

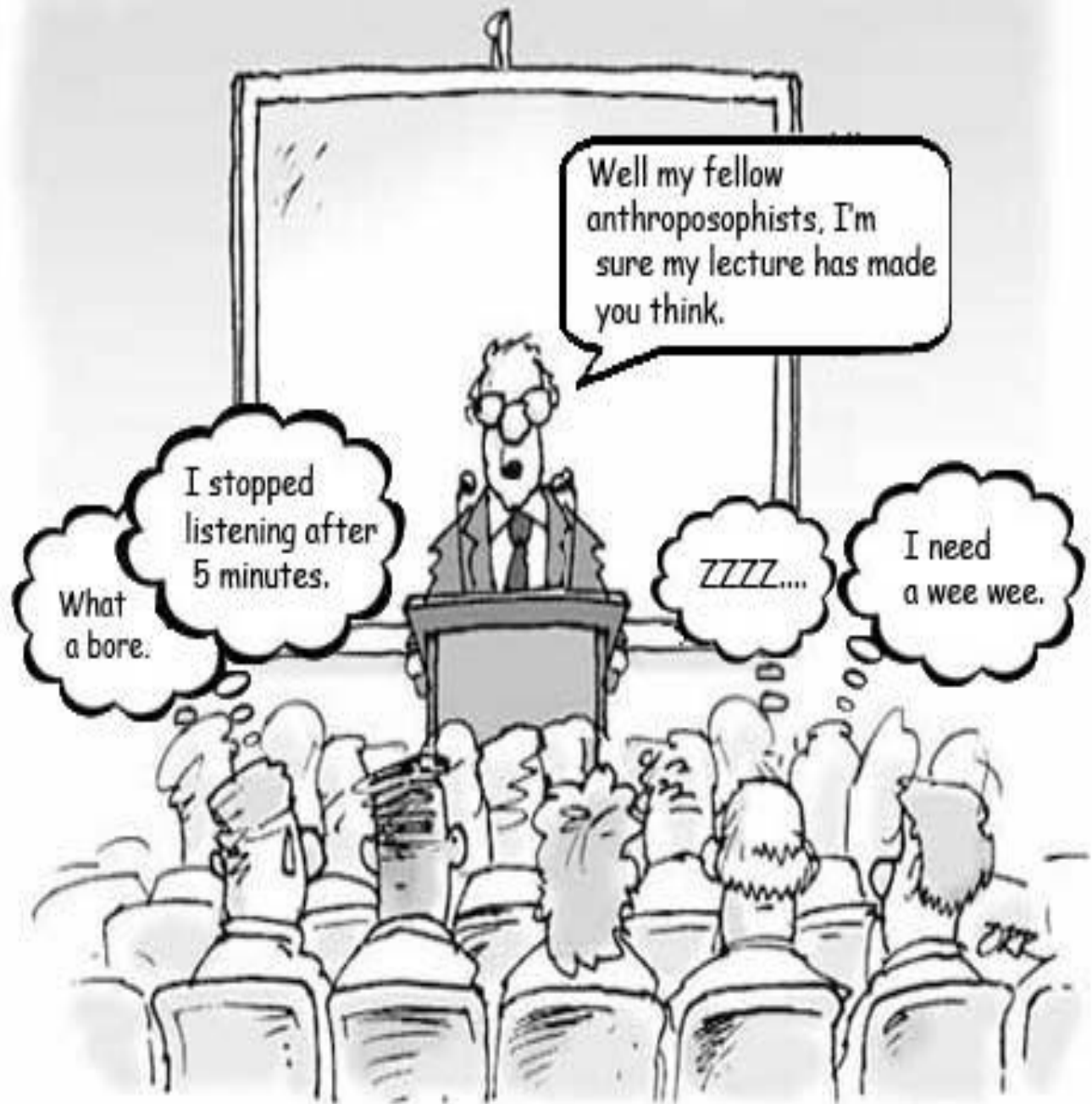
Achieving Healthy Catchments

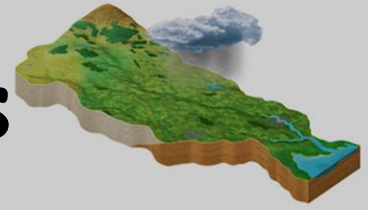
1. Where are we now?
2. Looking to the future
3. Maintaining the momentum

Donal Daly
Catchments Unit, EPA

Thanks to: colleagues in EPA, (particularly those in the Catchments Unit), LAWCO, DHPCLG, DAFM, GSI, LAs, those attending the recent catchment workshops, and many more

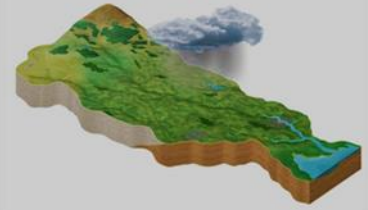
The danger ..





