

Week 1:				
Mon. (6 Feb.)	Opening Session		• Opening remarks and welcoming address	ESCAP/ AIT
	Lecture	Introduction to the course Introduction to Mid-term National Action Plan	<ul style="list-style-type: none"> • Course content • Introduction to key structure and elements of the national action plan • Purpose of the national action plan for this training • How the draft national action plan for this training 	ESCAP/ AIT
	Lecture	Introduction to Web GIS and GeoNode	<ul style="list-style-type: none"> • What is Web GIS? <ul style="list-style-type: none"> ○ Concepts in general ○ Web GIS technology • GeoNode as an example of web GIS (e.g., as open source data sharing and analysis platform) 	Ramesh De Silva
	Lab	Hands-on Session	<ul style="list-style-type: none"> • Access to AIT GeoNode <ul style="list-style-type: none"> ○ Overview on how to use GeoNode ○ Upload data ○ Create maps 	Ramesh De Silva
Tues. (7 Feb.)	Lecture	GeoNode Environment	<ul style="list-style-type: none"> • Software requirements: Linux as operating system • Hardware requirements: As recommended by GeoNode 	Ramesh De Silva
	Lab	Installing Linux OS	• Install Ubuntu Linux as OS to install GeoNode	Ramesh De Silva
	Lab	Basic Linux Commands	• Practice basic Linux commands for configuring and managing GeoNode	Ramesh De Silva
	Lab	Remote Management	<ul style="list-style-type: none"> • Remote access to Linux servers • Putty (as terminal emulator; host-guest) • WinSCP (for secured file transfer) 	Ramesh De Silva
Wed. (8 Feb.)	Lecture	GeoNode Setup	• Install and configure GeoNode	Ramesh De Silva
	Lab	Install GeoNode for Each Country	<ul style="list-style-type: none"> • A PC provided for each country • Installation of a working GeoNode in each PC 	Ramesh De Silva
	Lab	GeoNode Admin. Interface	• Exploring options from GeoNode Administrator interface, including users, groups, and site names	Ramesh De Silva
	Lab	GeoNode Interface	<ul style="list-style-type: none"> • Populate data to own GeoNode • Create maps with GeoNode • Learn how to provide permissions in GeoNode 	Ramesh De Silva
Thurs. (9 Feb.)	Lecture	Thematic Mapping Vector Layers	<ul style="list-style-type: none"> • Data classification <ul style="list-style-type: none"> ○ Use GeoNode Style editor ○ Use uDig, QGIS (e.g., open source GIS) for more comprehensive data classification ○ Data classification using SLD operations in GeoServer 	Ramesh De Silva
	Lab	Thematic Mapping Vector Layers	• Classify own country's data using GeoNode style editor, uDig and QGIS	-
Fri. (10 Feb.)	Lecture	Metadata	<ul style="list-style-type: none"> • What is metadata • Why it is necessary • How to create metadata and what are the components 	Ramesh De Silva
	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 <ul style="list-style-type: none"> ○ Regarding concepts from this week and/or progress status on their GeoNode 	-

Week 2:				
Mon. (13 Feb.)	Lecture	Introduction to GIS	<ul style="list-style-type: none"> • What is GIS? <ul style="list-style-type: none"> ○ Concepts in general ○ Examples of applications • Key elements of geospatial data 	Syams Nashrullah
	Lab	Use of Freely Available GIS Data	<ul style="list-style-type: none"> • Download data from Diva-gis, Admin Boundary data, Census Data, OSM, HDX (from OHCA) 	Syams Nashrullah
	Lab	Working with Coordinates/ Projections	<ul style="list-style-type: none"> • Project raster/vector • Geo-referencing • Geo-code addresses 	Syams Nashrullah
	Lab	Table Management	<ul style="list-style-type: none"> • Creating/editing a table for data management • Use different query to edit data from a table • Join and relate tables • Import and export table as excel file to use in other tools 	Syams Nashrullah
Tues. (14 Feb.)	Lab	Vector Analysis	<ul style="list-style-type: none"> • Use of different vector analysis methods <ul style="list-style-type: none"> ○ Proximity, overlay, buffer, merge, union, and etc. 	Syams Nashrullah
	Lab	Map Composition	<ul style="list-style-type: none"> • Create map layout from GIS layers <ul style="list-style-type: none"> ○ Components of a map 	Syams Nashrullah
