

**Identifying effective communication strategies to minimise water consumption in social housing through interaction with tenants**

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## Executive Summary

This research is funded by CIC Start online and aims to elicit and understand the attitudes and suggestions towards water conservation of tenants in social housing. These articulations and motivations will be used to develop a set of communication strategies to encourage tenants to participate in a programme of widespread water metering in social landlord dwellings. This is part of Scottish Water's wider resource planning into demand scenarios for water supply and is managed by Home Log Book who commissioned this research to be carried out by Heriot-Watt University.

Through interaction with 12 tenants from two different housing associations it has been identified that there is a significant lack of awareness regarding water conservation amongst social housing tenants. Tenants do not recall any information that was provided to them that would raise the need for saving water. The majority of the participants of this study agree that water is a plentiful resource in Scotland with no immediate threat from climate change and therefore there is no perceived urgency to conserve water.

It was found that TV is the most preferred medium for communication as it is owned and watched by all generations. Radio, eye-catching posters and letters are the second most popular choices by these tenants. It is suggested that to involve and engage a majority within a water conservation campaign, it is better to adopt different media to convey the desired messages. For instance written information (letters or leaflets) are mostly suited to retired or disabled communities, while internet and facebook applications engage younger generations, and radio is most suited to people with sight impairments.

This research has highlighted that tenants trust the words from the water companies more than they trust any Government organisations or independent bodies. This is because a water company has the full information on all the aspects of water supply and demand. Tenants also prefer to receive information and updates from their Housing Association through monthly meetings but do not feel that the full facts are provided to them. Tenants believe that they are more likely to engage with these meetings in their communal lounge of their sheltered accommodation as long as the information is provided clearly and without any jargon by their social landlord.

A campaign is effective if it touches people's hearts. Tenants believe that something striking such as an African aid advertisement on Television or a Poster with a picture of a dying plant is more likely to impact behaviours and attitudes. Some tenants think that raising awareness should be a slow process and if possible be embedded in school education. On the other hand, some tenants think that the only way to make people aware of this is to impose bans on water use like the ones in the South of England.

## 1. Introduction

Over recent years, the need to effectively manage future demand for water has been prioritised in both the political and public agenda. The regulatory and policy framework has been strengthened, with a greater commitment to water efficiency in Building Regulations [1] and the Code for Sustainable Homes [2], and Ofwat [3] have proposed the introduction of mandatory water efficiency targets for all water companies from 2010. To achieve success on water efficiency, it is important to combine awareness raising, behavioural motivators, technological progress and innovation [4].

While Scotland is a water rich country, this does not mean that unlimited water is available for treatment and supply. There are regional variations in the capability and flexibility of the water supply systems, which may be stretched in some areas during exceptionally dry periods [5]. Scottish Water wants to establish a specification in social housing that delivers maximum water efficiency, whilst ensuring customer enjoyment of their home. This is part of Scottish Water's wider resource planning into demand scenarios for water supply over the next 25 years. Objectives are to raise the awareness of water efficiency; test a number of approaches towards water advice; analyse the behavioural change patterns within 400 housing association (HA) households over 5 housing associations; and influence consumer behaviour to reduce average daily water consumption.

Understanding customer attitudes to water is necessary to target water efficiency measures effectively and to communicate the right messages to different consumer groups [6]. Water consumption behaviour can be measured via metering, but consumer attitudes are best assessed qualitatively. It is anticipated that better mechanisms to motivate and influence behaviour will be derived via this route. Education is crucial in encouraging a cultural shift in the way water is used and valued, and is key to ensuring that best practice water efficiency becomes the norm.

This study funded by CIC Start Online was commissioned by Home log Book and performed by Heriot-Watt University with the specific aim to elicit and understand the attitudes of HA tenants towards water use in their homes. Face-to-face interaction with tenants will enable discussion and probing to establish if they see a need to think about how much water they use, and what they could do to save water in their home. The motivations and attitudes elicited during these interviews will help to develop effective communication strategies for social landlords to use with tenants to assist with energy and water conservation, and thereby reduce CO<sub>2</sub> emissions and fuel poverty.

## 2. Background

The UK water industry collects, treats and then supplies over 16 billion litres of water to homes and businesses every year. It also collects and treats over 10 billion litres of waste water where each person in the UK uses a daily average of 150 litres of water [4]. The level of household consumption is influenced by demographic changes and the ways in which water is used, but has not changed significantly over the last five years [4]. Table 1 shows average consumption of water in a household for different actions.