Achieving Healthy Catchments in terms of:

- ☐ Water quality
- ☐ Natural capital & catchment services
 - ☐ Ecosystems (biodiversity) & geosystems (e.g. sand/gravels)
- ☐ People (public health – physical & mental))
- ☐ Flood mitigation
- ☐ Reduced green house gas emissions
- ☐ Local economy (and vibrant communities)
 - ❖ Difficult to achieve healthy catchments without a healthy local economy



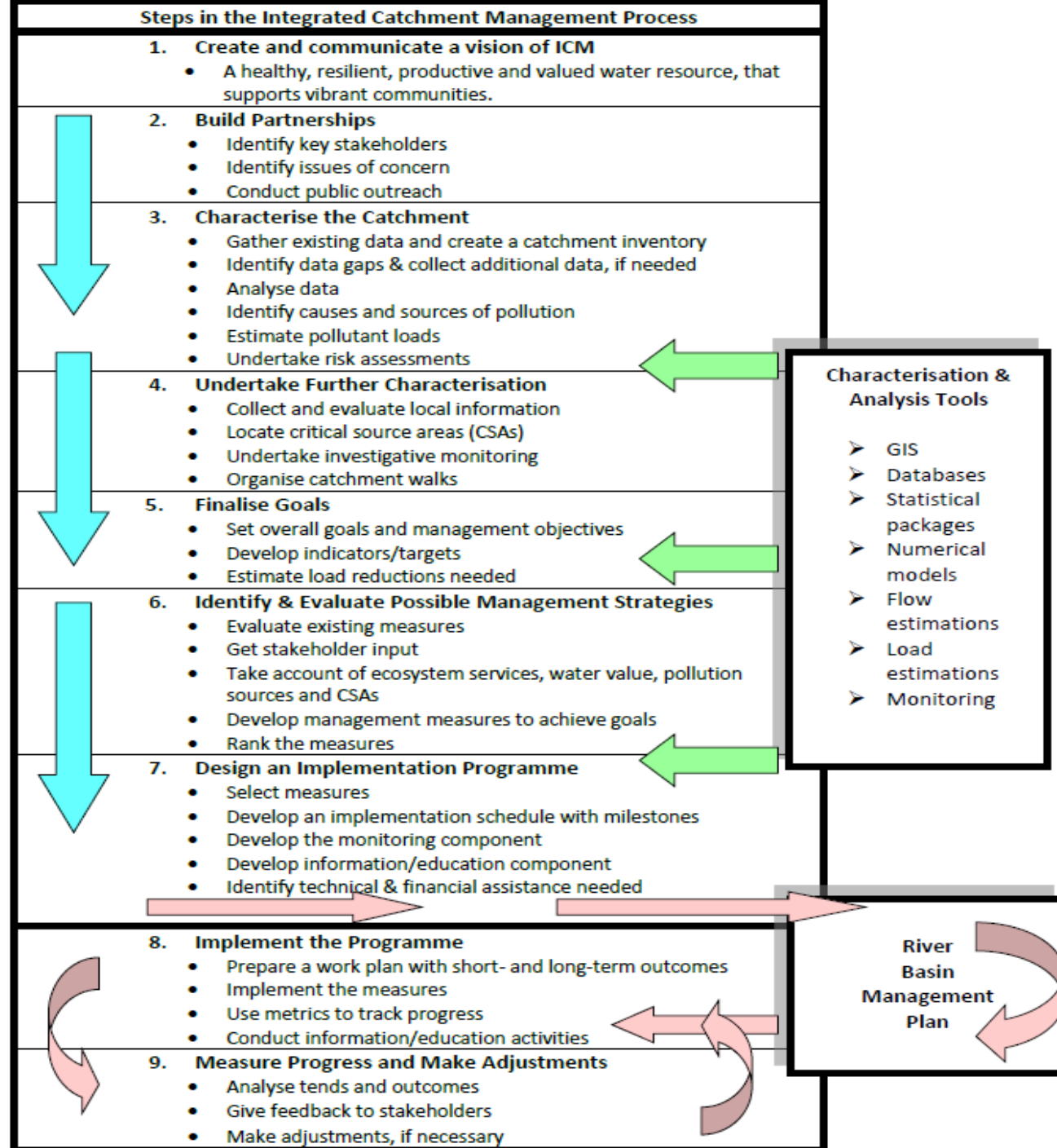
Where are we now?

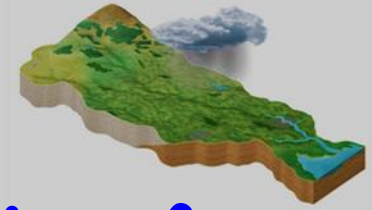
□ An agreed sensible approach

- ❖ Integrated Catchment Management (ICM)
- ❖ This provides the key framework (and philosophy)

Steps in the Integrated Catchment Management (ICM) Process

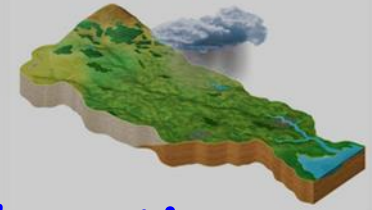
(adapted from USEPA (2008))





Where are we now?

