



Figure 9 Domestic demand in low-potential areas relative to the reference scenario (Source: Researcher (2025))

The reference line is at zero, serving as the baseline, the red line (extended dry period) shows consistently negative values suggesting less water is available/demanded, the green line (high population growth) shows increasing positive deviation from the reference suggesting rising water demand due to population pressure. The blue line (increased agricultural coverage), similar upward trend to green but lower magnitude. The yellow line (extended wet season):

Close to the reference suggesting that wet conditions don't drastically affect domestic demand in high-potential areas, urbanization drives demand above $21 \times 10^6 \text{ m}^3$ by the year 2052, requiring expanded infrastructure, efficiency improvements, and alternative water sources (Figure 10).



Figure 10 Institutional water demand relative to reference scenario (Source: Researcher (2025))

Each line shows how the institutional water demand in a given scenario deviates from the reference scenario. (black line) always at zero since other scenarios are being compared relative to it. High population growth (green line) shows a steady and sharp increase in institutional water demand over time, by the year 2052, demand is almost 4 million cubic meters higher than in the reference scenario. This scenario has the most significant impact