research utilized the triangulation of survey, unstructured interview, and field visit to determine the extent of farmers' satisfaction with NIA services in the province of Sorsogon. The one-page Farmer's Satisfaction Survey (FSS) had been administered to 45 randomly selected farmers identified through stratified sampling technique equally allocated to each of the Irrigator's Association (IA). Findings of the study revealed that the farmers are satisfied with NIA services specifically on the provision of quality technical advisory/support services, and quality construction/rehabilitation of irrigation facilities. There is no significant difference in the extent of satisfaction of farmers when grouped according to sex and IA. There is, however, a significant difference between the extent of satisfaction of the elder farmers and younger farmers, and farmers with higher yield than farmers with lower yield on specific mandated services. Furthermore, there is a significant difference in the extent of satisfaction of farmers on the equitable delivery and distribution of water irrigation when they are grouped according to stratum (upstream, midstream, downstream) and river irrigation system (RIS). The participatory program within and among the agency's stakeholders as an approach to improve the delivery of its services along water distribution, maintenance of irrigation facilities, capability building programs, information dissemination and other innovative projects should be explored.

KEYWORDS: *Farmer, Extent of Satisfaction, National Irrigation Administration (NIA), Services, Sorsogon*

INTRODUCTION

Customer satisfaction, according to Hom (2000), is the consumer's fulfillment response; it is a judgment of the product or service feature, or the product of service itself, provided a pleasurable level of consumption-related fulfillment, including levels of under- or over-fulfillment. Customer satisfaction is the direct manifestation of the customer's pleasure of the product or service delivered by the supplier or the organization.

Corporations and private companies use varied ways to track customer satisfaction. They directly contact customers, conduct surveys, establish customer hotlines, hold focus discussions, etc. They do all those to stay within

or ahead of the competition. But government offices tend to behave like monopolistic services. There are no competitions in most of government agencies. There are no rivals to compete ahead with. However, government offices are accountable to its clientele, the public; thus, clientele satisfaction should be a vital concern to government offices (Ong, 2002). In the field of agriculture, farmers' perspectives and inputs have usually been ignored. Elias, et.al, (2015) posits that evaluating farmer's satisfaction is highly important for many reasons. First, they are the beneficiaries. Second, they are the end user of the service. Third, the success of the agency's program depends on

their willingness to participate, which is a reflection of satisfaction.

NIA, formed under the provisions of the Republic Act 3601 or the NIA Act of 1963, is a government agency classified as a government-owned controlled corporation (GOCC) (House of Congress, 1963). NIA is primary responsible for irrigation development and management. One of the functions of NIA is to plan, design, construct and improved all irrigation systems and projects. It also operates, maintains and administers all national irrigation systems. It has also authority to charge and collect fees from the beneficiaries of the irrigation systems (NIA, n.d.).

The end-users or consumers of NIA services are the farmers who are essentially the lifeblood of the agency. Thus, being the major stakeholder, farmer's satisfaction feedback has an immense significance to understand the level of service quality that NIA provides. The satisfaction survey becomes a vital tool to measure the agency performance.

This study is founded on the performance agreement of NIA with the Governance Commission for GOCC (GCG) that draws NIA's commitment to increase productivity, income and customer satisfaction. NIA's strategy map observes the relevance of customer satisfaction as part of its success factors. It values customers' voice on its measure of performance.

The study focused on the farmers who are members of Irrigators' Associations (IA) under the National Irrigation System (NIS) of the NIA Sorsogon-Masbate Irrigation Management Office. Some Irrigators Associations are more self-administering and they are classified as Communal Irrigation System (CIS). CIS is formed when NIA has turned over the management of irrigation services to the IAs (Wijayaratna and Vermillion, 1994). Farmers under CIS are excluded in this study as they are more autonomous. Under NIA Sorsogon-Masbate Irrigation Management Office, there are only five Irrigators' Associations under the NIS; they are the Polot-Bulan IA, Somastaria IA, Aquilala IA,

Sandetarfab IA and John Peter IA. The first three are under the San Francisco River Irrigation System (RIS) and the other two are under The San Ramon RIS. They are all located in the town of Bulan, Sorsogon.