- Really good scientific information & understanding, & evidence base:
 - ❖ GSI, Teagasc, EPA, research by academic institutions, LA & IFI input
 - ❖ The characterisation outcomes provides an excellent basis for decision-making



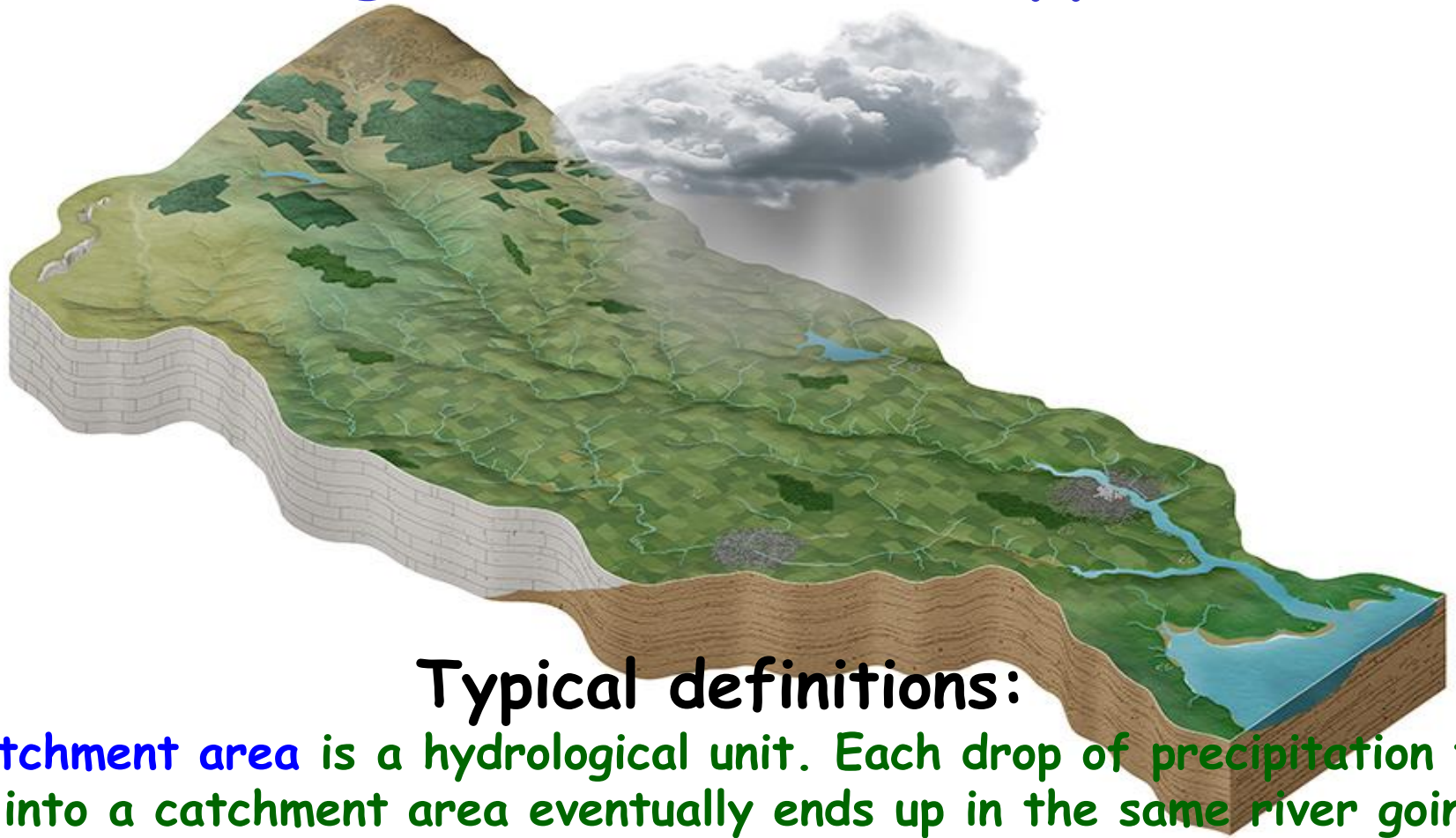
Where are we now?

- ❑ Increasing engagement, interaction & collaboration

SE Region catchment assessment workshop, Roscrea, June 2017



Looking to the future: Broadening and embedding the catchment approach



Typical definitions:

A **catchment area** is a hydrological unit. Each drop of precipitation that falls into a catchment area eventually ends up in the same river going to the sea if it doesn't evaporate.

