

The background of the slide is a light gray gradient, decorated with numerous realistic water droplets of various sizes. Some droplets are at the top, some at the bottom, and others scattered in the middle. They have highlights and shadows, giving them a three-dimensional appearance.

POLICY AND TECHNOLOGY FOR MORE RESILIENT COMMUNITIES

OPPORTUNITIES AND RISKS

RESILIENCE - SOME GENERAL OBSERVATIONS

- IT SEEMS TO BE GENERALLY ASSUMED THAT THE NATURAL ENVIRONMENT IS NOT RESILIENT TO WILDFIRES
- IT IS SIMILARLY ASSUMED THAT URBAN COMMUNITIES ARE MORE RESILIENT TO ENVIRONMENTAL THREATS SUCH AS FLOODS AND WILDFIRES
- BUSINESSES AND THE ECONOMY ARE OFTEN NOT WELL CONSIDERED AT THE PLANNING STAGES
- “LEGACY” DAMAGE FROM PRIOR EVENTS NEEDS TO BE FACTORED IN WHEN PLANNING

POOR REPORTING CAN CREATE FALSE UNDERSTANDINGS WHICH IMPLICATE UPON FUTURE PLANNING

“THE MORAY WILDFIRE, IN NORTHERN SCOTLAND IN 2019, RAGED FOR OVER A FORTNIGHT. AT ITS PEAK, THERE WERE 80 FIREFIGHTERS, 19 FIRE ENGINES AND TWO HELICOPTERS IN ATTENDANCE, BATTLING THE FLAMES ON FOUR FRONTS. BEFORE IT WAS EXTINGUISHED, IT HAD **DESTROYED** OVER 25 SQUARE MILES OF GRASSLAND AND PEAT”. (NATIONAL GEOGRAPHIC)

NATURAL ENVIRONMENT RESILIENCE IS AMAZING IN CERTAIN HABITATS – KANGAROO ISLAND

FEBRUARY 2020



AUGUST 2020



COMMUNITY RESILIENCE

- VULNERABILITY CAN BE DIRECTLY RELATED TO FACTORS ENTIRELY UNRELATED TO THE EMERGENCY EVENT
- THE CHANGING NATURE OF LAND OCCUPANCY CAN HAVE UNFORESEEN IMPACTS UPON BOTH THE RESILIENCE OF A LOCAL COMMUNITY AND THEIR TOLERANCES
- WHOSE PROBLEM IS THE RISK OF WILDFIRE?
- IT CAN BE GREATLY ENHANCED BY GOOD REGULATION WHICH COMPELS LOCAL COMMUNITIES TO PLAN AND PREPARE – IF IT IS OBSERVED/ IMPLEMENTED

ECONOMIC RESILIENCE

- SIMPLE TO ADDRESS THROUGH RECOVERY FUNDING AFTER EVENTS AND BY TAX BREAKS FOR INVESTMENT PRIOR TO EVENTS
- EXTREMELY DIFFICULT TO *FUTURE-PROOF* FOR EVENTS THAT HAVE NOT EVENTUATED YET BECAUSE THE COST: BENEFIT ANALYSIS CANNOT FACTOR IN LOSSES WHICH ARE ETHEREAL AND THEORETICAL
- THERE IS LITTLE POLITICAL CAPITAL IN PREVENTING EVENTS WHICH MIGHT HAPPEN

ECONOMIC RESILIENCE - UN OFFICE FOR DISASTER RISK REDUCTION

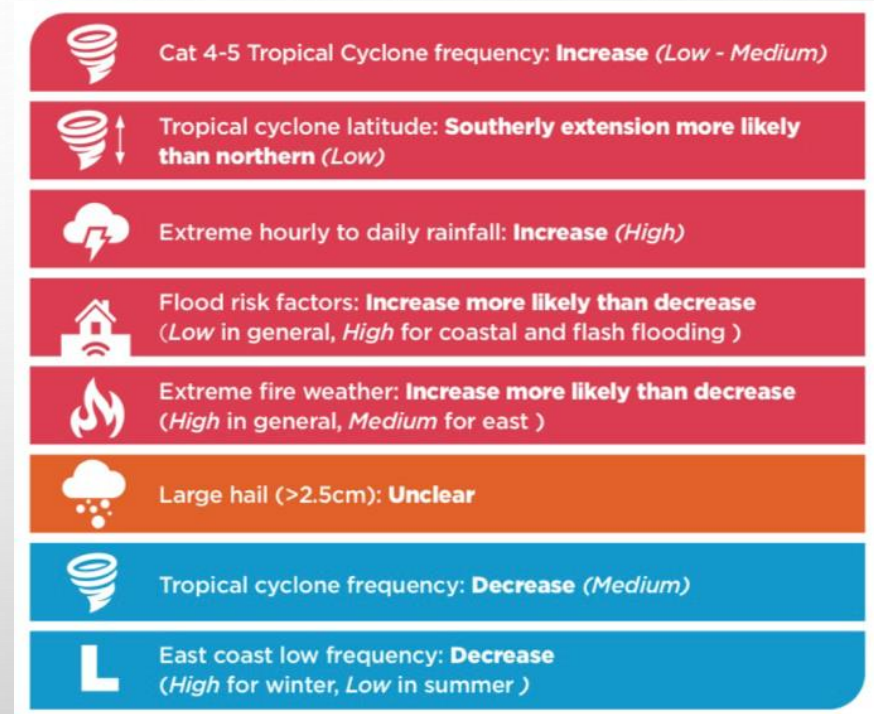
“BETWEEN THE PERIOD 2005 TO 2017, \$137 BILLION WAS PROVIDED IN DEVELOPMENT ASSISTANCE RELATED TO DISASTERS, WHEREIN \$9.60 OUT OF EVERY \$10 WAS SPENT ON EMERGENCY RESPONSE, RECONSTRUCTION, RELIEF, AND REHABILITATION; WHILE LESS THAN 4%, \$5.2 BILLION, WAS INVESTED INTO DISASTER PREVENTION, MITIGATION AND PREPAREDNESS”