OBJECTIVES OF THE STUDY

This study determined the extent of farmers' satisfaction on the NIA services in Sorsogon. It also tested whether there is a significant difference in the extent of satisfaction of the farmers when grouped according to their profile in terms of age, sex, income, river irrigation system (RIS), irrigator's association (IA), and strata they belong. Comments and suggestions from the farmers to improve the services of NIA were also identified.

METHODOLOGY

This descriptive method of research utilized the triangulation of survey, unstructured interview, and field visit in gathering the needed data. The main instrument used in this study is the one-page Farmer's satisfaction Survey (FSS) along the nine specific services provided by NIA as part of their mandates to deliver its farmer-clientele. This was translated into the vernacular of Bulan, Sorsogon. The nine specific services includes cropping calendar planning and implementation, water delivery and distribution, equitability of water delivery and distribution, prompt action on request for the rehabilitation/construction of irrigation systems/projects, quality of construction of irrigation facilities and structures, prompt action on requests for technical and support services, quality of technical and support services, prompt action on requests for trainings and other capacity building programs, and quality of trainings and other capacity building program provided. The survey questionnaire has been subjected to further content and face validation of the three faculty members of the Sorsogon State College. Part one of the FSS includes the profile of the farmers in terms of their age, sex, income (average number of sacks yield per hectare), river irrigation system (RIS), irrigator's association (IA), and stratum (upstream,

midstream, downstream) they belong. The second part was their evaluation in terms of the extent of satisfaction along the nine services identified. The FSS also include spaces for remarks and suggestions to further improve the services of NIA in the province of Sorsogon.

The sample of the study was taken from the list of farmers who are active members and officers of the five duly-registered Irrigators Associations (IAs) from the two RIS in Bulan, Sorsogon namely; San Ramon and San Francisco. A stratified random sampling technique was used in the selection of the intended farmers ensuring the appropriate representative sample of the study. The San Ramon RIS is composed of Sandetarfab IA, Inc. and John Peter IA, Inc while San Francisco RIS composed of PolotBulan IA, Inc, Somastaria IA, Inc., and Aquilala IA, Inc. Each of the Irrigators Associations (IAs) has been stratified into upstream, midstream, and downstream. Three farmers were randomly selected in each stratum through lottery method to compose the selected nine farmers from each IAs. A total of 45 farmers was the sample of the study.

The survey was conducted on the last week of February to the first week of March 2017. It was supplemented with the unstructured interview for clarification of the responses provided by the farmers in the questionnaire. Field visit to the farm has been also conducted by the researchers for verification and validations of the claims presented by the farmers during the interview. The data gathered in the survey has been tabulated and organized.

Statistical tools such as frequency count, percentage, and F-test using one-way Analysis of Variance (ANOVA) were utilized to treat the data. Shutler (2002) described ANOVA as a general method for studying sampled-data relationships which enables to test the difference between two or more sample means to be

analyzed, achieved by subdividing the total sum of squares. The result is the same as the method of t-test for independent samples when comparing two different means (Ferguson, 1989) which considered this test as a special case of one-way ANOVA (Park, 2005). This justifies the statistical tool use in the study in testing for the difference of the level of satisfaction of the farmers when group according to their profile with two or more variable means.

RESULTS AND DISCUSSIONS

1. Extent of Farmers' Satisfaction on the Services Offered by NIA

Table 1 presents the extent of satisfaction of the farmers on NIA services. The farmers are *satisfied* on the eight out of the nine identified services of NIA such as on the compliance in the implementation of agreed cropping calendar (3.62), timeliness of delivery and distribution of irrigation water (3.67), equitable delivery and distribution of irrigation water (3.73), quality of construction/rehabilitation of irrigation facilities and structures (3.96), prompt action on requests for technical advisory/support services (3.67), quality of technical advisory/support services provided (3.82), prompt action on requests for trainings and other capacity building programs (3.82), and quality of trainings and other capacity building programs provided (4.09). On the other hand, the farmers are *moderately satisfied* in one of NIA's services which is the prompt action on requests for the rehabilitation/construction of irrigation systems/projects (3.29). Generally, the farmers are *satisfied* with the services offered by the NIA as shown by an overall weighted mean value of 3.74.

