



Detailed Training Programme

Week 1:					
Mon. (10 July)	09.00 – 09.20	Opening ceremony		<ul style="list-style-type: none"> • Opening remarks by BMKG • Welcoming speech by Embassy of Japan • Welcoming speech by ESCAP 	<ul style="list-style-type: none"> • Dr. Andi E.S • Embassy of Japan • ESCAP
	09.20 – 09.40				
	09.40 – 09.45				
	09.45 – 10.30	Coffee break		<ul style="list-style-type: none"> • Photo session • Press Conference 	
	10.30 – 12.00	Lecture	Introduction to the course	<ul style="list-style-type: none"> • Brief overview on the course <ul style="list-style-type: none"> ○ Areas ○ Modes of learning ○ Expected outputs for the participants 	ESCAP / Ms. Anni Arumsari
	12.00 – 13.00	Lunch			
	13.00 – 13.45	Lecture	Introduction to UNDP	UNDP cooperation on geospatial project	UNDP
	13.45 – 14.30	Lecture	Introduction to multi-hazard early warning system	<ul style="list-style-type: none"> • General concept of multi hazard early warning • Introduction disaster management • Introduction risk assessment 	BNPB (National Management Disaster)
Tues. (11 July)	14.30 – 16.00	Lecture and practice	Spatial analysis for early warning system	<ul style="list-style-type: none"> • Concept of spatial data analysis for early warning system • How to create thematic map 	BIG
	16.00 – 16.30	Preparation to Regional Training Center (RTC) Citeko			
	08.30 – 09.00	Interactive session	Ice breaking	Introduction of each participant	Mr. Adityawarman
	09.00 – 10.30	Lecture	Extreme weather	<ul style="list-style-type: none"> • Weather early warning system 	Mr. Agie Mrs. Mia
	10.30 – 10.45	Coffee break			
	10.45 – 12.15	Lecture	Extreme weather	<ul style="list-style-type: none"> • Flood early warning system <ul style="list-style-type: none"> ○ Knowledge on flood 	Mr. Agie Mrs. Mia
	12.15 – 13.15	Lunch			
	13.15 – 14.45	Practice	Extreme weather	<ul style="list-style-type: none"> • Best practice of standard procedure on extreme weather 	Mr. Agie Mrs. Mia
Wed. (12 July)	14.45 – 15.00	Coffee break			
	15.00 – 16.30	Practice	Extreme Weather	<ul style="list-style-type: none"> • Best practice of standard procedure on extreme weather 	Mr. Agie Mrs. Mia
	09.00 – 10.30	Lecture	Remote sensing and weather satellite	<ul style="list-style-type: none"> • Introduction of remote sensing (weather satellite and radar) • Satellite animation and interactive diagnosis (SATAID) 	Mr. Riris Mr. Andersen
	10.30 – 10.45	Coffee break			
	10.45 – 12.15	Lecture	Remote sensing and weather	<ul style="list-style-type: none"> • Satellite products for detecting hydro-meteorological hazard 	Mr. Riris Mr. Andersen