In England and Wales, approximately 19 billion litres of water per day is provided from 2,100 licensed surface and groundwater abstractions. Over half of this is consumed by households [4]. In Scotland water services are provided to over 2.4 million households by a single public company, Scottish Water [7]. There is particular concentration of demand in Central Scotland which covers the Glasgow and Edinburgh conurbations [5]. This area contains 55% of household and 51% of non-household consumption within Scotland. Water is currently un-metered at an individual dwelling level in Scotland; a temperate climate and ample rainfall might lead to an impression of water abundance. There is no perceived need to conserve water in Scotland, but use leads directly to energy consumption – mostly to heat the water. Generating energy produces carbon dioxide (CO<sub>2</sub>), one of the main greenhouse gases which causes climate change. Domestic water heating emits around 5% of the UK’s CO<sub>2</sub> emissions; saving water can reduce energy consumption and household bills, reduce local environment impacts, and reduce CO<sub>2</sub> emissions related to pumping, heating and treating water [8].

**Table 1 Water use of household and garden activities**

Activity	Approach	Litre	Approach	Litres
Brushing teeth	Fill a beaker to rinse twice a day, don't leave the tap running	1	Brush for 5 minutes a day with tap running	50
Personal hygiene	Shower-5 minutes * flow of 9 litres a minute for average shower	45	Bath-average size	100
			Power shower-5 minutes *20 litres	100
Washing the dishes	Dish washer under 10 years old- full load	15	Dish washer under 10 years old- half load or less	15 plus
	Handwashing dishes in a bowl without	63	Handwashing dishes under a running tap	150
Washing machine	Washing machine under 10 years old- full load	50	Washing machine under 10 years old-half load	27.5
Watering the garden	Watering can filled with tap water	8-10	Sprinkler for an hour	500 plus
	Watering can filled with water from a water butt	0	Hosepipe for 10 minutes	180

Figures are estimates-exact figures will vary according to appliances, flow rate and design  
 Sources: Bathroom Manufacturers Association; water Wise; Environment Agency

Customer satisfaction with service levels may fall as restrictions begin to apply. This may lead to difficulties in engaging the public to increase awareness of the issues and to adopt more water efficient behaviours. The water industry will need to increase awareness of issues and encourage people to use water more efficiently.

### 2.1 Environmental, Social and Economic Issues

Reduced demand for water leads to reduced demand for energy and ultimately a reduced need for infrastructure and maintenance associated with water supply. Scottish Water is committed to acting responsibly; the company’s energy consumption has increased in recent years by an average of 2.5% per annum, counter to the Scottish and UK Government climate change targets [4]

There is a link between domestic hot water use and fuel poverty which is not yet fully measured by industry professionals, or understood by domestic home owners and tenants. Currently around 29% of social housing tenants in Scotland live in fuel poverty with 6% of these in extreme fuel poverty [6].

Reduced demand for water and energy is key to supplying these more sustainably and less carbon intensively; it is critical in a transition to a low carbon society.

The Energy Saving Trust estimate that heating water accounts for 30% of average household energy bills [9]. Water needs to be used wisely to enable people to satisfy basic needs and to enjoy a better quality of life without compromising the quality of life for future generations. Suitable water saving interventions can be installed, but their full potential can only be achieved with changed behaviour. Realising the effects of water wastage in terms of diminishing resources, energy consumption, environmental impacts and cost savings can motivate people to adopt consumption reducing measures.

## *2.2 Tenants and Social landlords*

There are 272 social landlords in Scotland. Twenty-six are local authorities and 246 registered social landlords (RSL). Between them they own and manage around 600,000 homes across Scotland, with more than half of these being council houses [10]. In terms of the services they provide, there is evidence that landlords across the social housing sector need to improve their performance by understanding and responding to the needs of different groups within the community.

From a social landlord's perspective, understanding the energy performance of their housing stock is the first step in developing a comprehensive and effective energy strategy. Addressing fuel poverty and delivering affordable warmth is an essential measure for housing management organisations to meet key housing standards. There are benefits to addressing fuel poverty for tenants and landlords alike. For the tenant, more affordable energy bills, reduced debt, improved thermal comfort, increased disposable income and improved health can result. For the landlord, energy efficient, affordable to heat homes can result in lower maintenance costs, improved tenant satisfaction, reduced void frequency, reduced rent arrears, and improved asset value.

## *2.3 The communication process*

Communications must be targeted according to respondent type. A communications strategy is effective if the imparted message is matched to suit those with which the communication takes place. Developing an effective means of communication [11] entails the precise definition of the target audience and characteristics therein, as well as the change one is hoping to bring about through communication. Determining the reasons for communication and understanding what is to be achieved are best done in consultation with intermediate and end users. It is also important in determining which communication pathways and media products are most suitable to develop. To develop a communication strategy the following need to be addressed;

- Which means of communication do people prefer?
- What is the target audiences' ownership of, or access to mass-media?(e.g. radio, newspapers, community TV, etc)

- What other sources of communication do people have access to (e.g. friends, neighbours, marketplaces, schools, religious bodies, folk media, social housing landlords, Councils)?

