

THE STUDY ON KNOWLEDGE LEVELS OF NATIONAL WATER RESOURCES POLICY

Consultancy Report Submitted to the Water Resources Secretariat
Colombo

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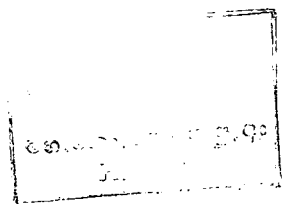


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Executive Summary

The proposed national water resources policy ensures rationalistic utilization of water resources among different water users. It is instrumental in allocating limited water resources in an effective, efficient and equitable manner for meeting present and future social, economic and environmental needs of the people. However, currently, the proposed policy is being seriously criticized by various stakeholders, ranging from domestic water user to ruling politicians although it has been screened through a public consultation process at the policy formulation stage. As a result, the policy planners are now in a process of rechecking the reactions of stakeholders to the policy through a research-oriented approach. Hence, the objective of this survey research is to ascertain the degree of knowledge of stakeholders on the policy, to determine any agitation, excitements, concerns or grievances on the contents of the policy and to recommend remedial measures for smooth implementation of proposed policy.

The study was conducted in four administrative districts namely Hambantota, Kurunegala, Polonnaruwa and Kandy. Sample sites were selected to represent farmers from major irrigation schemes, minor irrigation schemes, anicut schemes, groundwater irrigation and domestic water users. A sample of officers was also selected from all four districts representing grass root level, middle level and high level officials.

The findings of the study show that, only 43% of the general farmers and 54% of the farmer representatives have heard about the proposed new water policy. Among the domestic water users, only about 30% of users were aware about the policy. Findings also show that awareness among officers varies from 72% to 100%. The low awareness rate represents grass root level officials and the upper level represents high-level government officials. The study reveals that level of awareness of people increases with the increased level of educational standards. There is no notable variation on awareness among the people who represent different irrigation schemes of the sample such as major, minor or anicut systems. However, level of awareness of Agro-well farmers are considerably high when compared to that of the surface irrigation farmers. The lowest awareness on the policy was reported by the domestic water users. The

degree of awareness on the policy shows a notable difference between tail end farmers and head end farmers.

The main modes of information for farmers on proposed policy were informal sources such as hearsay/rumours/gossips etc. and political propaganda campaigns. The domestic water users and state officials have received the message mainly from print and electronic media. Less than 14% of the officers have obtained information on the policy from official meetings and discussions. Five percent and 17% of state officials in Hambantotata and Kurunegala districts respectively said that they have read the policy document but none of the officials of Polonnaruwa and Kandy stated this.

Although a large number of stakeholders - farmers, state officials and domestic water users claimed for awareness of the policy, they were truly ignorant on the actual contents of the proposed policy. Most of the stakeholders mentioned that strategies embedded in the water resources policy included imposing taxes; fixing meters for irrigation sources, fixing meters for wells, registration of household wells/agro wells, vesting of ownership of water resources by the state, privatization of water resources, and issuing permits or transferable permits for water users. About 70% of irrigation farmers, 85% of agro-well farmers, 96% of domestic water users and 60% of state officials viewed that the proposed policy consisted of taxing for water/irrigation water. Notable variations of knowledge on the contents were not found among different districts and among different stakeholders. About 31% of the farmers, 24% of the grass root level officials and 21% of the middle level officials stated that there were no positive aspects in the proposed policy. Highest majority of the high-level officials (58%) declared that they were not aware of positive aspects of the policy. Majority of stakeholders were not in a position to differentiate national water resource policy from rumor-based, water tax mechanism. Proposed water resource policy has become a tax phobia among stakeholders. Therefore, negative reactions shown by the stakeholders to the proposed policy were entirely based on hypothetical policy devices but not actual contents of the policy.

The main drawbacks identified in the process of policy formulation and policy dissemination adopted in the past were, top down approach and lack of transparency even among the highest strata of government officials. As a result, the actual content of the policy was interpreted and distorted in various manner by media (print and electronic), politicians and NGO's based on their own knowledge, assumptions and goals. The shape of the existing knowledge of sample stakeholders is basically characterized by various unauthentic sources. This includes rumors/gossips, political speeches, and imperfect information compiled by neighbors, media and NGOs.

Considering the above, it is advisable educating farmers at the grass root level on conducting field level discussions. It is also required obtaining participation of field level officials for these meetings too. In addition various stakeholders have suggested that there is a need to build a sound awareness on water resources policy in Sri Lanka through a cluster of strategies. This consisted of application of electronic and print media, educating grass-root level officials; building awareness through school children; appointing an independent organization to educate target stakeholders such as politicians, farmers, state officials, domestic water users etc. It is also necessary to conduct regional level workshops for inviting all stakeholders mentioned above to build correct and sound awareness among them by discussing all issues comprehensively. In order to formulate these strategies, it is recommended that an independent research institute or an organization be assigned.

CHAPTER 1

Background, Research Problem and Objectives of the Study

1.1 Introduction

In many parts of the world, water related problems and conflicts have become extremely acute and even critical. Sri Lanka also experiences substantial water shortages resulting mainly from mismanagement of water resources. Most of the dry zone districts in Sri Lanka are already facing either seasonal or year round severe water scarcities (Amarasinghe *et-al* 1999). As fresh water is becoming scarce, competition has arisen between irrigation water users and other water users including domestic, industrial, environment and social.

Considering the above situation and after decades of water waste, water pollution, and inability to provide basic water services to the poor, Government of Sri Lanka (GOSL) introduced the National Water Resources Policy and Institutional Arrangements in March 2000. The objective of this policy is to ensure the rational use of water resources in an effective, efficient, and equitable manner, consistent with social, economic and environmental needs of present and future generations.

The objectives of the water resources policy will be achieved through the application of various approaches components, which will be implemented through the new water policy act. The major components of the policy are the provision of water right to users and competitive allocation of water to various sectors (domestic, industrial, hydro power generation, irrigation, environmental and social water use), regulation of ground water extraction and its' allocation, demand management of water resources, management of water sector data and establishment of new institutional structure for water resources management. The proposed administration for the water resources management sector will comprise mainly of three entities namely National Water Resources Authority (NWRA), Water Resources Council (WRC) and Water Resources Tribunal (WRT).

It is expected that additional component of water resources policy will be developed in future for river basin planning and management, drought management and flood control, water resources development and financing and water quality management.

1.2 The Problem

The “National Water Resources Policy and Institutional Arrangement”, which was approved by the cabinet in March 2000, consisted of comprehensive aspects of water resource management including water allocation principles and institutional arrangements for future water resources management. Though there were public consultations prior to approval of the policy as cited by the Water Resources Secretariat (WRS), certain phrases and sections of the policy were criticized by interested parties including environmental groups, NGOs and politicians alike. Some of the contentious issues highlighted by those opposing the policy were, ownership of water, introduction of a water tax, transferable water entitlements and charging a levy for domestic wells. As a result of these concerns, WRS amended the National Water Resources Policy and Institutional Arrangement, incorporating the comments and suggestions given by the public. Therefore, the current Policy document is a revised version of the National Water Policy approved by the cabinet in March 2000. According to these amendments the “Water Resources Authority Act” or the Water Legislation was also amended. The present available document is the fifth revision of the “draft act”.

The Present study envisages obtain the views of different stakeholders on the “issues of concern” in the water policy so that WRS can conduct the proposed public campaign more effectively. The present stakeholder survey identifies issues of concern among different stakeholders and proposes strategies for effective consultations.

