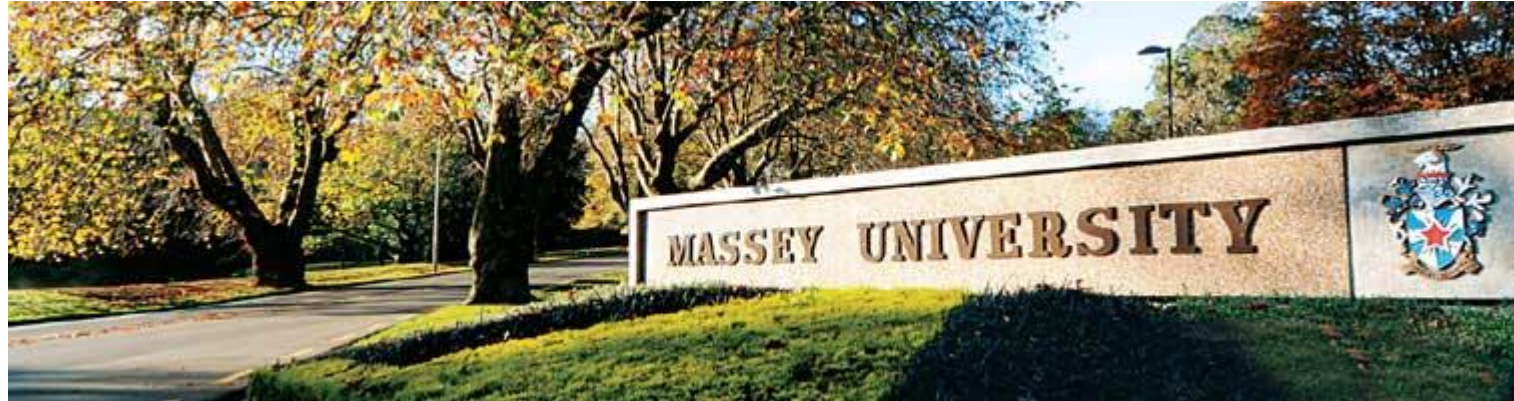


# Advance GIS training: Country task



Art Subharat and Chris Compton

EpiCentre, School of Veterinary Science, Massey University

6 August 2021

# Timetable

Time	Topics	Instructors
10.00-10.05	Context	Ashish
10.05-10.20	Recap Spatial Risk Assessment	Chris
10.20-10.35	Country task assignment (SRA application), objectives, timeline	Art
10.35-11.35	Break out session by country team: planning, task	All
11.35-11.50	Report back by country team	Art
11.50-12.00	Closing remarks	Ronel