Table 1. Extent of Satisfaction of the Farmers along the NIA Services

Services	WM	Description	Rank
1. Compliance in the implementation of agreed cropping calendar	3.62	Satisfied	8
2. Timeliness of delivery and distribution of irrigation water	3.67	Satisfied	6.5
3. Equitable delivery and distribution of irrigation water	3.73	Satisfied	5
4. Prompt action on requests for the rehabilitation/ construction of irrigation systems/projects	3.29	Moderately Satisfied	9
5. Quality of construction/rehabilitation of irrigation facilities and structures	3.96	Satisfied	2
6. Prompt action on requests for technical advisory/support services	3.67	Satisfied	6.5
7. Quality of technical advisory/support services provided	3.82	Satisfied	3.5
8. Prompt action on requests for trainings and other capacity building programs	3.82	Satisfied	3.5
9. Quality of trainings and other capacity building programs provided	4.09	Satisfied	1
Overall	3.74	Satisfied	

Table 1 reveals that NIA provides quality, informative, and useful training and capacity building programs to the farmers, having the service with the highest mean. According to most respondents, though there may be delay on requests for trainings and capacity building programs, but when provided, they are undoubtedly very relevant. That same goes with the construction and rehabilitation of irrigation facilities; the table reflects that NIA also ensures quality in the construction and rehabilitation of irrigation facilities, although majority of respondents are moderately satisfied of the prompt action on requests for the construction and rehabilitation of such facilities. Respondents who left remarks on their score said that requests for repair/rehabilitation takes a long time to be responded and much less completed. It is also worth noting that although indisputably there are delays on NIA's action on requests for construction/rehabilitation, but some respondents chose to give a fair and satisfied score because they understand that delays are caused by extensive appropriations procedures and not of local NIA office inaction.

There were some respondents who expressed dissatisfaction on the equitable distribution of irrigation water. Respondents, particularly those from the downstream and the most remote from the water source, would say that irrigation water would not be enough when it reaches their field. However, some respondents stated that NIA cannot be held totally responsible for it; inequitable distribution most of the times are due to farmers' stubbornness to follow irrigation schedule. That same goes with compliance of following the cropping calendar. Most respondents remarked that some farmers choose not to comply with the calendar as they want to get either ahead of other strata or simultaneous with other IAs. On the other hand, some farmers are also unable to comply due to financial constraints, or the unavailability of funds to start planting.

The result is comparable with the study conducted by Gomo, Mudhara and Senzanje (2014) in Kwazulu-Natal, South Africa, which measured the satisfaction of farmers with the performance of Mooi River Irrigation. It was revealed that majority of farmers are satisfied with the irrigation services; major factors that

influenced farmers' satisfaction (other than their personal and professional profile) are trainings received on water management, fairness and timeliness of water distribution and the participation of farmers in the inspection irrigation infrastructure scheme. The International Research Group–Lebanon (2014) also conducted farmers' satisfaction survey for the irrigation services of Litani River Authority which revealed a parallel result with the present study that farmers were generally dissatisfied with the irrigation services due to untimeliness of water delivery.

2. Difference in the Extent of Farmers' Satisfaction when Grouped According to their Profile

Table 2 presents the extent of satisfaction of the farmers when grouped according to their age. The table further shows the F-value as test of difference at 0.05 level of significance. It is reflected in the table that the farmers differ significantly along two out of the nine services, which are compliance in the implementation of the agreed cropping calendar and provision of quality trainings and other capacity building programs, with a corresponding F-value of 3.687 and 2.502, respectively, which exceed the critical value of 2.456 at 0.05 level. These lead to the rejection of null hypothesis (H_0) of no significant difference.