			satellite	<ul style="list-style-type: none"> ○ Hydro estimator – heavy rainfall ○ Global satellite mapping precipitation ● Cumulonimbus detection 	
	12.15 – 13.15	Lunch			
	13.15 – 14.45	Practice	Remote sensing and weather satellite	<ul style="list-style-type: none"> ● Cloud identification from satellite data 	Mr. Asri Mr. Andersen
	14.45 – 15.00	Coffee break			
	15.00 – 16.30	Practice	Remote sensing and weather satellite	<ul style="list-style-type: none"> ● Cloud identification from satellite data ● RGB technique 	Mr. Asri Mr. Andersen
Thurs. (13 July)	09.00 – 10.30	Lecture	Common alert protocol and service delivery	<ul style="list-style-type: none"> ● Providing comprehensive public weather service ● User focus and service delivery 	Mr. Agie
	10.30 – 10.45	Coffee break			
	10.45 – 12.15	Lecture	Common alert protocol and service delivery	<ul style="list-style-type: none"> ● Multi hazard impact based forecast and warning services <ul style="list-style-type: none"> ○ Key concepts and schema ○ Operational applications ○ Recommended elements 	Mr. Agie
	12.15 – 13.15	Lunch			
	13.15 – 14.45	Lecture	Common alert protocol and service delivery	<ul style="list-style-type: none"> ● Common alert protocol (CAP) <ul style="list-style-type: none"> ○ Benefit of CAPs 	Mr. Agie
	14.45 – 15.00	Coffee break			
	15.00 – 16.30	Lecture	Common alert protocol and service delivery	<ul style="list-style-type: none"> ● Actions for alerting authority 	Mr. Agie
Fri. (14 July)	08.30 – 10.00	Lecture	Marine forecast & warning	<ul style="list-style-type: none"> ● Introduction to ocean meteorology <ul style="list-style-type: none"> ○ Basic of marine met – oceanography ○ Marine-met operational: from observation ○ Variables and parameters for services 	Mr. Andri Ramdhani Mr. Siswanto
	10.00 – 10.15	Coffee break			
	10.15 – 11.45	Lecture	Marine forecast & warning	Global and environmental issues of ocean <ul style="list-style-type: none"> - Sea level rise and threat to small island - Ocean climate changes 	Mr. Andri Ramdhani Mr. Siswanto
	11.45 – 13.30	Friday prayer and lunch			
	13.30 – 16.30	Interactive weekly recap		<ul style="list-style-type: none"> ● Recap presentation <ul style="list-style-type: none"> ○ Summary of this week's contents ● Participant presentation/discussion/practice ● Regarding concepts from this week and/or progress status on their draft national action plan/work plan 	Mr Marjuki Mr. Agie Mr. Andri Mr. Iman
Sat. (15 July)	09.00 - end	Excursion		Safari garden zoo	



Week 2:					
Mon. (17 July)	09.00 – 10.30	Lecture	Marine forecast & warning	<ul style="list-style-type: none"> Applied marine meteorology information and services <ul style="list-style-type: none"> Marine-met information production Services and dissemination of marine-met information User oriented product and applied marine-met information (e.g, sails, fisheries, coastal communities, tourisms, SAR, offshore exploration, ocean pollution and environment issues) 	Mr. Andri Ramdhani Mr. Bayu Edo Pratama
	10.30 – 10.45	Coffee break			
	10.45 – 12.15	Practice	Marine forecast & warning	<ul style="list-style-type: none"> Ocean forecast system and data processing <ul style="list-style-type: none"> Introduction to Ocean Modeling Introduction to BMKG ocean forecast system 	Mr. Andri Ramdhani
	12.15 – 13.15	Lunch			
	13.15 – 14.45	Practice	Marine forecast & warning	Data processing and visualization	Mr Bayu Edo Pratama
	14.45 – 15.00	Coffee break			
	15.00 – 16.30	Practice	Marine forecast & warning	Data processing and visualization	Mr Bayu Edo Pratama
Tues. (18 July)	09.00 – 10.30	Lecture	Climate forecast	Overview seasonal climate prediction in BMKG	Mr. Adi Ripaldi
	10.30 – 10.45	Coffee break			
	10.45 – 12.15	Lecture	Climate forecast	Exploring climate data using IRI Data Library	Mr. Robi Muharsyah
	12.15 – 13.15	Lunch			
	13.15 – 14.45	Practice	Climate forecast	How to produce seasonal forecast using HyBMG	Mr. Adi Ripaldi Mr. Robi Muharsyah
	14.45 – 15.00	Coffee break			
	15.00 – 16.30	Practice	Climate forecast	How to produce seasonal forecast using climate prediction tools IRI	Mr. Adi Ripaldi Mr. Robi Muharsyah
Wed. (19 July)	09.00 – 10.30	Lecture and Practice	Understanding of climate information	<ul style="list-style-type: none"> Overview of climate services in Indonesia Climate characteristic Climate information dissemination 	Mr. M. Agung. F
	10.30 – 10.45	Coffee break			