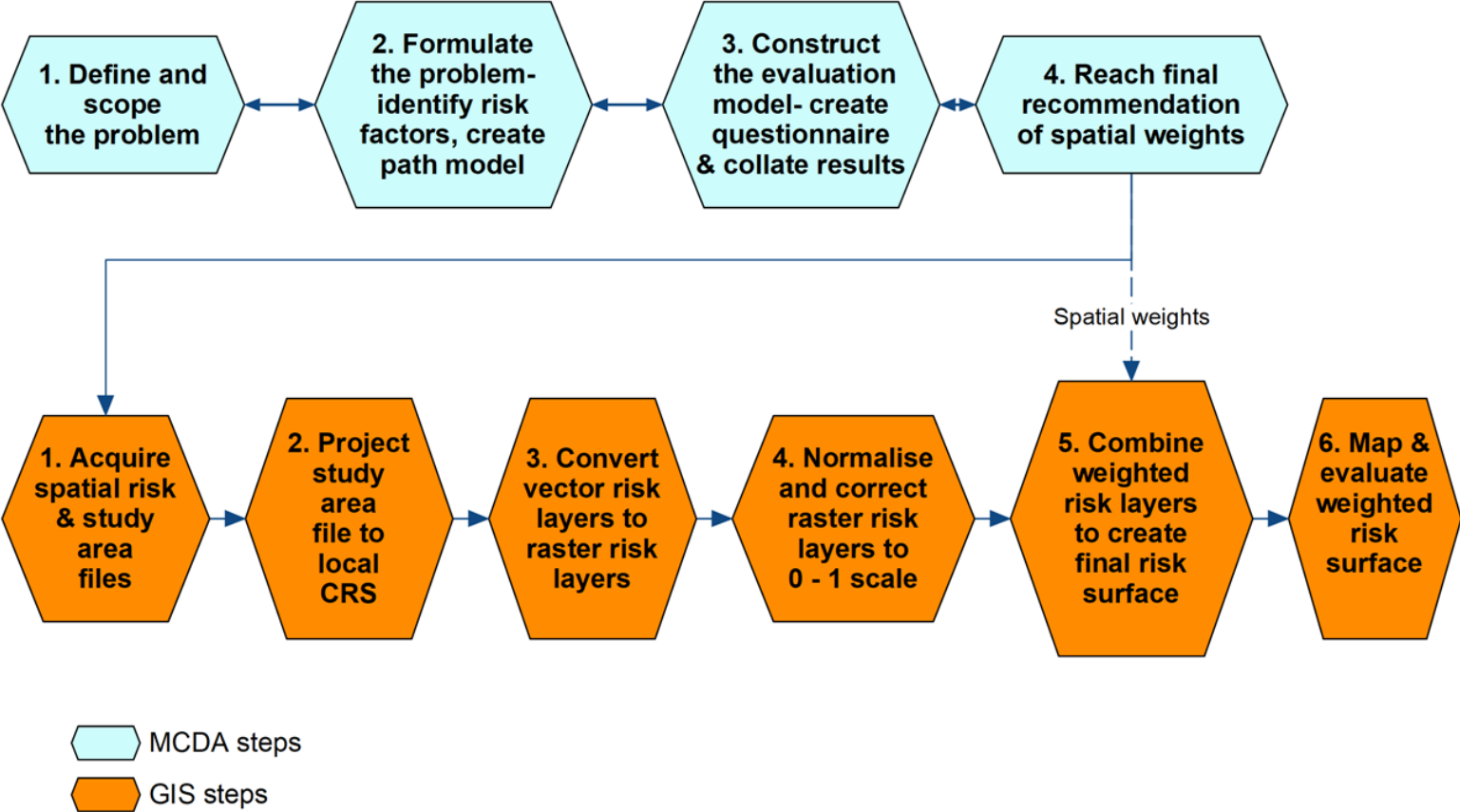
# Country task

## Objectives:

To apply skills you have learned in conducting spatial risk assessment for a specific (livestock) disease in your own country