The results indicate that the elder farmers and the younger farmers have significantly different level of satisfaction on the

compliance in the implementation of cropping calendar. The elders have a moderate level of satisfaction as compared to the younger farmers who are satisfied. This reflects that majority of the older farmers would opt not to comply with the cropping calendar. It can be inferred that they would stick to their traditional ways of farming. Whatever that has worked in years and decades of farming is what they believe that would work all the time. Furthermore, those elders in the age group 81-90 and those in the age group of 51-60 are moderately satisfied on the provision of quality trainings as compared farmers belong to other age group considered which is significantly different. It can be inferred that older farmers, with the length of experience in farming, are not anymore interested in the trainings and capacity building provided by the agency.

The overall results show that the age group 81-90 has the lowest satisfaction rate compared to the youngest age groups. According to Elias, et. al. (2015), older farmers are often less flexible and less willing to engage in a new and innovative activity due to fear of risk, in contrast to younger farmers who are more open and flexible to innovation and risks. This may however not agree with Terry and Israel (2004) statement that older farmers should be more satisfied with the services as they have better farm experience than the younger ones.

Table 2. Extent of Satisfaction of Farmers When Grouped According to Age

Services	Age (years)						F-value
	31-40 n=5	41-50 n=11	51-60 n=7	61-70 n=13	71-80 n=6	81-90 n=3	
1. Compliance in the implementation of agreed cropping calendar	3.60	4.36	4.00	3.23	3.17	2.67	3.687*
2. Timeliness of delivery and distribution of irrigation water	3.60	4.18	3.29	3.77	3.50	2.67	1.266
3. Equitable delivery and distribution of irrigation water	3.20	4.18	3.29	4.00	3.83	2.67	1.622
4. Prompt action on requests for the rehabilitation/ construction of irrigation systems/projects	3.80	3.18	3.14	3.31	3.50	2.67	0.390
5. Quality of construction/ rehabilitation of irrigation facilities and structures	4.00	4.09	4.00	3.92	4.00	3.33	0.236
6. Prompt action on requests for technical advisory/support services	3.80	3.73	4.00	3.77	3.50	2.33	1.526
7. Quality of technical advisory/ support services provided	4.20	4.00	4.00	3.85	3.50	2.67	1.611
8. Prompt action on requests for trainings and other capacity building programs	4.40	4.36	3.14	3.92	3.33	3.00	2.038
9. Quality of trainings and other capacity building programs provided	4.00	4.55	3.29	4.15	4.50	3.33	2.502*
Overall	3.84	4.07	3.57	3.77	3.65	2.81	1.597

*Significant at $\alpha = 0.05$, $F_{crit} = 2.456$

When grouped according to farmers' sex, table 3 shows the extent of their satisfaction. It can be seen from the table that all computed F-value along the nine NIA services are within the critical value of 4.067 when tested at 0.05 level of significance. This means that the farmers did not differ significantly in their extent satisfaction on NIA services when grouped according to sex. Regardless of sex, the farmers have the same level of satisfaction on the services provided by NIA. This result shows that both genders embrace similar perspective in terms of the services they receive from the

agency. It shows that gender is apparently not a factor in the perception of farmers' satisfaction.

Table 3. Extent of Satisfaction of Farmers When Grouped According to Sex

Services	Male n=38	Female n=7	F-value
1. Compliance in the implementation of agreed cropping calendar	3.63	3.57	0.023
2. Timeliness of delivery and distribution of irrigation water	3.68	3.57	0.062
3. Equitable delivery and distribution of irrigation water	3.74	3.71	0.002
4. Prompt action on requests for the rehabilitation/ construction of irrigation systems/projects	3.26	3.43	0.110
5. Quality of construction/rehabilitation of irrigation facilities and structures	3.97	3.86	0.072
6. Prompt action on requests for technical advisory/support services	3.71	3.43	0.511
7. Quality of technical advisory/support services provided	3.89	3.43	1.659
8. Prompt action on requests for trainings and other capacity building programs	3.87	3.57	0.400
9. Quality of trainings and other capacity building programs provided	4.11	4.00	0.071
Overall	3.76	3.62	0.224

*Significant at $\alpha=0.05$, $F_{crit} = 4.067$

When grouped according to farmers' income in terms of the number of sacks yield per hectare, table 4 presents their extent of satisfaction. It can be noted from the table that all computed F-value are within the critical value of 2.833 except the prompt action on requests for technical advisory/support services with a computed F-value of 2.900 which exceeds the critical value at 0.05 level of significance. This means that farmers differ significantly in their extent of satisfaction along this NIA services when grouped according to their income in terms of number of sacks yield per hectare. Those with lesser yield are moderately satisfied with the prompt action on requests for technical advisory/support services while those with higher yields are highly satisfied along these services.