1.3 Objectives and Scope of the Study

The major objective of this study is to find out the degree of awareness of the contents of national water resources policy by different stakeholders and their positive and negative concerns of the same. The specific objectives are;

1. To understand the perceptions of stakeholders on the National Water Resources Policy.

2. To identify the concerns raised by different stakeholders and its positive and negative effects with respect to water resources development in Sri Lanka.
3. To identify the target groups for further consultation.
4. To propose the strategies that will suit for future public consultation with different stakeholder groups.
5. To develop an effective communication strategy to disseminate the National Water Resources Policy to all stakeholders.

This study was focused mainly on the following stakeholders, namely surface irrigation farmers, ground water farmers, ground water users for domestic needs, pipe born water users, and state officials attached to water related sector.

1.4 Methodology

1.4.1 Study Locations and Justification for Selection

The study areas for this project were selected from Polonnaruwa, Kurunegala, Kandy and Hambantota. These districts represent dry zone, intermediate zone, wet zone and dry/arid zone respectively. Study site selection within the district was based on different water regimes (major irrigation, minor irrigation, ground water irrigation etc.), various cropping systems (dry zone cash crop production, up country vegetable production, low country paddy cultivation, fruits crops cultivation etc.) and different types of domestic water users (domestic well, pipe born water supply schemes). A reconnaissance survey was done at the beginning of the study to select representative study locations in different districts.

The selected sites and reason for the selection are given in table No. 1.1.

Table No. 1.1 Locations of the Sample Sites

District	Location	Type of Water Source	Major Crops	Reason for the Selection
Kandy	Marassana	Minor irrigation	Vegetable/paddy	High potential upcountry vegetable growing area based on irrigation water
	Murapola	Anicut type irrigation scheme	Paddy	It represents anicut type major scheme for paddy cultivation
	Kundasale	Pipe born water supply scheme	-	Kundasale is sub urban area, where drinking water is provided for limited number of days due to scarcity of water
Kurunegala	Ihalawewa at Bathalagoda	Minor irrigation	Paddy	The irrigation system is depend on both rainfall and the water issue from Bathalagoda major irrigation system
	At Ibbagamuwa	Minor irrigation	Paddy	The irrigation system is entirely depend on rainfall
	Kobaigane	Agro-wells	OFC	The area represents the cultivation of cash crops and OFCs using groundwater
	Kurunegala - Dambulla Road (within municipal limit)	Pipe born water supply	-	The area represent the urban drinking water supply scheme
Hambantota	Muruthawela (Head End)	Major irrigation scheme	Paddy/OFC	Muruthawela is a water scarce major irrigation schemes where, bethma cultivation is practiced every season
	Muruthawela (Tail End)	Majors irrigation schemes + Community rural drinking water supply schemes	Paddy/OFC	In addition to the above reasons, this area consisted of rural water supply scheme which is constructed and managed by the community
	Kirindi-oya - New system, Tail end, Tract 3 D ₉	Major irrigation scheme	Banana	Water scarce major irrigation scheme, where, farmers cultivate Banana in both seasons using water efficiently
	Lunugamwehara – old system, Weeravila tank, DC ₅	Major irrigation scheme	Paddy	Water is available in both season for paddy cultivation
Polonnaruwa	Parakrama Samudraya (Head End)	Major irrigation scheme	Paddy	Water sufficient major irrigation scheme, which is also fed by a river diversion project (Mahaweli)
	Parakrama Samudraya (Tail End)	Major irrigation scheme	Paddy	- do -
	Hingurakgoda	Agro-well	OFC	Potential area for the ground water irrigation

1.4.2 Sample Size

Sample for the investigation was limited to the selected sample sites given in table No. 1.1. Stratification was done in major irrigation schemes in order to represent the head end, and tail end of the system. One Distributory Canal Organization (DCO) from head end, one DCO from tail end was selected from each major irrigation system. About 25% of the total population of sample DCO was selected randomly for the detailed survey. The sample for the pipe born water supply scheme was selected by choosing a street, which is covered by the water supply scheme and 25% of the water consumers were selected randomly for the study.

In addition, around 20 officers at various levels were selected from each district representing agriculture, agrarian, irrigation, drinking water supply and district and divisional level administrative decision makers. The selected officers are categorized into three groups namely, grass root officials, middle level officials and high level officials. The selected grass root officials include, Samurdhi Development officers, Agricultural Research and Production Assistants (formerly Govi Niyamaka), Grama Niladhari and Work Supervisors (Irrigation). The middle level officials are namely, Irrigation Project Manager, Institutional Development Officers (IDOs), Technical Assistant (TAs), Divisional Officer (DOs), Agricultural Instructors (AI), Agricultural Officers (AO), Deputy Project Managers, Block Managers (Mahaweli), Community Development Officers, and ADA Managers. The top level official selected are, District Secretary, Divisional Secretary, Additional Divisional Secretary, Irrigation Engineer, Deputy Director/Irrigation, Assistant Commissioner/ Agrarian Services, District Land Development Officer, Planning Engineers, Additional Superintendent /water supply and Drainage Board and District Irrigation Engineer. The details of the sample size are given in table No. 1.2.

Table No. 1.2 Distribution of Sample

District	Location	Sample Size (Farmers/Domestic Water Users)	State Officials
Kandy	Marassana	30	18
	Murapola	30	
	Kundasale (Pipe born water)	35	
Kurunegala	Ihalawewa	23	21
	Neligamawewa	42	
	Kobaigane (Agro-well)	28	
	Kurunegala Municipality (Pipe born water)	33	
Hambantota	Muruthawela–Head End (Tract 2, D ₆)	32	22
	Muruthawela–Tail End (Tract 3, D ₉)	31	
	Kirindi-oya – Head End (Old system) Weeravila tank, Gonagama, Tissamaharama	30	
	Kirindi oya – Tail End (New system), Left Bank, Tract 4	27	
Polonnaruwa	Parakrama Samudraya – Head End, D ₂ , Veera Parakrama FO	30	20
	Parakrama Samudraya – Tail End BOP 317, Thalpota FO	30	
	Hingurakgoda – Agro wells	22	
	TOTAL	423	

1.4.3 Data Collection Techniques

Information of quantitative nature was generated from a brief questionnaire administered to farmers, domestic water users and state officials. Construction of questionnaire was based on the observations of preliminary field visits and of discussions among the research team and with client researchers. Information of qualitative nature was generated basically on observations, opinion inquires, semi-structured interviews, informal conversations and on unconventional sources. In other words, information of this investigation was not limited only to traditional sources of information but to non-traditional sources, that led to obtaining exploring more valuable and useful insights about the proposed water policy.

1.5 Limitations of the Study

The following limitations were encountered in undertaking this study.

1. The total duration given for the project was 75 days including preparatory works, literature review and field data collection. The given period was not sufficient to conduct an in-depth study to further examine the concerns raised by different stakeholders.
2. The site selection was limited to selected water regimes in each district. The sample sites also were limited in major irrigation schemes to one DCO in head end and tail end respectively which is not sufficient considering the large command area, large number of farming population with different sets of socio-economic parameters in these schemes.