\*This task is compulsory to complete this OIE GIS training course

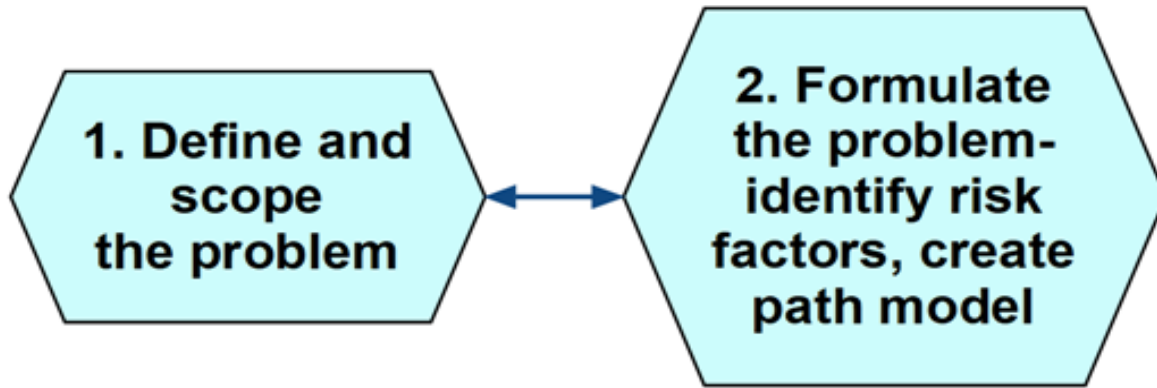
# SRA framework



# Proposed timeline:

Date	Steps
6 August 2021 (breakout session)	Starting MCDA 1 - 2 <div data-bbox="1862 361 2349 525" style="float: right; border: 1px solid black; padding: 5px;"> </div>
9 – 13 August 2021	Complete MCDA 1 - 4 <div data-bbox="1332 539 2326 704" style="float: right; border: 1px solid black; padding: 5px;"> </div>
16 August 2021	Zoom 7 <sup>th</sup> session: catch up on MCDA, Start on GIS steps
17 – 20 August 2021	Complete GIS steps <div data-bbox="1230 811 2349 1018" style="float: right; border: 1px solid black; padding: 5px;"> </div>
23 August 2021	Submit PPT for mentor feedback
30 August 2021	Zoom 8 <sup>th</sup> session: country team presentation

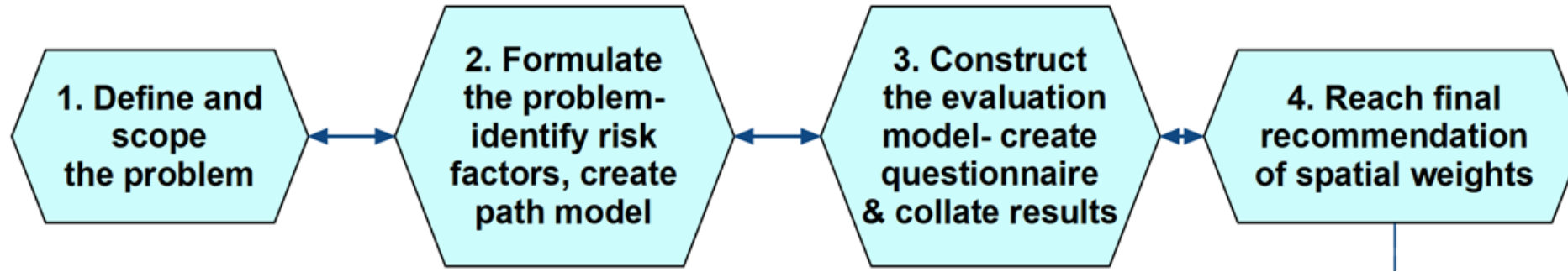
# Breakout session



## Teamwork:

- Which disease of interest?
- Identify risk factors (RFs)
- Formulate initial causal path diagram
- Determine which risk factors can be mapped
- Identify team leader (point of contact)
- Identify national experts (policy, field) for opinions (RFs and MCDA process)
- Identify potential data for GIS steps, outbreak data for validation