This implies that those farmers who acquired high yield per hectare are being able to receive prompt and quality technical advisories

and support services from NIA. Inversely, it can be also inferred that those who received prompt and quality technical advisory/support services produce better yield. The support services provided by NIA include pests and diseases management, fertilizer management, rice variety management among others.

The table also reveals that farmers who produced the highest yield have the higher satisfaction. Respondents who had an estimated yield of 240 sacks and above scored the highest customer satisfaction rate, while the lowest yield, on the other hand, had the relatively lowest recorded satisfaction score. This result may apparently be easy to understand as the increase in the yield translates into the increase in farmers' satisfaction. This result also confirms the statement of Gomo, Mudhara, and Senzanje (2014) that farmers, who are more satisfied with the irrigation services, endeavor to achieve optimum management of their resources, compared to their counterparts.

Table 4. Extent of Satisfaction of Farmers When Grouped According to Income

Services	Number of Sacks Yield per Hectare				F-value
	81-160 n=5	161-200 n=23	201-240 n=13	241-above n=4	
1. Compliance in the implementation of agreed cropping calendar	3.20	3.43	3.85	4.50	2.113
2. Timeliness of delivery and distribution of irrigation water	4.00	3.52	3.54	4.50	1.148
3. Equitable delivery and distribution of irrigation water	3.60	3.43	4.08	4.50	1.688
4. Prompt action on requests for the rehabilitation/ construction of irrigation systems/projects	3.00	3.39	3.15	3.50	0.236
5. Quality of construction/rehabilitation of irrigation facilities and structures	3.60	3.78	4.31	4.25	1.004
6. Prompt action on requests for technical advisory/support services	3.00	3.61	3.69	4.75	2.900*
7. Quality of technical advisory/support services provided	3.20	3.78	3.85	4.75	2.542
8. Prompt action on requests for trainings and other capacity building programs	3.80	3.83	3.69	4.25	0.234
9. Quality of trainings and other capacity building programs provided	3.80	4.17	4.00	4.25	0.278
Overall	3.47	3.66	3.79	4.36	1.312

*Significant at $\alpha=0.05, F_{crit} = 2.833$

When grouped according to the farmers' RIS, there are four out of the nine NIA services that farmers differ significantly in their level satisfaction (shown in Table 5). These are services on equitability of water delivery and distribution, prompt action on requests for rehabilitation/construction of irrigation systems, quality of rehabilitation/construction of irrigation facilities, and quality of technical advisory/support services with the corresponding F-value of 6.473, 8.855, 4.220 and 6.931, respectively, all exceed the tabular value of 4.067 at 0.05 level.

Using the overall mean, the farmers significantly differ in their level of satisfaction when grouped according to the RIS they belong. This could be

supported by the computed F-value of 6.919 which is greater than the critical value of 4.067 at 0.05 level of significance. This means that farmers who belong to San Ramon RIS are more satisfied with NIA services than those who belong to San Francisco RIS. Table 5 illustrates that San Francisco RIS has an evident concerns on equitable distribution of irrigation water, prompt action on requests for construction/rehabilitation, quality of construction/rehabilitation and quality of technical advisory and support services.

Table 5. Extent of Satisfaction of Farmers When Grouped According to RIS

Services	River Irrigation System (RIS)		F-value
	San Ramon n=18	San Francisco n=27	
1. Compliance in the implementation of agreed cropping calendar	3.89	3.44	2.386
2. Timeliness of delivery and distribution of irrigation water	4.00	3.44	2.945
3. Equitable delivery and distribution of irrigation water	4.22	3.41	6.473*
4. Prompt action on requests for the rehabilitation/ construction of irrigation systems/projects	3.89	2.89	8.855*
5. Quality of construction/rehabilitation of irrigation facilities and structures	4.33	3.70	4.220*
6. Prompt action on requests for technical advisory/support services	3.89	3.52	1.654
7. Quality of technical advisory/support services provided	4.22	3.56	6.931*
8. Prompt action on requests for trainings and other capacity building programs	4.06	3.67	1.278
9. Quality of trainings and other capacity building programs provided	4.17	4.04	0.198
Overall	4.07	3.52	6.919*

