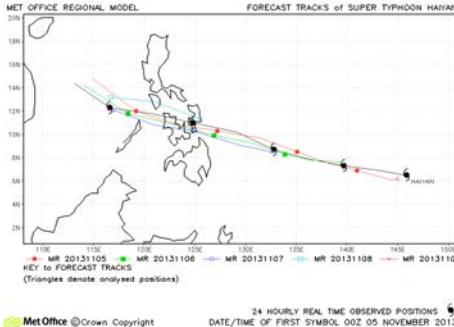
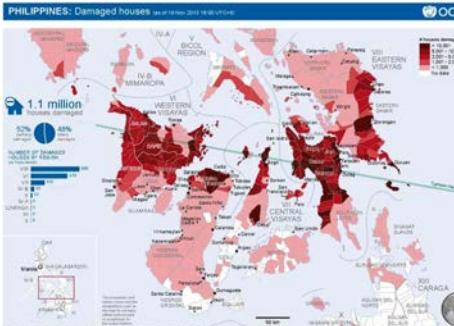
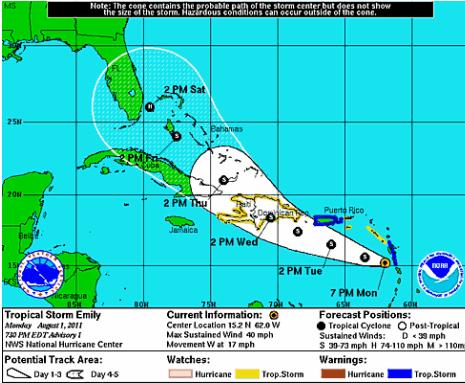


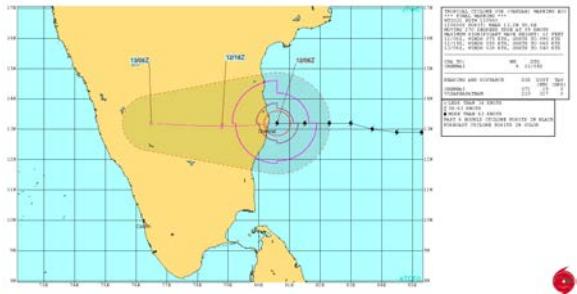
الإسنادات الإعلامية

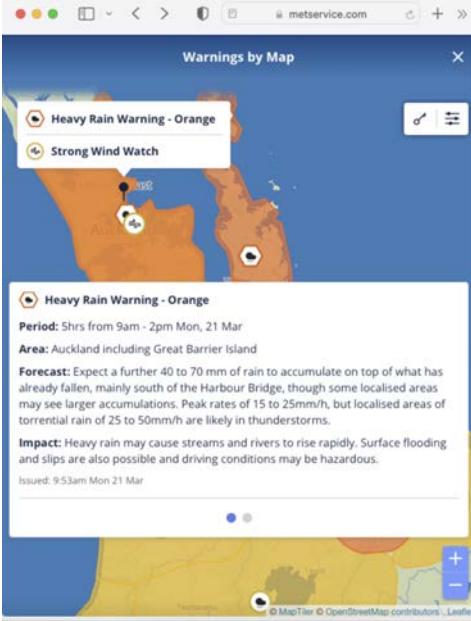
مقدمة إلى خدمات التنبؤ والإذار على أساس الأثر (IBFWS)

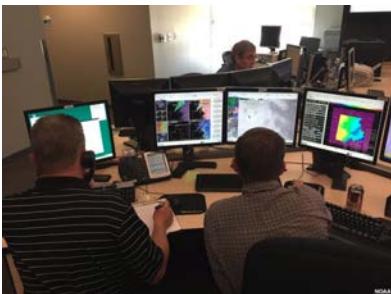
| # | صورة | العنوان / الملف | المؤلف | المصدر | الترخيص / الإذن |
|--|---|--|------------------------------|---|--|
| Module 1: Fundamentals of IBFWS | | | | | |
| 1. |  | 960px-Basey_after_Yolanda.JPG | Credit: By Lawrence Ruiz, | https://en.wikipedia.org/wiki/Typhoon_Haiyan#/media/File:Basey_after_Yolanda.JPG | CC BY-SA 4.0, https://commons.wikimedia.org/w/index.php?curid=43911464 |
| 2. |  | 1620px-Philippine_island_of_Binuluanguan_Following_Typhoon_Haiyan_MOD_45156472.jpg | LPHOT Keith Morgan, | https://commons.wikimedia.org/w/index.php?curid=30512881 | Images are downloadable at high resolution, made available at http://www.defencimagery.mod.uk for reuse under the OGL (Open Government License). |

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| 3. |  A map titled "FORECAST TRACKS of SUPER TYPHOON HAIYAN" showing the projected path of Typhoon Haiyan across the Philippines. The map includes a grid from 20N to 25N and 110E to 150E. Multiple colored lines represent forecast tracks, with triangles indicating analyzed positions. A legend at the bottom left identifies the tracks by date: MR 20131105 (red), MR 20131106 (green), MR 20131107 (blue), MR 20131108 (cyan), and MR 20131109 (pink). A note at the bottom states "KEY to FORECAST TRACKS (triangles denote analysed positions)". The Met Office logo and "Met Office ©Crown Copyright" are visible at the bottom. | Haiyan-forecast-UKMet.gif | UK Met Office | UK Met Office | Permission granted |
| 4. |  A photograph showing the severe physical destruction caused by Typhoon Haiyan in Tacloban. Several tall, leaning utility poles stand amidst rubble and debris. In the foreground, two people are seen examining the wreckage of a destroyed building. | 1080px-Tacloban_Typhoon_Haiyan_2013-11-13.jpg | Trocaire, Ireland DSC_0749, | https://commons.wikimedia.org/w/index.php?curid=29660396 | https://creativecommons.org/licenses/by-nc/2.0/ |
| 5. |  A map titled "PHILIPPINES: Damaged houses as of 18 Nov 2013 16:00 UTC" from OCHA. The map shows the Philippines with red shading indicating the number of damaged houses per province. A legend on the right shows house density: 0-100 (light yellow), 101-200 (yellow), 201-500 (orange), 501-1000 (red), and >1000 (dark red). A callout box in the top left corner states "1.1 million houses damaged". The map also includes state/province names like N.B., MIMAROPA, BICOL REGION, WESTERN VISAYAS, EASTERN VISAYAS, CARAGA, and DAVAO. A small inset map shows the location of the Philippines relative to Southeast Asia. | ReliefNet_Map_of_Damaged_houses_Typhoon_Haiyan.pdf | ReliefWeb, UN Office for the Coordination of Humanitarian Affairs - See more at: http://reliefweb.int/map/phippines/phillipines-damaged-houses-18-nov-2013-1800- | https://en.wikipedia.org/wiki/File:ReliefNet_Map_of_Damaged_houses_Typhoon_Haiyan.pdf | Public Domain |

