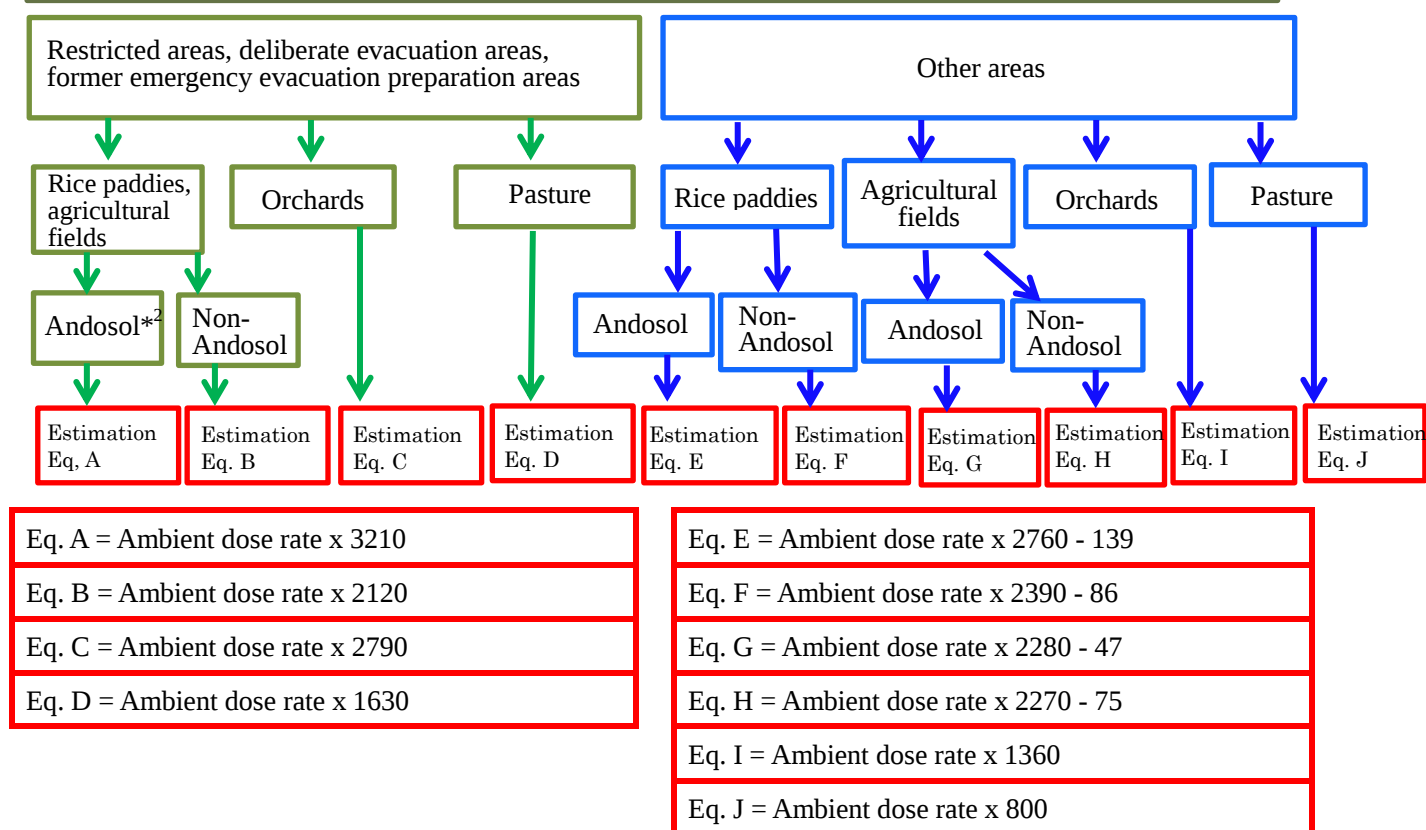


Simplified method for calculating radiocesium concentration in agricultural soil

- This is a method for calculating radiocesium concentration in agricultural soil from the ambient dose rate at one meter above the ground surface.
- The radiocesium concentration in agricultural soil has a linear correlation with the ambient dose rate (at one meter above the ground surface)
- Radiocesium concentration (Bq/kg) in agricultural soil can be approximately determined by measuring ambient dose rate ($\mu\text{Sv/h}$).
- This method is associated with errors. For accurate measurements, the germanium detector needs to be used.

(1) Measure ambient dose rates ($\mu\text{Sv/h}$)*¹

(2) Estimate the concentration (Bq/kg) using the following equations according to the type of agricultural land



[Example] For the case of (rice paddies)-(Andosol)- (Other areas), using the Estimation Eq. E,
 $0.2 \mu\text{Sv/h} \times 2760 - 139 = 413 \text{ Bq/kg}$
 (Ambient dose rate at 1 m above the ground surface) (Estimated radioactivity concentration)

(*¹): Ambient dose rates measured by the aircraft radiation monitoring can be obtained from the distribution map of radiation dose, etc. on the website of the Ministry of Education, Culture, Sports, Science and Technology.

[URL: <http://ramap.jmc.or.jp/map/eng/>]

(*²): Information on whether or not the soil is Andosol type can be obtained from the soil map in the soil information reading system on the website of the National Institute for Agro-Environmental Sciences site.

[URL: http://agrimesh.dc.affrc.go.jp/soil_db/]