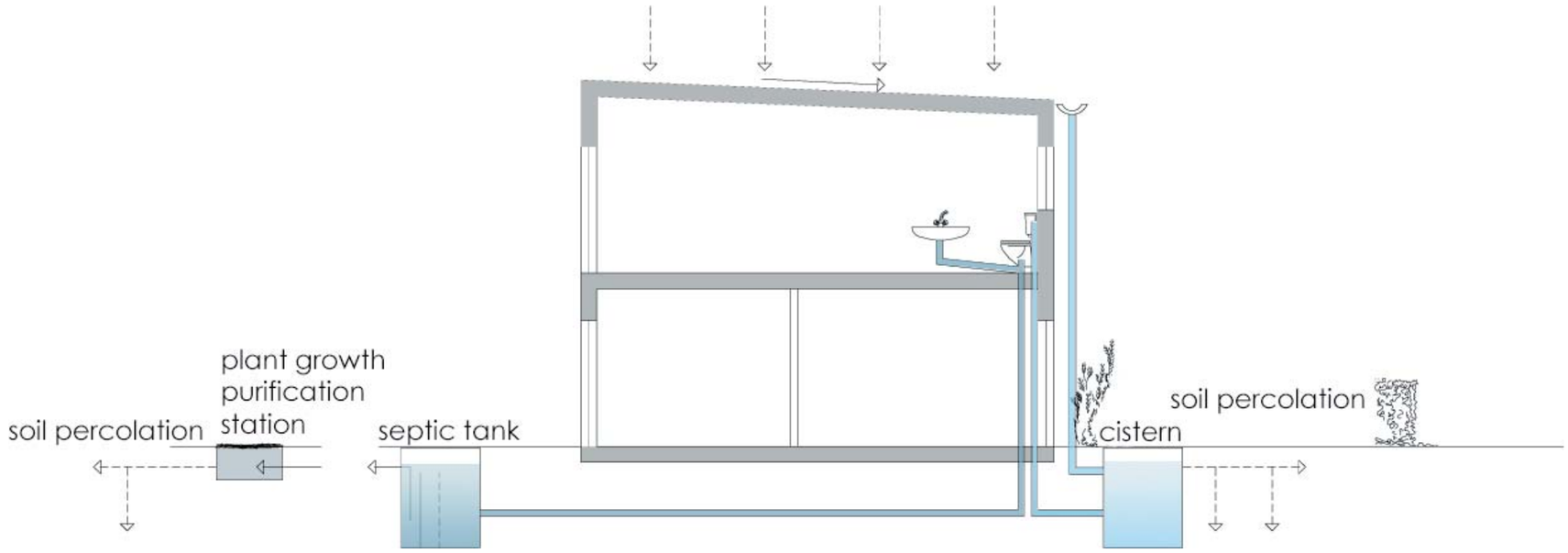

RAIN WATER UTILISATION - CALCULATION OF YIELD AND DEMAND

- Annual yield [m³/a]: (only in the rainy season - 6 months)
  roof area = 70 m²
  runoff coefficient (flat roof) = 0,8
  annual precipitation = 1553 mm/a

  Ry = (runoff coefficient * roof area * annual precipitation) / 10³ = 0,8 * 70 * 1553 /1000 = 86,97 m³/a

- Demand [m³/a]: The demand refers to the 6 months rainy season + max.1 month storage = 210 days
  B1 (demand WC) = 18 l/day per person * 4 persons * 0,210 = 15,12 m³/a

  B2 (demand water for cleaning) = 5 l/day per person * 4 persons * 0,210 = 4,2 m³/a

  B3 (demand washing machine) = 18 l/day per person * 4 persons * 0,210 = 15,12 m³/a

  Rd = B1 +B2 +B3 = 15,12 + 4,2 + 15,12 = 34,44 m³/a
  Ry > Rd (86,97 > 34,44) - the demand can be supplied !

- Cistern volume:
  Vz = Rd / 6 months = 34,44 / 6 = 5,74 m³ or 6 m³ cistern volume required

LOCAL WATER CYCLE