The study of common fixed points of compatible maps in fuzzy metric spaces and fuzzy mathematics is an active area of research that holds promise for future developments. Here are some potential future research directions in this field:

1. **Generalization of Compatibility:** Investigate the generalization of compatibility conditions beyond traditional compatibility. Explore more flexible notions of compatibility that can encompass a wider range of mappings and interactions while still ensuring the existence of common fixed points.

2. **Mixed Fuzzy Metrics:** Extend the study to mixed fuzzy metrics, which combine concepts from fuzzy set theory and metric spaces. Develop theories for common fixed points of compatible maps in such mixed fuzzy metric spaces, considering their potential applications in modelling uncertainty in various scenarios.

3. **Hybrid Approaches:** Combine fuzzy set theory with other mathematical frameworks, such as intuitionistic fuzzy sets, rough sets, or interval-valued fuzzy sets. Investigate common fixed points in these hybrid contexts to address complex uncertainty and vagueness.