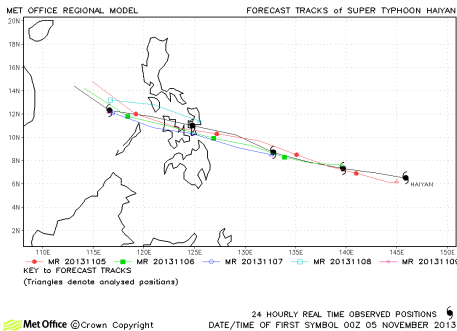
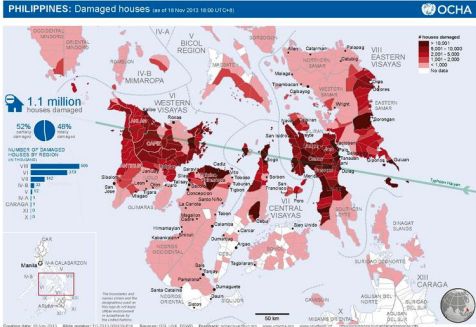
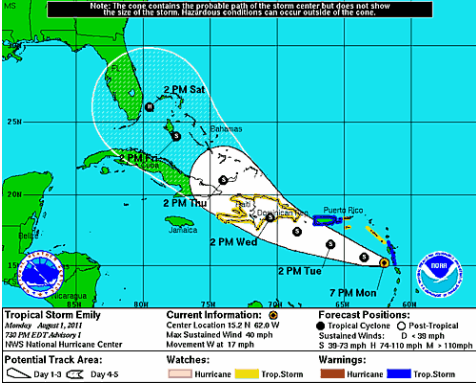


Media Attributions

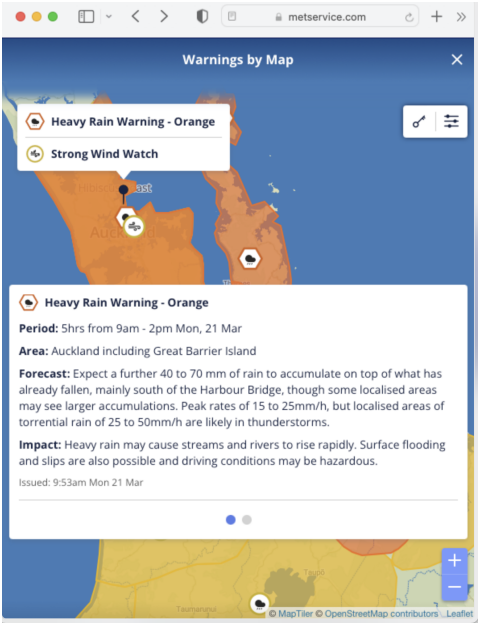
Introduction to Impact-Based Forecast Warning Services (IBFWS)

#	Image	Title/File	Author/Credit	Source	License/Permission
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_Binuluang_Following_Typhoon_Haiyan_MOD_45156472.jpg	LPHOT Keith Morgan,	https://commons.wikimedia.org/wiki/index.php?curid=30512881	Images are downloadable at high resolution, made available at http://www.defenceimagery.mod.uk for reuse under the OGL (Open Government License).
3.		Haiyan-forecast-UK Met.gif	UK Met Office	UK Met Office	Permission granted
4.		1080px-Tacloban_Typhoon_Haiyan_2013-11-13.jpg	Trocaire, Ireland DSC_0749,	https://commons.wikimedia.org/wiki/index.php?curid=29660396	https://creativecommons.org/licenses/by-nc/2.0/

5.		ReliefNet_Map_of_Damaged_houses_Typhoon_Haiyan.pdf	ReliefWeb, UN Office for the Coordination of Humanitarian Affairs - See more at: http://reliefweb.int/map/philippines/philippines-damaged-houses-18-nov-2013-1800-utc8#sthash.cEfqVP84.dpuf	https://en.wikipedia.org/wiki/File:ReliefNet_Map_of_Damaged_houses_Typhoon_Haiyan.pdf	Public Domain
6.		Emily2011path233014W5_NL_sm.gif	NOAA/NWS	https://www.nhc.noaa.gov/archive/2011/graphics/al05/loop_5W.shtml	Public domain

