consensus
consumption environment sustainability

Future washing scenarios (images & narratives)

Exploring alternative futures for sustainable washing practices in Irish homes in the year 2050

CONSENSUS BACKCASTING RESEARCH

This document is an intermediary output from the CONSENSUS sustainable energy use backcasting process. Backcasting is based on the collective development of desirable future visions, followed by looking back (backcasting) to see how a transition towards that future could be achieved. As opposed to other futures techniques, such as forecasting, backcasting is valued for its potential to widen perceptions about sustainability problems and develop trend-breaking, holistic solutions. The CONSENSUS research project uses backcasting methodologies in an all-Ireland context as an alternative, creative means of designing innovations for sustainable household consumption and long-term action plans to work towards their achievement.

In approaching the problem of home energy consumption, the research adopted a 'social practice' approach given that much of our daily energy use is consumed through the completion of everyday practices and household chores. The practice of home heating was taken as the primary unit of analysis as it represents the highest end-use of energy in Irish households accounting for c. 70% of total home energy consumption. The social practice approach contrasts rational and individualized conceptions of human attitudes and actions and the tendency to overlook limitations imposed by existing technological or social contexts that 'lock' people into patterns of consumption. Instead, this approach notes the variety of social, infrastructural and institutional elements that shape our daily practices. In the context of home heating practices, these elements are; technological (e.g. heating systems, built structure), organizational (e.g. systems of energy provision and regulations) socio-cultural (e.g. temperature norms and expectations) and personal (e.g. heating habits).

The research engaged a range of interdisciplinary stakeholders from the public, private and semi-state sectors in Ireland (North & South) who collectively shape how we heat our homes. The backcasting process began with a stakeholder 'visioning workshop' based on the question; 'what kinds of technological, organizational and socio-cultural innovations can we envisage in the year 2050 that might fulfill the needs of home heating (warmth, comfort, wellbeing) more sustainably? In the 'scenario elaboration' phase, proposals from the visioning workshop were developed into three distinct future scenarios depicting more sustainable heating practices. This document contains these scenarios in visual and narrative form.

Next, an online forum was created to gain feedback from the workshop participants on the scenarios. After this, the scenarios were subjected to a qualitative 'sustainability assessment' to analyse their environmental, social and economic implications and 'citizen-consumer' workshops were held to assess opinions of everyday users towards the scenarios. Three particularly promising practices were distilled from these phases. The final phase of the research involved an interdisciplinary stakeholder transition workshop which culminated in a Transition Framework highlighting possible policy, education and research interventions that together might lead towards more sustainable energy use in the home in 2050. Outputs from this backcasting process are available from: www.consensus.ie/publications.