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| | | | utc8#sthash.cEfqVP84.dpuf | | |
| 6. |  <p>Note: The cone contains the probable path of the storm center, but does not show the size of the storm. Hazardous conditions can occur outside of the cone.</p> <p>Tropical Storm Emily Last Update: 11 AM EDT 730 PM EDT Admire I NWS National Hurricane Center</p> <p>Potential Track Area:</p> <p>Current Location: 15.2°N 62.8°W Max Sustained Wind: 40 mph Movement W at 17 mph</p> <p>Forecast Positions: • Tropical Cyclone: Post-Tropical Sustained Winds: D = 38 mph S 39-73 mph H 74-10 mph M +10mph </p> <p>Watches: Warnings:</p> <p>Day 1-3 Day 4-5</p> <p>Hurricane Trop.Storm Hurricane Trop.Storm</p> | Emily2011path2330 14W5_NL_sm.gif | NOAA/NWS | https://www.nhc.noaa.gov/archive/2011/graphics/al05/loop_5W.shtml | Public domain |
| 7. |  | Father Carries Daughter to Safety Country Haiti, Port-au-Prince UN_DAM/Haiti - Jeanne storm/2022Feb02 - Library - 0bf.jpg/UN7686194 _0bf_Standard.jpg | UN Photo/Logan Abassi | Unique Identifier UN7686194 https://dam.media.un.org/ | https://shop.un.org/rights-permissions |

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| 8. |  | <p>Headline: MINUSTAH Peacekeepers Assist Flood Victims in Haiti</p> <p>UN_DAM/Haiti - Jeanne storm/2022Feb02 - Library - 0c0.jpg/UN7686195 _0c0_Low_Resolution.jpg</p> | <p>UN Photo/Logan Abassi</p> | <p>Unique Identifier: UN7686195</p> <p>https://dam.media.un.org/</p> | https://shop.un.org/rights-permissions |
| 9. |  | JTWC_io0516.gif | Joint Typhoon Warning Center, US Navy | https://upload.wikimedia.org/wikipedia/commons/d/d8/JTWC_io0516.gif | public domain |
| 10. |  | <p>Meteorologist at Indonesia Meteorological and Geophysical Agency, BMKG</p> | WMO | https://flic.kr/p/EP4xxU | https://creativecommons.org/licenses/by-nc-nd/2.0/ |

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| 11. |  | heavyrain-impact-mobile-NZMetSvc21Mar2022.png | NZ MetService | Warnings & Watches page, Meteorological Service of New Zealand, https://www.metservice.com/warnings/home |
| 12. |  | pexels-photo-6754173.jpeg | Photo by Pavel Danilyuk | from Pexels https://www.pexels.com/license/ Free to use |

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|-----|--|-----------------------------|---|---|---|
| 13. |  | nws_radio.meted.jpg | NOAA/NWS St. Louis, MO | https://www.meted.ucar.edu/ | COMET Terms of Use https://www.meted.ucar.edu/about_legal.php#C |
| 14. |  | Forecaster_work.jpg | NOAA | https://www.meted.ucar.edu/ | COMET Terms of Use https://www.meted.ucar.edu/about_legal.php#C |
| 15. |  | 5545703979_732654fb1c_h.jpg | Photo by Khalfan Said, U.S. Embassy, Tanzania | https://flic.kr/p/9s4bzR | https://creativecommons.org/licenses/by/2.0/ |

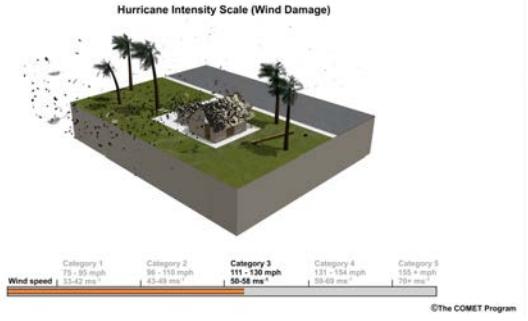
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| 16. |  | 51102011688_c576 512e48_b.jpg | UNDP Climate | https://flic.kr/p/2kRH3 | https://creativecommons.org/licenses/by-nc/2.0/ |
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Module 2: Roadmap to the IBFWS Paradigm

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| 17. |  | Super_Typhoon_Surigae_near_the_Philippines_-_April_19th,_2021_(51126373195).jpg | Pierre Markuse | https://flickr.com/photos/24998770@N07/51126373195 | https://creativecommons.org/licenses/by/2.0/deed.en |
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| 18. |  A photograph showing a flooded street. Two men are in a small,充气的 boat (raft) moving through the water. Other people are standing or walking in the background along the water-saturated ground. | 10695722693_9dd99835f2_c.jpg | AusAID | https://flic.kr/p/hi9nHX | https://creativecommons.org/licenses/by/2.0/ |
| 19. |  A photograph of a house situated near a creek. The foreground shows the rocky, shallow water of the creek flowing through some trees. The house is a two-story structure with a visible staircase leading up to its entrance. The photo is credited to Lon Goldstein at the bottom. | House by creek | Lon Goldstein | | https://creativecommons.org/licenses/by-nd/2.0/ |

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| 20. |  | Hurricane-katrina-port-sulphur-la-4-14-06-this-is-a-post-mitigated-home-that-bba139.jpg | Marvin Nauman/FEMA | https://nara.getarchive.net/media/hurricane-katrina-port-sulphur-la-4-14-06-this-is-a-post-mitigated-home-that-bba139 | Public domain - FEMA |
| 21. |  | House 2.jpg House at ground level | Adanna Robertson-Quimby | | https://creativecommons.org/licenses/by-nd/2.0/ |