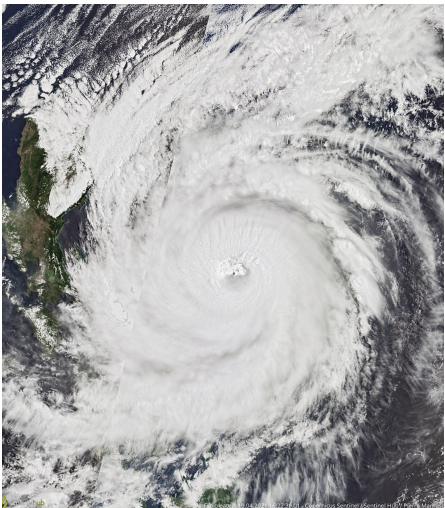
7.		Father Carries Daughter to Safety Country Haiti, Port-au-Prince UN_DAM/Haiti - Jeanne storm/2022Feb02 - Library - 0bf.jpg/UN7686194 _0bf_Standard.jpg	UN Photo/Logan Abassi	Unique Identifier UN7686194 https://dam.media.un.org/	https://shop.un.org/rights-permissions
8.		Headline: MINUSTAH Peacekeepers Assist Flood Victims in Haiti UN_DAM/Haiti - Jeanne storm/2022Feb02 - Library - 0c0.jpg/UN7686195 _0c0_Low_Resolution.jpg	UN Photo/Logan Abassi	Unique Identifier: UN7686195 https://dam.media.un.org/	https://shop.un.org/rights-permissions

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

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/

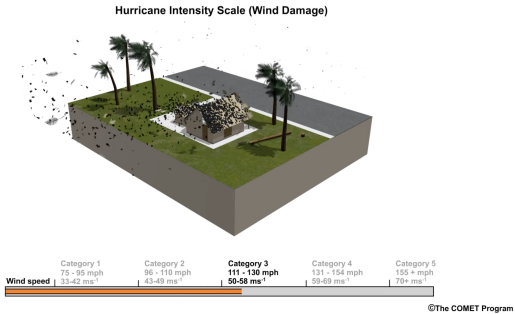
16.		51102011688_c576512e48_b.jpg	UNDP Climate	https://flic.kr/p/2kRHaH3	https://creativecommons.org/licenses/by-nc/2.0/
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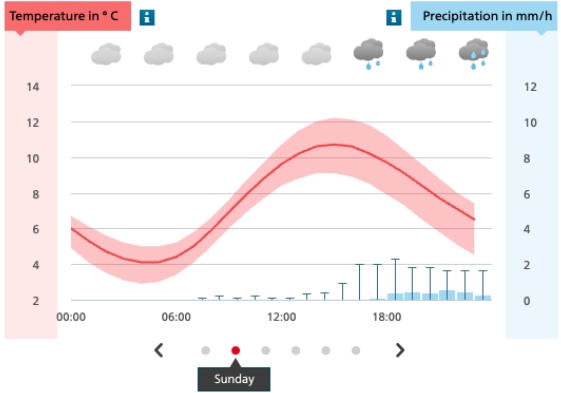
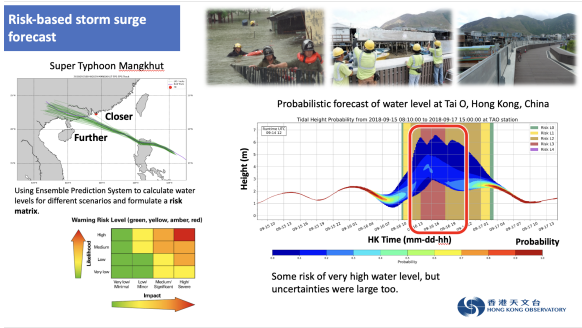
Module 2: Roadmap to the IBFWS Paradigm

17.		Super_Typhoon_Suring_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.		10695722693_9dd99835f2_c.jpg	AusAID	https://flic.kr/p/hi9nHX	https://creativecommons.org/licenses/by/2.0/
19.	 Photo by Lon Goldstein	House by creek	Lon Goldstein		https://creativecommons.org/licenses/by-nd/2.0/

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/

22.		3883928876_efccf3e42f_o.jpg	Max Barners	https://flic.kr/p/6Vd9JY	https://creativecommons.org/licenses/by-nd/2.0/																		
23.	 Hurricane Intensity Scale (Wind Damage) <table border="1"><thead><tr><th>Category</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th></tr></thead><tbody><tr><td>Wind speed</td><td>74 - 95 mph</td><td>96 - 110 mph</td><td>111 - 130 mph</td><td>131 - 156 mph</td><td>157 + mph</td></tr><tr><td></td><td>33-42 ms⁻¹</td><td>43-49 ms⁻¹</td><td>50-58 ms⁻¹</td><td>59-69 ms⁻¹</td><td>70+ ms⁻¹</td></tr></tbody></table> ©The COMET Program	Category	1	2	3	4	5	Wind speed	74 - 95 mph	96 - 110 mph	111 - 130 mph	131 - 156 mph	157 + mph		33-42 ms ⁻¹	43-49 ms ⁻¹	50-58 ms ⁻¹	59-69 ms ⁻¹	70+ ms ⁻¹	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
Category	1	2	3	4	5																		
Wind speed	74 - 95 mph	96 - 110 mph	111 - 130 mph	131 - 156 mph	157 + mph																		
	33-42 ms ⁻¹	43-49 ms ⁻¹	50-58 ms ⁻¹	59-69 ms ⁻¹	70+ ms ⁻¹																		