### **3. Research objectives**

This study aims to

- Understand the attitudes of HA tenants towards water use in their homes.
- Identify the current thinking of tenants about their water use and what they could do to save water in their homes
- Elicit tenants' preferred media for communicating water conservation messages
- Recommend communication strategies to encourage tenants to participate in a programme of widespread water metering in HA dwellings

### **4. Methodology**

A needs assessment is necessary to find out the target audiences' interest in, knowledge and perceptions of, and behaviour concerning the anticipated or completed research issue. Not only does a needs assessment help to ensure that the 'message' being communicated is appropriate, it will also give some baseline data, which can in turn provide part of the means to monitor the effectiveness of the communication strategy (be it an information campaign or a participatory learning process) at a later stage [11].

A literature review was carried out to develop a set of questions to be asked to the HA tenants. To ensure that these questions are tailored appropriately for tenant interviews, a meeting was organised with Energy Savings Trust (EST) to receive advice and get insights into their public engagement experiences.

For this qualitative study, 10 individual interviews were undertaken to examine the current trends, needs and preferences of Link HA tenants in Falkirk. Interviews allow access to matters which are rarely publicly discussed, or which are not discussed very honestly in a public context [12]. These interviews help gain an understanding of water use, the need to conserve water, motivation issues behind water conservation and the preferred medium for communication of water efficiency messages.

All discussions were taped, fully transcribed, in addition to notes being taken during the meetings. The approach adopted to analyse the contents of focus groups and interviews is based on the 'content analysis' methodology provided by Krippendorff [13]. Through the content analysis the transcripts were read through several times to sort segments of texts into content areas that are of similar nature and of interest to the analysis. Through the content analysis, data was reduced to manageable representations, which helped in inferring the answer to the research question to proceed from texts to results.

### **5. Results and Discussion**

According to the original proposal 10 individual interviews with tenants of the Link HA in Falkirk were to be performed by the end of March to gain an understanding of water use, the need to conserve water, motivation issues behind water conservation etc.

This project however, has faced major delays due to unexpected circumstances and therefore could not adhere to the timescales mentioned above. The main reason being the contact at the Link HA responsible for organizing tenant interviews left employment without delegating this task to a successor and despite several attempts, Link HA was unable to arrange a substitute. This resulted in the quest for finding another HA amongst the 5 Associations involved in the major project and took more than two months, during which time the authors used their own contacts to organise four telephone interviews from MuirHouse HA Edinburgh. Muirhouse HA owns 445 properties in Edinburgh including flats, main door flats, four in a block flats, houses and bungalows. Some are designed to meet the needs of older people and those with disabilities.

Finally eight face to face interviews were arranged with tenants from the Blackwood HA. Five of these tenants were residents of Tweedbridge Court in Peebles and the remaining three were from Abbey Court which is located in the Abbeyhill area of Edinburgh. Tweedbridge Court has 38 self-contained flats predominantly designed for elderly tenants with disabilities and wheelchair requirements. The Abbeycourt scheme has 44 self-contained flats of various sizes, the majority of which are designed for wheel chair users and for people with limited mobility. Both developments provide sheltered housing and comprise of a communal lounge, laundry, guest bedrooms and a staff office. The floors of these buildings are served by a lift and are designed to encourage tenants to undertake all aspects of day-to-day living tasks as far as they are able.

The resulting sample of tenants predominantly consists of the elderly and people with disabilities who according to Age Scotland [10] are more likely to rent from a social landlord than to own their home or rent privately. It is therefore, vitally important that the thoughts and views of these tenants is incorporated in the development of any water conservation campaign.

## **5.1 Main Findings**

### *5.1.1 Water conservation information*

Tenants who participated in this investigation, unanimously agreed that they were never provided with any kind of information regarding water efficiency or water conservation. Furthermore, they were unaware of the need to conserve water and therefore did not think about saving water. The tenants agreed that the initial step should be to provide them with some information on the importance of water conservation based on facts and figures and the consequences if water conservation is not taken on board. Tenants agreed that information on current issues is generally provided to them by their HA through general meetings and as long as the message is clear and effective, it is likely to have an impact.