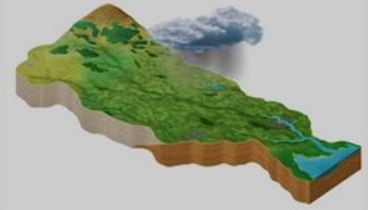
A **catchment** is defined as an area of land contributing to a river, lake or other waterbody



Proposed (technocratic) definition (as a shared mental model)

A multi-functional, topographically-based, dynamic, multiple-scale socio-biophysical system; defined by over ground and underground hydrology; connecting land, water, ecosystems and people; and used as the basis for environmental analysis, management and governance.

Connects (and integrates) topography, water (all types), ecosystems, geosystems, flooding, GHGs, planning, and PEOPLE/COMMUNITIES in the catchment



Looking to the future

□ “Activity without achievement”



We must
achieve our
goal!!

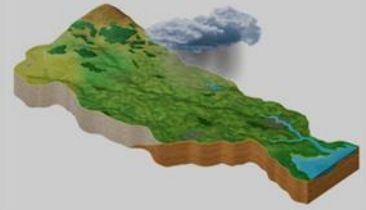


We must have
"Activity with
Achievement"

Outcomes not just outputs!!



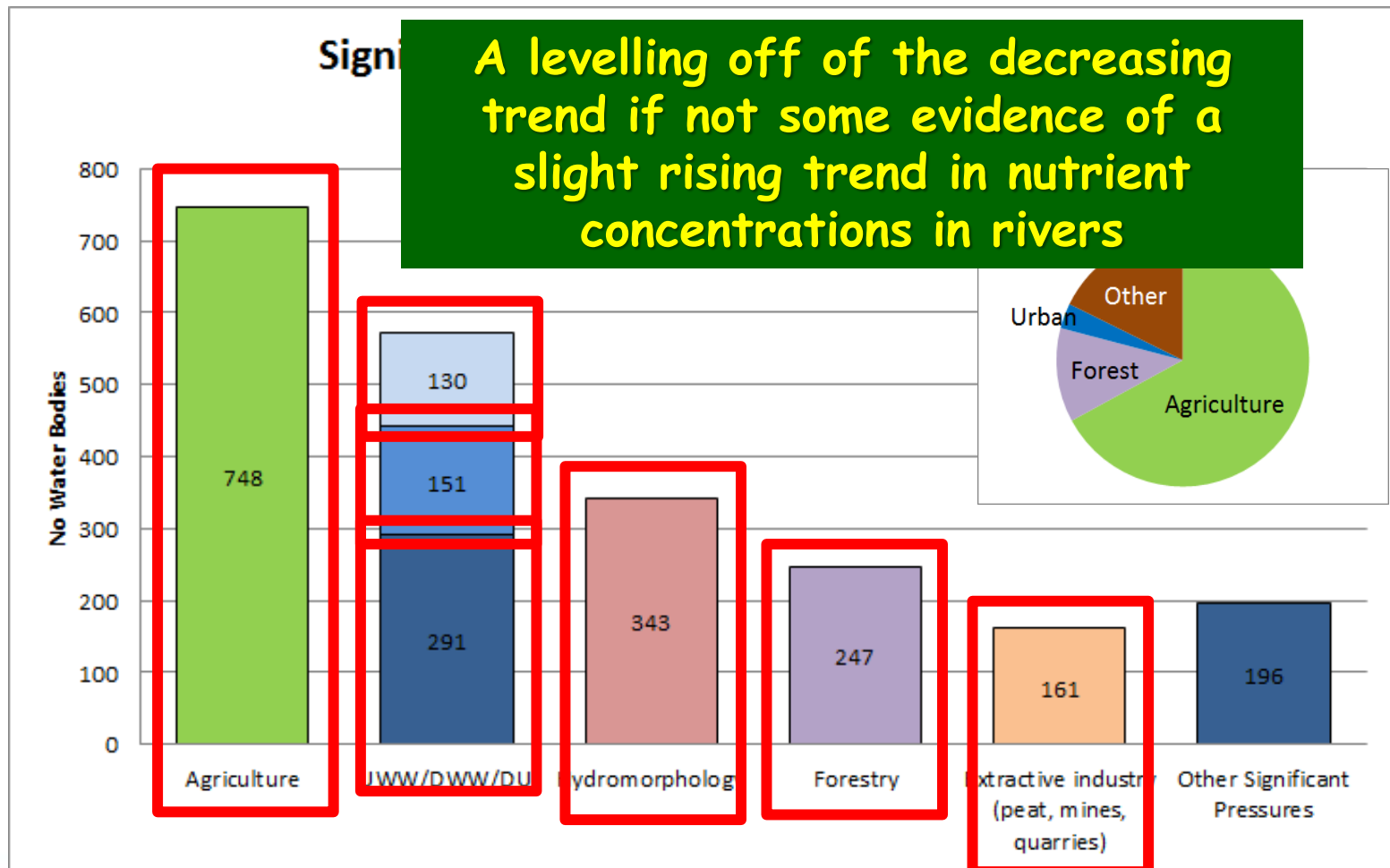
www.sports-in-focus.com



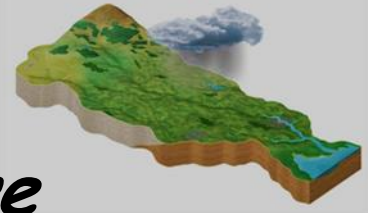
Looking to the future?