24.	Genève 381 m a. sea level Sunday, 13 March 2022 	MeteoSuisse-prob-f cst11Mar2022.png	MeteoSwiss	https://www.meteoswiss.admin.ch/home.html	Courtesy MétéoSuisse
25.	Risk-based storm surge forecast Super Typhoon Mangkhut 	Module3_Q2Q3KKH 1803.pptx			Courtesy Hong Kong Observatory

26.	Valid Wed 23-Mar-2022 through Sat 26-Mar-2022 The map displays the outline of New Zealand with several colored regions indicating heavy rain probability. A red dashed line outlines a high-confidence area in the northeast. A yellow dashed line outlines a low-confidence area in the central-north. A purple dashed line outlines a moderate-confidence area in the west. Another purple dashed line outlines a moderate-confidence area in the south. A blue dashed line outlines a low-confidence area in the southeast. Labels with leader lines point to these areas: 'Wed 23 Mar Heavy Rain Confidence High' (red), 'Wed 23 Mar Heavy Rain Confidence Low' (yellow), 'Wed 23 Mar Heavy Rain Confidence Moderate' (purple, west), 'Thu 24 Mar to Fri 25 Mar Heavy Rain Confidence Low' (purple, west), 'Wed 23 Mar Heavy Rain Confidence Moderate' (purple, south), and 'Thu 24 Mar Heavy Rain Confidence Low' (blue, southeast). Issued 04:27 pm 21-Mar-2022 © Meteorological Service of New Zealand Ltd	HeavyRainProbMap_NZMetSvc21Mar2022.png		NZ MetService Warnings & Watches page, Meteorological Service of New Zealand, https://www.metservice.com/warnings/home	Courtesy Meteorological Service of New Zealand
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27.

MetService

@MetService

...

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](https://www.metservice.co.nz/forecast/outlook)
^Tahlia

Sun 31

Mon 01

10 20 30 40 50 60 70 80 90

Probability of 10+mm rain

9:10 PM · May 28, 2020 · TweetDeck

3 Retweets

5 Likes

Tweet-ProbFcst-NZ
MetSvc28May2020.
png

NZ MetService
Warnings &
Watches page,
Meteorological
Service of New
Zealand,
<https://www.metservice.co.nz/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	38.8
Zagreb	20.2	21.3	22.9	Zagreb	33.7	35.1	37.1
Karlovac	20.0	21.1	22.7	Karlovac	34.5	35.9	38.0
Gospić	17.0	18.0	19.6	Gospić	32.1	33.4	35.4
Rijeka	22.7	23.7	25.1	Rijeka	32.7	33.9	35.5
Knin	20.5	21.6	23.1	Knin	35.5	36.9	39.0
Split	25.8	26.8	28.2	Split	33.9	35.1	36.7
Dubrovnik	25.4	26.3	27.6	Dubrovnik	32.3	33.2	34.7

Description of thresholds

Moderate heatwave hazard

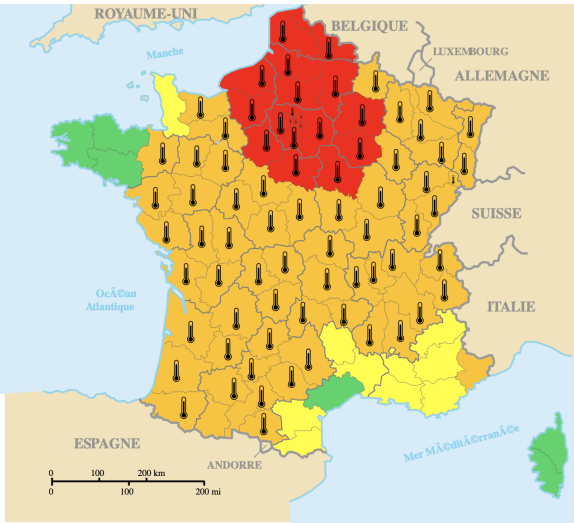
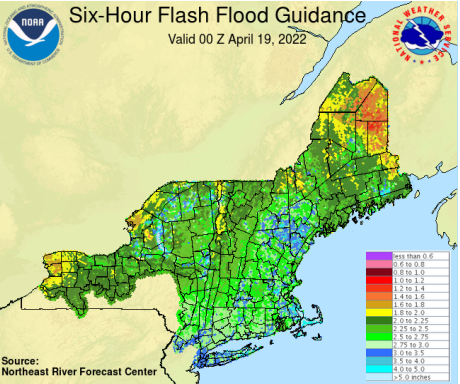
High heatwave hazard