### *5.1.2 Water as a precious resource*

Respondents regard water as a key resource for survival necessary for carrying out daily routines such as drinking, cleaning, washing, watering plants. A majority of the respondents regard water as the most important resource when comparing with energy, pollution, transport, recycling. These feelings are expressed through the comments given below:

*A man can live without food much longer than he can live without water.*

*Water is important for me to wash, to have a shower on a regular basis, to keep clean, to do the dishes, to drink and for everything really.*

*I have a condition called Diabetes Insipidus where my body continually dehydrates and for me water is probably more vitally important than a normal person.*

### 5.1.3 Motivations for water savings

When tenants were asked about what encourages them to think about their use of water and to value it as a precious resource, the respondents could not come up with a particular reason other than they just think that wasting water is silly and not the right thing to do. Most participants said that in Scotland generally, no thought is given to conserve water and water is taken for granted. For most elderly respondents the incentive to save water comes from the hardships that they suffered during the war. They referred to collecting water in water butts for plants and for feeding animals. Lack of water supply and the cost to heat the water in those times were the key reasons behind most of the savings in those days. Some respondents acknowledge the need for water conservation as a lot of the world is in desperate need for water including some parts of Britain (droughts in South England). At the same time a minority does not believe in saving water at all. These views are expressed by some of the comments from different respondents below;

*I don't think washing one dish towel in a washing machine is a smart idea. I think it's disgusting, that is just a fragrant waste of water.*

*I would not like to waste water because some of the countries in Africa are screaming to have wells put in to get water.*

*I think it is very hard to say because the thing is that I don't remember anybody ever telling me except being told that in Africa and parts of India they didn't have enough water. That was really enough.*

*I don't really suppose that I think about it as much, I just know not to run the taps if unnecessary.*

*We have always had it on tap, you turn a tap and it is on. Just taking things for granted.*

*I don't save it because I can't see a thing, I've got no sight. I just use it all the time.*

*Scotland could easily afford to build reservoirs for the next century with the amount of rainfall compared to the South East or the South West of England. So I don't see there would ever be any problem with the water situation in this country. To me, boffins are just kind of scaremongering.*

### 5.1.4 Personal actions to reduce water wastage

Respondents in general do not think that they waste water. The majority confirmed that taking a shower is better than having a bath but at the same time their accommodation is already fitted with showers to enable wheel chair access. Some of the tenants have recently fitted new toilet systems which save a lot of water either due to having a small cistern or by having half a flow rather than a full flow. A number of tenants believe that dish washers are the most economical device as long as it is used to its full potential when it is completely filled up. For a minority the incentive for not wasting water is to

recycle water after washing dishes to be used for growing their own vegetables. Some of these views are expressed by the comments given below;

*After I finish washing my dishes, I water the plants with the water, I seldom use a dish washer and wash my car with a bucket and sponge.*

*For my own personal welfare, I do all my dishes at the same time by filling my basin up and so it's only getting done once so you're not wasting water.*

*I try to keep an eye on my family and encourage them to stop wasting water. For example when my husband shaves he leaves the water running from the tap, so I close it and tell him about droughts in Africa. Similarly, when my children wash their hands or brush their teeth, I supervise them to stop the running tap.*

*I think people waste a lot of water on car washing, it's surprising how many gallons they use, you don't have to use water to clean a car, you can have an old duster to get rid of stains and dirt.*

*The old cistern in the toilet used to hold between 7 and 8 litres of water, it now holds 2.5 to 3 litres of water, now there's a 50% saving right away.*

#### 5.1.5 Views on an effective and memorable campaign

Respondents of this study were asked to take a moment to think about a campaign which was effective in catching their attention. The results are shown in Table 2

**Table 2 Effective and memorable campaigns**

Respondents	Age band	Sex	Disability	Campaign	Communicating medium	Impact feature
R1	35-44	F	N	Nil	Nil	Nil
R2	55-64	F	Y	Swine flu	Direct mailing	Awareness through Information
R3	25-34	F	N	Somalia aid	TV adverts	Homeless people, no water/money
R4	45-54	F	N	Indian aid	TV adverts	Starving children in India
R5	55-64	M	Y	Coca Cola	TV and Radio	Thirst quenching scenes
R6	65-74	F	Y	Look for cyclists	TV adverts	How accidents happen by motorists
R7	55-64	F	Y	Radio campaigns	Radio	Effective information for blind community
R8	75-84	M	Y	Green cross code	TV adverts	Showing children how to cross the road
R9	55-64	M	Y	Recycling	Leaflets/ news papers	Provision of information
R10	65-74	F	N	American waterfalls	TV adverts	Exceptional natural beauty
R11	65-74	M	Y	An Inconvenient Truth	Video film by Al Gore	Chilling facts about global warming
R12	55-64	F	N	Recycling campaign	Direct mailing and posters	Information and provision of multi bins

Table 2 provides some description about the participants of this study. It can be seen that the total number of 12 participants consists of four males and eight females. Furthermore, seven tenants have a disability and the majority of the participants are above the age of 54. From the Table it can be seen that the most effective campaigns are the ones that are presented on Television (TV). This may lead to the conclusion that TV is the most popular medium for our respondents. For a minority (partially sighted and blind) radio campaigns are the only preferred option as demonstrated by the quote below;

*I heard about different campaigns on Radio Borders. You get a lot of information from that station about things. That's what I listen to.*

A majority of participants suggest that for a campaign to touch people's hearts it is necessary to provide useful information and chilling facts. For instance years ago nobody would recycle anything and now a bigger percentage recycle because of awareness. Not just figures and numbers but explaining the causes, preventions and actions that can help to bring about a change are an important part of an effective campaign. Telling people that they are using a hundred gallons of water a week which can be reduced by 50% by not having so many baths but having showers instead, would be effective.