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| 22. |  | 3883928876_efccf3e42f_o.jpg | Max Barners | https://flic.kr/p/6Vd9JY | https://creativecommons.org/licenses/by-nd/2.0/ |
| 23. |  | Video and stills | COMET/UCAR | https://www.youtube.com/watch?v=W3ghU4e2OKY | COMET Terms of Use https://www.meted.ucar.edu/about_legal.php#C |

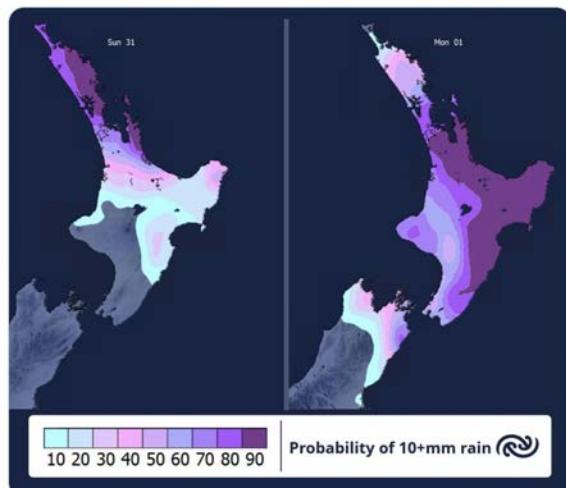
| | | | | | |
|-----|---|------------------------------------|------------|---|--------------------------------|
| 24. | <p>Genève 381 m a. sea level Sunday, 13 March 2022</p> <p>The figure shows a weather forecast for Geneva on Sunday, March 13, 2022. It includes a graph of temperature in °C from 2 to 14 and precipitation in mm/h from 0 to 12. The temperature starts at ~6°C at 00:00, dips to ~4°C at 06:00, rises to a peak of ~11°C at 12:00, and then falls to ~7°C by 18:00. Precipitation is shown as small bars along the x-axis, with a notable cluster around 18:00. A legend indicates that grey dots represent temperature and blue clouds with dots represent precipitation. Below the graph is a navigation bar with arrows and a 'Sunday' label.</p> | MeteoSuisse-prob-fcst11Mar2022.png | MeteoSwiss | https://www.meteoswiss.admin.ch/home.html | Courtesy MétéoSuisse |
| 25. | <p>Risk-based storm surge forecast Super Typhoon Mangkhut</p> <p>The figure shows a probabilistic forecast of water level at Tai O, Hong Kong, China. It includes a map of Hong Kong indicating the path of Super Typhoon Mangkhut, with 'Closer' and 'Further' labels. Below the map is a risk matrix for 'Warning Risk Level' (green, yellow, red) based on 'Impact' (High, Medium, Low) and 'Probability' (Very High, High, Medium, Low). To the right is a graph titled 'Probabilistic forecast of water level at Tai O, Hong Kong, China' showing 'Total height Probability from 2018-09-12 00:00 to 2018-09-17 00:00 at TAI station'. The graph plots Height (m) against HK Time (mm-dd-hh) and shows a bell-shaped curve with shaded regions representing different probability levels. A red box highlights a peak in the distribution. Below the graph is a note: 'Some risk of very high water level, but uncertainties were large too.' The Hong Kong Observatory logo is at the bottom.</p> | Module3_Q2Q3KKH1803.pptx | | | Courtesy Hong Kong Observatory |

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| 26. | <p>Valid Wed 23-Mar-2022 through Sat 26-Mar-2022</p> | <p>HeavyRainProbMap _NZMetSvc21Mar2 022.png</p> | <p>NZ MetService Warnings & Watches page, Meteorological Service of New Zealand, https://www.metservice.com/warnings/home</p> | <p>Courtesy Meteorological Service of New Zealand</p> |
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27.

[Tweet](#)

Across the North Island, most places are likely to see some rain from Sunday. Eastern areas have the highest probability, especially on Monday, with the upper South Island also getting a taste to close out the long weekend. Check out the outlook at bit.ly/SWOutlook
^Tahlia



9:10 PM · May 28, 2020 · TweetDeck

3 Retweets 5 Likes

Tweet-ProbFcst-NZMetSvc28May2020.png

NZ MetService Warnings & Watches page, Meteorological Service of New Zealand,
<https://www.metservice.com/warnings/home>

Courtesy Meteorological Service of New Zealand

28.

Example of spatial variation in thresholds from the Meteorological and Hydrological Service of Croatia

Temperature thresholds for the heatwave hazard for eight towns in Croatia

| | Minimum temperature (°C) | | | Maximum temperature (°C) | | |
|-----------|---------------------------------|------|------|---------------------------------|------|------|
| Osijek | 20.1 | 21.2 | 22.9 | Osijek | 35.2 | 36.7 |
| Zagreb | 20.2 | 21.3 | 22.9 | Zagreb | 33.7 | 35.1 |
| Karlovac | 20.0 | 21.1 | 22.7 | Karlovac | 34.5 | 35.9 |
| Gospic | 17.0 | 18.0 | 19.6 | Gospic | 32.1 | 33.4 |
| Rijeka | 22.7 | 23.7 | 25.1 | Rijeka | 32.7 | 33.9 |
| Knin | 20.5 | 21.6 | 23.1 | Knin | 35.5 | 36.9 |
| Split | 25.8 | 26.8 | 28.2 | Split | 33.9 | 35.1 |
| Dubrovnik | 25.4 | 26.3 | 27.6 | Dubrovnik | 32.3 | 33.2 |

| Description of thresholds | | |
|---|------------------------------|--|
| | Moderate heatwave hazard | |
| | High heatwave hazard | |
| | Extreme high heatwave hazard | |

Croatia_thresholds_example_wmo_1150_pt1.png

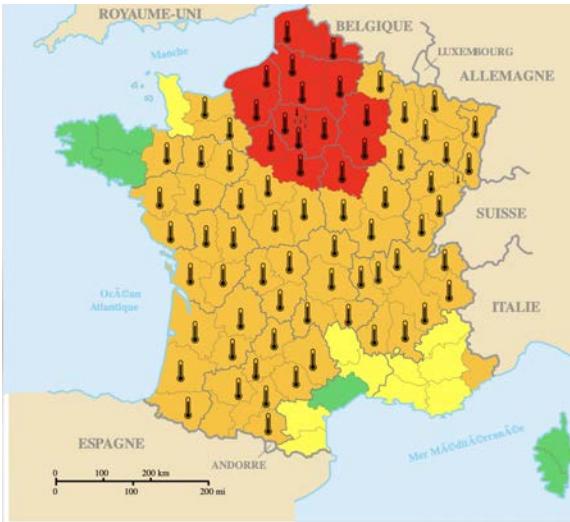
WMO

Guidelines on Multi-hazard Impact-based Forecast and Warning Services

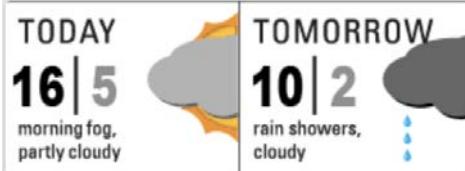
https://library.wmo.int/index.php?lvl=notice_display&id=17257