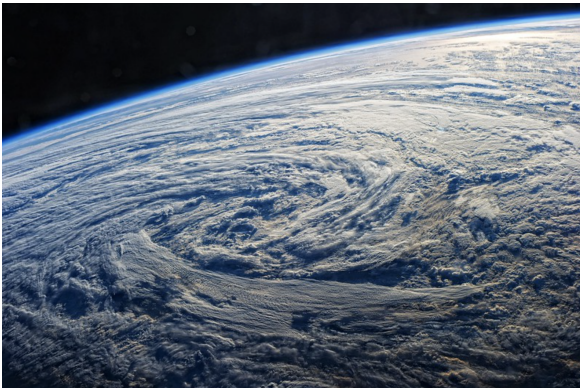
Extreme high heatwave hazard

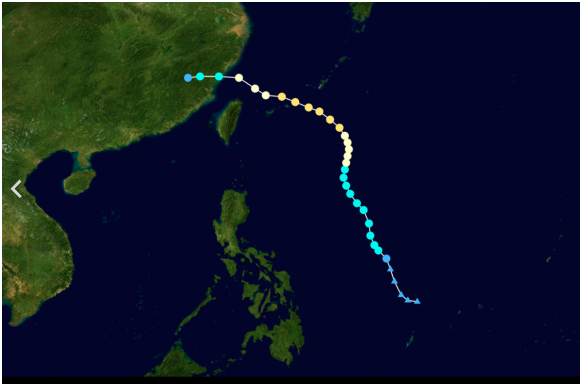
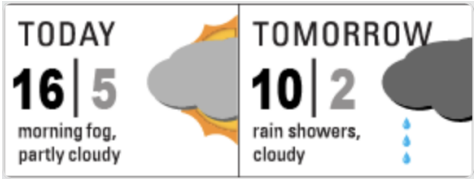
Croatia_thresholds_example_wmo_1150_pt1.png

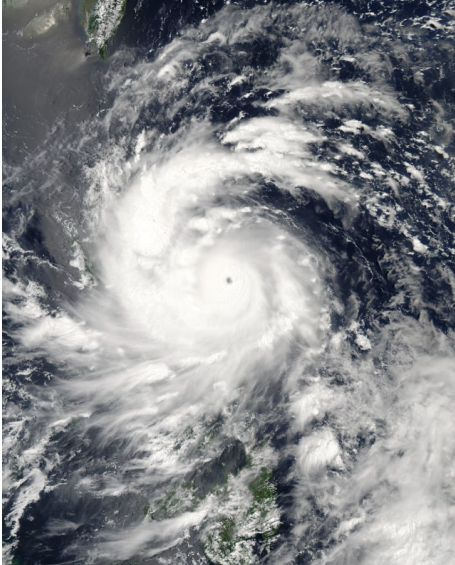
WMO

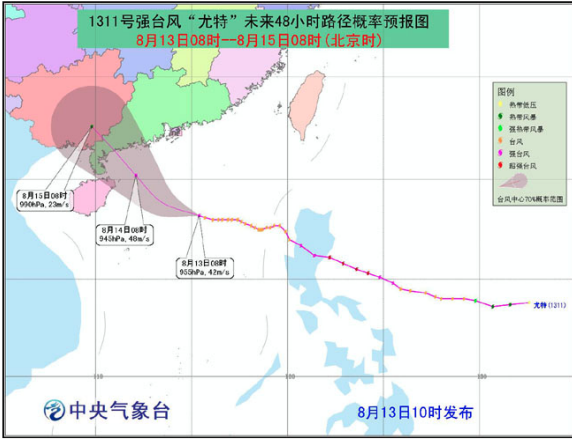
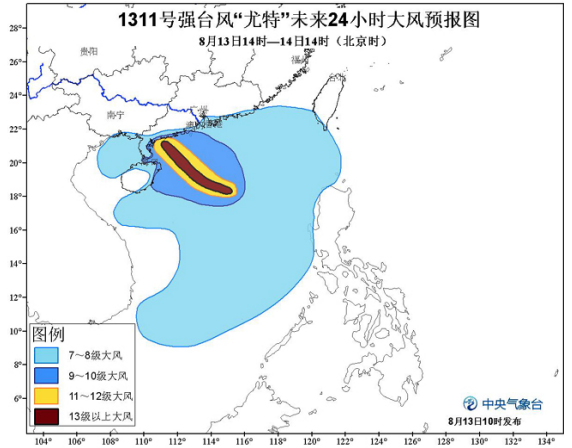
Guidelines on Multi-hazard Impact-based Forecast and Warning Services
https://library.wmo.int/index.php?lvl=notice_display&id=17257
Guidelines on Multi-hazard Impact-based Forecast and Warning Services Part II
https://library.wmo.int/index.php?lvl=notice_display&id=21994

29.		843px-Meteo_France_weather_warning_map_-_24-25.07.2019.svg.png	By User:Ternoc - Own work	https://commons.wikimedia.org/wiki/index.php?curid=80716459	Public Domain
30.		ffg1_6hr_19Apr2022_00z_NERFC.png	NOAA/NWS	https://www.weather.gov/serfc/ffg	Public domain