“WE ARE STUCK IN A VICIOUS CIRCLE WHERE THE FINANCIAL COST OF DISASTERS IS RAPIDLY RISING, STRAPPING GOVERNMENTS IN THEIR ABILITY TO MOBILIZE AND PROVIDE NECESSARY FUNDS, TRAPPED IN THE VICIOUS AND SELF-FULFILLING CYCLE OF DISASTER-RESPONSE-RECOVER-REPEAT”



WHY ARE WE PERENNIALY SURPRISED THAT THESE EVENTS HAPPEN?

- SOURCE: AUSTRALIAN NATURAL HAZARDS ROYAL COMMISSION
- “THERE ARE NO NATURAL DISASTERS”
- THESE WEATHER-RELATED EVENTS ARE REGULAR AND PREDICTABLE
- WHY ARE WE SURPRISED AT THEIR OCCURRENCE?
- HOW PREPARED ARE OUR CATEGORY 1 RESPONDERS?



POLICY DEVELOPMENT WHICH CREATES RESILIENCE

- THERE NEEDS TO BE A POLICY SHIFT FROM “RESPONSE AND RECOVERY” TO “ACCEPTANCE AND PLANNING”
- MOVING FROM A TECHNICAL APPROACH TO AN ADAPTIVE ONE WILL ALSO OFFER IMPROVEMENTS.
- THERE NEEDS TO BE CLEAR DEFINITION OF WHAT CONSTITUTES RESILIENCE. IT NEEDS TO BE UNDERSTOOD BY ALL STAKEHOLDERS AND USED IN PLANNING TO PROVIDE REALISTIC EXPECTATION OF WHAT IS AND IS NOT FEASIBLE WHEN FIRES OCCUR.
- THESE POLICY BASES THEN NEED TO BE THE FOUNDATION OF MESSAGING, WITH THE REALISTIC RISKS AND CONTROL MEASURES BEING BROADCAST PRIOR TO EMERGENCIES OCCURRING.

LEARNING FROM OUR OWN EVENTS AND THOSE IN OTHER PLACES

- WHAT CAN BE SUCCESSFULLY TRANSFERRED OR TRANSLATED FROM ONE AREA/NATION TO ANOTHER? WHAT RISKS ARE ASSOCIATED WITH SUCH ATTEMPTS?
- ESTABLISHING THE SCALE OF THE WILDFIRE CHALLENGE – IN FIRE AND RESCUE SERVICE TERMS, IS IT LIFE, PROPERTY OR THE ENVIRONMENT? OR JUST A NUISANCE?
- IT IS SIMPLY NOT SAFE TO TAKE THE LEARNINGS FROM EVENTS IN OTHER JURISDICTIONS WITHOUT A PROFOUND UNDERSTANDING OF THE LEGISLATIVE, HISTORIC AND OTHER RELEVANT INFLUENCES

METHODS OF LEARNING FROM LARGE EVENTS ARE OFTEN NOT HELPFUL

- REVIEWS/ INQUIRIES ARE RETROSPECTIVE IN NATURE AND “STABLE DOOR REGULATIONS” RESULT
- EXPERTISE IS AWARDED TO THOSE MOST AFFLICTED BY THE FIRES
- THERE ARE FREQUENTLY INACCURACIES IN THE EVIDENCE CONSIDERED