These views are typified by the quotes below;

*Whether it be a TV ad or a radio ad or flyers it needs to be backed up by the necessary information for people to understand. For example the little pamphlet/booklet they sent us about swine flu years ago.*

*It's just information more than anything else to make people think about it as opposed to just doing what they want with it. Years ago people did recycle but not an awful lot, but the more you're hearing on TV, newspapers, just your bins in general, more people tend to recycle.*

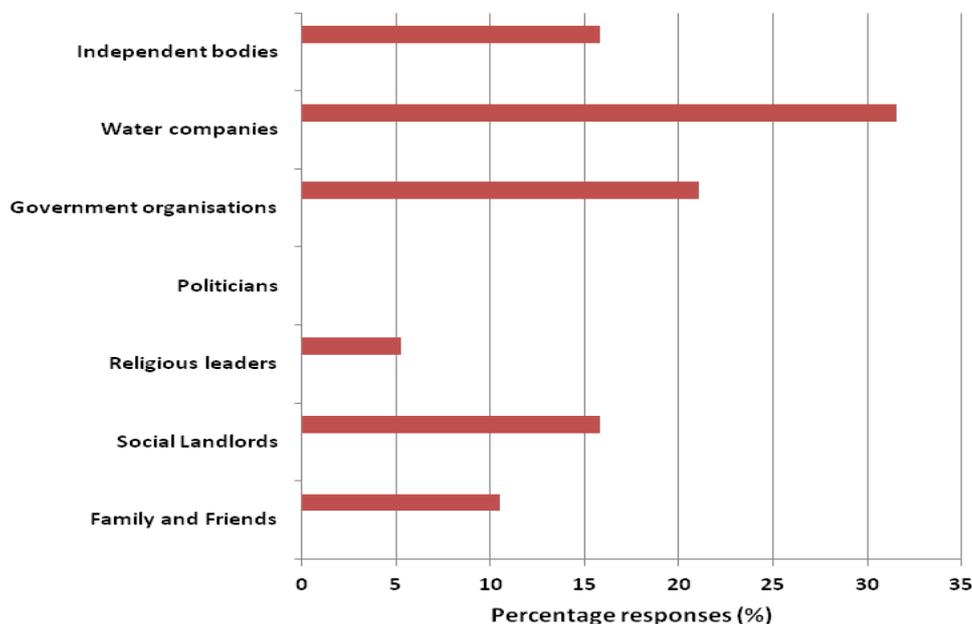
*Something convincing like Al Gore's hard-hitting video needs to be done. He's the perfect spokesman for that and he knew his subject matter to the nth degree.*

#### 5.1.6 Trustworthy members of the community

Participants of this study were asked about the people they trust for advice (how effective is the message communicated through them) – for instance landlords, politicians, government organisations, water companies, independent bodies, family or neighbours. These preferences are shown in Figure 1.

From Figure 1 it can be seen that a majority of respondents have shown confidence in the water companies as they provide water and have all the necessary information about supply, demand, how much water is used and how much it costs. Respondents have mixed views about the way their HA provides information to them. Some are happy and some believe that information is provided with too much jargon.

15% of respondents put their trust into independent organisations as they are honest and have no motivation of gaining something out of a campaign. 20% respondents voted for government organisations. A minority also voted for religious leaders who should be explaining to people in their own way about the importance of water and how they should appreciate it and not waste it.