31.	Early Warning System for Extreme Heat Temperatures (SAT-TE Calor) Argentinian National Meteorological Service - 13 January, 2022 18:32h  Effect on Health - 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. https://www.smn.gob.ar/modelos	Argentina_heatwave_13jan20221838h.png	Modified from source	https://www.smn.gob.ar/modelos	Credit: Courtesy Argentinian National Meteorological Service
32.		Edited ISS037 image of Typhoon Fitow, close to Taiwan. 10105483996_34146e76aa_c.jpg	Stuart Rankin	https://flic.kr/p/goZfjG	https://creativecommons.org/licenses/by-nc/2.0/

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.needpix.com/photo/410098/	public domain

36.		AftermathBertha-41 23970_67291d76.jpg	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/wiki/index.php?curid=27658452	Public domain

38.		typhoon_utor_track_fcst_cma-aug2013.jpg	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

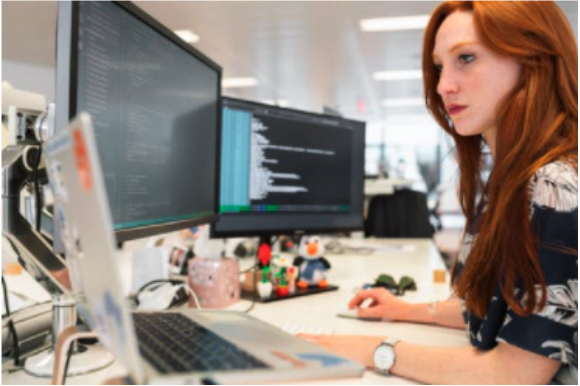
42.	Green: No severe hydrometeorological hazard expected Yellow: Be aware Orange: Be prepared Red: Take action Assign a colour to the warning which is a combination of potential impact and likelihood (Source: Met Office, United Kingdom) Figure 2. Risk matrix	risk_matrix_metoffice_UK.png	UK Met Service	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	Courtesy UK Met Service
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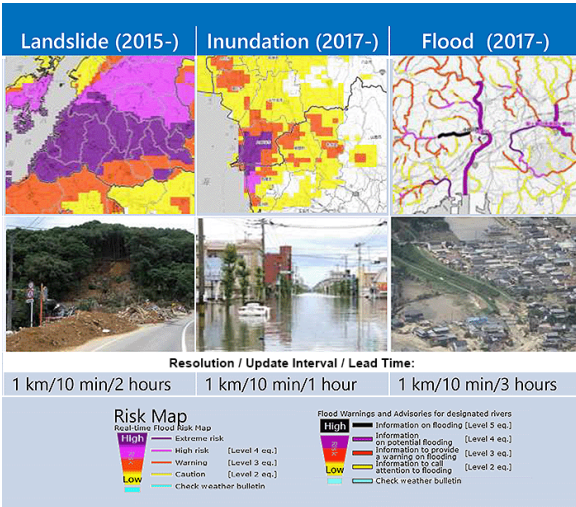
43.	South African Weather Service - Risk Matrix <table><tr><td rowspan="4">Likelihood</td><td>High</td><td></td><td>2</td><td>6</td><td>10</td></tr><tr><td>Medium</td><td></td><td>1</td><td>5</td><td>9</td></tr><tr><td>Low</td><td></td><td></td><td>4</td><td>8</td></tr><tr><td>Very Low</td><td></td><td></td><td>3</td><td>7</td></tr><tr><td></td><td></td><td>Minimal</td><td>Minor</td><td>Significant</td><td>Severe</td></tr><tr><td></td><td></td><td colspan="4">Impact</td></tr></table> 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				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																																				
44.	BMKG Indonesia Risk Matrix <table><tr><td rowspan="4"> Likelihood</td><td>High</td><td></td><td>2</td><td>7</td><td>10</td></tr><tr><td>Medium</td><td></td><td>1</td><td>6</td><td>9</td></tr><tr><td>Low</td><td></td><td></td><td>4</td><td>8</td></tr><tr><td>Very Low</td><td></td><td></td><td>3</td><td>5</td></tr><tr><td></td><td></td><td>Minimal</td><td>Minor</td><td>Significant</td><td>Severe</td></tr><tr><td></td><td></td><td colspan="4">Impact</td></tr></table> Courtesy BMKG and Met Office, UK	 Likelihood	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			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																																						