# 1<sup>st</sup> week (9 – 13 August)

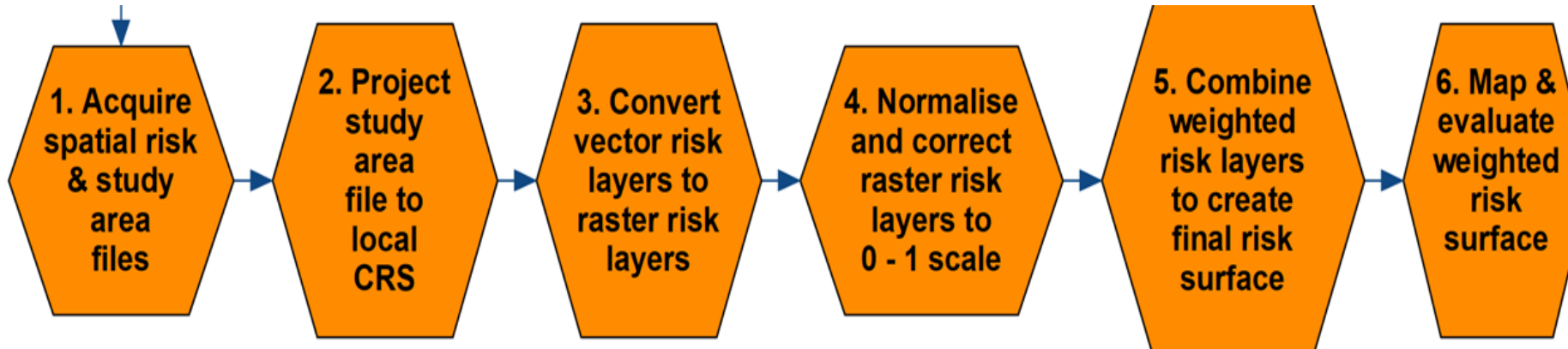


## Team work:

- Contact in-country expert, Focus group to revise spatial risk factors (if needed) (\*OIE can support the process)
- Develop questionnaire and ask in-country expert to complete (including team members)
- Collate data and perform analysis using provided Excel Spreadsheet
- Reach final recommendation of spatial weight/ seek data for GIS steps
- Report progress on 16 August (7<sup>th</sup> zoom live session)



## 2<sup>nd</sup> week (16 – 20 August)



### Team work:

- Preparation of spatial layers
- Combine spatial layers to create final risk surface
- Validate with available outbreak data
- Prepare PPT presentation



# PPT Presentation

## Template:

- Background and rationale (current disease situation)
- Methodology
- Results and validation
- Discussion
- Conclusion and potential next step

\*Submit 1<sup>st</sup> draft on 23 August 2021 (mentor will provide feedback)

\*\* Final presentation 30 August 2021

# Sources of spatial data

## 1. Geocoding locations (google maps)

- To obtain geolocation (lat, long) of specific location

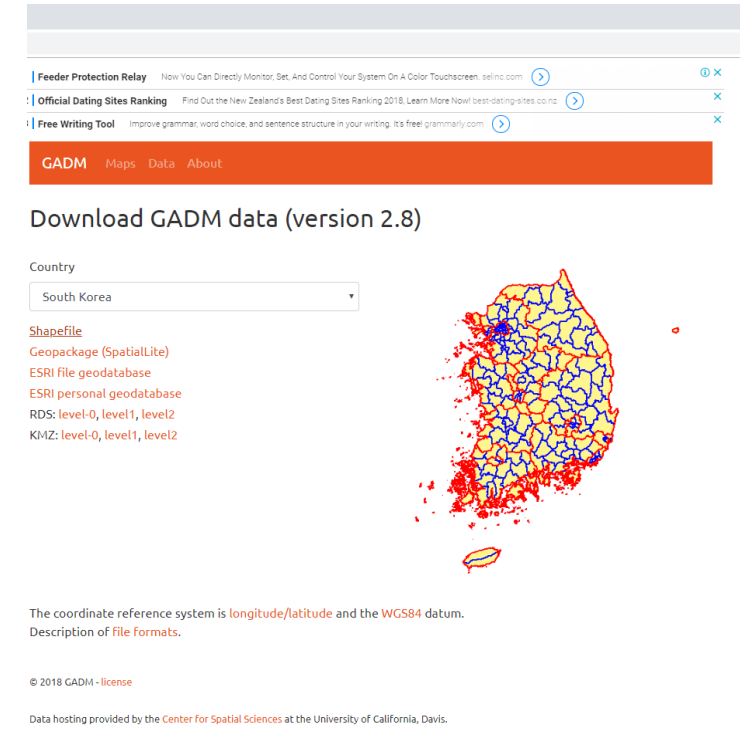
## 2. GADM database of Global Administrative Areas

[https://gadm.org/download\\_country\\_v2.html](https://gadm.org/download_country_v2.html)

- To obtain shape files of administrative areas of specific country

## 3. Geofabrik data <http://download.geofabrik.de/>

- To obtain shape files of road (OpenStreetMap), railway, water way etc.