**Figure 1 Trustworthy members of community**

### 5.1.7 Actions influencing water efficiency

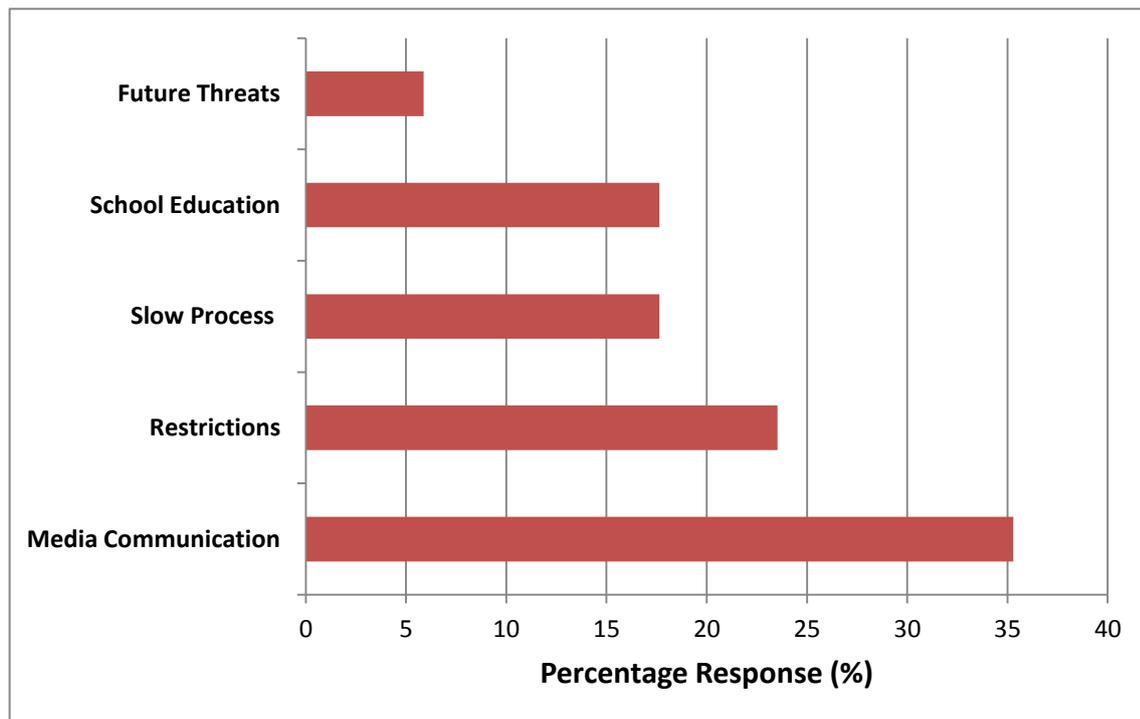
Respondents were asked to suggest actions that can deliver the greatest impact in engaging people in water conservation. The resulting responses can be seen in Figure 2 and are explained as follows.

A majority of respondents deem media as the most effective way of promoting water efficiency messages. According to them this would work if there are advertisements which actually mean something rather than the ones that are aimed only at selling. These respondents believe that not everybody has got money to go and buy a new suite or a new carpet, but everybody has got the power to save water. Participants prefer more graphic explanations and not all the percentages but simple facts like pouring out X amount of water could save or keep a family going for Y amount of time or grow Z amount of crops. Posters with meaningful comments and pictures are believed to be the most effective. It was further mentioned that these posters would have to be put somewhere where they would catch people's eyes rather than just sticking a poster up beside other posters.

Some respondents suggested that it should be a slow but persistent process as sometimes people don't get the message the first time so it should be followed by a reminder. Respondents said that the water companies should go to people's doors or have a public meeting to tell them about how long it will be before this is really going to

affect Scotland; is it going to be in the near future or hundreds of years or ten years time?

A small number of respondents also think that water conservation should be embedded in school education, as at that age children can actually understand it. Once they leave school and start their own home they know exactly how they are going to conserve water and energy.



**Figure 2 Actions to engage people in water conservation**

Only a handful of respondents were aware of the threats of climate change and are careful about their water usage for the future. Recycling water for growing vegetables is deemed as the most effective way of conserving water. It is also said that sometimes people are aware of such issues but just choose to switch off, they don't actually think and believe that anything is going to happen. Some respondents are pro-restrictions and believe that if bans are imposed on the use of water at certain times or if maybe water is cut off at a certain time, only then will people listen and fill a bucket to use during the cut off period. Some of these views are expressed by the quotes given below;

*It has to be something that's going to have a real impact on daily life and people will quickly realise in a few days if they had no running water!*