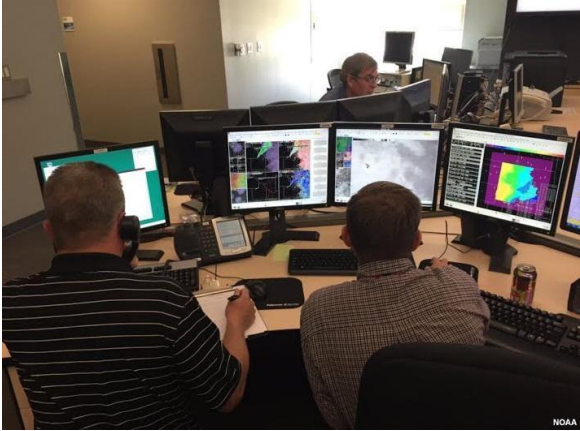
45.			Photo by Denniz Futalan from Pexels		
46.			Photo by RF. .studio from Pexels		
47.			Photo by Matheus Bertelli from Pexels		

48.			Photo by cottonbro from Pexels		
49.			Photo by Harrison Haines from Pexels		

50.			Photo by RODNAE Productions from Pexels		
51.			Photo by Markus Spiske from Pexels		

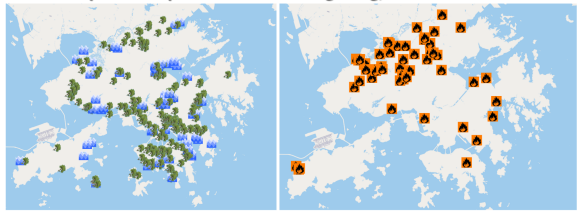
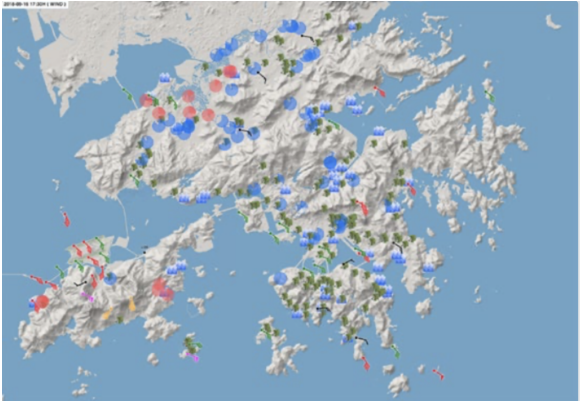
52.			Photo by ThisIsEngineering from Pexels		
53.			Photo by Yan Krukov from Pexels		

54.	 Figure 3. United Kingdom Natural Hazards Partnership		Met Office UK	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	Courtesy Met Office UK								
55.	 <table><tr><th>Resolution / Update Interval / Lead Time:</th><th>1 km/10 min/2 hours</th><th>1 km/10 min/1 hour</th><th>1 km/10 min/3 hours</th></tr><tr><td>Risk Map Real-time Flood Risk Map</td><td> - Extreme risk - High risk (Level 4 eq.) - Warning (Level 3 eq.) - Caution (Level 2 eq.) - Check weather bulletin </td><td> - Information on potential flooding (Level 5 eq.) - Information on potential flooding (Level 4 eq.) - Information to provide a warning on flooding (Level 3 eq.) - Information to call attention to flooding (Level 2 eq.) - Check weather bulletin </td><td></td></tr></table>	Resolution / Update Interval / Lead Time:	1 km/10 min/2 hours	1 km/10 min/1 hour	1 km/10 min/3 hours	Risk Map Real-time Flood Risk Map	- Extreme risk - High risk (Level 4 eq.) - Warning (Level 3 eq.) - Caution (Level 2 eq.) - Check weather bulletin	- Information on potential flooding (Level 5 eq.) - Information on potential flooding (Level 4 eq.) - Information to provide a warning on flooding (Level 3 eq.) - Information to call attention to flooding (Level 2 eq.) - Check weather bulletin		JMA_Real-time_Risk_Map_modified.png	JMA	Japan Meteorological Agency (JMA)	Courtesy Japan Meteorological Agency (JMA)
Resolution / Update Interval / Lead Time:	1 km/10 min/2 hours	1 km/10 min/1 hour	1 km/10 min/3 hours										
Risk Map Real-time Flood Risk Map	- Extreme risk - High risk (Level 4 eq.) - Warning (Level 3 eq.) - Caution (Level 2 eq.) - Check weather bulletin	- Information on potential flooding (Level 5 eq.) - Information on potential flooding (Level 4 eq.) - Information to provide a warning on flooding (Level 3 eq.) - Information to call attention to flooding (Level 2 eq.) - Check weather bulletin											

56.	 A photograph showing three people in a control room or office. They are seated at a desk with multiple computer monitors. The monitors display various weather maps and data. The person in the foreground is wearing a striped shirt and is looking at the screens. The person in the background is wearing a light-colored shirt and is also looking at the screens. The person in the middle is wearing a checkered shirt and is looking at the screens. The NOAA logo is visible in the bottom right corner of the image.	forecaster_work.jpg	NOAA	https://www.meted.ucar.edu/	COMET Terms of Use https://www.meted.ucar.edu/about_legal.php#C
57.	 A photograph showing two firefighters in full protective gear, including helmets and oxygen tanks, fighting a large fire. The firefighters are wearing yellow and black gear. The fire is very large and intense, with bright orange and yellow flames. A rainbow is visible in the background, partially obscured by the fire.	pexels-pixabay-260367.jpg	Pixabay	Photo by Pixabay from Pexels: https://www.pexels.com/photo/accident-action-danger-emergency-260367/	public domain,cco