	10.45 – 12.15	Lecture and Practice	Introduction to meteorological instrument	<ul style="list-style-type: none"> • Standard weather instrument • Simple weather instrument 	Mr Suradi
	12.15 – 13.15	Lunch			
	13.15 – 14.45	Lecture	Drought monitoring	<ul style="list-style-type: none"> • Introduction to drought monitoring • The sequences of drought occurrences and impacts 	Ms. Novana Sari & Ms Noor L.A
	14.45 – 15.00	Coffee break			
	15.00 – 16.30	Practice	Drought monitoring	<ul style="list-style-type: none"> • Analysis of drought index based on SPI method using SCOPIC software 	Ms. Novana Sari & Noor L.A
Thurs. (20 July)	09.00 – 10.30	Lecture	Monitoring consecutive dry days	<ul style="list-style-type: none"> • Concept of monitoring consecutive dry days <ul style="list-style-type: none"> ◦ Data collection • Data processing 	Ms Mia & Mr Alan
	10.30 – 10.45	Coffee break			
	10.45 – 12.15	Practice	Monitoring consecutive dry days	<ul style="list-style-type: none"> • Create a map of monitoring consecutive dry days using QGIS 	Ms Mia & Mr Alan
	12.15 – 13.15	Lunch			
	13.15 – 14.45	Lecture	Climate variability	Monitoring and analysis atmospheric and marine dynamic	Mr. Alif & Ms Diah. A
	14.45 – 15.00	Coffee break			
	15.00 – 16.30	Practice	Climate variability	Monitoring and analysis atmospheric and marine dynamic	Mr. Alif & Ms Diah. A
Fri. (21 July)	08.30 – 10.00	Lecture	Climate sectoral (health)	<ul style="list-style-type: none"> • Analysis of climate parameters and dengue fever 	Ms. Kwarti. A.S & Ms. Mamenun
	10.00 – 10.15	Coffee break			
	10.15 – 11.45	Practice	Climate sectoral (health)	<ul style="list-style-type: none"> • How to analysis climate parameters and dengue fever using correlation studies 	Ms. Kwarti. A.S & Ms. Mamenun
	11.45 – 13.30	Friday prayer and lunch			
	13.30 – 16.30	Interactive weekly recap		<ul style="list-style-type: none"> • Recap presentation <ul style="list-style-type: none"> ◦ Summary of this week's contents • Participant presentation/discussion/practice • Regarding concepts from this week and/or progress status on their draft national action plan / work plan 	Mr Marjuki Mr. Agie Mr. Andri Mr. Iman
Sat. (22 July)	09.00 – 12.00	Self assignment		<ul style="list-style-type: none"> • Drafting the action plan 	