SCENARIO 1: 'WATER CONTROL' - HIGH REGULATORY CHANGE

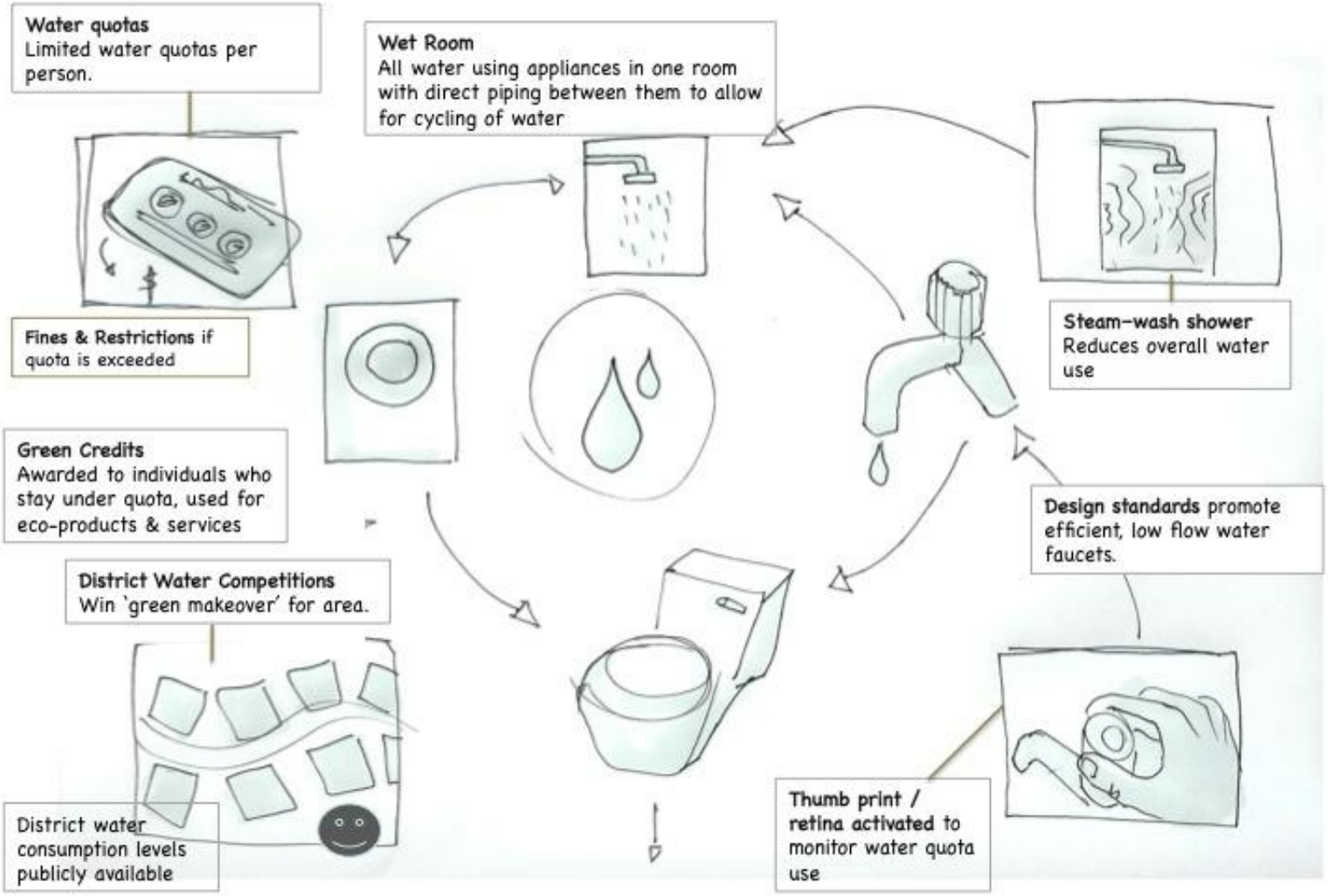
It's a Saturday morning and Derek wakes up at the usual time. He makes a cup of coffee and goes online to check the news and his **'quota tracker'**. In contrast to the days of his youth when the government supplied water for free in endless quantities, people now have to pay a fee to receive a basic weekly water quota (covering cooking, eating and washing requirements). If people exceed their quota they must **pay fines,** or in incidences of repeat offence, **water restrictions** may be imposed. Derek has been watching his water consumption closely during the week and the water quota tracker calculates that he has enough water left to allow for a leisurely **steam-shower** this morning.

Derek goes upstairs to the **'Wet Room'** a special room in the home where all the washing appliances are kept. These devices are supplied with water from the public mains but many people are installing rainwater harvesting to supplement this. In the wet room, water is used for one washing function (e.g. showering) and then stored temporarily for re-use (e.g. in washing machine). This allows **cycling of water between devices**, with water ultimately being used in toilet flushing or gardening.

All of the appliances in Derek's Wet Room are extremely efficient due to **regulations** that require manufacturers to **design for low water use** and to provide **labeling** indicating an appliance's performance. He just recently bought a **combination steam-shower** which begins with a steaming session for lathering up followed by short water bursts to allow people to rinse. Because of its high efficiency rating, this product had an especially low VAT rate making it the affordable option for customers. To activate the steam-shower Derek **scans his thumb-print,** which identifies who is using the shower, so that the appropriate amount can be deducted from his quota.