- ❑ Finalising the River Basin Management Plan & work to achieve WFD (and other) objectives
 - ❖ Draft RBMP is in consultation phase
 - ❖ Approaches: 1) maintain national measures; 2) targeted measures where necessary *"the right measure in the right place"*
- ❑ What level of ambition is achievable?
- ❑ What dates for achieving WFD environmental objectives for unsatisfactory water bodies - **2021**, **2027** or beyond 2027 ??

Significant Pressures in *At Risk* rivers and lakes (TraC/GW in progress)



Half of all *At Risk* water bodies are impacted by multiple pressures



Looking to the future....

Agriculture as a significant pressure

□ Current approaches - mainly:

- ❖ Inspections
- ❖ RDP incentives (e.g. GLAS), with an element of targeting
- ❖ Limited knowledge transfer on environmental issues

Looking to the future....

Agriculture as a significant pressure

- Context 1: more food is needed to support a growing world population
- Context 2: farmers don't like being told what to do!!

❑ An new/amended paradigm is needed (in my view)

- ❖ Acknowledging that farmers are custodians of the rural environment and most would take this seriously
- ❖ Moving away from 'fear' as the driver for the desired behavioural change

Achieving healthy catchments



But, I am not saying that inspections are not needed!!

Looking to the future....

Agriculture as a significant pressure

- Context 1: more food is needed to support a growing world population
- Context 2: farmers don't like being told what to do!!

❑ An new/amended paradigm is needed (in my view)

- ❖ Acknowledging that farmers ARE the custodians of the rural environment and that most take this seriously
- ❖ Moving away from 'fear' as the driver for the desired behavioural change
- ❖ Farm advisors as the link between farmers and regulators on environmental (water quality, biodiversity, etc) protection.
- ❖ Engagement, listening, respect, empathy, understanding, common language, working it out together, appreciating that farmers have to earn a living from farming, etc.
- ❖ Further development of the National Dairy Sustainability Initiative (as outlined in the dRBMP)
- ❖ Pay farmers for ecosystem and other beneficial services in relevant areas, e.g. HNV areas
- ❖ Use more targeted RDP incentives for effectiveness and to encourage multiple benefits

Achieving healthy catchments









Co-benefits for water quality, biodiversity and flood mitigation.

Looking at Agriculture

- Recommended approach (response to address at EPA Agency Day 2017) E working together to find

Smart Farming

Improving farm returns.
Enhancing the environment.

Highlight: Christy McKenna Smart Farming participant, Trevor Unwinwoody Teagasc Advisor and Brian Treanor Monaghan IFA.



€4,000 saved through Smart Farming in Monaghan

This year's Smart Farming cost saving challenge is well underway, with farm visits now completed on 25% of the farms.

So now is probably a good time to look back at some of the savings identified by previous participants in the programme.

Emyvale farmer, Christy McKenna took the Smart Farming challenge previously.

Feed management was one of the biggest areas identified for savings on his farm. He was given advice on how to achieve the 76% target for silage dry matter digestibility, as well as how to reduce silage effluent.

Other areas included identifying energy savings of up to €1,000 and improving grassland management to increase milk yield.

Christy's recommendation to other farmers considering Smart Farming is to get involved, "The free Smart Farming cost saving study completed on my farm provided a great opportunity to look at how I can improve my returns while enhancing the environment. The follow-on discussion with my neighbours here on the farm was a great way for us to learn from one another."

LAST CHANCE!!

WIN

A nutrient management plan & lime* for your farm

*Maximum value €2,500

ENTER NOW! Please tell us: What are the **two** benefits of Smart Farming listed on the video clip on smartfarming.ie/competition



Brian McIlvenna,
Sustainable Energy
Authority of Ireland

About the scheme

The Sustainable Energy Authority of Ireland promotes the Accelerated Capital Allowance (ACA) scheme to encourage investment in energy efficient equipment and systems. The scheme was opened to sole-traders including farmers for the first time in 2017. Under the ACA scheme 100% of capital expenditure on approved equipment can be off-set against profit in the year of purchase.

Example

Consider a farming operation that spends €10,000 on approved energy efficient equipment, in a year in which it earns €30,000 in profit (i.e. farmer is paying tax at the 20% standard rate).