Table No. 2.1 Awareness on Water Policy among Farmers

District	Hambantota				Kurunegala				Polonnaruwa				Kandy			
	Yes		No		Yes		No		Yes		No		Yes		No	
Awareness	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Number of Respondents																
General Farmers	39	41	57	59	45	51	44	49	35	49	37	51	14	28	36	72
FRs	15	63	09	37	02	50	02	50	06	60	04	40	02	25	06	75
Total	54	45	65	55	47	51	46	49	41	50	41	50	16	28	42	72

2.1.2 Awareness among Domestic Water User

Survey of domestic water consumers of the National Water Supply and Drainage Board in Kurunegala and Kandy indicates that, 67% and 68% of users in respectively are not aware of the proposed National Water resources policy. A point, which should be noted, is that although the proposed policy has more concern and priority in allocating water for domestic needs by competitive allocation of water among sectors the message has not reached the beneficiaries.

2.1.3 Awareness of Government officials

The findings on awareness of the proposed policy among the state officials are given in table No. 2.2. According to the findings, all high level officials have heard about the proposed policy and proportion of awareness decrease at the bottom category of officials. Among the grass root level officials, who are directly involved with the people 25% are not aware about the proposed policy. At the same time 100% of the state officials including all categories, who have heard about the policy from all sample districts accepted that, there must be a proper national water resources policy to manage the water resources of the country.

Table No. 2.2 Awareness on Water Policy among Government Officials

Awareness	Awareness on Water Policy			
	Awareness		Non awareness	
	No.	%	No.	%
Number of respondents				
Grass root level officials	21	72	8	28
Middle level officials	28	82	5	18
High level officials	18	100	0	0

2.2 Relationship between selected socio-economic factors and knowledge on water resources management policy

2.2.1 Age

Table No. 2.3 shows the relationship between different age groups of the non-officer stakeholders (farmers and domestic water users) and the awareness of the proposed policy was examined. The findings illustrates that, the age group of over 60 years is the group that is least aware of the policy. Although there are no considerable differences in the level of awareness among the other age groups of the users, the age group of 30-40 years shows a higher level of awareness compared to rest of the age groups in all districts except in Kandy district.

Table No.2.3 Relationship between age and awareness

Age Group	Awareness of Proposed Water Policy															
	Hambantota				Kurunegala				Polonnaruwa				Kandy			
	Aware		Not aware		Aware		Not aware		Aware		Not aware		Aware		Not aware	
	No.*	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
20-30	03	60	02	40	03	43	04	57	02	50	02	50	02	33	04	67
30-40	14	67	07	33	11	50	11	50	09	64	05	36	08	31	18	69
40-50	18	47	20	53	20	48	22	52	17	57	13	43	13	43	17	57
50-60	12	55	10	45	17	50	17	50	10	38	16	62	01	05	19	95
> 60	07	21	26	79	07	33	14	67	02	29	05	71	05	38	08	62

No.* = Number of respondents

2.2.2 Education

The majority of the non-officer stakeholders' level of education is in the range of year 5-11 (less than G.C.E. O/L qualification). According to the study findings, the proportion of the people who have heard about the proposed policy has been increasing with increasing level of education (Table No. 2.4)

Table No. 2.4 Relationship between level of education and awareness on water policy

District Awareness	Awareness of Proposed Water Policy															
	Hambantota				Kurunegala				Polonnaruwa				Kandy			
	Awareness		Non awareness		Awareness		Non awareness		Awareness		Non awareness		Awareness		Non awareness	
	No. *	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Year 1-5	17	32	36	68	07	35	13	65	05	31	11	50	02	15	11	85
Year 5-11	24	56	19	44	26	43	35	57	21	57	16	69	09	18	42	82
G.C.E. (O/L)	8	80	02	20	18	56	14	44	09	45	11	43	07	54	06	46
G.C.E (A/L)	4	80	01	20	03	50	03	50	05	71	02	55	09	82	02	18
Graduate	-	-	-	-	04	80	01	20	-	-	-	29	02	33	04	67

No.* = Number of respondents

2.2.3 Type of Water Source

Demand, scarcity and value of water vary with type of water source, since it determines the cropping pattern, cropping intensity and type of water use. Therefore, the study attempted to analyze the level of awareness on proposed water policy among the users of different sources of water. The findings reveal that, largest percentage of Agro-well water users have heard about the new policy compared to irrigated farmers and domestic water users. There is hardly any difference between major and minor irrigation, but the number of people among the users of drinking water supply schemes heard about the policy is very low (Table No. 2.5)

Table No. 2.5 Relationship between type of water source and the awareness

District Awareness	Awareness of Proposed Water Policy															
	Hambantota				Kurunegala				Polonnaruwa				Kandy			
	Awareness		Non awareness		Awareness		Non awareness		Awareness		Non awareness		Awareness		Non awareness	
	No.*	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Major irrigation	54	45	66	55	-	-	-	-	26	43	34	57	9	30	21	70
Minor irrigation	-	-	-	-	29	45	36	55	-	-	-	-	7	23	23	70
Agro-wells	-	-	-	-	18	64	10	36	15	68	7	32	-	-	-	-
Drinking water supply	-	-	-	-	11	33	22	67	-	-	-	-	13	37	22	60

No.* = Number of respondents

2.2.4 Location of the users with in the Water Source

The water availability, value of water and consequent socio-economic conditions also differs depending on the location of farm lot within an irrigation scheme. Therefore, the relationship between the level of awareness and location of the farmland (head and tail ends) of the farmers in the major irrigation schemes was studied. The results indicate that higher percentage of tail end farmers (50-60%) in the major irrigation schemes have heard about the policy than head end farmers (30-40%). The finding again validate the argument mentioned previously that, the message of the proposed policy has reached more farmers who are faced with increasing water scarcity (Table No 2.6).

Table No. 2.6 Level of awareness Vs location of irrigation schemes

District Awareness	Awareness of Proposed Water Policy							
	Hambantota				Polonnaruwa			
	Awareness		Non awareness		Awareness		Non awareness	
	No.	%	No.	%	No.	%	No.	%
Number of respondents								
Head end	24	39	38	61	9	30	21	70
Tail end	30	52	28	48	17	57	13	43

2.3 Role of different media on awareness creation of the proposed policy

The responses gathered on the media information about the policy were multiple and the results are given in table No.2.7, 2.8, 2.9 and 2.10. The findings describes that, the major mode of information for farmers was through informal and unauthentic sources such as rumours/gossips, neighbour farmers and politicians except in Kandy district, where print and electronic media have played a major role. However, the responses on information received through formal channels such as government officials, meetings/discussions was very minimal. In case of domestic water users, who live mainly in urban and sub urban areas, the major information channel was again print and electronic media. It is worthwhile to note that the main source of information for state officials as well was through print and electronic media as in domestic water users. State officials who have seen the actual policy document are less than 5% in Hambantota and 15% Kurunegala district and none in rest of the districts.

