

CAAV

Professionals in the Countryside



Property Values Flooding and Climate Change Adaptation

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IPAV Conference – Dublin – 8th November 2023

Climate Change



- **Impact** - with volatile and extreme weather
 - Winter storms in the USA and here, flooding here
 - Hot dry spells
 - Mediterranean hit harder than British Isles
- **Mitigation** – emissions reduction
 - Changing practices, renewable energy, sequestration, etc
- **Adaptation** – how to live with it
- What we do not mitigate we must adapt to
 - More change to come even if policies work

What Do We Face?



- Changed rainfall patterns: wetter west, drier east
 - More intense extreme, localised rainfall with flooding
- Storms, not only in the winter with high winds and damage, some associated with flooding
- Temperature peaks over 40°C
 - With periods of sustained heat and drought
- Drought on its own at other times of year
- Conditions favouring new pests and diseases
 - When there may be fewer crop protection products
- Still some intense cold snaps
- Global supply chains risks and opportunities

Flooding 2023



- Repeated intense rainfall on saturated ground
 - Thessaly – the agricultural area of Greece
 - Slovenia – a land of mountain and flood
 - Libya – the dam bursts of Derna – 16” of rain
 - Emilia Romagna, Spain (10” in a day), Georgia, Bulgaria, ...
- Storm Babet – second named storm by October
 - Aberdeen and Angus – repeated
 - Cork and Wexford
 - Eastern UK
- Houses, farms, infrastructure, commercial, ...
 - Destruction, damage, pollution , ...

Flooding and Property



- The immediate impact
 - Damage and displacement
 - Insurance claims if insured
 - Disrupted markets
- And then? Medium/longer term effects?
- General view is that values return
 - “People have short memories”
- But we have tight housing markets
- Riverside and coastal properties often have attractions consistent with flood risk

Flooding and Property Values



- Look closer – when do markets recognise risk?
 - EVSB work for Slovenia – TEGOVA paper
- Distinguish between flood risk and flood events
 - Question gets asked after events
 - BUT flood risk may already be in values
- Flood risk leads to flood defences
 - Mitigating risk but the risk moves elsewhere
- Institutional and regulatory changes – Flood Re in UK
- What when insurers and lenders refuse?
 - Financial risks of insurers
 - Would that remove borrowers from the market?

Even So ...

- All other things are seldom equal
- People adapt
- Western housing markets are undersupplied
 - Different in the Balkans?
- Financial and market conditions at the time
- Higher value properties based on location
- Properties adapted for flood
 - Tiled, changed electrics, protections, living in upper floors
- Coastal erosion answers
- Do some settlements have to be replaced?

Adaptation - Overall



- Data and Management – identify/respond to risks
- Insurances
- Specialise with risk or diversify for resilience
- Skills and outlooks needed
- Soil improvement for resilience
 - Absorbent, improving organic matter and structure
- Factor issues into cropping and stocking decisions
- Nature for resilience and its own sites
- Interaction/collaboration with neighbours?

Torrential Rain and Flooding



- Farm infrastructure
 - Handling/harvesting, managing water
- Land, buildings and flooding
 - Identify flood risk and avoid it
 - How to remedy waterlogging, pollution, etc
- Access routes with tracks, bridges and culverts
- Making housing resilient
 - Look at Flood Re's Build Back Better measures
- Livestock and animal welfare
 - Protection of animals and fodder

Water Quantity

Natural Flood Management

- Expect to hear much about this
- Attenuating flooding
- Upland tree planting
- Soil management – aiding water management
- Slowing water
 - “leaky dams”, washlands, beavers, etc
- Find the deals for rural owners to relieve urban losses

Anne Valley, Waterford, ROI



- Whole catchment approach using Integrated Constructed Wetlands
 - A series of shallow, aerobic wetland areas
- Farm drainage had not taken account of wider effects
- ICWs buffer polluted and storm water
- Anchor service but brought other benefits
 - Aquatic biodiversity, amenity, landscape
 - Reported to have increased farm profits
- Low cost, multi-output approach

Storms



- Trees and woods – risks and mitigation?
 - Management of woodland edges, trees as windbreaks
- Ensure annual checks to trees beside roads and footpaths
- Buildings – windtight and watertight?
- Security of power supplies – more dependent on electricity
 - Own power generation – and if mains are down?
- For low lying coastal areas with rising sea levels
 - Local abandonment of coastal defences
 - Risk of sea surge (as in 1947 and 1953)

Sustained Heat/Drought - 1



- What would happen with 4 weeks at 35°C? At 40°C?
- Water management
 - can farm control water supply for over a year?
 - Reservoirs, etc
 - political risk to water sources – security if dependent on abstraction licences
 - what water is drawn from streams, ponds etc?
 - efficiency of use
 - reduced evaporation from reservoir
 - irrigation technology

Sustained Heat/Drought - 2



- Conditions for livestock
 - Airflow in buildings, shelter, protecting yields
- Fodder provision for livestock
 - Mixed species pastures for drought resilience
 - Is a greater pasture area required for security?
 - Keep poorer/wetter pasture free as insurance grazing
- Working and housing conditions for people
- Woodland/trees – design and species choice
 - Watching trees for drought stress
- Subsidence – areas of greatest risk expected to grow

And ...



- **Wildfire Risk**
 - Managing risk
 - woodland and wider landscape
 - crops
 - straw etc in store
 - Protecting key infrastructure
- **Diseases and Pests**
 - Arable issues, livestock
 - Trees/Woodland – monitoring, managing – mixed planting

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Questions?