*Significant at $\alpha=0.05, F_{crit} = 4.067$

According to the NIS IA Profile report by NIA Sorsogon-Masbate Irrigation Management Office as of December 2015, the San Francisco RIS covers a field area which is 580 hectares serving three IAs with about 856 farmer-beneficiaries and a 17.6 km length of canal. In other words, San Francisco RIS serves 30% wider farm area, 24% longer canal and 12% more farmers than the San Ramon RIS, with only two IAs under its water source. These make the latter RIS more manageable than the former. Furthermore, the San Francisco RIS has only about 31% of lined (concretized) canals while about 69% is still unlined (earthen), compared to San Ramon RIS that is about 48% lined (NIA Sorsogon-Masbate IMO, 2015). Consequently, prompt action on requests for the rehabilitation/construction of irrigation facilities has shown significant difference on RIS.

The overall satisfaction shows that San Francisco RIS has a relatively lower satisfaction rate than San Ramon RIS. The apparent condition and scope of San Francisco in terms of the area and the number of clientele cause the water distribution unstable as compared to another RIS. Gomo, Mudhara and Zensanje (2014) revealed in their study of farmers' satisfaction at Mooi River Irrigation System that fairness in irrigation distribution makes farmers satisfied with the whole irrigation services.

Table 6 shows the extent of satisfaction of the farmers when grouped according to the Irrigator's Association (IA) they belong. It is reflected in the table that all computed F-value are within the critical value of 2.606 at 0.05 level. This means that the farmers did not differ significantly in their satisfaction level along the identified nine services of NIA. When grouped

according to RIS, there is a significant difference; but when broken down into IAs, significant difference was not apparent. It can be observed that IAs provide similar rating according to their RIS. John Peter IA and Sandetarfab IA reflected close similar ratings, as well as, the latter three. Hence, significant difference did not manifest among IAs.

water delivery and distribution with a corresponding computed F-value of 4.356 and 3.660, respectively, which are higher than the critical value of 3.220 at 0.05 level. Those farmers belong to upstream are more satisfied with these services than those belong to midstream and downstream. It is apparent that those who are close to the water source (upstream) are more satisfied than those who are remote (midstream and downstream). It is also expected that timeliness of water delivery and

Table 6. Extent of Satisfaction of Farmers When Grouped According to IA

Services	John Peter n=9	Sandetarfab n=9	Aquilala n=9	Polot n=9	Somas-taria n=9	F-value
1. Compliance in the implementation of agreed cropping calendar	3.89	3.89	2.78	3.44	4.11	3.328
2. Timeliness of delivery and distribution of irrigation water	4.00	4.00	3.33	3.56	3.44	0.734
3. Equitable delivery and distribution of irrigation water	4.00	4.44	3.22	3.56	3.44	1.856
4. Prompt action on requests for the rehabilitation/ construction of irrigation systems/projects	3.89	3.89	2.89	3.11	2.67	2.267
5. Quality of construction/ rehabilitation of irrigation facilities and structures	4.22	4.44	3.56	3.78	3.78	1.113
6. Prompt action on requests for technical advisory/support services	3.78	4.00	3.33	3.33	3.89	0.976
7. Quality of technical advisory/ support services provided	4.11	4.33	3.33	3.44	3.89	2.349
8. Prompt action on requests for trainings and other capacity building programs	4.00	4.11	3.44	3.67	3.89	0.477
9. Quality of trainings and other capacity building programs provided	4.22	4.11	4.22	4.11	3.78	0.312
Overall	4.14	4.01	3.65	3.56	3.35	1.905

*Significant at $\alpha=0.05$, $F_{crit} = 2.606$

The extent of satisfaction of farmers when grouped according to stratum they belong is shown in table 7. It can be gleaned from the table that the farmers differ significantly in their level of satisfaction on timeliness of water delivery and distribution and equitability of

fairness of distribution are the key concern of those in the downstream and the midstream. There were some respondents who remarked that farmers in the upstream strata over-use the water and would disregard delivery schedule, particularly during dry season.

