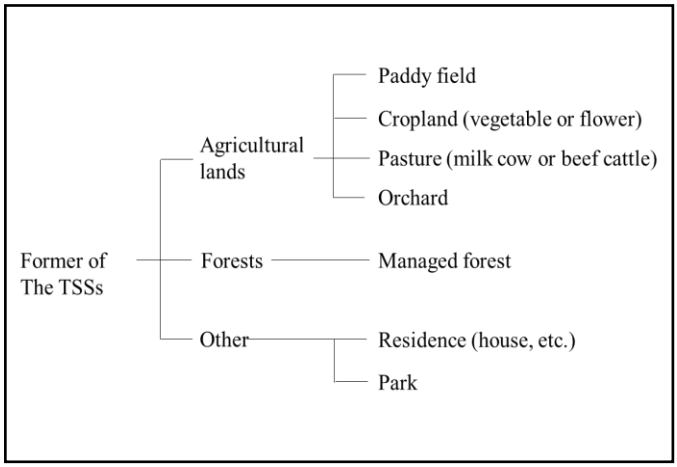
Dose assessment for the future use of the former Temporary Storage Sites

○ Background

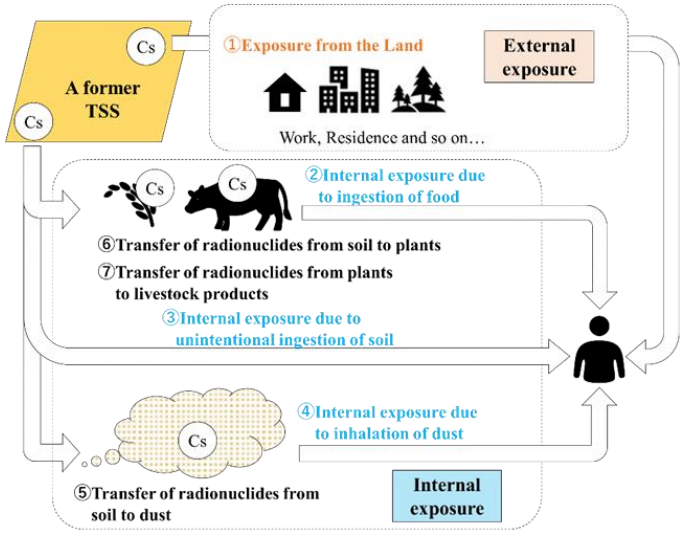
- Temporary Storage Sites (TSS) were constructed to receive radioactive contaminated soil and waste
- In principle, TSSs should be restored back to their original land-use.
- Each municipality in Intensive Contamination Survey Area (ICSA) has undertaken air dose rate measurements at TSSs and found no significant remaining contamination.
- The next step is to assess the likely dose when returning the land to its former use.

○ Method

- We considered various types of land-use and possible exposure pathways as shown in the figures below.
- Calculations were done for all age groups.
- The dose per unit radioactive cesium concentration (1Bq/kg) was calculated in each case.
- Doses were calculated using the evaluation method above for case studies using data from the actual measured radioactive cesium concentration in the topsoil at 3 TSSs.
- Calculations also used air dose rates found at 571 TSSs which were converted to radioactive cesium concentrations.



The land-uses assumed for the former TSS



Expected exposure pathway

○ Results

Long Term Safety Goal (Additional dose)	Expected Additional Dose (Average Parameters)	Highest Additional Dose (Pessimistic Parameters)
1 mSv/yr or less	0.094 mSv/yr	0.56 mSv/yr

- At the former TSSs the calculation for adults gave the highest figure of 0.094 mSv/year in the residential case (0.14 mSv/year for child).
- This is almost a ten times below the 1 mSv long-term safety goal.
- Even when taking pessimistic parameter values (as opposed to average values), the highest calculated dose was 0.56 mSv/year for adults (0.71 mSv/year for child).
- This is very unlikely to occur in real life and is still well below the 1mSv safety goal.

Dose assessment can be carried out upon request from relevant municipalities and landowners.