Table No. 2.7 Role of different media in awareness creation - Irrigated farmers

District	Hambantota	Kurunegala	Polonnaruwa	Kandy
	% of total responses	% of total responses	% of total responses	% of total responses
Rumours/gossips	26.36	34.62	21.57	11.11
Neighbours	23.64	5.77	17.65	-
Politicians	17.27	-	5.88	3.70
Newspapers	10.00	28.85	19.61	22.22
T.V.	5.45	13.46	7.84	22.22
Radio	3.64	11.54	9.80	14.81
Meetings/discussions	3.64	1.92	15.69	14.80
FOs	6.36	-	-	11.11
Govt. officials	2.73	1.92	1.96	-
NGOs	0.91	-	-	-
Leaflets	-	1.92	-	-

**Table No. 2.8 Role of different media in awareness creation
Agro-well farmers**

District	Kurunegala	Polonnaruwa
	% of total responses	% of total responses
Rumours/gossips	5.13	33.33
Neighbours	17.95	15.15
Politicians	5.13	15.15
Newspapers	33.33	
T.V.	23.08	3.03
Radio	7.09	-
Meetings/discussions	5.13	9.09
FOs	-	3.03
Govt. officials	2.56	6.00

**Table No. 2.9 Role of different media in awareness creation
Domestic water uses**

District	Kurunegala	Kandy
	% of total responses	% of total responses
Newspapers	39.13	45.45
T.V	26.09	22.73
Radio	17.39	13.64
Rumours/gossips	4.45	4.55
Neighbours	8.70	4.55
Govt. officials	-	4.55
Posters	-	4.55

**Table No 2.10 Role of different media on awareness creation
State Officers**

District	Hambantota	Kurunegala	Polonnaruwa	Kandy
	% of responses	% of responses	% of responses	% of responses
Newspapers	22.00	26.66	29.27	-
T.V	16.00	25.00	19.51	-
Radio	16.00	15.00	9.76	7.69
Meetings/discussions	14.00	11.66	12.20	7.69
Neighbours	8.00	-	-	-
Training programmes	8.00	-	-	3.85
Govt. officials	2.00	11.66	14.63	3.85
Politicians	6.00	3.33	9.76	3.85
Rumours/gossips	4.00	-	-	19.23
Magazine	2.00	1.66	-	-
Policy document	2.00	5.00	-	-
Leaflets	-	-	2.44	-
NGOs	-	-	2.44	-

2.4 Knowledge of the Stakeholders on the Contents of the Proposed Water Resources Policy

2.4.1 Knowledge of the Farmers

As has been mentioned in the previous section 2.1.1, out of 350 farmers, 157 said that they have heard about the proposed national water resources policy. When inquired about the specific knowledge of those 157 stakeholders on the proposed policy by an open-ended question, they responded as shown in table no. 2.11. In the inquiry, sample stakeholders were given an opportunity to provide any number of different responses to the question.

Table No. 2.11 clearly shows that the knowledge of farmers on the contents of the policy was not congruent with the actual contents of the proposed water resources policy. Out of 157 stakeholders, around 70% said that proposed policy consisted of taxing for irrigation water. Twenty eight percent said that the policy included installations of irrigation water meters. 24% of the sample stakeholders was of view that the policy was aimed at taxing domestic wells and 20% was of view that the contents of the policy included privatization of water resources of the country.

The most important finding of this table is unawareness or ignorance of the farmers on the actual contents of the proposed water resources policy. Actual contents of the policy such as registration of wells, introduction of transferable water rights, sustainable management of ground water, allocation of water resources among different users were given very low prominence among the responses of the interviewed stakeholders. For example, less than 1% of the sample stakeholders was of view that sustainable management of ground water or allocation of water resources among different users is in the contents of the proposed water resources policy.

Table 2.11 Knowledge of the Farmers on the Contents of the Proposed Water Policy

Administrative District	Hambantota		Kurunegala		Polonnaruwa		Kandy		Total #	
	No	%	No	%	No	%	No	%	No	%
Total No. of respondents	53		47		41		16		157	
No. of responses	No	%	No	%	No	%	No	%	No	%
Taxing for irrigation water	35	66.03	31	65.9	29	70.73	13	81.25	108	68.79
Installation of meters for irrigation water	25	47.16			19	46.34			44	28.02
Taxing for domestic wells	15	28.30	18	38.29	5	12.19			38	24.20
Privatization of water resources	15	28.30			14	34.16	2	12.5	31	19.74
Registration of wells & Agro. wells	3	5.66	7	14.89	8	19.51	5	31.25	23	14.65
Installation of meters for domestic wells	12	22.64	3	6.38	4	9.75	1	6.25	20	12.74
Introducing of transferable water rights	3	5.66			1	2.43			4	2.54
Reduction of water wastage					2	4.86			2	1.27
Sustainable management of ground water					1	2.43			1	0.63
Allocation of water resources among different users							1	6.25	1	0.63
Rehabilitation of irrigation schemes	1	1.88			1	2.43			2	1.27
No idea					2	4.86			2	1.27
Acquisition of water resource by the government			1	2.12					1	0.63

Most farmers have given multiple responses

As a whole, considerable variation of responses was not observed on the pattern of knowledge of stakeholders on the policy among different administrative districts. Responses displayed in table no. 2.11 organized on descending order shows this homogeneity. More or less, same order of importance can be observed in all four administrative districts. Nonetheless, the responses of the stakeholders of Hambantota and Polonnaruwa districts show some sort of close relationship with regard to some of the responses. Same type of resemblance is observed between Kurunegala and Kandy districts too. For example, around 47% of the farmers of Polonnaruwa and Hambantota districts have said that proposed policy consisted of installation of meters for irrigation water. In contrast, none of the farmers of Kurunegala or Kandy district has expressed this idea as part of the contents of the policy.

The study team was of view that similarities observed between Polonnaruwa and Hambantota districts and between Kurunegala and Kandy districts are results of prevailing political environment of those particular areas. Polonnaruwa and Hambantota areas are stronger in left-oriented political movements than that of the other two districts. Based on informal discussions with stakeholders, it was found that left-oriented political movements of those areas were campaigning against the proposed water resources policy convincing stakeholders on taxing and installation of meters. In which case, the proposed policy has become a phobia among the stakeholders irrespective to their categories.

Especial features were not found on the responses of agro-well farmers or domestic water users with regard to their knowledge on the contents of proposed water resources policy. The highest majority of agro-well farmers both in Kurunegala and Polonnaruwa districts said taxing of water was the major content of the proposed water resources policy. Alike farmers of other categories, they also pointed out installation of meters, privatization of water resources as important contents of the proposed policy. With regard to domestic water users, surprisingly, 54 percent picked registration of wells as part of the contents of the policy, which is in the actual contents of the policy document. Table no. 2.12 and 2.13 show the responses of agro-well farmers and domestic water users in this regard.

Table 2.12 Knowledge of the Agro-well Farmers on the Contents of the Proposed Water Policy

District	Kurunegala		Polonnaruwa		Total	
	No	%	No	%	No	%
Total No. of respondents	18		15		33	
No. of responses						
Taxing for water	16	88.88	12	79.00	28	84.85
Registration of wells	7	38.88	7	46.77	14	42.42
Government owned water resources	3	16.66	9	59.00	12	36.36
Privatizing of water resources	3	16.66	6	39.00	9	27.27
Introducing transferable entitlement for water	3	16.66	5	33.44	8	24.24
Fixing of meters for wells	5	27.77	1	6.77	6	18.18

Table 2.13 Knowledge of the Domestic Water Users on the Contents of the Proposed Water Policy

District	Kurunegala		Kandy		Total	
Total No. of respondents	11		13		24	
No. of responses						
	No	%	No	%	No	%
Taxing for water	10	90.90	13	100.00	23	95.83
Registration of wells	6	54.54	7	53.85	13	54.17
Privatization of water resources	5	45.45	7	53.85	12	50.00
Introducing transferable entitlement for water	3	27.27	6	46.15	9	37.50
Installation of meters for wells	6	54.54	2	15.38	8	33.33
Government owned water resources	2	18.18	4	30.76	6	24.00

2.4.2 Knowledge of the High Level Government Officials on the Contents of the Proposed Water Resource Policy

As previously mentioned, all 19 high level government officials interviewed in connection with the awareness of proposed water resources policy have said that they were aware of the policy. As in the previous examination, these officials were also inquired about specific components of the proposed policy for verification of their awareness, they responded as shown in table no. 12.14. As of the cases of other categories of stakeholders, high-level officials too voiced 'taxing of water' as a prominent component of the proposed water resources policy. However, none of the officials stated that installation of water meters for irrigation canals or installation of meters for wells as a constituent of proposed policy document.