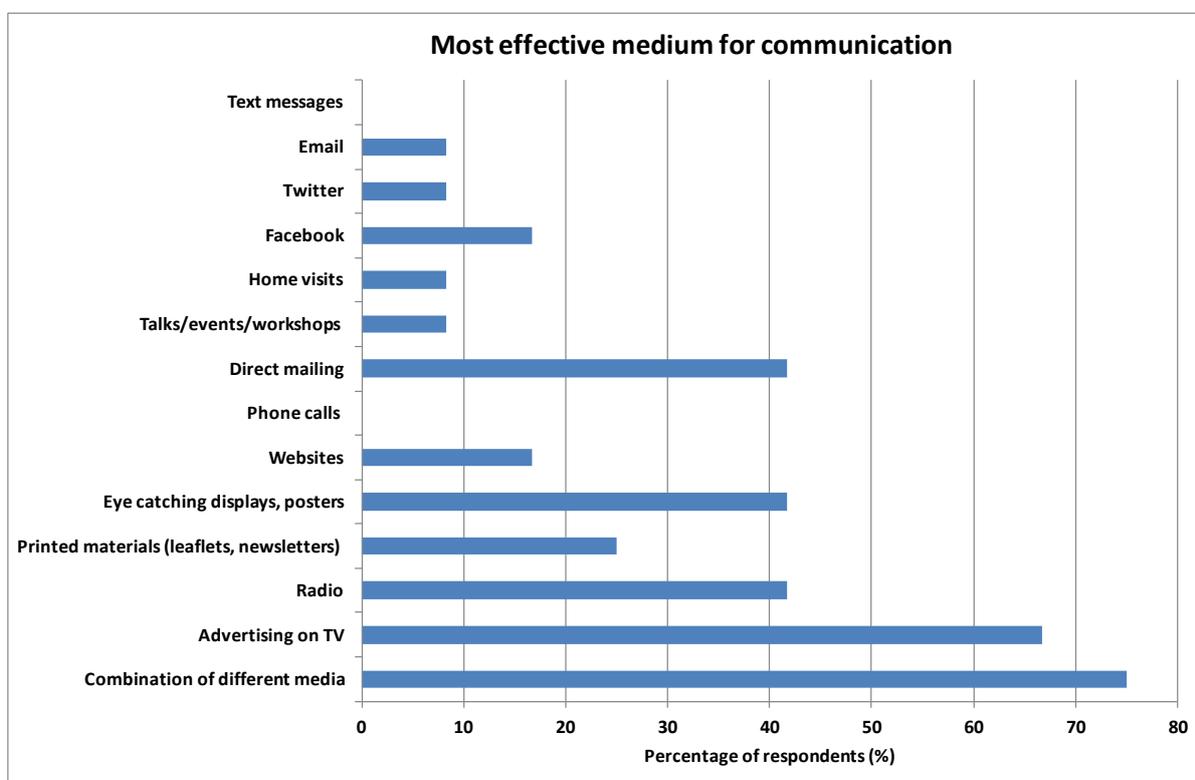
*A message from local authority such as if you waste water you will be charged!! Very bad message, but people need a warning so that they think "Oh I've got to stop this" or "I've got to watch what I'm doing",*

*You would have to have punitive measures and I don't think that would be acceptable. The only way we can make people care is to punish them by turning their water off.*

*The only way I would see to reduce water waste is by introducing water meters.*

**5.1.8 Effective medium for communication**

All respondents are in possession of a TV and a radio with only a few having access to the internet or Sky network. The TV reception and the number of channels are also significantly lower in Peebles (Borders) compared with a city. Respondents were asked about the effectiveness of the media to grasp their attention when conveying messages. The results are shown in Figure 3. It can be seen that TV is the popular choice followed by eye catching posters, direct mailing and radio. TV is deemed the best way to get a message across to all generations; direct mailing and newsletters are the preferred choice for older generations. A minority is in favour of facebook, text messages and internet and believe these to be mostly used by only the younger generation. For tenants who are partially sighted or blind, the most acceptable media to receive information is either through radio or audio tapes (provided by their HA). Tenants strongly prefer to have information pasted on the noticeboards in their sheltered housing accommodation.



**Figure 3 choices for preferred media for communication**

Due to physical disabilities tenants have less mobility to go out and therefore think that their regular meetings with their landlords are an effective platform for any water conservation measures. It was further mentioned that a combination of different mediums would be more effective and help to cater for all ages/groups, and will be more effective. Some of these opinions are typified by the comments given below:

*Posters catch your eye when you are either standing waiting on a bus or sitting at traffic lights. We actually fitted one water efficiency measure in our toilet. We'd seen it on a poster in a local Homebase shop.*

*Letters are actually quite good, you get something there that's tangible and you can read it in your own time and keep it and store it whereas emails can be deleted.*

*A general mix of everything really, something that's maybe a combination of technology and the old standard letter through your mailbox probably.*

*I think they should write to people, maybe send out mail and then have it on the TV as well as on the radio.*

*It should be done by public broadcast like TV, Radio. Internet, websites, and different social networking sites are very useful but it doesn't touch my life at all.*

*I am blind so I cannot read the printed material. If they can put it on tape, I've not got a computer, just got a tape recorder. That's all I got and this is how I receive information from my HA - on tape.*

*I watch TV, hardly go out and therefore rely on the information given to me by my HA.*

#### 5.1.9 Information on utility bills

Respondents were asked if they would like to receive such water conservation information at the back of their utility bills. 80% of respondents do not think that the information provided on the back of a utility bill is important and therefore they don't read it. Only 20% deemed this a good way of raising awareness among people, with the main reason being the belief that the majority of respondents do not like the idea of providing information at the back of their bills. They believe that the information provided on utility bills is not user friendly, the typeface is far too small, and that it is unintelligible.