Guidelines on Multi-hazard Impact-based Forecast and Warning Services Part II

https://library.wmo.int/index.php?lvl=notice_display&id=21994

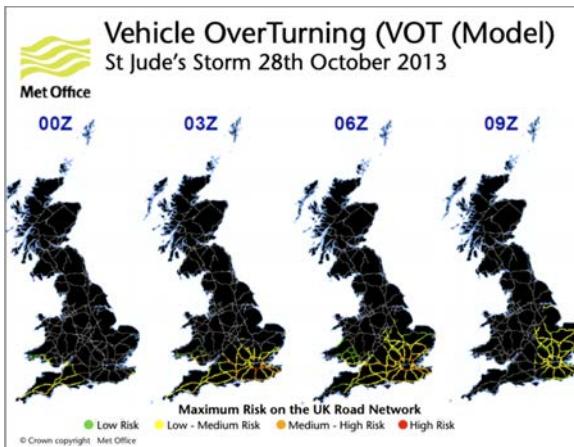
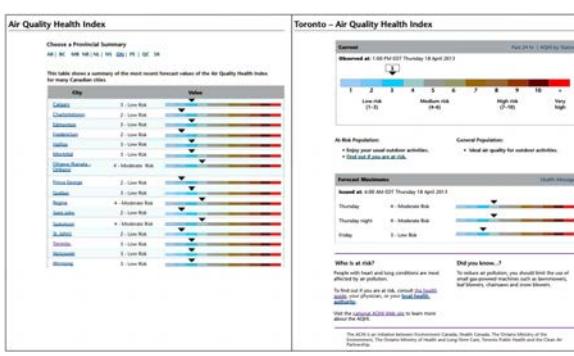
| | | | | | |
|-----|--|---|---------------------------|---|---------------|
| 29. |  | 843px-Meteo_France_weather_warning_map_-24-25.07.2019.svg.png | By User:Ternoc - Own work | https://commons.wikimedia.org/w/index.php?curid=80716459 | Public Domain |
| 30. |  | ffg1_6hr_19Apr2022_00z_NERFC.png | NOAA/NWS | https://www.weather.gov/serfc/ffg | Public domain |

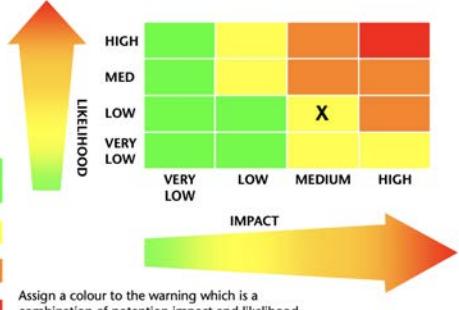
| | | | | | |
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| 31. | <p>Early Warning System for Extreme Heat Temperatures (SAT-TE Calor) Argentinian National Meteorological Service - 13 January, 2022 18:32h</p>  <p>Effect on Health</p> <ul style="list-style-type: none"> Red: High to extreme. Very dangerous. Can affect everyone, even the healthy. Orange: Moderate to high. Can be very dangerous, especially for risk groups. Yellow: Mild to moderate. Can be dangerous, especially for risk groups, such as young children, those older than 65 years and people with chronic illness. Green: No effect on health. No danger to the health of the population. <p>https://www.smn.gob.ar/modelos</p> | Argentina_heatwave_13jan20221838h.png | Modified from source | https://www.smn.gob.ar/modelos | Credit: Courtesy Argentinian National Meteorological Service |
| 32. |  <p>Edited ISS037 image of Typhoon Fitow, close to Taiwan. 10105483996_34146e76aa_c.jpg</p> | <p>Edited ISS037 image of Typhoon Fitow, close to Taiwan. 10105483996_34146e76aa_c.jpg</p> | Stuart Rankin | https://flic.kr/p/goZfjG | https://creativecommons.org/licenses/by-nc/2.0/ |

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| 33. |  | 1165px-Fitow_2013_track.png | Meow, Background image NASA/. Tracking data Joint Typhoon Warning Center | https://en.wikipedia.org/wiki/Typhoon_Fitow#/media/File:Fitow_2013_track.png | Public domain |
| 34. |  | forecast-today_and_tomorrow.png | Parhamr | https://commons.wikimedia.org/wiki/File:Newspaper_weather_forecast_-_today_and_tomorrow.svg | https://creativecommons.org/licenses/by-sa/3.0 |
| 35. |  | Storm-843732_1280.jpg | Reslmaier, | https://www.flickr.com/photos/410098/ | public domain |

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| 36. |  | AftermathBertha-4123970_67291d76.jpeg | John Lucas | https://www.geograph.org.uk/photo/4123970 | https://creativecommons.org/licenses/by-sa/2.0/ |
| 37. |  | 864px-Utor_2013-08-11_0515Z.jpg | Jeff Schmaltz, LANCE/EOSDIS MODIS Rapid Response Team, NASA GSFC | http://earthobservatory.nasa.gov/NaturalHazards/view.php?id=81837 , Public Domain, https://commons.wikimedia.org/w/index.php?curid=27658452 | Public domain |