2.4.3 Knowledge of the Middle Level Officials on the Contents of the Proposed Water Resources Policy

Out of the interviewed 31 middle level officials, 28 said that they were aware of the proposed water resource policy. When middle level officials were inquired specifically about the contents of the policy, the highest percentage, which is 64%, said that taxing of irrigation water was in the policy content. The second highest percentage, which is around 18%, said that 'registration of wells' was in the policy document. Remarkable variation of responses was not found among the different administrative districts. Table no. 2.14 shows the responses of the state officials.

2.4.4 Knowledge of the Grass-root Level Officials on the Contents of the Proposed Water Resources Policy

Out of 29 grass-root level officials, 21 were aware of the proposed water resources policy. Although the awareness of grass-root level officials was lower than that of the middle level officials, pattern of responses didn't show notable difference. The highest percentage of grass-root officials also said 'taxing of irrigation water' was in the policy content (Table No. 2.14)

Table 2.14 Knowledge of the State Officers on the Contents of the Proposed Policy

Category of the Officials	Grass Root Officers		Middle Level Officers		High Level Officers	
	No.	%	No.	%	No.	%
Total No. of respondents	21		28		19	
Taxing of irrigation water	13	61.9	18	64.2	12	63.15
Taxing of domestic wells	8	38.0	4	14.28	3	15.78
Registration of wells	5	23.8	5	17.85	1	5.26
Allocation of water resources among different sectors	1	4.7	4	14.28	6	31.57
Sustainable management of ground water			2	7.14	4	21.05
Privatization of water resources	4	19.0	3	10.71	1	5.26
Awareness creation among water user on value of water	2	9.5	3	10.71	-	-
Acquisition of water resources by the government	1	4.7	3	10.71	1	5.26
Introduction of transferable water rights			1	3.57	4	21.05
Establishment of institutional structure for management of water			2	7.14	2	10.52
Installation of meters for irrigation water			2	7.14	-	-
Rehabilitation of irrigation sources			1	3.57	-	-
Handing over of O&M responsibilities to FOs			1	3.57	-	-
Don't know	1	4.7	3	10.71	1	5.26
Establishment of water tribunals			-	-	1	5.26
Installation of meters for domestic wells	1	4.7	-	-	-	-

2.5 Assessment of the Contents of Water Resources Policy by Different Stakeholders

When different stakeholders were asked about their assessment on the contents of the proposed water resources policy, they expressed their views in terms of positive and negative aspects of the policy contents. It should be noted that this assessment was not based on actual contents of the proposed policy but on the hypothetical contents assumed by different stakeholders. In other words, stakeholders assessed the contents of the policy on the basis of their prevailing knowledge. For example, some stakeholders categorized 'installation of meters for wells' as a negative aspect of the content although it was not an ingredient of the actual policy content. Therefore, this assessment cannot be reckoned as an assessment of the contents of real policy documents but an assessment of assumed contents of the policy by the stakeholders based on their existing awareness. Still and all, results of this assessment would be highly beneficial for the policy makers to refine the proposed policy document in accordance with the interests of people.

2.5.1 Positive Aspects of the Contents of the Proposed Policy As Perceived by the Stakeholders

Table No. 2.15 shows positive aspects of proposed water resource policy as declared by the grass-root level officials. Out of the total of 21 grass-root level officials interviewed, the highest percentage, which is 33%, said that water conservation was one of the positive aspects of the proposed policy. The second highest percentage, which is 24%, said that positive aspects were not available in the proposed policy. Nineteen percent however, surprisingly selected taxing of irrigation water as a positive aspect of the content even it is not included in the actual content of the policy.

With regard to middle level officials, the highest percentage, which is 50 percent stated that 'water conservation and reduction of wastage' was a positive aspect of proposed water policy. Twenty-one percent said that positive aspects were not available in the contents of the proposed water resource policy. Table No 2.15 shows the responses of middle level officials in this regard.

The total number of high level official interviewed was 19 and the highest majority, which is 58 percent, said that they were not aware of positive aspects hitherto. Forty-two percent stated that taxing of water was a positive aspect of the policy. Two officials stated that there were no positive aspects in the proposed policy. Table No. 2.15 shows the responses of the high level officials in this regard.

Table 2.15 Positive Aspects of the proposed policy – State Officials

Aspects	Grass Root Level Officials		Middle Level Officials		High Level Officials	
	No	%	No	%	No	%
Total No. of respondents	21		28		19	
No. of responses	No	%	No	%	No	%
Water conservation and reduction of wastage	7	77.77	14	50	5	26
No positive aspects	5	23.81	6	21	2	10.5
Not aware about positive aspects	5	23.81	1	3.5	11	58
Taxing for irrigation water	4	19.04	2	7.1	8	42
Minimizing government cost	-	-	2	7.1	-	-
Provide equal share of water to all	3	14.28	1	3.5	2	10.5
Assessment of water resources	-	-	1	3.5	1	5.3
State ownership of water resources	-	-	1	3.5	1	5.3
Issue of water entitlements	1	4.76	-	-	-	-
Provision of adequate water for agriculture	1	4.76	-	-	-	-
Taxing for large scale water users	-	-	1	3.5	1	5.3
Registration of wells	-	-	1	3.5	1	5.3
Taxing for wells	-	-	-	-	1	5.3
Controlled issue of water	-	-	-	-	1	5.3
Provide an economic value for irrigation water	-	-	1	3.5	-	-
Privatization of O&M responsibilities	-	-	1	3.5	-	-
Handing over of O&M to FOs	-	-	1	3.5	-	-
Legal enforcement for water management	-	-	1	3.5	-	-
Ensure the quality aspects of water	-	-	1	3.5	-	-
Provision of solution for forecast water scarcity	-	-	1	3.5	-	-

The highest percentage of irrigation farmers, which is about 31%, has said that proposed water policy has no positive aspects and about 12% said that they did not know positive aspects yet. Table no. 2.16 shows the responses of irrigation farmers.

Table 2.16 Positive Aspects of the Proposed Policy - Farmers

District	Hambantota		Kurunggala		Polonnaruwa		Kandy		Total	
	No	%	No	%	No	%	No	%	No	%
Total No. of respondents	53		47		41		16		157	
No of responses										
No positive aspects	28	52.83	10	21.27	6	14.63	4	25.00	48	30.57
Taxing for irrigation water	17	32.07	15	31.19	5	12.19	1	6.25	38	24.2
Not known	4	7.54	3	6.38	8	19.51	5	31.25	20	12.74
Water conservation & reduction of wastage	3	5.66	1	2.12	7	17.07			11	7.01
Legal enforcement for water management	1	1.88			1	2.43			2	1.27
Privatization of O & M responsibilities of irrigation	2	3.77							2	1.27
Issue of water entitlements	1	1.88	1	2.12					2	1.27
Privatization of tanks	1	1.88			1	2.43			2	1.27
Installation of meters for drinking water					1	2.43			1	.64
Charging for extravagant water users	1	1.88							1	.64

When inquired about the reasons for selecting above matters as positive aspects both non-officer stakeholders and state officials pointed out number of justifications. The leading justifications were as follows:

- (a) Control over water conserves water resources and reduces water wastage
- (b) Taxing is reasonable because big farmers are capable of paying taxes. (Taxing has been selected as one of the positive aspects even it was not included in the actual policy document)
- (c) Taxing is reasonable because it helps covering O &M cost of water supply
- (d) Control on water helps managing watersheds
- (e) Taxing creates sense of ownership

2.5.2 Negative Aspect of Proposed Water Resource Policy as Perceived by the Stakeholders

Non-officer stakeholders and state officials were interviewed with regard to negative aspects of the proposed water policy. The majority of both state officials and non-officials highlighted taxing of irrigation water, taxing of ground water, privatization of water resources as leading negative aspects of the policy. As in previous examinations, considerable variations were not found among the districts, between domestic water users and farmers, or between farmers and state officials. Although the frequencies of the responses were different from sample to sample, order of importance of the responses remained same. As an illustration, responses of domestic water users and responses of agro-well farmers on the negative aspects of the proposed policy were presented in table no. 2.17 and in table no. 2.18. These two tables show that both agro-well farmers and domestic water users were exceedingly concerned about taxing of water. In the case of domestic water users, they were more concerned about taxing of drinking water than that of irrigation water.

Table 2.17 Negative Aspects of the Proposal Policy – Domestic Users

District	Kurunegala		Kandy		Total	
	11		13		24	
	No	%	No	%	No	%
Taxing for ground water/drinking water	7	63.63	4	30.76	11	45.83
Taxing for irrigation water	4	36.36	6	46.15	10	41.66
No negative concerns	1	9.09	2	15.38	3	12.50
Privatization of water resources			2	15.38	2	8.33
Registration of wells			2	15.38	2	8.33
Installation of meters for irrigation water	1	9.09			1	4.16
Installation of meters for wells	1	9.09			1	4.16
Not known			1	7.69	1	4.16

Table 2.18 Negative Aspect of the Proposed Policy – Agro-well Farmers

District	Kurunegala		Polonnaruwa		Total	
Total No. of respondents	18		15		33	
No of responses	No	%	No	%	No	%
Taxing for irrigation water	18	100.00	7	46.67	25	75.75
Taxing for ground water/ wells	2	11.12	5	33.34	7	21.22
Privatization of water resources			5	33.34	5	15.15
Registration of wells	3	16.67			3	9.09
No negative concerns	1	5.56	2	13.36	1	9.09
Installation of meters for wells	1	5.56	2	13.36	1	3.03
State ownership of water resources	1	5.56			1	3.03
Issuing of transferable water entitlements	1		1	6.67	1	3.03
Strict control on water supply		5.56	1	6.67	1	3.03

When inquired about the reasons for selecting above issues as negative aspects, non-officer stakeholders pointed out several specific reasons for their judgments. The major reason given by irrigation and agro-well farmers was the inability bear extra cost due to implementation of water taxes. The main reason for the negative concern declared by domestic water users is that taxing of ground water is unfair because it is a natural resource. Some important reasons given by both non-officer and officer stakeholders were as follows:

- (a) Taxing of water is unfair because water is a natural resource.
- (b) Privatization of water resources is unfair because water resource is a common property.
- (c) Control over water reduces the degree of freedom for water utilization.
- (d) When water is taxed, even drainage water users have to pay taxes
- (e) Domestic wells shouldn't be charged because they are privately owned properties.
- (f) If water policy comes in to materialization, farmers might leave agriculture
- (g) Farmers cannot pay any more taxes, because they are already poor.

2.6 Remedial Solutions and Policy Measures Proposed by Stakeholders to Reduce Water Wastage and to Improve Water Use Efficiency

In the survey, field level officials, middle level officials, high level officials, irrigation farmers, agro-well farmers and domestic water users were requested to submit their suggestions for improvement of water use efficiency and to reduce present water wastage. As in the previous examinations, notable variations were not found among the responses of these samples. A

similar set of suggestions came out from all samples with no distinction or uniqueness in any of the sample. Suggestions came out in the inquiry were general but represented a wide range of issues and concerns of water resource management (Table No. 2.18 and 2.19).

As found in the study, the most prominent suggestion made by the interviewees for improvement of water use efficiency was training of stakeholders of water resource sector. Irrespective to the sample categories, this was the leading suggestion in all samples. One interesting suggestion made by the sample of officers was to implement a tax policy only for irrigation water users. They suggested charging for additional water units used. Another interesting suggestion made by the non-officer sample was to provide entire authority of water management to a single state organization. In addition to the list of suggestions given by the state officials depicted in the table No 2.19, there were other suggestions such as adhering the agricultural activities to a cropping calendar, encouraging people for rainwater collection, eliminating political involvement in water allocation and management, construction of agro wells with a proper plan and provide training on water management from school age. Only two officials of the sample proposed each of these suggestions. Suggestions were also made for installation of automatic taps in public places, public-private partnership in water management, de silting of Irrigation tanks, limit the paddy cultivation only to one season and adopt water saving crops in other season and provision of economic incentive for demand management. However, these suggestions were made only by a single officer of the sample.

Table 2.18 Remedial Solutions Suggested by Non-officers for Improvement of Water Use Efficiency and Reduction of Water Wastage

Districts	Hambantota		Kurunegala		Polonnaruwa		Kandy		Total	
Total number of respondents	115		93		82		60		350	
No of responses	No	%	No	%	No	%	No	%	No	%
Training of stakeholders	31	26.9	32	34.6	7	8.5	17	20.7	97	27.7
Proper maintenance of irrigation systems	28	24.3	9	9.6	7	8.5	4	6.7	48	13.7
Issuing of water with control	18	15.6	10	10.7	5	6.1	6	10.0	39	11.1
Taking legal actions against water wastage	8	6.9	7	7.5	5	6.1	8	13.4	28	8.0
Implementation of water management plans	8	6.9	7	7.5	6	7.3	3	5.0	24	6.8
Taking legal actions against farmers who damage structures	5	4.34			2	2.4	4	6.7	11	3.2
Appointment of qualified field officials	9	7.8	9	9.6	3	3.6	4	8.4	27	3.0
Introduction of a small tax on irrigation water	1	0.86	6	6.4	1	1.2	1	1.7	9	2.6
No suggestions	1	0.86	4	4.3			5	5.0	8	2.3
Giving O & M responsibilities to FOs	3	2.6	3	3.2			1	1.7	7	2.0
Adhering to a cropping calendar			2	2.1	4	4.8			6	1.8
De-silting of tanks			4	4.2			2	3.4	6	1.8
Introduction of low water use crops	1	0.86	2	2.1	3	3.6			6	1.7
Introduction of drip irrigation	1	0.86	1	1.1	3	3.6			5	1.4
Charging for additional units of water used	1	0.86	2	2.1			1	1.7	4	1.1
Do not know			3	3.2					3	0.9
Introduction of water storage programs					1	1.2	2	3.4	3	0.9
Installation of private water taps instead of common taps	3	2.6							3	0.8
Construction of anicuts to re-use drainage water			1	1.1	2	2.4			3	0.8
Encouraging people for rainwater collection			2	2.1			1	1.7	3	0.8

Table 2.19 Remedial Solutions Suggested by State officers for Improvement of Water Use Efficiency and Reduction of Water Wastage

