Tuberculosis (TB) represents a severe public health challenge in Somalia, compounded by factors like conflict, poverty, and limited healthcare access, yet specific mathematical modeling for this context is limited. This study addresses this gap by developing and comparing modified Susceptible-Infected-Recovered (SIR) and Susceptible-Exposed-Infected-Recovered (SEIR) compartmental models to analyze TB transmission dynamics in Somalia, utilizing historical data from the World Health Organization (WHO) and World Bank spanning 2000 to 2022. The models were parameterized using optimization techniques, basic reproduction numbers (R_0) were estimated (SIR: 1.047, SEIR: 1.037), stability analyses of equilibrium points were conducted, and future TB incidence and mortality rates were forecasted. Both models indicated $R_0 > 1$, signifying persistent TB transmission, supported by stability analyses showing unstable disease-free and stable endemic equilibriums. While both SIR and SEIR models generally fitted the observed data well for susceptible, infected, and recovered compartments, the SIR model provided more consistent results overall. Forecasts predict a continued increase in TB incidence alongside a slow decrease in mortality through 2030, indicating Somalia is unlikely to meet the Sustainable Development Goal (SDG) 3 target for TB reduction. This research enhances the understanding of TB dynamics in Somalia and provides valuable predictive insights to support evidence-based public health interventions and resource allocation for TB control.