Approved equipment is listed in the Triple E Register maintained by the SEAI and covers a wide range of commercial, industrial, and

farming equipment including lighting and pumps. The register can be seen at www.seai.ie/Your_Business/Triple_E_Product_Register

ACA benefits to the farmers

The ACA offers the following benefits:

- Reduction to tax bill.
- Improved cash flow.
- Reduction in energy costs.

Claiming the ACA in 3-steps

1. Decide upon required equipment.
2. Ensure equipment model is on the ACA specified list (Triple E register) before making purchase.
3. On the tax return form, make the ACA claim.

Expenditure within each equipment category must, at the end of the accounting period, be equal to or exceed minimum expenditure amounts relevant for each category.

More information on the ACA can be found as follows:

Tel. 1850 37 66 66 website: www.seai.ie/aca

www.smartfarming.ie

Email: smartfarming@ifa.ie
or call 01 426 0343



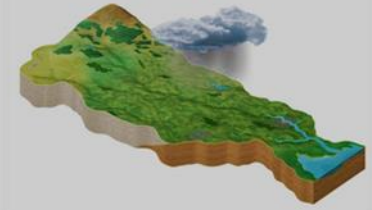
Looking to the future....

Agriculture as a significant pressure

Achieving healthy catchments



- ❑ Recommended approach - *“Those with the challenge are leading their response to addressing it.”* (Quote from Thomas Ryan, IFA, in presentation on Smart Farming at EPA Agency Day 2017) Even if not always 'leading', at least helping and actively working together to find and undertake solutions.
- ❑ Recommended approach - collaboration ..(Emphasise 'CAN' not the CAN'T!!)
(Farm advisors have a critical role in facilitating this.)
- ❑ Benefits are enormous
 - ❑ Better environment for biodiversity, water quality, tourism, etc
 - ❑ Better financial returns for farmers
 - ❖ Quotes from Owen Brennan (Devenish) in Farmers Journal 20 May
Origin Green needs to evolve - become more data-driven and science-based in the future. Industry should see the environment as a profit centre not a cost centre. As little as 20% of global milk production is grass-based systems - global demand will require this to be a greater %age in the future. This plays right into Ireland's hand.
 - ❑ Healthier rural communities
 - ❑ A greater sense of 'community' and 'working together'.
 - ❑ Vibrant rural economies



Maintaining the momentum

□ We have momentum

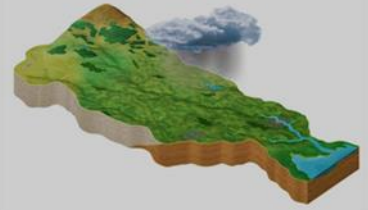
- ❖ Draft RBMP published with final plan due
- ❖ LAWCO in place and active
- ❖ New resources likely to be available
- ❖ We know what the issues are
- ❖ We have an Investigative Assessment approach in-hand, which will help us to locate the issues, and evaluate and target measures
- ❖ There is enthusiasm and hope arising from the workshops
- ❖ Etc

□ But, can we maintain the momentum to reach our goal of satisfactory water and biodiversity, etc??

Maintaining the momentum

(to achieve our goals) (1)

Achieving healthy catchments



□ Agriculture

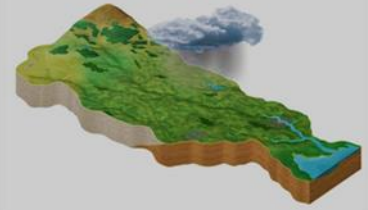
- ❖ “The right measure in the right place” is the key to improving unsatisfactory situations.
- ❖ I.e., measures that take account of the biophysical setting, the issues causing the problem (e.g. P, N, sediment, pesticides) and of co-benefits/multiple benefits.
- ❖ But, we haven't assessed adequately what these measures should be or undertaken cost effectiveness analysis.
- ❖ Or, how they can be implemented

□ This is a challenge for the future; however, it is not an insurmountable one

Maintaining the momentum

(to achieve our goals) (2)

Achieving healthy catchments



□ Linking science with policy.....

1990

SO, THIS CLIMATE
CHANGE THING
COULD BE A PROBLEM...



1995

CLIMATE CHANGE:
DEFINITELY A
PROBLEM.



2001

YEP, WE SHOULD
REALLY BE GETTING
ON WITH SORTING THIS
OUT PRETTY SOON...



2007

LOOK, SORRY TO SOUND
LIKE A BROKEN RECORD
HERE...



2013

WE REALLY HAVE
CHECKED AND WE'RE
NOT MAKING THIS UP.



2019

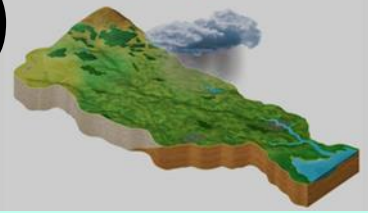
IS THIS
THING ON?