The screenshot shows the GADM website interface. At the top, there are navigation links for "Feeder Protection Relay", "Official Dating Sites Ranking", and "Free Writing Tool". Below this is a navigation bar with "GADM", "Maps", "Data", and "About". The main heading is "Download GADM data (version 2.8)". A "Country" dropdown menu is set to "South Korea". Below the dropdown, there are links for "Shapefile", "Geopackage (SpatialLite)", "ESRI file geodatabase", "ESRI personal geodatabase", "RDS: level-0, level1, level2", and "KMZ: level-0, level1, level2". To the right of these links is a map of South Korea with administrative boundaries. Below the map, there is text stating "The coordinate reference system is longitude/latitude and the WGS84 datum. Description of file formats." and "© 2018 GADM - license". At the bottom, it says "Data hosting provided by the Center for Spatial Sciences at the University of California, Davis."

# Sources of spatial data

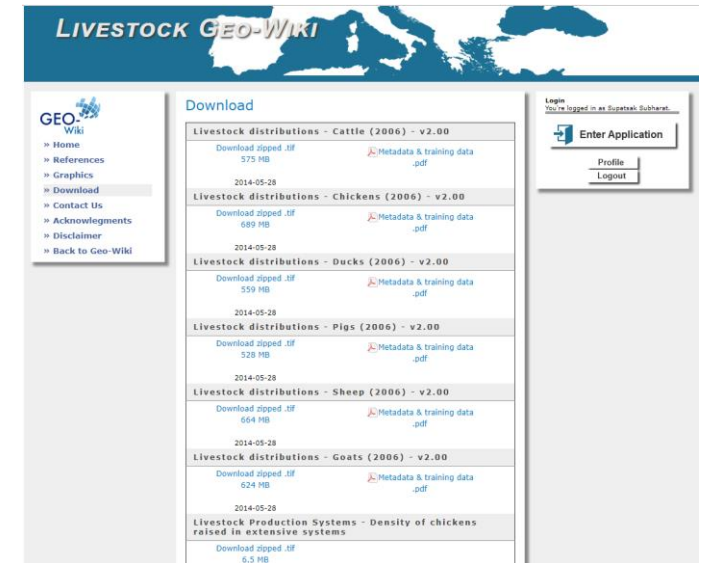
## 4. FAO Gridded Livestock of the World

<https://livestock.geo-wiki.org/download/>

- To obtain raster map of livestock density (no. of animals per km<sup>2</sup>)
- Need to create username and password

## 5. OIE WAHIS <https://wahis.oie.int/#/analytics>

- Web-based application to support vet services
- Timely and reliable source for early warning and response of emerging animal disease e.g. FMD, HPAI and etc.



The screenshot shows the 'LIVESTOCK GEO-WIKI' website. The main content area is titled 'Download' and lists several data packages for download, each with a 'Download zipped .tif' link and a 'Metadata & training data .pdf' link. The packages include:

- Livestock distributions - Cattle (2006) - v2.00 (575 MB)
- Livestock distributions - Chickens (2006) - v2.00 (690 MB)
- Livestock distributions - Ducks (2006) - v2.00 (539 MB)
- Livestock distributions - Pigs (2006) - v2.00 (528 MB)
- Livestock distributions - Sheep (2006) - v2.00 (664 MB)
- Livestock distributions - Goats (2006) - v2.00 (624 MB)
- Livestock Production Systems - Density of chickens raised in extensive systems (6.5 MB)

On the left side, there is a navigation menu with links to Home, References, Graphics, Download, Contact Us, Acknowledgments, Disclaimer, and Back to Geo-Wiki. On the right side, there is a login section with a 'Login' link, a 'You're logged in as Supatrat Subhanat' message, and buttons for 'Enter Application', 'Profile', and 'Logout'.

# Thanks for your attention

