than merely structural (Zhang et al., 2021). System-specific hydraulic conditions further help explain these differences. Experimental work designed to mimic land-based RAS and deep-sea cage flow regimes showed that higher flow velocities enhanced growth performance relative to low-flow conditions in L. *maculatus*, while a separate velocity trial found the best specific growth rate and weight gain at a moderate flow of 1.14-1.56 body lengths/s rather than at still water or the highest velocity (Fei et al., 2025).

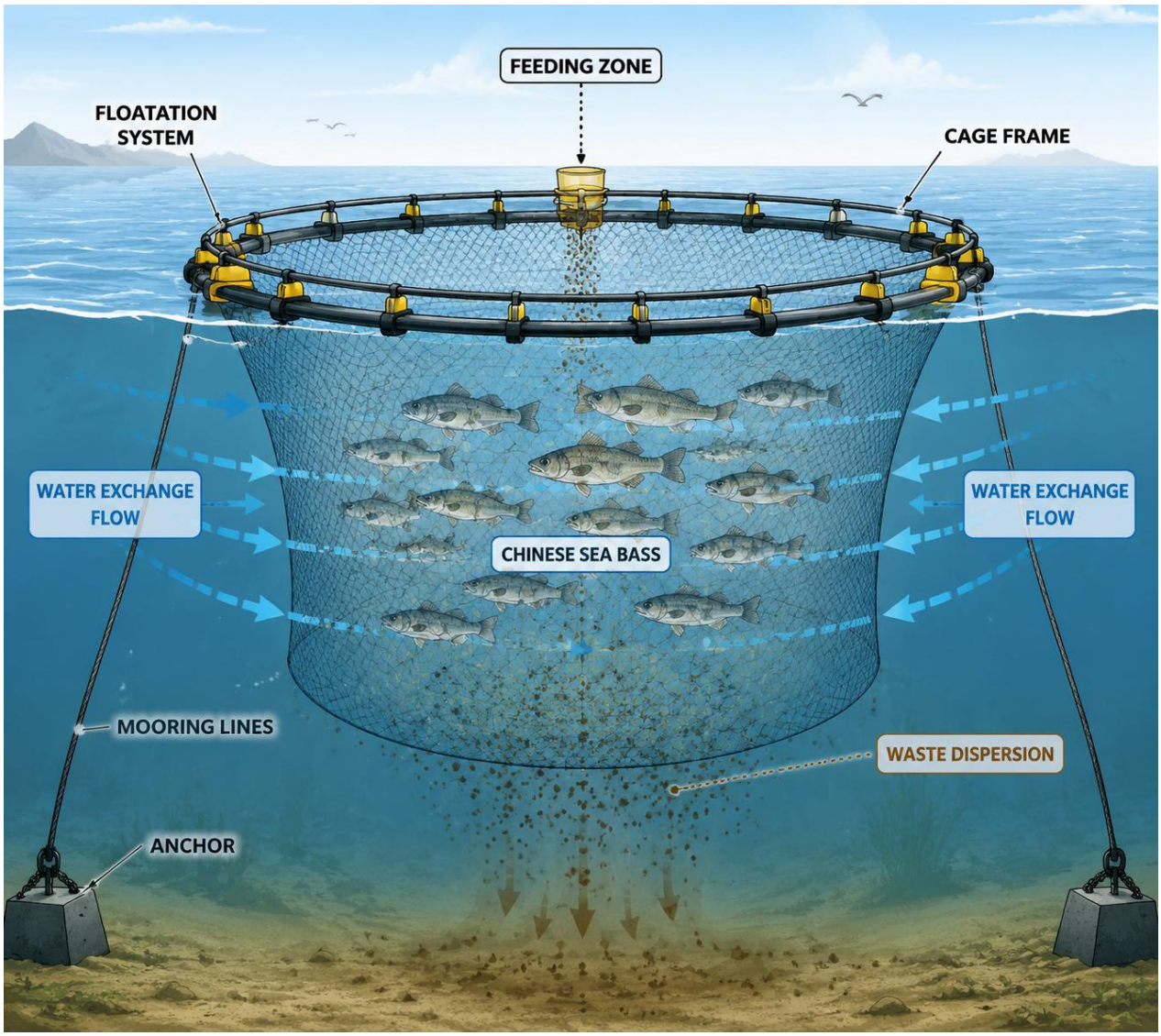

Figure 1 Schematic representation of a marine cage and net pen aquaculture system used for Chinese sea bass culture

Evidence from other cultured bass supports the same pattern: systems that provide more stable and better-controlled rearing conditions often produce faster growth, but only within appropriate density and engineering limits. In largemouth bass, a funnel-shaped recirculating system produced significantly higher body weight than a traditional pond system, indicating that industrialized water treatment and circulation can improve growth outcomes over conventional pond culture (Xu et al., 2025). In European sea bass net pens, growth rate increased linearly with cage volume, reaching 0.68 g/day in large cages versus 0.56 and 0.32 g/day in medium and small cages, respectively, showing that even within cage farming, physical scale can materially affect growth. Recirculating systems also have density thresholds. In tank-based RAS for sea bass, daily feed intake and specific growth rate were maintained up to 70 kg/m^3, but growth declined above that level, with specific growth rate about 14% lower at 100 kg/m^3. Taken together, the evidence indicates that no farming system guarantees superior growth on its own; performance depends on how well each system controls the specific environmental factors that constrain growth.