58.			Photo by ThisIsEngineering from Pexels		
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.m eted.ucar.edu/abo ut_legal.php#C
61.		start_burn.jpeg	Brent Lawrence, USFWS	https://www.meted. ucar.edu/fire/sitrep/ media/graphics/sta rt_burn.jpg	COMET Terms of Use https://www.m eted.ucar.edu/abo ut_legal.php#C
62.		DBK_FOC_3554_0 1_13_2017a.jpg	California Department of Water Resources	https://pixel-ca-dwr. photoshelter.com/in dex	public domain - per Ryan Endean, Assistant Deputy Director, Public Affairs Office, California Department of Water Resources (DWR), ryan.endean@wat er.ca.gov)

63.			Photo by Mikhail Nilov from Pexels		
64.	Examples of Impact Data from Hong Kong, China  Cumulative fallen tree reports and flooding reports (blue wavy icons) on 16 Sep 2018, during the passage of Super Typhoon Mangkhut Cumulative hill fire reports on 25 Oct 2020, being the Chung Yeung Festival 	Impact_data_chart_KKH1803.pptx	Hong Kong Observatory (HKO)		Courtesy Hong Kong Observatory (HKO)
65.		GIS_ImpactData_mangkhut.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=no	

				tice_display&id=21994	
66.			Photo by Manuel Geissinger from Pexels		
67.			Photo by Yan Krukov from Pexels		
68.			Photo by Christina Morillo from Pexels		

69.			Photo by fauxels from Pexels		
70.			Photo by Canva Studio from Pexels		
71.		IMG_2145.JPG	UK Met Office	UK Met Office	Permission granted

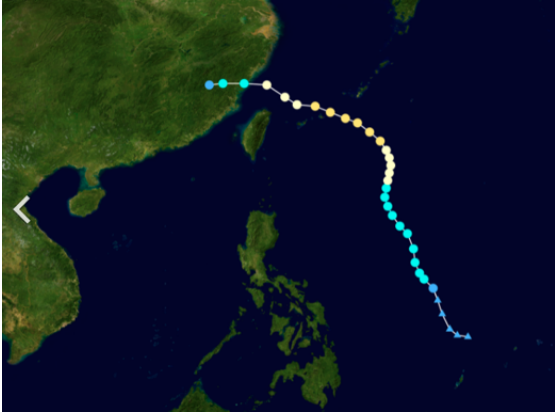
72.	 CA Department of Water Resources	KJ_oroville_FERC_0452_08_07_19.JPG	California Department of Water Resources	https://pixel-ca-dwr.photoshelter.com/in dex	public domain - per Ryan Endean, Assistant Deputy Director, Public Affairs Office, California Department of Water Resources (DWR), ryan.endean@water.ca.gov)
73.			Photo by fauxels from Pexels		

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

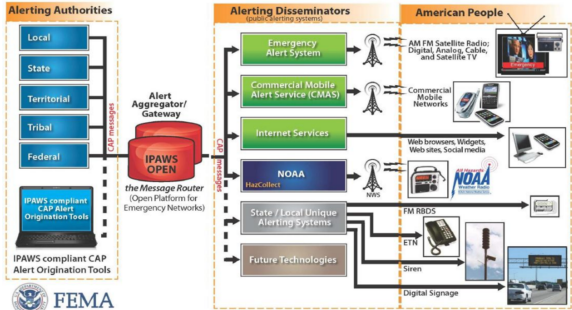
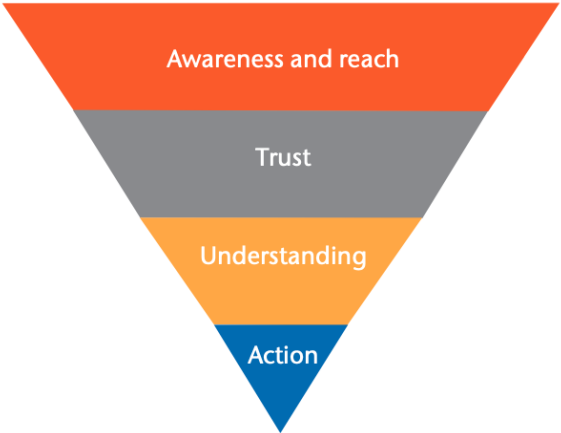
76.		P1012655.JPG	UK Met Office	UK Met Office	Permission granted
77.			Photo by ICSA from Pexels		
Module 4: Effective Communications Strategies for Impacts-Based Warnings					