Maintaining the momentum (2)

Linking science with policy

Achieving healthy catchments



☐ Linear model

Researchers >> Public body scientists/engineers (deriving options and likely outcomes) >> Departmental policy advisors >> the Minister

By the way I didn't do this for most of my working life!!!!!!

❖ Economics main driver for policy makers and politicians.

Parallel roles for scientists:

☐ Integrators

☐ Translators (providing 'translational leadership')

☐ Communicators

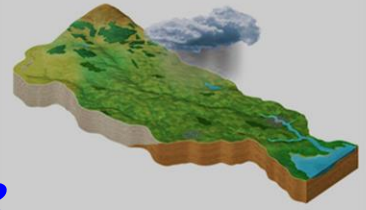
❖ We need to try put ourselves 'in the shoes' of policy makers (and local communities)

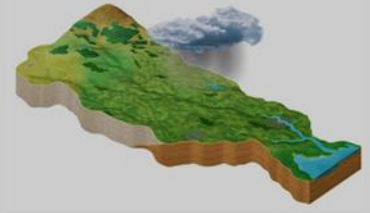
Maintaining the momentum

(to achieve our goals) (3)

*Putting people/communities at the core
of environmental management*

- The concept of 'environmental management' can only be a viable one when it takes firm root in public opinion and consequently has an effect on politics and policy-making.





Maintaining the momentum (3)

□ The role of LAWCO office

❖ Crucial policy decision

❖ But needs back-up from EPA, LAs, ++



"It is people who save rivers, not plans, reports, websites and newsletters"

Quote adapted from 'Saving Eden: A Manifesto' www.savetheeden.org

Maintaining the momentum

(to achieve our goals)
(4)

The role of:

❑ Collaboration

❑ Teamwork

❖ Within
organisations



Maintaining the momentum

(to achieve our goals)
(4)

The role of:

□ Collaboration

□ Teamwork

❖ Between
public sector
bodies



Maintaining the momentum

(to achieve our goals)

(4)

The role of:

□ Collaboration

□ Teamwork

❖ Among all of
us - public &
private
sectors

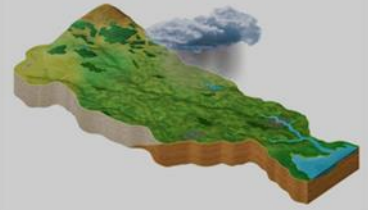


**Suggestion: let us align the areas we agree on
and deal with the areas we disagree on
separately!**

A wide-angle photograph of a rural landscape. In the foreground, a lush green field is visible. In the middle ground, there is a small village with several white buildings, including a large house and a smaller building. A road winds through the landscape. In the background, there are rolling green hills and a large, forested hill. The sky is blue with some clouds.

**"By working together,
we will achieve more"**

Catchments Unit philosophy



Maintaining the momentum

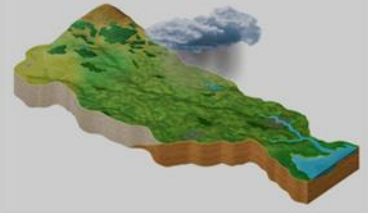
(to achieve our goals) (5)

□ Having a shared vision & goals



Source: RTE Sports Gallery





Maintaining the momentum

- Developing and having a “shared vision” and shared goals – critical, in my view

Vision – a motivating force that compels people to action towards a shared understanding of a desirable future

(from Nore Vision)

**OUR VISION: healthy people,
and a healthy environment,
through transition to a
sustainable local economy**



**The
Organic
centre**

Rossinver, Co. Leitrim

Ph: 071-9854338

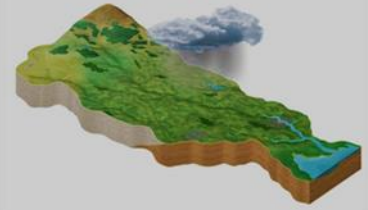
web: www.theorganiccentre.ie

e-mail: info@theorganiccentre.ie

Visit Our Gardens And Eco Shop
– Attend A Weekend Course –

Open Tuesday to Sunday
10:00am - 5:00pm
March - October





Maintaining the momentum

(to achieve our goals)

❑ Suggested components of a **shared vision** of “healthy catchments”