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| 38. | | typhoon_utor_track_fcst_cma-aug2013.jpeg | China Meteorological Administration | http://www.cma.gov.cn/en2014/news/News/201408/t20140812_255794.html | Courtesy of China Meteorological Administration |
| 39. | | typhoon_utor_impact_fcst_cma-aug2013.jpeg | China Meteorological Administration | http://www.cma.gov.cn/en2014/news/News/201408/t20140812_255794.html | Courtesy of China Meteorological Administration |

| 40. |  <p>Vehicle OverTurning (VOT) (Model) St Jude's Storm 28th October 2013</p> <p>Met Office</p> <p>00Z 03Z 06Z 09Z</p> <p>Maximum Risk on the UK Road Network</p> <p>© Crown copyright. Met Office</p> | UK_VOT_model_stJude's28Oct2013.png | UK Met Service | <p>Guidelines on Multi-hazard Impact-based Forecast and Warning Services</p> <p>https://library.wmo.int/index.php?lvl=notice_display&id=17257</p> <p>Guidelines on Multi-hazard Impact-based Forecast and Warning Services Part II</p> <p>https://library.wmo.int/index.php?lvl=notice_display&id=21994</p> | Courtesy UK Met Service | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 41. |  <p>Air Quality Health Index</p> <p>Choose a Provincial Summary</p> <p>ON BC AB MB NL NS PE QC YT</p> <p>This table shows a summary of the most recent forecast values of the Air Quality Health Index for many Canadian cities.</p> <table border="1"> <thead> <tr> <th>City</th> <th>1 - Low Risk</th> <th>2 - Low Risk</th> <th>3 - Low Risk</th> <th>4 - Low Risk</th> <th>5 - Low Risk</th> <th>6 - Moderate Risk</th> <th>7 - Low Risk</th> <th>8 - Low Risk</th> <th>9 - Low Risk</th> <th>10 - Low Risk</th> </tr> </thead> <tbody> <tr><td>Calgary</td><td>1 - Low Risk</td><td>1 - Low Risk</td></tr> <tr><td>Edmonton</td><td>1 - Low Risk</td><td>1 - Low Risk</td></tr> <tr><td>Vancouver</td><td>1 - Low Risk</td><td>1 - Low Risk</td></tr> <tr><td>Toronto</td><td>1 - Low Risk</td><td>1 - Low Risk</td></tr> <tr><td>Montreal</td><td>1 - Low Risk</td><td>1 - Low Risk</td></tr> <tr><td>Ottawa</td><td>1 - Low Risk</td><td>1 - Low Risk</td></tr> <tr><td>Quebec City</td><td>1 - Low Risk</td><td>1 - Low Risk</td></tr> <tr><td>Gatineau</td><td>1 - Low Risk</td><td>1 - Low Risk</td></tr> <tr><td>Winnipeg</td><td>1 - Low Risk</td><td>1 - Low Risk</td></tr> <tr><td>St John's</td><td>1 - Low Risk</td><td>1 - Low Risk</td></tr> <tr><td>Nanaimo</td><td>1 - Low Risk</td><td>1 - Low Risk</td></tr> <tr><td>Saskatoon</td><td>1 - Low Risk</td><td>1 - Low Risk</td></tr> <tr><td>Regina</td><td>1 - Low Risk</td><td>1 - Low Risk</td></tr> <tr><td>Fatherland</td><td>1 - Low Risk</td><td>1 - Low Risk</td></tr> <tr><td>Yellowknife</td><td>1 - Low Risk</td><td>1 - Low Risk</td></tr> <tr><td>Whitehorse</td><td>1 - Low Risk</td><td>1 - Low Risk</td></tr> <tr><td>Yellowknife</td><td>1 - Low Risk</td><td>1 - Low Risk</td></tr> </tbody> </table> <p>Toronto - Air Quality Health Index</p> <p>Current: Issued at: 1:00 PM EST Thursday 18 April 2013</p> <p>1 - Low risk (1-3) 2 - Medium risk (4-6) 3 - High risk (7-10) 4 - Very high risk (11-14)</p> <p>As Risk Population: + Enjoy your usual outdoor activities. + Avoid peak traffic times.</p> <p>General Population: + Ideal air quality for outdoor activities. + Good and Asthma friendly air.</p> <p>Forecast: Issued at: 4:00 AM EST Thursday 18 April 2013</p> <p>Thursday: A - Moderate Risk Thursday night: A - Moderate Risk Friday: B - Low Risk</p> <p>What is air risk? People with heart and lung conditions are most affected by air pollution. To find out if you are at risk, consult the Health Effects section. To learn more about air quality, visit the AQHI page.</p> <p>Old page banner: 2 To protect air pollution, you should limit the use of small gas powered machines such as barbecue, fuel burners, charcoal grills and even blowers.</p> <p>The AQHI is an initiative between Environment Canada, Health Canada, The Ontario Ministry of the Environment, The British Columbia Ministry of Environment, The Yukon Department of Environment and the Prairie Provinces.</p> | City | 1 - Low Risk | 2 - Low Risk | 3 - Low Risk | 4 - Low Risk | 5 - Low Risk | 6 - Moderate Risk | 7 - Low Risk | 8 - Low Risk | 9 - Low Risk | 10 - Low Risk | Calgary | 1 - Low Risk | Edmonton | 1 - Low Risk | Vancouver | 1 - Low Risk | Toronto | 1 - Low Risk | Montreal | 1 - Low Risk | Ottawa | 1 - Low Risk | Quebec City | 1 - Low Risk | Gatineau | 1 - Low Risk | Winnipeg | 1 - Low Risk | St John's | 1 - Low Risk | Nanaimo | 1 - Low Risk | Saskatoon | 1 - Low Risk | Regina | 1 - Low Risk | Fatherland | 1 - Low Risk | Yellowknife | 1 - Low Risk | Whitehorse | 1 - Low Risk | Yellowknife | 1 - Low Risk | air_quality_Env_Canada.png | | <p>https://weather.gc.ca/airquality/pages/index_e.html</p> | |
| City | 1 - Low Risk | 2 - Low Risk | 3 - Low Risk | 4 - Low Risk | 5 - Low Risk | 6 - Moderate Risk | 7 - Low Risk | 8 - Low Risk | 9 - Low Risk | 10 - Low Risk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Calgary | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Edmonton | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vancouver | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Toronto | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Montreal | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ottawa | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quebec City | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gatineau | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Winnipeg | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| St John's | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nanaimo | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Saskatoon | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Regina | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fatherland | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yellowknife | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Whitehorse | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yellowknife | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | 1 - Low Risk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| 42. |  <p>Figure 2. Risk matrix</p> <p>(Source: Met Office, United Kingdom)</p> | risk_matrix_metoffice_UK.png | UK Met Service | <p>Guidelines on Multi-hazard Impact-based Forecast and Warning Services</p> <p>https://library.wmo.int/index.php?lvl=notice_display&id=17257</p> <p>Guidelines on Multi-hazard Impact-based Forecast and Warning Services Part II</p> <p>https://library.wmo.int/index.php?lvl=notice_display&id=21994</p> | Courtesy UK Met Service | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|--|------------------------------|----------------|---|-------------------------|----|--|--------|---|---|---|--|-----|---|--|---|--|----------|---|--|---|--|---------|-------|-------------|--------|--|--------|--|--|--|--|----------------------------------|--|--|--|---------------|--|--|----------------------------------|
| 43. | <p>South African Weather Service - Risk Matrix</p> <table border="1"> <thead> <tr> <th>Likelihood</th> <th>High</th> <th>2</th> <th>6</th> <th>10</th> </tr> <tr> <th></th> <th>Medium</th> <th>1</th> <th>5</th> <th>9</th> </tr> <tr> <th></th> <th>Low</th> <th>4</th> <th></th> <th>8</th> </tr> <tr> <th></th> <th>Very Low</th> <th>3</th> <th></th> <th>7</th> </tr> <tr> <th></th> <th>Minimal</th> <th>Minor</th> <th>Significant</th> <th>Severe</th> </tr> <tr> <th></th> <th colspan="4" style="text-align: center;">Impact</th></tr> </thead> <tbody> <tr> <td></td> <td colspan="4" style="text-align: center;">Courtesy SAWS and Met Office, UK</td></tr> </tbody> </table> | Likelihood | High | 2 | 6 | 10 | | Medium | 1 | 5 | 9 | | Low | 4 | | 8 | | Very Low | 3 | | 7 | | Minimal | Minor | Significant | Severe | | Impact | | | | | Courtesy SAWS and Met Office, UK | | | | SAWS_risk.png | | | Courtesy SAWS and Met Office, UK |
| Likelihood | High | 2 | 6 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Medium | 1 | 5 | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Low | 4 | | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Very Low | 3 | | 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Minimal | Minor | Significant | Severe | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Impact | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Courtesy SAWS and Met Office, UK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| 44. | <p>BMKG Indonesia Risk Matrix</p> <table border="1"> <thead> <tr> <th>Likelihood</th> <th>High</th> <th>Medium</th> <th>Low</th> <th>Very Low</th> <th>Impact</th> </tr> </thead> <tbody> <tr> <td>High</td> <td>2</td> <td>7</td> <td>10</td> <td></td> <td></td> </tr> <tr> <td>Medium</td> <td>1</td> <td>6</td> <td>9</td> <td></td> <td></td> </tr> <tr> <td>Low</td> <td></td> <td>4</td> <td>8</td> <td></td> <td></td> </tr> <tr> <td>Very Low</td> <td></td> <td>3</td> <td>5</td> <td></td> <td></td> </tr> <tr> <td></td> <td>Minimal</td> <td>Minor</td> <td>Significant</td> <td>Severe</td> <td></td> </tr> <tr> <td></td> <td colspan="4">Impact</td> <td></td> </tr> </tbody> </table> <p>Courtesy BMKG and Met Office, UK</p> | Likelihood | High | Medium | Low | Very Low | Impact | High | 2 | 7 | 10 | | | Medium | 1 | 6 | 9 | | | Low | | 4 | 8 | | | Very Low | | 3 | 5 | | | | Minimal | Minor | Significant | Severe | | | Impact | | | | | BMKG-Indonesia_risk.png | | Courtesy BMKG and Met Office, UK |
|------------|---|------------|-------------|----------|--------|----------|--------|------|---|---|----|--|--|--------|---|---|---|--|--|-----|--|---|---|--|--|----------|--|---|---|--|--|--|---------|-------|-------------|--------|--|--|--------|--|--|--|--|-------------------------|--|----------------------------------|
| Likelihood | High | Medium | Low | Very Low | Impact | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| High | 2 | 7 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Medium | 1 | 6 | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low | | 4 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Very Low | | 3 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Minimal | Minor | Significant | Severe | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Impact | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Module 3: Best Practises for Collaboration and Strategic Partnerships in IBFWS