Table 7. Extent of Satisfaction of Farmers When Grouped According to Strata

Services	Upstream n=15	Midstream n=15	Downstream n=15	F-value
1. Compliance in the implementation of agreed cropping calendar	4.07	3.33	4.47	2.670
2. Timeliness of delivery and distribution of irrigation water	4.27	3.20	3.53	4.356*
3. Equitable delivery and distribution of irrigation water	4.33	3.47	3.40	3.660*
4. Prompt action on requests for the rehabilitation/ construction of irrigation systems/projects	3.67	3.13	3.07	1.136
5. Quality of construction/rehabilitation of irrigation facilities and structures	4.20	3.80	3.87	0.622
6. Prompt action on requests for technical advisory/support services	3.73	3.67	3.87	0.172
7. Quality of technical advisory/support services provided	3.93	3.80	3.73	0.191
8. Prompt action on requests for trainings and other capacity building programs	4.13	3.87	3.47	1.333
9. Quality of trainings and other capacity building programs provided	4.40	4.00	3.87	1.300
Overall	4.08	3.59	3.56	2.567

*Significant at $\alpha=0.05, F_{crit} = 3.220$

This agrees to the study of Gomo, Mudhara and Zensanje (2014) that at many times fairness and timeliness of water distribution is missed due to farmers' inability to follow the schedule prescribed in the general agreement. Downstream farmers experience limited water supply due to upstream farmers' inability to stick to water schedules. They hypothesized that farmers are more likely to be satisfied with the irrigation service when the water supply increases in their prescribed schedule.

3. Suggestions Offered by the farmers to Further Improve Services of NIA in Sorsogon

Table 8 provides the comments and suggestions offered by the farmers to further improve the services of the NIA in Sorsogon. The two most frequent suggestions provided by respondents are the construction/concretization

of canals and rehabilitation/repair of canals. Majority of respondents explicitly stressed on the improvisation of canals. They stated that if canals are lined and repaired, water effluence will improve; and consequently, inadequate distribution of water will be of less concern. Respondents said that with earthen canals, grasses and undesired plants easily grow, wastes and garbage are indiscriminately disposed and potholes are ubiquitously made; these obstruct irrigation flow and impede equitable water distribution.

These suggestions made by respondents confirm the 2015 report of irrigation inventory in the two RIS. The 2015 inventory of canals stated that only 39% of canals are lined (or concretized) and 61% are still unlined. That same report also stated that condition of most of the lined canals is dilapidated; thus, they critically need rehabilitation (NIA Sorsogon-Masbate IMO, 2015).

Table 8. Suggestions to Further Improve Services of NIA

Suggestions	f	%
1. Construction & concreting of canals	12	27
2. Rehabilitation & repair of canals	11	24
3. Maintain cleanliness of canals	6	13
4. Adherence to water distribution schedule	5	11
5. Reinstate & add water/ditch tenders	5	11
6. Lower service rates & fees	4	9
7. Widen & improvise water gates & turn-outs	3	7
8. Provide sufficient water supply	3	7
9. More active 'IA' to maintain canals & monitor water distribution	2	4
10. Availability of heavy equipment	1	2
11. NIA conducts info dissemination to residents to maintain cleanliness	1	2
12. Prompt release of funds for repair requests	1	2
13. Provide more trainings/seminars to improve production	1	2
14. Rehabilitation of NIA service roads	1	2
15. Repair of NIA local offices	1	2
16. Update NIA records on old accounts	1	2

The third most frequent suggestion is the cleanliness of canals. Some respondents address this concern to the agency as they deem it is part of its obligation to maintain canal cleanliness. On the other hand, some address this to themselves and their IAs as part of their task. They, however, mutually understand that when canals are maintained, irrigation will be optimized. There seems to be a diverse understanding on whose obligation is it to maintain the canals' cleanliness. Irrigation Management Transfer (IMT) contract between NIA and IAs stipulates that it is the IAs responsibility to maintain the canal. Section E of the said contract, entitled Specific Responsibilities of the Parties, state that lateral and some portion of main canals within the IA area are part of the responsibility of the IA. It also covers the periodic & routine maintenance of canals, manual removal of silts, cutting of vegetation, clearing of debris, etc. (IMT Contract NIA-Sandetarfab IA, 2013).