Week 3:					
Mon. (24 July)	08.00 – 12.00	Site visit	Field study	Agency of Geospatial Information of Indonesia	Mr. Bagus Mr. Marjuki
	12.00 – 13.00	Lunch			
	13.00 – 16.30	Site visit	Field study	Indonesia Disaster Relief Training Ground (Ina-DRTG)	Mr. Riyadi Mr. Marjuki
Tues. (25 July)	09.00 – 10.30	Lecture	Risk assessment on geophysical hazard	Seismic hazard assessment	Dr. Jaya Murjaya
	10.30 – 10.45	Coffee break			
	10.45 – 12.15	Lecture	Risk assessment on geophysical hazard	Seismic hazard analysis	Dr. Jaya Murjaya
	12.15 – 13.15	Lunch			
	13.15 – 14.45	Practice	Risk assessment on geophysical hazard	Probabilistic seismic hazard analysis (PSHA)	Dr. Jaya Murjaya
	14.45 – 15.00	Coffee break			
	15.00 – 16.30	Practice	Risk assessment on geophysical hazard	Probabilistic seismic hazard analysis (PSHA)	Dr. Jaya Murjaya
Wed. (26 July)	09.00 – 10.30	Lecture & discussion	Standard operating procedure	Standard operating procedure (SOP) <ul style="list-style-type: none"> ○ Definition and benefit ○ General schema/structure/mechanism: daily routine tasks vs. during disaster 	Mr. Riyadi
	10.30 – 10.45	Coffee Break			
	10.45 – 12.15	Lecture & discussion	Standard Operating Procedure	Example: SOPs of InaTEWS	Mr. Riyadi
	12.15 – 13.15	Lunch			
	13.15 – 14.45	Lecture & discussion	Tsunami warning communication chain	<ul style="list-style-type: none"> • Tsunami early warning communication chain <ul style="list-style-type: none"> ○ The key actor ○ Reception by local government 	Mr. Riyadi
	14.45 – 15.00	Coffee break			
	15.00 – 16.30	Lecture & discussion	Tsunami warning communication chain	<ul style="list-style-type: none"> • Tsunami early warning communication chain <ul style="list-style-type: none"> ○ Decision making • Dissemination 	Mr. Riyadi
Thurs. (27 July)	09.00 – 10.30	Lecture	Table top exercise (TTX)	Introduction to table top exercise	Mr Daryono Ms. Tri Handayani
	10.30 – 10.45	Coffee break			
	10.45 – 12.15	Lecture	Table top exercise (TTX)	Tsunami scenario	Mr Daryono Ms. Tri Handayani
	12.15 – 13.15	Lunch			



	13.15 – 14.45	Practice	Table top exercise (TTX)	Exercise	Mr Daryono Ms. Tri Handayani
	14.45 – 15.00	Coffee break			
	15.00 – 16.30	Practice	Table top exercise (TTX)	• Evaluation	Mr Daryono Ms. Tri Handayani
Fri. (28 July)	08.30 – 10.00	Discussion	Country report	Presentation country report from each participant (20 minute/country)	SPREP
	10.00 – 10.15	Coffee Break			
	10.15 – 11.45	Discussion	Country report	• Review current status of EWS • Challenge for development	SPREP
	11.45 – 13.30	Friday Prayer and Lunch			
	13.30 – 15.00	Lecture & discussion		• Gender Issues on Multi Hazard Early Warning System	Ms. Nelly
	15.00 – 15.15	Coffee Break			
	15.15 – 16.45	Interactive weekly recap		• Recap presentation ○ Summary of this week's contents • Participant presentation/discussion/practice • Regarding concepts from this week and/or progress status on their draft national action plan / work plan	Mr Marjuki Mr. Agie Mr. Andri Mr. Iman
Sat. (29 July)	09.00 – 12.00	Self assignment		• Drafting the action plan	

Week 4:

Mon. (31 July)	09.00 – 16.30	Final presentations	<ul style="list-style-type: none">• Presentation on action plan / work plan by countries• Discussion		Mr Marjuki Mr. Agie Mr. Andri Mr. Iman
Tues. (1 Aug)	09.00 – 16.30	Final presentations	<ul style="list-style-type: none">• Presentation on action plan / work plan by countries• Discussion		Mr Marjuki Mr. Agie Mr. Andri Mr. Iman
Wed. (2 Aug)	09.00 – 10.45	Field study to operational room BMKG	• Visit to MEWS, CEWS and TEWS room in BMKG headquarter		Mrs. Anni Arumsari
	10.45 – 11.00	Coffee break			
	11.00 – 12.00	Closing remarks	<ul style="list-style-type: none">• Report training• Testimony from participant• Delivery of certificate• Closing remarks	<ul style="list-style-type: none">• Ms. Nurhayati• Representative from participant• Dr Andi E.S• Dr. Andi E.S	