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| 45. |  | | <p>Photo by Denniz Futralan from Pexels</p> | |
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| 46. |  | | Photo by RF_.studio from Pexels | | |
| 47. |  | | Photo by Matheus Bertelli from Pexels | | |
| 48. |  | | Photo by cottonbro from Pexels | | |

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| 49. |  | | <p>Photo by Harrison Haines from Pexels</p> | | |
| 50. |  | | <p>Photo by RODNAE Productions from Pexels</p> | | |

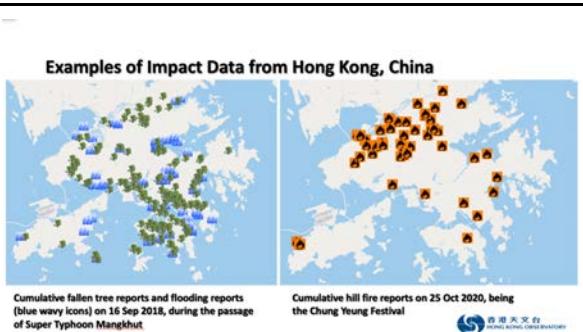
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| 51. |  | | <p>Photo by Markus Spiske from Pexels</p> | | |
| 52. |  | | <p>Photo by ThisIsEngineering from Pexels</p> | | |

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|-----|--|--|---|---|-------------------------------|
| 53. |  | | <p>Photo by Yan Krukov from Pexels</p> | | |
| 54. |  <p>Natural Hazards Partnership Delivering coordinated assessments, research and advice on natural hazards for governments and resilience communities across the UK</p> <p>Figure 3. United Kingdom Natural Hazards Partnership</p> | | <p>Met Office UK</p> | <p>WMO Guidelines on Multi-hazard Impact-based Forecast and Warning Services Part II: Putting Multi-hazard IBFWS into Practice https://library.wmo.int/index.php?lvl=notice_display&id=21994</p> | <p>Courtesy Met Office UK</p> |

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| 55. | <p>JMA_Real-time_Risk_Map_modified.png</p> <p>JMA</p> <p>Japan Meteorological Agency (JMA)</p> <p>Courtesy Japan Meteorological Agency (JMA)</p> |
| 56. | <p>forecaster_work.jpg</p> <p>NOAA</p> <p>https://www.meted.ucar.edu/</p> <p>COMET Terms of Use https://www.meted.ucar.edu/about_legal.php#C</p> |