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

81.		Downed_Power_Lines_(17157695726)(1).jpg	Tony Webster		https://creativecommons.org/licenses/by/2.0/deed.en
82.		Snow_road.jpg	NSSL NOAA	https://www.meted.ucar.edu/	COMET Terms of Use https://www.meted.ucar.edu/about_legal.php#C

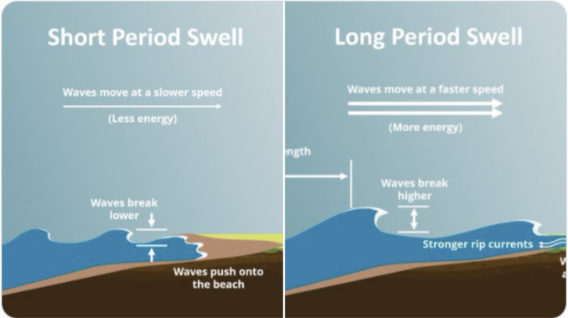
83.		1920px-Fitow_2013_track.png	By Meow - Created by Meow using WikiProject Tropical cyclones/Tracks. The background image is from NASA. Tracking data is from the Joint Typhoon Warning Center[1]	https://en.wikipedia.org/wiki/Typhoon_Fitow#/media/File:Fitow_2013_track.png https://commons.wikimedia.org/w/index.php?curid=28812172	Public Domain
84.		TADDHighRes-sm.gif	NWS NOAA	https://www.weather.gov/safety/flood-turn-around-dont-drown	Public domain

85.		14197246562_626339166f_o.jpg	Fairfax County	https://flic.kr/p/nCyAM9	https://creativecommons.org/licenses/by-nc-nd/2.0/
86.		CAPcoverimage.jpg	WMO	https://etrp.wmo.int/course/view.php?id=157	https://creativecommons.org/licenses/by-sa/4.0/

87.	IPAWS Architecture Standards based alert message protocols, authenticated alert message senders, shared, trusted access & distribution networks, alerts delivered to more public interface devices  The diagram illustrates the IPAWS Architecture. On the left, 'Alerting Authorities' include Local, State, Territorial, Tribal, and Federal entities, along with 'IPAWS compliant CAP Alert Origination Tools'. These connect to an 'Alert Aggregator/Gateway' labeled 'IPAWS OPEN' and 'the Message Router (Open Platform for Emergency Networks)'. This gateway then connects to 'Alerting Disseminators' which include the Emergency Alert System, Commercial Mobile Alert Service (CMAS), Internet Services, NOAA, State/Local Unique Alerting Systems, and Future Technologies. These disseminators then reach 'American People' through various channels: AM/FM Satellite Radio, Digital, Analog, Cable, and Satellite TV; Commercial Mobile Networks; Web browsers, Widgets, Web sites, and Social media; FM radios; ETN; Siren; and Digital Signage.	IPAWS-US-CAP-diagram.png	FEMA	https://etrp.wmo.int/course/view.php?id=157	Public domain
88.	 The REACH model is depicted as an inverted funnel divided into four horizontal sections. From top to bottom, the sections are: 'Awareness and reach' (orange), 'Trust' (grey), 'Understanding' (yellow), and 'Action' (blue).	REACH_model.png		Guidelines on Multi-hazard Impact-based Forecast and Warning Services Part II https://library.wmo.int/index.php?lvl=notice_display&id=21994	

89.	← Tweet  MetService @MetService ... 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 During prolonged heat don't forget animals...  Ensure they have plenty of water  Provide shade  Avoid exercise during hottest time of day  Regularly check they are coping  Do not lock in vehicles Pets & livestock care 	NZTweet-seasonal-1-30Jan2019.png	Courtesy Meteorological Service of New Zealand	NZ MetService	Courtesy Meteorological Service of New Zealand
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90.					
	Tweet MetService @MetService 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 6:05 PM · Jan 27, 2019 · TweetDeck	NZTweet-seasonal- 2-27Jan2019.png	Courtesy Meteorological Service of New Zealand	NZ MetService	Courtesy Meteorological Service of New Zealand

91.	← Tweet  MetService  @MetService 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  10:25 PM · Sep 25, 2020 · TweetDeck 6 Retweets 1 Quote Tweet 23 Likes	NZTweet-seasonal-explainer-3-25Sept2019.png	Courtesy Meteorological Service of New Zealand	NZ MetService	Courtesy Meteorological Service of New Zealand
92.		winter-ready-ireland.png		https://www.gov.ie/en/publication/3670b1-be-winter-ready/ Guidelines on Multi-hazard Impact-based Forecast and Warning Services Part II https://library.wmo.int/index.php?lvl=no	

				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-uTWSWrGZ4yEMaYyv4o2SiQT20nsz	
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