He decides to cut his shower a little shorter than usual as he noticed earlier that he is well within his water quota this week and as a result is in the line for **green credits.** These are awarded to people who consume consistently less than their quota. The credits can be used for the purchase of water efficient products or other eco-certified goods and services. Derek is keen to get a rainwater harvesting system installed and has nearly built up enough credits to do this. He also knows that if his community manages to build up enough credits, they could be in with a chance of winning a **community prize**. He can see **online** that they are near the top of the league so he has got together with friends to start a campaign for his area to encourage people to keep their water use low. If they succeed, they will get a **green makeover** for the area, and finally get that new playground and bicycle lanes that they've been waiting for so long.

SCENARIO 1. Tighter regulation & technology improvements



SCENARIO 2: 'AQUA ADAPT' – HIGH CULTURAL CHANGE

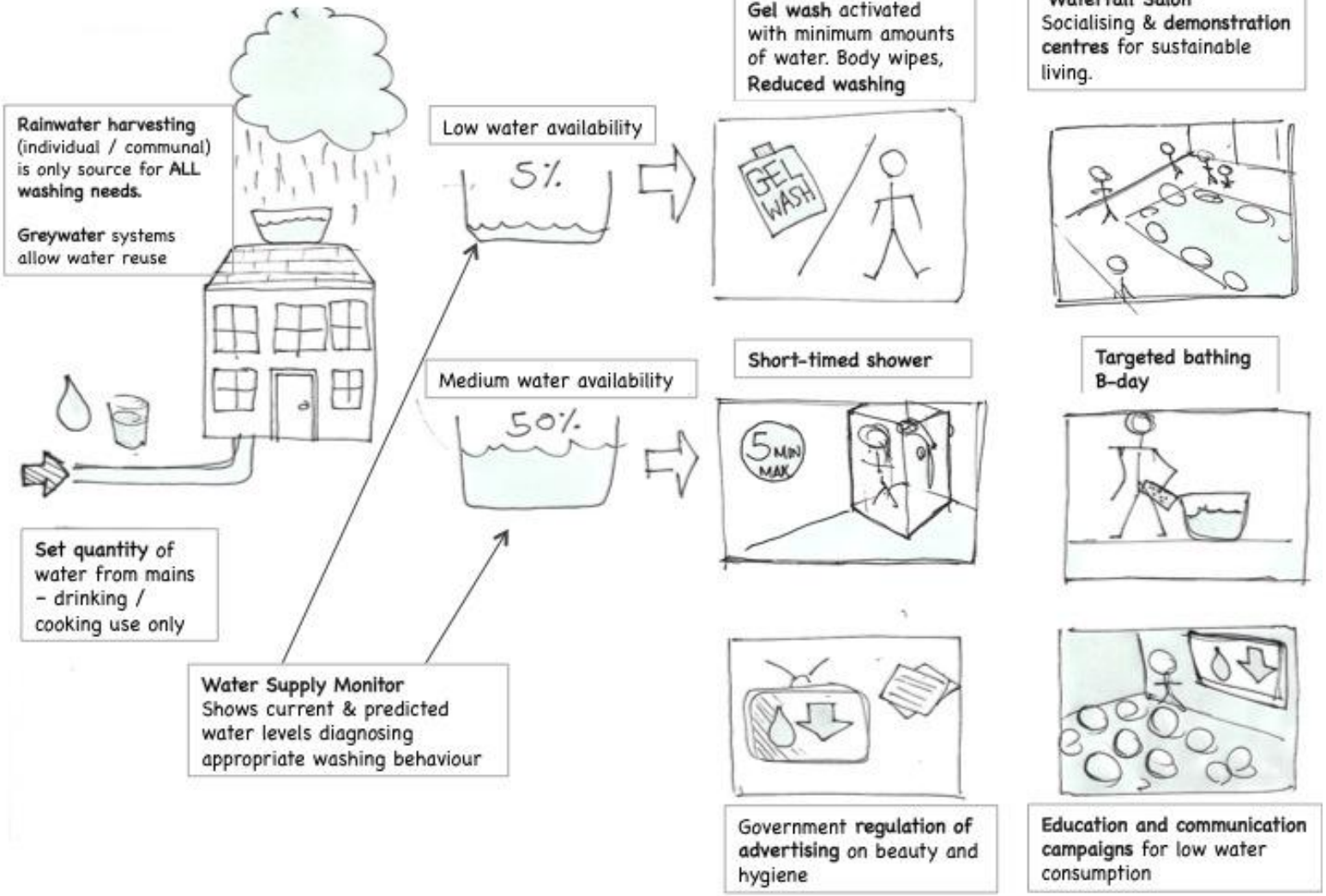
Claire wakes up earlier than normal. It is the middle of the Irish summer, and it looks like it's going to be another warm, dry day. Not to worry though, while her stock of harvested rainwater is low, she knows there is a range of ways she can carry out her washing needs using only small amounts of water. In the year 2050, everybody has access to **rainwater harvesting systems** thanks to a government funded roll-out around the country. In urban areas, these tanks are shared between apartment blocks while in more sparsely populated areas, every home has it's own rainwater collection tank. The **collected rainwater is used for all household washing needs** (personal washing, clothing, dishes etc), in fact, it is the only water source for these purposes. The old water mains delivers just a **small amount of treated water** to homes - enough to cover their cooking and drinking needs.