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|-----|---|---------------------------|--|--|-------------------|
| 57. |  A firefighter in full protective gear, including a helmet with a reflective visor and oxygen tanks, is spraying a powerful stream of water onto a massive, intense orange and yellow fire. The firefighter is positioned in front of the flames, facing away from the camera. | pexels-pixabay-260367.jpg | Pixabay | Photo by Pixabay from Pexels: https://www.pexels.com/photo/accident-action-danger-emergency-260367/ | public domain,cc0 |
| 58. |  A man and a woman are standing at a table, looking down at and discussing a large sheet of paper, likely architectural blueprints or plans. The man is wearing a high-visibility orange vest over a dark shirt, and the woman is wearing a patterned blouse and dark pants. | | Photo by ThisIsEngineering from Pexels | | |

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| 59. |  | imet_coordinate.jpeg | NOAA/NWS | https://www.meted.ucar.edu/ | COMET Terms of Use https://www.meted.ucar.edu/about_legal.php#C |
| 60. |  | nws_fire_desk_NW_S.meted.jpg | NOAA/NWS Tallahassee, FL | https://www.meted.ucar.edu/ | COMET Terms of Use https://www.meted.ucar.edu/about_legal.php#C |
| 61. |  | start_burn.jpeg | Brent Lawrence, USFWS | https://www.meted.ucar.edu/fire/sitrep/media/graphics/start_burn.jpg | COMET Terms of Use https://www.meted.ucar.edu/about_legal.php#C |

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| 62. |  | DBK_FOC_3554_0 1_13_2017a.jpg | California Department of Water Resources | https://pixel-ca-dwr.photoshelter.com/index | public domain - per Ryan Endean, Assistant Deputy Director, Public Affairs Office, California Department of Water Resources (DWR), ryan.endean@water.ca.gov) |
| 63. |  | | Photo by Mikhail Nilov from Pexels | | |
| 64. |  | Impact_data_chart_KKH1803.pptx | Hong Kong Observatory (HKO) | | Courtesy Hong Kong Observatory (HKO) |

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| 65. |  | GIS_ImpactData_m angkhut.png | | WMO Guidelines on Multi-hazard Impact-based Forecast and Warning Services Part II: Putting Multi-hazard IBFWS into Practice https://library.wmo.int/index.php?lvl=notice_display&id=21994 | |
| 66. |  | | Photo by Manuel Geissinger from Pexels | | |
| 67. |  | | Photo by Yan Krukov from Pexels | | |

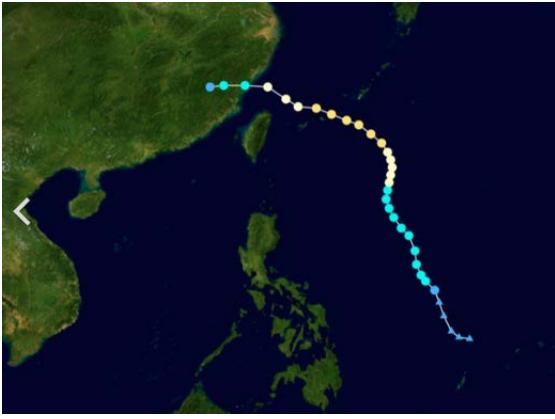
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| 68. |  | | Photo by Christina Morillo from Pexels | | |
| 69. |  | | Photo by fauxels from Pexels | | |
| 70. |  | | Photo by Canva Studio from Pexels | | |

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| 71. |  | <u>IMG_2145.JPG</u> | UK Met Office | UK Met Office | Permission granted |
| 72. |  | KJ_oroville_FERC_0452_08_07_19.JPG | California Department of Water Resources | <u>https://pixel-ca-dwr.photoshelter.com/index</u> | public domain - per Ryan Endean, Assistant Deputy Director, Public Affairs Office, California Department of Water Resources (DWR), <u>ryan.endean@water.ca.gov</u>) |
| 73. |  | | Photo by fauxels from Pexels | | |

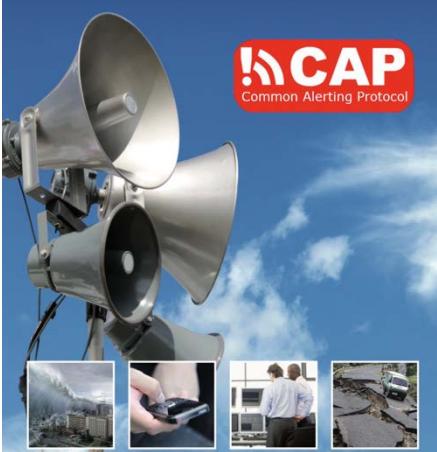
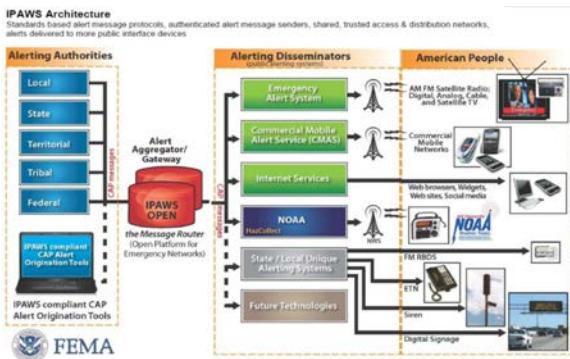
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| 74. |  | | Photo by Tima Miroshnichenko from Pexels | | |
| 75. |  | fcst-action-game-UKMet.png | Met Office, UC | https://understandrisk.org/wp-content/uploads/FB-EA-Game-v5-1.pdf | Met Office, UC |

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| 76. |  | P1012655.JPG | UK Met Office | UK Met Office | Permission granted |
| 77. |  | | Photo by ICSA from Pexels | | |
| Module 4: Effective Communications Strategies for Impacts-Based Warnings | | | | | |

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| 78. |  | Traffic_direction_statepolice.png | U.S. Army National Guard photo by Capt. Brendan Mackie | https://nara.getarchive.net/ | public domain |
| 79. |  | Disaster_center_mg_r_fema.png | Jocelyn Augustino/FEMA | | Public domain |
| 80. |  | road_repair_crew.png | | | public domain |