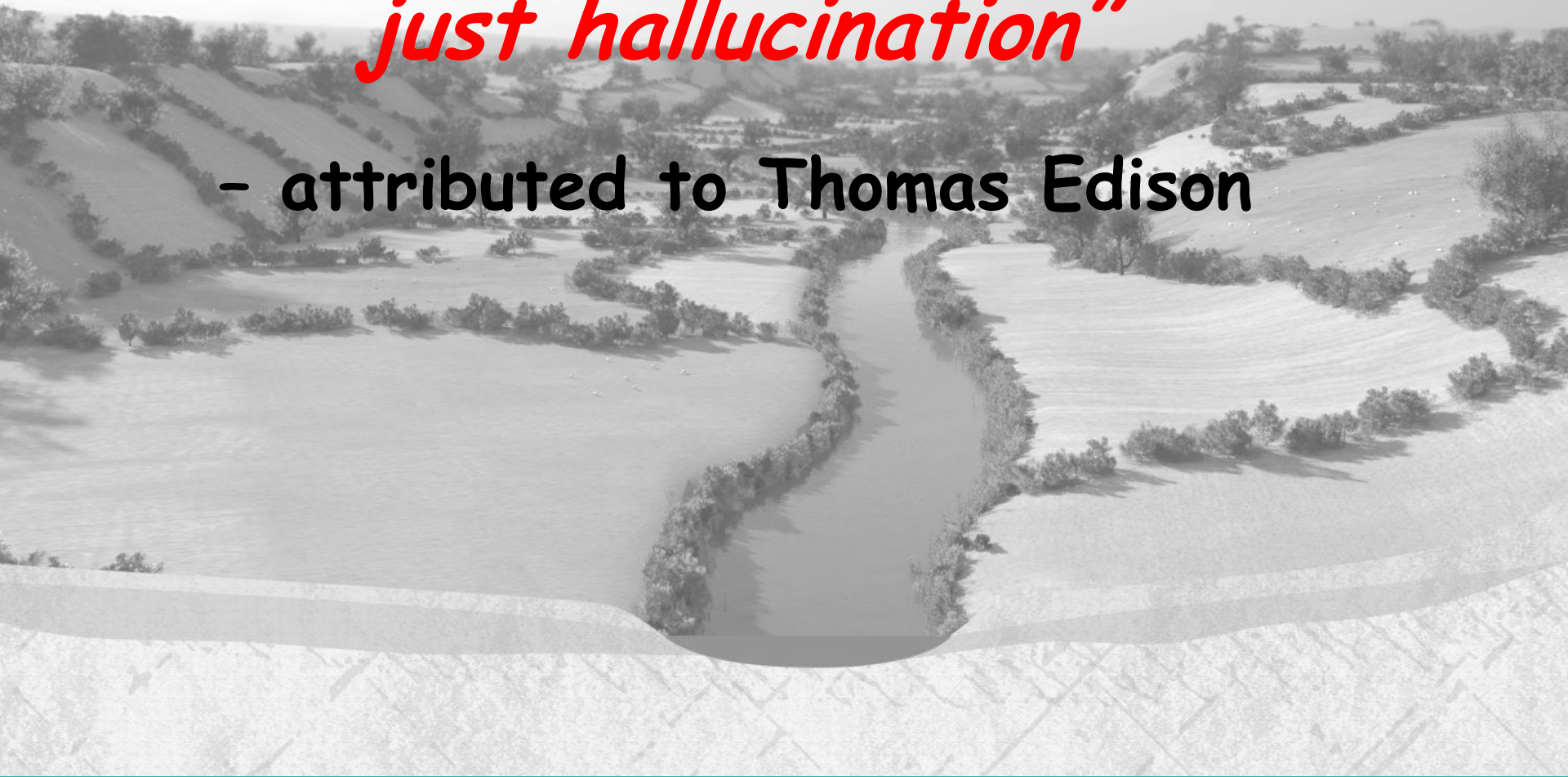
- ❖ Water quality & quantity
- ❖ Catchment services and natural capital
 - ❖ Ecosystems, including the services from them
 - ❖ Geosystems, including the services from them
- ❖ The people/communities/farmers that live in catchments
- ❖ People's wellbeing, including vibrant local communities and public health (physical and mental)

All connected together as a means of achieving multiple benefits.

This makes it a more powerful and effective vision.

But remember,
*"Vision without execution is
just hallucination"*

- attributed to Thomas Edison



There are national and international pressures

**“Exhortations are merely words,
it is actions that are needed”**

Clara Bog

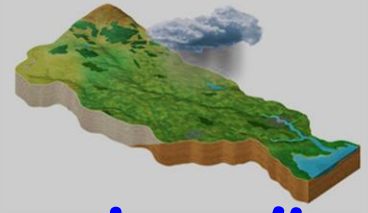


I suggest that this is a time for T.K.
Whitaker-type leadership and vision here
in Ireland

Maintaining the momentum

Summary

Achieving healthy catchments



1. "The right measure in the right place"
2. Involving those with the challenge in finding and undertaking the solutions
3. Bridging the gap between science and policy
4. Putting people at the core of environmental management
5. Collaboration and teamwork essential
6. Developing a shared vision and shared goals

What does the future hold for Cora?

Cora, European citizen from Ireland, born on the 11th January 2015

Will she love nature??

Will she enjoy biodiversity?

Will she see glaciers in the Alps?

Will she have access to clean water??

Will she count on an affordable energy supply?

Will she experience the richness of ecosystems around the world?

Will she see "healthy catchments" throughout Ireland?

Will she have the possibility of passing on a healthy environment to her children?



Will she be able to fulfil her dreams?