This means that Claire and the rest of the population have to adjust their cleaning activities according to the quantity of rainwater collected. The home '**water supply' monitor** helps them manage their water use by displaying current and predicted rainwater supply levels given the weather forecast. It also suggests the type of washing that can be performed with the available supply. Today the monitor shows that supply is at 5% and rain is not forecast until the weekend. As recommended by the monitor, Claire avoids water use and instead uses **gel cleaner** for her hair and **body wipes** for refreshment. In time of average water supply, targeted bathing is common or short, timed showers.

It has been a few days since she has had a full shower but she knows that it is not necessary to wash once or twice daily as people used to a few decades ago. **Government has extended control on advertising** promoting excessive cleanliness and unrealistic expectations for people's appearances and harmful chemicals in washing products have been banned. Besides, she plans to visit the 'waterfall salon' (**public bathhouse**) tomorrow evening for a professional 'super-clean' treatment and to socialize with other friends. The government ensures adequate supply for these facilities and provides **vouchers for people to attend** them during times of low water supply. At the bathhouses, people can also **learn practical skills** on how to reduce their water consumption and other environmental impacts.

People have become accustomed to adapting their lives to such fluctuations in water supply as part of a broader trend of living more in tune with natural rhythms (e.g. eating in-season vegetables and fruit or avoiding electricity use at peak times). So while the country experiences a dry spell Claire is happy to adjust to low water cleaning solutions in the knowledge that the water supplies in their rainwater harvesting systems will be replenished again soon. Heavy rainfall is forecasted for the end of next week and Claire is looking forward to treating herself to a nice long bath!

SCENARIO 2. Behavioural Adaptation



SCENARIO 3: 'DEWATERISE' – HIGH TECH CHANGE

Tuesday the 20th January 2050 starts like any other day for Ruth. She is awakened by the light and pulsing given off by her **revite-alarm**. This intuitive technology senses when her body is at the optimum time in its sleep cycle to induce wakefulness. This leads to greater vitality in the mornings and today she doesn't feel the need to shower to wake herself up. Besides, she had a quick wash three days ago and is keen to save money on her water bills. Greater water scarcity in the last few decades has seen a real push for reduced water use with **water charging and metering** introduced to homes across Ireland. After a basic free quantity for drinking and cooking, the cost of water increases dramatically.