*All the bills and the statements that are received are printed too small and require me to take my glasses off to read them. I prefer to receive separate pamphlets and leaflets for information.*

*I am on pre-paid meter so do not receive any bills. It just makes it easier if it is a separate pamphlet or separate leaflets then I am more likely to pay attention to it.*

*....I have never ever noticed any other information at the back of these bills. I would prefer to have this information probably separately.*

*I can't read or understand the bills that are presented to me, the typeface is far too small, it's unintelligible. If it had bigger print and spaced more out then I would definitely be able to read, as I read the paper.*

*If information is added at the back of a bill regarding how we conserve water then I think it's a better way of communicating. People would read it wouldn't they? Well I would anyway because I read everything that comes in front of me.*

*Absolutely hopeless! It's way too complicated, honestly especially gas bills and I don't pay attention to what is at the back of a bill.*

#### 5.1.10 Barriers to adopting conservation measures

The major barrier perceived by tenants in Scotland is the fact that people have a set amount to pay no matter how much water is used. It is said that in England people are

more aware of their water use as they have water meters and they know it's going to cost them money. It was also said that some people would still choose to ignore the messages even if all the facts are provided. This could either be due to the fact that they are not educated enough or they choose not to do it. It has to be something that's going to have a real impact on daily life for it to really do anything for anyone. As one respondent said;

*the people who care will still care and the people who don't care will still not care! If they say right a hose ban, people are still going to waste water.*

It is also said that leaks are a major problem, especially in England, which are not always fixed right away and lose hundreds of gallons of water. This puts people off from doing any savings. As one respondent said

*oh well, no matter what I do, it's just a drop in the ocean literally. It can't be too vital if they can allow leaks to go on.*

A minority of respondents think that climate change is like a fairy tale at the moment and are adamant that Scotland would never need a water conservation plan as it has got sufficient reservoirs that are overflowing. One respondent expressed such feelings as the quote given below;

*Because we've only got two big cities, Glasgow and Edinburgh, I can't remember the last time there was a hose pipe ban here for the central belt.*

#### 5.1.11 Campaign Messages

Finally participants of this study were asked to give a useful message that could become the title of such a campaign. Some of the replies are quoted below

*Use water sparingly, not freely (Respondent 1)*

*Having a big ocean out there does not mean that you can use as much water as you like (Respondent 2)*

*Appreciate what you have, because other people in other parts of the world don't have what you have (Respondent 3)*

*Save water Save Energy Save Your Bills (Respondent 4)*

*Car washes? compare a couple of buckets with hose pipes and automatic car wash (Respondent 9)*

*Conserve life, conserve water (Respondent 10)*

*Only use it when necessary (Respondent 12)*

## 6 Conclusions and Recommendations

During this investigation a number of issues were identified which should be considered in devising an effective communication strategy for promoting water efficiency in social housing tenants.

The most common theme that emerged from this study is that tenants do not have any awareness of water conservation in Scotland. Some people are aware of the drought situation in England but do not believe that such a situation can ever exist for Scotland. Tenants regard water as a key resource for survival but are not aware of potential threats of climate change and they don't recall any such information ever being provided to them.

For some tenants the incentive to save water comes from the hardships that they suffered during the war. Some tenants recycle used water from dishwashing to grow their own vegetables. For a minority, saving water is no concern at all as they believe that with plenty of rainfall in Scotland there is no threat to water supply at all.

It is said that water is taken for granted as it is readily available at taps and the only way that this attitude can be changed is by having a limited supply or by making use of water meters so that people pay for what they use. Tenants believe that having a shower instead of a bath, use of new toilet systems and dish washers are effective in reducing water wastage.

Tenants deem TV advertisements on African/Indian aid as very heart touching. The pictures and facts shown in these campaigns have really influenced them and now they do not unnecessarily waste water by leaving the tap open whilst brushing their teeth. Another highly recommended campaign is the recycling campaign whose success is attributed to the provision of sufficient information through leaflets, newspapers, advertisements on radio and TV and encouragement through the provision of multi bins.

This study has identified that awareness can be effectively raised through media where TV is regarded as the most influential medium. Whether it is a child, a teenager or a pensioner, all generations watch TV alike. For the blind community the most effective medium is radio or information provided to them on tapes by their HA. Not all the tenants have access to the internet and therefore do not think facebook or e-mails are very effective. Due to having physical disabilities, a lot of tenants prefer receiving written information such as letters, leaflets, booklets which they can read sitting down and in their own time. Providing information at the back of utility bills was regarded as a waste of time as the majority do not pay attention to it. It is recommended that the use of more than one medium for communication would satisfy the needs of the majority.

A majority of tenants put their trust in the water companies as the true provider of facts and information regarding water provision and consumption. Tenants also prefer to receive information through regular meetings where their HA keeps them updated with current issues. However, there is a lack of trust with the way this information is provided. It may be concluded that to engage these tenants in any water conservation measure it may be effective to have a representative from the water company occasionally present at these meetings to convey the full information with facts and clarity.

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