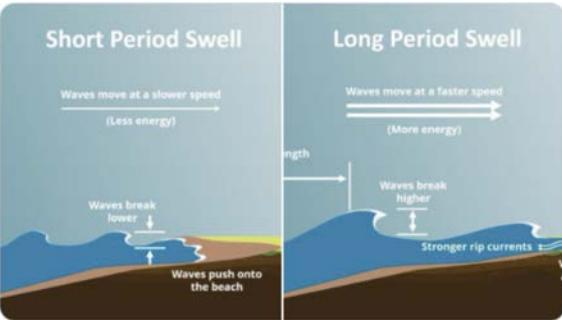
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| 81. |  A photograph showing several utility poles with multiple power lines. One main pole is leaning significantly to the left, causing all the lines it supports to sag and touch the ground. The sky is overcast and grey. | Downed_Power_Lines_(17157695726)(1).jpg | Tony Webster | | https://creativecommons.org/licenses/by/2.0/deed.en |
| 82. |  A photograph of a snowy highway. Several vehicles are visible, including a white pickup truck with its hazard lights on, and a dark car. In the background, there are snow-covered mountains. The road surface is covered in snow and appears slippery. | Snow_road.jpg | NSSL NOAA | https://www.meted.ucar.edu/ | COMET Terms of Use https://www.meted.ucar.edu/about_legal.php#C |
| 83. |  A map of the North Pacific Ocean and parts of East Asia. A yellow and cyan line represents the path of Typhoon Fitow in 2013, starting near the coast of China and moving northward across the ocean. The background shows landmasses and some cloud patterns. | 1920px-Fitow_2013_track.png | By Meow - Created by Meow using WikiProject Tropical cyclones/Tracks. The background image is from NASA. Tracking data is from the Joint Typhoon Warning Center[1] | https://en.wikipedia.org/wiki/Typhoon_Fitow#/media/File:Fitow_2013_track.png https://commons.wikimedia.org/w/index.php?curid=28812172 | Public Domain |

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| 84. |  | TADDHighRes-sm.gif | NWS NOAA | https://www.weather.gov/safety/flood-turn-around-dont-drown | Public domain |
| 85. |  | 14197246562_6263 39166f_o.jpg | Fairfax County | https://flic.kr/p/nCyAM9 | https://creativecommons.org/licenses/by-nc-nd/2.0/ |

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| 86. |  | CAPcoverimage.jpg | WMO | https://etrp.wmo.int/course/view.php?id=157 | https://creativecommons.org/licenses/by-sa/4.0/ |
| 87. | <p>IPAWS Architecture Standards based alert message protocols, authenticated alert message senders, shared, trusted access & distribution networks, alerts delivered to more public interface devices</p>  <p>The diagram illustrates the IPAWS architecture. On the left, 'Alerting Authorities' (Local, State, Territorial, Tribal, Federal) connect to an 'Alert Aggregator/Gateway'. This gateway feeds into the 'IPAWS OPEN' platform, which is described as 'the Message Router (Open-Platform for Emergency Networks)'. The platform then connects to various 'Alerting Disseminators': Emergency Alert System, Commercial Mobile Alert Service (CMAS), Internet Services, NOAA Weather Radio, State/Local Unique Alerting Systems, and Future Technologies. These disseminators then reach the 'American People' through various channels such as AM/FM Satellite Radio, Digital, Analog, Cable, and Satellite TV; Commercial Mobile Networks; Web browsers, Widgets, Web sites, Social media; NOAA Weather Radio; FM 88.25; and Digital Signage.</p> | IPAWS-US-CAP-diagram.png | FEMA | https://etrp.wmo.int/course/view.php?id=157 | Public domain |

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| 88. |  | REACH_model.png | | <p>Guidelines on Multi-hazard Impact-based Forecast and Warning Services Part II</p> <p>https://library.wmo.int/index.php?lvl=notice_display&id=21994</p> | |
| 89. | <p>← Tweet  @MetService ...</p> <p>Hot again for many parts of the country. Many people are struggling with this prolonged heat , but don't forget our pets and livestock! More temperature information at MetService.com ^Lisa</p>  <p>2:57 PM · Jan 30, 2019 · TweetDeck</p> | NZTweet-seasonal-1-30Jan2019.png | <p>Courtesy Meteorological Service of New Zealand</p> | <p>NZ MetService</p> | <p>Courtesy Meteorological Service of New Zealand</p> |

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| 90. | <p>← Tweet  @MetService</p> <p>With temperatures spiking around the country it pays to keep a few things in mind about dealing with the heat. Here's some advice for the family, and don't forget about your pets and animals! ^AH</p>  <p>6:05 PM · Jan 27, 2019 · TweetDeck</p> | NZTweet-seasonal-2-27Jan2019.png | Courtesy Meteorological Service of New Zealand | NZ MetService | Courtesy Meteorological Service of New Zealand |
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| 91. | <p>← Tweet</p> <p> MetService @MetService ...</p> <p>Following the inclement weather this week, significant swells are forecast. With our new marine forecasts released last week, we now forecast swell period when greater than 10s. Check the info-graphics to see why this is important! ^Tui</p>  <p>10:25 PM · Sep 25, 2020 · TweetDeck</p> <p>6 Retweets 1 Quote Tweet 23 Likes</p> | NZTweet-seasonal-explainer-3-25Sept2019.png | Courtesy Meteorological Service of New Zealand | NZ MetService | Courtesy Meteorological Service of New Zealand |
| 92. |  <p>Helping make you, your home and your business more resilient and prepared for severe weather</p> <p>Kiltear na hÉireann Government of Ireland</p> | winter-ready-ireland.png | | <p>https://www.gov.ie/en/publication/3670b1-be-winter-ready/</p> <p>Guidelines on Multi-hazard Impact-based Forecast and Warning Services Part II</p> <p>https://library.wmo.int/index.php?lvl=no</p> | |

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| | | | tice display&id=21994 | |
| 93. |  | | MetService New Zealand | https://fb.watch/bTNpDkSvzO/ |
| 94. |  Ocean Buoy Awareness - Solomon Islands Pijin | Ocean Buoys | WMO | https://www.youtube.com/playlist?list=PLNaX-uTWSWrHr554n5hLdemL-idLcefMq |

| 95. | | Coastal Inundation | WMO | https://www.youtube.com/playlist?list=PLNaX-uTWSWrGZ4yEMaYvv4o2SiQT20nsz | |
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