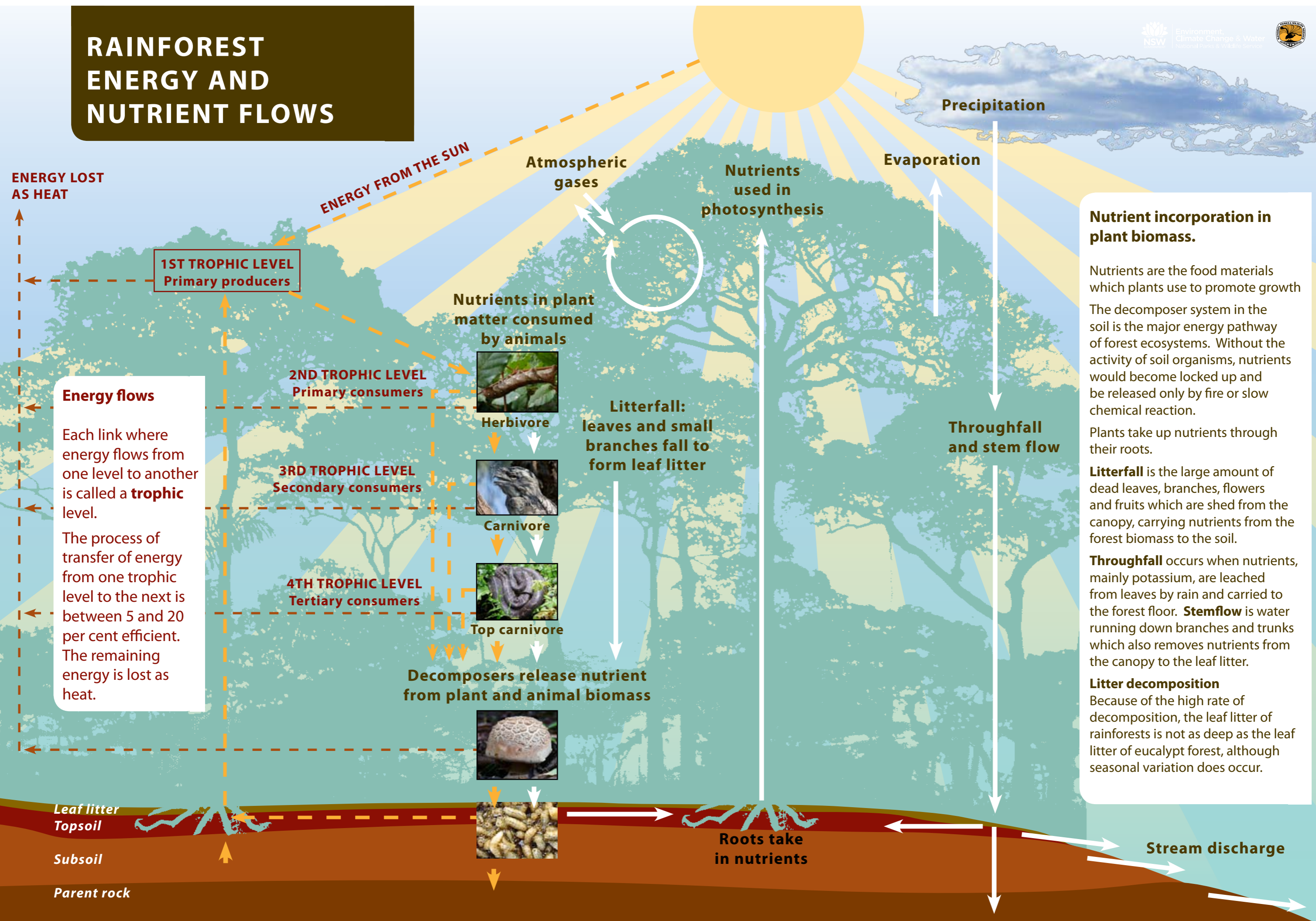


# RAINFOREST ENERGY AND NUTRIENT FLOWS



**Energy flows**

Each link where energy flows from one level to another is called a **trophic level**.

The process of transfer of energy from one trophic level to the next is between 5 and 20 per cent efficient. The remaining energy is lost as heat.

**Nutrient incorporation in plant biomass.**

Nutrients are the food materials which plants use to promote growth. The decomposer system in the soil is the major energy pathway of forest ecosystems. Without the activity of soil organisms, nutrients would become locked up and be released only by fire or slow chemical reaction.

Plants take up nutrients through their roots.

**Litterfall** is the large amount of dead leaves, branches, flowers and fruits which are shed from the canopy, carrying nutrients from the forest biomass to the soil.

**Throughfall** occurs when nutrients, mainly potassium, are leached from leaves by rain and carried to the forest floor. **Stemflow** is water running down branches and trunks which also removes nutrients from the canopy to the leaf litter.

**Litter decomposition**

Because of the high rate of decomposition, the leaf litter of rainforests is not as deep as the leaf litter of eucalypt forest, although seasonal variation does occur.