This doesn't prevent people from being clean and hygienic however as a range of **waterless washing technologies** have been developed which in combination reduce the need for water-based washing. For example, today Ruth uses her **eco-friendly body spray** for light refreshment and dresses in her usual work uniform, ready for her day waiting tables in the local restaurant. Her uniform is made from **advanced, deoderising clothing materials** that need little washing, are soft to touch and breathable. These clothing materials are widespread and are especially favoured for work activities – leaving the wearers confident and fresh all day and reducing the need for excess water use in either clothes washing, or personal washing.

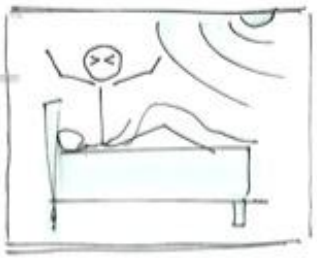
When she gets home, she has only a short time to get ready to meet with friends that evening. She is attending an **'innovation dialogue'** with a group of like minded people designed at brainstorming ideas for technologies and policies that may help people to reduce their home water and energy use. Many people attend these creative and interactive forums (in person and online) and eco-credits are gained for participation. These can be used in eco-certified products and services.

Before leaving the house, Ruth checks her '**wash watch'** - a personal body odour and cleanliness monitor which lets her see if she needs to clean and if so, what type of cleaning to perform - gone are the days when people washed excessively due to paranoia about body odor and cleanliness. This 'wash watch' links up with the '**smart water grid'** which is a low loss efficient water delivery system that measures usage, spot trends and helps manage demand for water. The 'wash watch' lets Ruth know that she's doing fine and suggests a short **steam clean** tomorrow evening when water costs will be less due to low demand and high abundance of water then.

Very few people own showers and power showers due to high taxes on these devices because of the huge amount of water they use. However, steam showering and low flow solutions are more widespread. The afternoon wash she has planned for tomorrow will tide her over for another few days as the combination of deoderising clothing, body sprays and revite-alarm will keep her refreshed and clean.

SCENARIO 3. Technological Change – waterless solutions

Revite-Alarm
Light & sensory pulses induce wakefulness reducing need to shower in mornings.



Open innovation
For green technology innovation. Strong sustainability focus in education.

Gain **eco-credits** for participation.

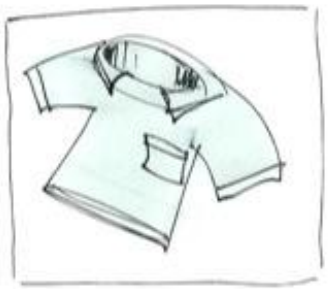
WATER CHARGING – PAY BY USE

HEAVY TAXES on water using appliances.

Waterless washing solutions widespread.

'Wash-watch'
On body device monitors dirt / odor levels & diagnoses: when a person needs to clean & which technology to use

Eco-friendly body spray for perfume purposes



Deoderising / bacteria eating clothing

Smart Water Grid
low loss, measures usage, manages demand.

ABOUT CONSENSUS

CONSENSUS: (**Con**sumption, **En**vironment and **Sus**tainability) is a four-year collaborative research project involving Trinity College Dublin and the National University of Ireland, Galway. It examines four key areas of household consumption that currently impact negatively on the environment and inhibit our ability to achieve sustainable development across both Northern Ireland and the Republic: energy, water, food and transport. CONSENSUS was funded by the Science, Technology, Research and Innovation for the Environment (STRIVE) Programme 2007–2013 financed by the Irish Government under the National Development Plan 2007–2013.

ABOUT THE AUTHORS

RUTH DOYLE is a PhD researcher on the CONSENSUS project and is based in the Geography Department of Trinity College Dublin. Her research is concerned with sustainable home water and energy consumption in Irish households and uses a participatory backcasting approach to design innovations and action plans for a transition to more sustainable consumption practices.

ANNA DAVIES is Professor of Environmental Geography and Director of the Environmental Governance Research Group within the School of Natural Sciences at Trinity College Dublin. She is Principal Investigator of CONSENSUS. Anna is a member of the National Economic and Social Council and the Royal Irish Academy's Geographical Sciences Committee.