Remedial Solutions	No.	%
Training of stakeholders	36	44.5
Issue of water with control	14	17.3
Implementation of water management plan	14	17.3
Introduction of a small tax on irrigation water	12	14.8
Taking legal actions against water wastage	12	14.8
Proper maintenance of irrigation systems	11	13.5
Charging for additional units of water used	9	11.2
Introduction of drip irrigation systems	8	9.8
Proscription of illegal farming & protection of watersheds	7	8.6
Giving O & M responsibilities to FOs	5	6.2
Introduction of low water use crops	4	4.9
Introducing motivational techniques for WM	4	4.8
Appointment of qualified field staff	3	3.7

CHAPTER 3

Strategies for Policy Dissemination

3.1 Drawbacks/Problems Reported on Media Used by Farmers

The findings indicate that farmers in all four districts have used various modes to obtain information on water resources policy as discussed in section 2.3. However, 75% of them said that they were not satisfied with the level of knowledge gained and the source of the knowledge. The major drawbacks and issues identified by farmers on the mode of knowledge gained were namely: non-reliability of rumors (36%); distorted information given by electronic and printed media (34%); imperfect information provided by neighbors (10%); reliability of issues in speeches made by politicians (8%); differences in political ideologies (6%); differences in information given by various media (3%); and various other reasons (3%) (Table 3.1). However, farmers in Polonnaruwa and Kandy districts expressed their views on drawbacks and other issues considered such as distorted information given by electronic and print media. They believed that, print and electronic media, which provided information on proposed water policy, were politically biased and also they wonder about silent strategy of government media in this regard. In addition, farmers expressed that, the information given on the policy by different media was conflicting, which has also raised the question of reliability among farmers.

Table 3.1: Drawbacks/Issues Reported on Mode of Media Used by Farmers

Drawbacks/Issues	Hambantota		Kurunegala		Polonnaruwa		Kandy		Total #	
	No.	%	No.	%	No.	%	No.	%	No.	%
Reliability of rumors	19	40.4	17	42.5	7	29.2	1	9.1	44	36.1
Distorted information given by electronic and printed media	7	14.9	14	35.0	12	59.0	9	81.8	42	34.4
Imperfect information provided by neighbors	8	17.0	4	10.0	0	0	0	0	12	9.8
Reliability of speeches made by politicians	9	19.2	1	2.5	0	0	0	0	10	8.2
Differences in political ideologies	3	6.4	2	5.0	2	8.3	0	0	7	5.7
Differences in information given by various media	0	0	1	2.5	1	4.2	1	9.1	3	2.5
Other	1	2.1	1	2.5	2	8.3	0	0	4	3.2
Total	96	100	79	100	79	100	25	100	279	100

Most farmers have given multiple responses on issues/drawbacks on media used.

3.1.1 Effective Strategies to Build Sound Awareness on Water Resources Policy

As shown in table 3.2, farmers have suggested implementing various effective strategies to build sound and right awareness on water resources policy among general public. Farmers have suggested four main strategies to build awareness particularly among farmers at the farm level, on water resources policies such as: educate through farmer organizations and farmer companies (34%); build awareness through grass root level officials (26%); conduct discussions and meetings directly with the target (21%); use print (news papers, phamlets, hand bills etc) and electronic (television, and radio) media (15%). These findings imply that, the effective awareness campaign can be conducted at field level through rural organizations and field level officials.

Table 3.2 Effective Strategies Proposed by Farmers to Build Sound Awareness on Water Resources Policy

Strategies	Hambantota		Kurunegala		Polonnaruwa		Kandy		Total #	
	No.	%	No.	%	No.	%	No.	%	No.	%
Through farmer organizations/ farmer companies	34	52.3	9	14.8	24	42.9	4	14.8	71	34.0
Through grass-root level officials	16	24.6	22	36.1	10	17.9	7	25.9	55	26.3
Through Organizing meetings and discussions directly	10	15.4	22	36.1	8	14.3	3	11.1	43	20.6
Use electronic and print media	2	3.1	8	13.1	10	17.9	11	40.7	31	14.8
Appointing an independent organization	2	3.1	0	0	1	1.8	0	0	3	1.4
Other	0	0	0	0	2	3.6	1	3.7	3	1.4
Not known	1	1.5	0	0	1	1.8	1	3.7	3	1.4
Total	65	100	61	100	56	100	27	100	209	100

Most farmers have given multiple responses on issues/drawbacks in media used.

3.1.2 Drawbacks/Problems Reported on Media Used by State Officials

Though state officials in all four districts used various modes to obtain information on water resources policy, about 90% of them said that they were not satisfied with knowledge gained and the source of information received. The main drawbacks and issues identified by them were namely: distorted information given by electronic and printed media (55%); reliability of rumors (15%); differences in political ideologies and speeches (15%); biased information received (4%); imperfect information provided by neighbors (3%); differences in information given by various media (3%); and various other reasons (6%) (Table 3.3).

Most of the officials have expressed their views on drawbacks and other issues considered mainly as distorted information given by electronic and print media. They were highly dissatisfied about policy dissemination process being partners of state machinery of policy formulation and implementation, because their main source of information was not from official level authentic sources. It is clear that to be successful in building awareness among state officials, the reliability and fairness of information should be maintained through various modes of media. It would be beneficial for most stakeholders in water resource policy formulation and implementation.

Table 3.3: Drawbacks/Issues Reported on Mode of Media Used by State Officials

Drawbacks/Issues	Hambantota		Kurunegala		Polonnaruwa		Kandy		Total #	
	No.	%	No.	%	No.	%	No.	%	No.	%
Distorted information given by electronic and printed media	9	56.2	9	47.4	13	78.4	7	46.7	38	55.1
Reliability of rumors	3	18.8	4	21.1	0	0	3	20.0	10	14.5
Differences in political ideologies and speeches	3	18.8	4	21.1	0	0	3	20.0	10	14.5
Bias information received	0	0	0	0	3	15.8	0	0	3	4.4
Imperfect information provided by neighbors	1	6.3	0	0	0	0	1	6.7	2	2.9
Differences in information given by various media	0	0	0	0	1	5.3	1	6.7	2	2.9
Other	0	0	2	10.6	2	10.6	0	0	4	5.8
Total	16	100	19	100	19	100	15	100	69	100

Most state officials have given multiple responses on issues/drawbacks on media used.

3.1.3 Effective Strategies to Build Sound Awareness on Water Resources Policy

Most of the state officials have suggested implementing various effective strategies to build sound and right awareness on water resources policy among them. As shown in table 3.4, state officials have suggested four main strategies to build awareness particularly on water resources policies among them such as: using print (news papers, phamlets, hand bills etc.) and electronic media (television, and radio) (29%); building awareness through grass root level officials (22%); educating target groups through grass root level officials (21%); and building awareness through farmer organizations and farmer companies (13%). The state sector officials have suggested other strategies, which were: building awareness through school children and voluntary organizations; and appointing an independent organization for building awareness.

Table 3.4: Effective Strategies Proposed by State Officials to Build Sound Awareness on Water Resources Policy

Strategies	Hambantota		Kurunegala		Polonnaruwa		Kandy		Total #	
	No.	%	No.	%	No.	%	No.	%	No.	%
Using electronic and print media	9	32.1	6	20.7	15	36.6	7	25.0	37	29.3
Organizing meetings and discussions directly with the target	6	21.4	13	44.8	4	9.8	5	17.9	28	22.2
Educating through grass-root level officials	6	21.4	4	13.8	7	17.1	10	35.7	27	21.4
Building awareness through farmer organizations/ farmer companies	4	14.3	2	6.9	8	19.5	3	10.7	17	13.5
Build awareness through school children	1	3.6	1	3.5	3	7.3	1	3.6	6	4.8
Through voluntary organizations	1	3.6	2	6.9	1	2.4	1	3.6	5	4.0
Appointing an independent organization	1	3.6	0	0	1	2.4	1	3.6	3	2.4
Other	0	0	0	0	2	4.8	0	0	2	1.6
Not known	0	0	1	3.4	0	0	0	0	1	0.8
Total	28	100	29	100	41	100	28	100	126	100

Most farmers have given multiple responses on issues/drawbacks in media used.