	Lab	GIS Data Preparation for GeoNode	<ul style="list-style-type: none"> • Convert different type of data for spatial analysis <ul style="list-style-type: none"> ○ .kml file into .shp file ○ .xlsx file into .shp file 	Syams Nashrullah
Wed. (15 Feb.)	Lab	GIS for Decision Making: Case Study 1	<ul style="list-style-type: none"> • Identify an suitable location of a public facility <ul style="list-style-type: none"> ○ Using criteria's such as far away from existing facility, close to the road, located in densely populated area, etc. 	Lakmal Deshapriya
	Lab	GIS for Decision Making: Case Study 2	<ul style="list-style-type: none"> • Identify disaster-prone area <ul style="list-style-type: none"> ○ Analyze GIS data to produce map fire risk in a city ○ Build a scenario for fire risk in a city assuming fire risk is high when building density is high, far from fires stations, close to industrial centers, etc. 	Lakmal Deshapriya
Thurs. (16 Feb.)	Lecture	Postgres/ PostGIS Databases	<ul style="list-style-type: none"> • Role of PostGIS (for adding geographic objects to Postgres) • Create geometry column 	Ramesh De Silva
	Lab	Connect to GeoNode Database	<ul style="list-style-type: none"> • Locally connect to GeoNode Database • Remotely connect to GeoNode Database • Insert and visualize new records 	Ramesh De Silva
	Lab	Access GeoNode via Desktop GIS Applications I	<ul style="list-style-type: none"> • As Web Map Services (WMS) • As Web Feature Service (WFS) 	Ramesh De Silva
	Lab	Access GeoNode via Desktop GIS Applications II	<ul style="list-style-type: none"> • Database connection 	Ramesh De Silva
Fri. (17 Feb.)	Lecture	GeoServer	<ul style="list-style-type: none"> • Introduction and features of GeoServer 	Ramesh De Silva
	Lab	GeoServer	<ul style="list-style-type: none"> • Install and work with Geoserver • GeoServer instance in GeoNode 	Ramesh De Silva
	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 <ul style="list-style-type: none"> ○ Regarding concepts from this week and/or progress status on their GeoNode 	-

Week 3:				
Mon. (20 Feb.)	Lecture	Introduction to Remote Sensing	<ul style="list-style-type: none"> • Basic concepts of Remote Sensing (RS) <ul style="list-style-type: none"> ○ Image acquisition methods ○ Brief Introduction to applications of RS 	Kavinda Gunasekara
	Lecture	Remote Sensing Data	<ul style="list-style-type: none"> • Satellites and sensors • RS data sources and types 	Kavinda Gunasekara
	Lab	Access Freely Available Satellite Data	<ul style="list-style-type: none"> • Download Landsat data using EarthExplorer 	Kavinda Gunasekara
	Lab	Access Freely Available Satellite Data	<ul style="list-style-type: none"> • Download Sentinel data 	Sasanka Madawalagama
Tues. (21 Feb.)	Lecture	Google Earth	<ul style="list-style-type: none"> • Data import/ export • Mapping profiles 	Kavinda Gunasekara
	Lab	Introduction to Image Processing	<ul style="list-style-type: none"> • Image enhancement methods • Image classification 	Lakmal Deshapriya
	Lab	Satellite Data Pre-Processing	<ul style="list-style-type: none"> • Geometric correction • Radiometric correction Visual interpretation 	Lakmal Deshapriya
Wed. (22 Feb.)	Lecture	Sentinel Asia (SA) and International Disaster Charter (IDC) Activations during Disaster	<ul style="list-style-type: none"> • Introduction to SA and IDC activities • Structure of SA and IDC • AIT's experience as a Principle Data Analysis Node in SA • AIT's experience as Project Manager in IDC • Activation and implantation of SA and IDC calls using past case studies 	Shiro Ochi
	Lecture	Unmanned Aerial Vehicles for disaster risk reduction Part I	<ul style="list-style-type: none"> • Introduction to concepts on drones • Usage of drones for disaster risk reduction • Examples of applications 	Sasanka Madawalagama
	Lab	RS for Decision Making Case Study 1	<ul style="list-style-type: none"> • Conduct flood damage assessment <ul style="list-style-type: none"> ○ Extract flood area ○ Calculate affected area and affected population caused by rain or cyclone 	Lakmal Deshapriya