NEW TECHNOLOGY – OPPORTUNITIES AND RISKS

NEW TECHNOLOGIES ARE ABUNDANT AND MANY WILL HAVE APPLICATIONS IN EMERGENCY PLANNING AND RESPONSE

- THERE ARE OPPORTUNITIES FOR BETTER PLANNING BY USING:
 - SATELLITE AND AERIAL SCANNING WHEN MAKING RISKS ASSESSMENTS
 - EARLY AND AUTOMATIC DETECTION HAS A ROLE IN LARGE SILVICULTURAL PLANTATIONS
 - UTILISING THE TRUE ADVANTAGES OF FIRE DANGER RATING SYSTEMS
 - USING SOPHISTICATED FIRE BEHAVIOUR ANALYSIS WHEN TACKLING LARGE FIRES
 - REAL TIME PUBLIC SAFETY MESSAGING USING APPS SUCH AS “ALERT SA” AND “FIRES NEAR ME” (NEW SOUTH WALES)



RISKS - UNFORESEEN IMPACTS OF TECHNOLOGY

- INFORMATION OVERWHELMS INTELLIGENCE
 - THE PUBLIC MEDIA MACHINE IS HUNGRY AND WILL NOT WAIT FOR FORMAL BRIEFINGS
 - MUST BE PROACTIVELY MANAGED AND THEY NEED TO FEEL THEY ARE BEING BRIEFED *“FROM THE HORSE’S MOUTH”*
 - OR THEY WILL “GO ROGUE”
- 

FIRE DANGER RATINGS CAN ASSIST PRE AND REAL-TIME PLANNING



Australian Government
Bureau of Meteorology

IDS55006
Australian Government Bureau of Meteorology
South Australia

**Fire Weather Forecast for South Australia
for Wednesday 20 November 2019**

Issued at 2:54 pm CDT on Tuesday 19 November 2019.
FORECASTS ARE ISSUED REGULARLY: PLEASE ENSURE YOU HAVE THE LATEST VERSION

Summary

District	District FFDI	District GFDI	District Rating	Percent Coverage	Fire Weather Warning
North West Pastoral	150	69	Severe	85	Y
North East Pastoral	121	44	Severe	1	Y
West Coast	161	153	Catastrophic	13	Y
Eastern Eyre Peninsula	161	154	Catastrophic	18	Y
Lower Eyre Peninsula	171	240	Catastrophic	80	Y
Flinders	132	107	Extreme	24	Y
Mid North	131	157	Catastrophic	17	Y
Mount Lofty Ranges	115	58	Catastrophic	39	Y
Adelaide Metropolitan	113	55	Severe	23	Y
Yorke Peninsula	144	189	Catastrophic	65	Y
Kangaroo Island	100	24	Catastrophic	14	Y
Riverland	120	78	Severe	96	Y
Murraylands	109	60	Severe	40	Y
Upper South East	95	21	Severe	1	Y
Lower South East	77	1	Extreme	15	Y

• Ratings are provided in conjunction with Fire Authorities.
• District FFDI is the representative peak FFDI in the district for that fuel type. 10% of the district has a max FFDI higher than 1.
• Percent Coverage is the percentage of the District that falls in or above the District Rating threshold.

Wednesday
Significant fire weather with catastrophic conditions forecast for 6 districts. Very hot and dry throughout with strong north to northwesterly winds, near gale force at times in the south and west, ahead of a cooler fresh and gusty change moving across the west in the afternoon and evening. Areas of raised dust possible ahead and behind the change during the afternoon and evening.

ADVANTAGES OF GOOD METEOROLOGY

- YORKETOWN FIRE, NOVEMBER 2019
- FAST MOVING FIRE IN CROPS DRIVEN BY NORTHERLY WINDS
- NORTHERLY WINDS PREVAILED FOR 12 HOURS
- WITHIN MINUTES OF THE FORECASTED CHANGE, THE WIND SHIFTED TO WESTERLY



AIRBORNE ATTACK

- A VALUABLE SUPPLEMENT AND CONTAINMENT METHOD
- NO SUBSTITUTE FOR BOOTS ON THE GROUND
- BUT CAN BE AMAZINGLY SUCCESSFUL IF TARGETED PROPERLY
- EVEN THEN, THERE WILL BE OPPONENTS



SOCIAL MEDIA AND MOBILE PHONES – MY LEARNINGS

- MUST BE MONITORED BY EMERGENCY AGENCIES DURING LARGE SCALE EVENTS
- MUST BE *FEED* MANAGED TO ENSURE FALSE INFORMATION IS CORRECTED/ ADJUSTED
- CAN BE POWERFUL IN PUBLIC MESSAGING (BUT YOU CAN'T RELY UPON IT)
- INFORMATION FROM THESE SOURCES CAN BE DISASTROUS IF RELIED UPON WITHOUT VERIFICATION – “INTELLIGENCE EATS INFORMATION FOR BREAKFAST”

IF WE INVOLVE THE MEDIA WELL AND PROACTIVELY,
ALLOWING THEM ACCESS TO OUR INTELLIGENCE,
POWERFUL SUPPORT CAN BE CREATED