3.1.4 Drawbacks/Problems Reported on Media Used by Drinking Water Users

As shown in table 3.5, there were some drawbacks and issues identified by domestic water users in Kurunegala and Kandy districts namely: distorted information given by electronic and printed media (57%); differences in information given by various media (21%); and reliability of rumors (14%); and various other reasons (8%). However 50% of the domestic water users who have heard about the policy declared that, they were satisfied with knowledge gain mainly though electronic media.

Table 3.5: Drawbacks/Issues Reported on Mode of Media Used by Drinking Water Users

Drawbacks/Issues	Kurunegala		Kandy		Total #	
	No.	%	No.	%	No.	%
Distorted information given my electronic and printed media	2	28.6	6	85.7	8	57.2
Differences in information given by various media	3	42.8	0	0	3	21.4
Reliability of rumors	1	14.3	1	14.3	2	14.2
Differences in political speeches	1	14.3	0	0	1	7.1
Total	7	100	7	100	14	100

Most drinking water users have given multiple responses on issues/drawbacks on media used.

Most of the domestic water users have expressed their views on drawbacks and other issues considered, mainly as distorted information given by electronic and print media. It is clear that to be successful in building awareness among drinking water users, the provision of reliable and fair information should be done through electronic and print media. It would be beneficial for almost all stakeholders involved in water resource policy formulation and implementation.

3.1.5 Effective Strategies to Build Sound Awareness on Water Resources Policy

As shown in table 3.6, domestic water users have suggested three main strategies to build awareness particularly on water resources policies among them such as: using print (news papers, phamlets, hand bills etc.) and electronic media (television, and radio) (47%); organizing meetings and discussions with the target (20%), and building awareness through grass root level officials (17%). The drinking water users have suggested other strategies, which were: building awareness through school children and voluntary organizations; appointing an independent organization for building awareness (Table 3.6).

Most of the state officials have suggested implementing various effective strategies to build sound and right awareness on water resources policy among them.

Table 3.6: Effective Strategies Proposed by Drinking Water Users to Build Sound Awareness on Water Resources Policy

Strategies	Kurunegala		Kandy		Total #	
	No.	%	No.	%	No.	%
Using electronic and print media	8	72.7	6	31.6	14	46.7
Organizing meetings and discussions directly with the target	0	0	6	31.6	6	20.0
Educating through grass-root level state officials	2	18.2	3	15.8	5	16.7
Building awareness through school children	0	0	2	10.5	2	6.67
Appointing an independent organization	0	0	2	10.6	2	10.6
Not known	1	9.1	0	0	1	3.3
Total	11	100	19	100	30	100

Most drinking water users have given multiple responses on issues/drawbacks in media used.

CHAPTER 4

Conclusions and Recommendations

4.1 Conclusions and Implications

1. Awareness of Stakeholders on Proposed Policy

About 40% of farmers and 30% of domestic water users have heard about the proposed Water Resources Policy (WRP). Among farmers, agro-well water users (ground water irrigation) were the most informed compared to surface irrigation farmers. Notable variation was not found on level of awareness among the people who represent different irrigation schemes of the sample such as major, minor or anicut schemes. However, the level of awareness among farmers in head end of major irrigation system was comparatively lower than that of the farmers in water scarce tail end parts of the schemes. The findings also show that, stakeholders in dry zone districts are more aware than that in wet zone district of Kandy. The level of awareness among state officials varies from 72% to 100%. The lowest awareness rate represents by grass root level officials and the highest level represents by high-level government officials. The study reveals that level of awareness of people on WRP increases with the increased level of educational standards.

2. Mode of Information Received on Proposed WRP

The main modes of information for farmers on WRP were informal and unauthentic sources such as rumours/gossips/hearsay/fellow farmers etc. and political propaganda meetings. About 87% of officials and 80% of domestic water users have received the message mainly from print and electronic media. The state officials who received the information through official sources such as official meetings and discussions was only 15%. Five percent and 17% of the officers in Hambantota and Kurunegala districts respectively said that they have read the policy document, but none of the officials of Polonaruwa and Kandy stated this.

3. Knowledge of the Stakeholders on the Content of WRP

A vast majority of stakeholders who claimed for consciousness of the policy was truly ignorant on the actual contents of the water resources policy. About 70% of surface irrigation farmers,

85% of agro-well farmers, 96% of domestic water users and 60% of state officials viewed that the WRP consisted of taxing of water/irrigation water. Therefore, the proposed WRP has become a taxing phobia among stakeholders. The highest number of irrigation farmers (31%) said that WRP has no positive aspects. The major positive aspect of the policy as perceived by grass root level and middle level officials was water conservation and reduction of water wastage. However, 58% of high-level officials stated that they were not aware of any positive aspects of the proposed WRP.

4. Main Drawbacks Identified in dissemination of the WRP.

The study findings clearly elaborated that the process adopted for the policy formulation and dissemination in the past were top down approach and lack of transparency even among the highest strata of government officials. The shape of the existing knowledge of sample stakeholders is basically characterized by various unauthentic sources. This includes rumours/gossips, political speeches and imperfect information compiled by neighbours, media and NGOs. The information were distorted and mis-interpreted by politicians, print and electronic media and some NGO's based on their own knowledge, assumptions and goals.

4.2 Recommendations

4.2.1 Effective Media for Different Stakeholders

In line with the survey findings, the effective modes of dissemination of knowledge on WRP includes generic modes for general public, which contains print media - paper supplements, booklets, leaflets, and hand bills; and discussion through electronic media-televisions, radio etc. However, specific target oriented dissemination process of knowledge should be initiated for farmers, state officials and domestic water users. For farmers and farmer leaders, the effective and comprehensive dissemination process would be carried out through farmer organizations, grass-root level officials and conducting grass-root level meetings. For the target of state officials, print and electronic media, and organizing of meetings and discussions on the subject would be effective to build the awareness. For domestic water users, the effective modes would be electronic and print media and organizing meetings and discussions with the target through grass-root level officials-Samurdhi, Grama Niladari etc.

4.2.2 Strategies for Future Policy Dissemination

For dissemination of information on WRP, the task should be assigned to an independent research organization. This organization should plan out strategies for different targets and stakeholders in line with the survey results identifying the most effective modes of dissemination. Particularly, a national workshop should be organized inviting all ministers, top level state officials, NGOs, and bankers, who are concerned about water sector and water related sectoral issues; private sector institutions and existing and prospective industrial water users, all state and private sector electronic and print media personnel, and officials who are enforcing environmental law to educate them giving comprehensive knowledge on water resources policy. In addition, print and electronic media coverage should be arranged for every move in the dissemination process. Particularly, print media - leaflets and booklets in three different languages should be distributed in advance through public sector channels of 'Samurdhi or Govi Niyamakas and Grama Niladaries'. Further, conducting farmer and user conventions is advisable in each province, allowing participation for farmer leaders and representatives from other water users to build comprehensive awareness on WRP.

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