	Lab	RS for Decision Making Case Study 2	<ul style="list-style-type: none"> • Conduct satellite based rainfall analysis <ul style="list-style-type: none"> ○ Download, process, and composite satellite data ○ Extract area with abnormal variations of rainfall 	Lakmal Deshapriya
Thurs. (23 Feb.)	Lecture	Develop Mid-term National Action Plan	<ul style="list-style-type: none"> • Introduction of the guideline/template for national action plan • Discussion on current situation in each country • Participant presentation/discussion in NAP 	ESCAP/ AIT
Fri. (24 Feb.)	Lecture & Lab	Thematic Mapping Raster Layers	<ul style="list-style-type: none"> • Classify raster layers • Using QGIS sld4raster extension • Classify country's own raster data 	Ramesh De Silva
	Lecture	Hazard and Risk Assessment	<ul style="list-style-type: none"> • Introduction to quantitative risk assessment • Examples of risk mapping for strengthened disaster resilience 	Manzul K. Hazarika
	Lab	RS for Decision Making Case Study 2	<ul style="list-style-type: none"> • Conduct building damage assessment <ul style="list-style-type: none"> ○ Analyze damage from cyclone/earthquake 	Lakmal Deshapriya -

Week 4:				
Mon. (27 Feb.)	Lecture	Customizing GeoNode I	<ul style="list-style-type: none"> • Examples • Explain about customizing options 	Ramesh De Silva
	Lab	Customizing GeoNode II	<ul style="list-style-type: none"> • Customize different components of GeoNode <ul style="list-style-type: none"> ○ Logo ○ Title ○ Content 	Ramesh De Silva
	Lab	Customizing GeoNode III	<ul style="list-style-type: none"> • Create new menu items 	Ramesh De Silva
	Lab	Handling Documents in GeoNode	<ul style="list-style-type: none"> • Set maximum documents size, document types to be uploaded • Link with data layers and maps 	Ramesh De Silva
Tues. (28 Feb.)	Lab	Unmanned Aerial Vehicles for disaster risk reduction Part II	<ul style="list-style-type: none"> • Process images from drone • Introduction to relevant software and tools 	Sasanka Madawalagama
	Lecture	Geospatial Information Technology for Disaster Risk Reduction	<ul style="list-style-type: none"> • Intro to UNOSAT • Use of Geospatial Information for DRR – Case Studies • Real-time GIS (WPS) • Spatial Decision Support System (SDSS) 	Khaled Mashfiq
	Lecture	Overview of Procedural Guidelines	<ul style="list-style-type: none"> • Challenges to share information and solutions • Procedural guidelines – Case of ASEAN • 7-Steps for sharing geospatial information during emergency response • Way to adapt it in the PICs 	Syed T. Ahmed
Wed. (1 Mar.)	Lab	External WMSs	<ul style="list-style-type: none"> • Dealing with external WMS sources 	Ramesh De Silva
	Lab	Interconnecting GeoNodes	<ul style="list-style-type: none"> • Temporary • Permanently • Use AIT GeoNode as an example 	Ramesh De Silva
	Lab	Publish Maps	<ul style="list-style-type: none"> • Publish maps from each GeoNode in GIC website 	Ramesh De Silva
	Lecture	GeoNode Online Documentations and Support Groups	<ul style="list-style-type: none"> • GeoNode discussion groups for users • Online tutorials, videos 	Ramesh De Silva
Thurs. (2 Mar.)	Lab	Backup GeoNode	<ul style="list-style-type: none"> • Backup settings, data, and templates • Backup database 	Ramesh De Silva
	Lab	Restore GeoNode	<ul style="list-style-type: none"> • Demo using GeoNode backup 	Ramesh De Silva
	Lab	Work with own GeoNode and Own Data	<ul style="list-style-type: none"> • Further customizing own GeoNode • Upload more data sets brought from countries • Create value added maps 	-
Fri. (3 Mar.)	Final Presentations		<ul style="list-style-type: none"> • Country-wise final presentations <ul style="list-style-type: none"> ○ Plan to apply GeoNode in each country ○ Draft mid-term national action plan 	-
	Closing Speeches and Certificate Distribution		<ul style="list-style-type: none"> • Closing speeches by AIT, Embassy of Japan to Thailand, and ESCAP • Distribute certificate 	ESCAP