Adherence to water distribution schedule and reinstatement of water/ditch tenders come fourth and fifth of the most

frequent suggestions. Adherence to schedule is more of a concern with peers. Respondents said that most farmers particularly in the upstream and midstream do not follow the irrigation schedule particularly during dry season. Hence, some respondents suggest reinstating water/ditch tenders in order to monitor irrigation activity of the farmers and avoid non-compliance. The tasks of water/ditch tenders, however, are already relegated to the IAs. In the IMT Contract of NIA with IAs, monitoring of equitable distribution and resolving water-related conflicts among farmers are already part of IA responsibility (IMT Contract NIA-Sandetarfab IA, 2013). The empowerment given by NIA to IAs is part of the Participatory Approach Program of the agency which involves major stakeholders such as farmers and IAs in all phases of irrigation endeavor (Ofrecio, 2005).

Further suggestions such as improving irrigation facilities, providing enough water supplies, more active IAs and other recommendations with lower frequency are related to improvisation of irrigation facilities. What can be drawn from these suggestions is that farmers would be certainly satisfied if they

get fair and sufficient irrigation service that would optimize their yield. After conducting a citizen satisfaction survey, Public Service Commission of South Africa posits that farmers are highly satisfied with services that have tangible, reliable and accessible dimensions (Public Service Commission, 2007). This contention can be applied to NIA services; when services are tangible, that is having concrete and improved canals; when services are reliable, that is having sustained equitable water supply; and when services are accessible, that is having easy access to irrigation facilities; farmers will be highly satisfied of the overall services of the agency.

CONCLUSIONS AND RECOMMENDATIONS

The foregoing discussions of results deduced that the farmers—particularly NIS—are satisfied of the NIA services in Sorsogon. The NIA provided their clientele with quality trainings and capability building programs, quality technical and advisory support services, and quality construction or rehabilitation of irrigation facilities (despite the delayed action on requests for the improvement of the irrigation systems). The farmers' participation in the planning and implementation of the programs and services of NIA creates harmonious relationship and shares their experiences among them. There is a significant difference between the extent of satisfaction of the elder farmers and younger farmers on the provision of NIA capability building program and compliance in the implementation of agreed cropping calendar. Farmers with high yield have significantly high satisfaction on action on requests for technical advisory and support than those with lower yield. Male and female farmers have common level of satisfaction on the mandated services of NIA. There is no significant difference in the extent of satisfaction of farmers when grouped by IA. However, there is a significant difference in the extent of satisfaction of farmers on the equitable delivery and distribution of water irrigation when they are group according to

stratum and RIS. The timeliness of delivery and distribution of irrigation water is also significantly different among strata (upstream, midstream, downstream). Furthermore, the San Ramon RIS farmers are significantly more satisfied than the San Francisco RIS farmers on the NIA services.

In order to further improve the NIA services in Sorsogon, it is recommended to allocate funds for the total rehabilitation and construction of the irrigation system especially in San Francisco RIS. The NIA could explore a multi-agency financial support to sustain the compliance in terms of water distribution, maintenance of irrigation facilities, and capability building programs for the farmers. Programs on reforestation and proper waste disposal should be strengthened, initiated, and conducted by NIA through a collaborative effort among the government agencies such as DENR, DA, SUC, DepEd, LGU etc with the support from the non-government organizations, civil societies, private individuals, and concerned citizens. Simultaneous planting within the IAs and rotational method of planting between and among IAs should be explored especially during dry season to minimize problems on delivery of water distribution. Information dissemination of each innovative programs, projects, and services of NIA should be strengthened with the support from the concerned IAs and LGU. These recommendations would enhance the participatory program within and among the agency's stakeholders as an approach to improve its services.

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