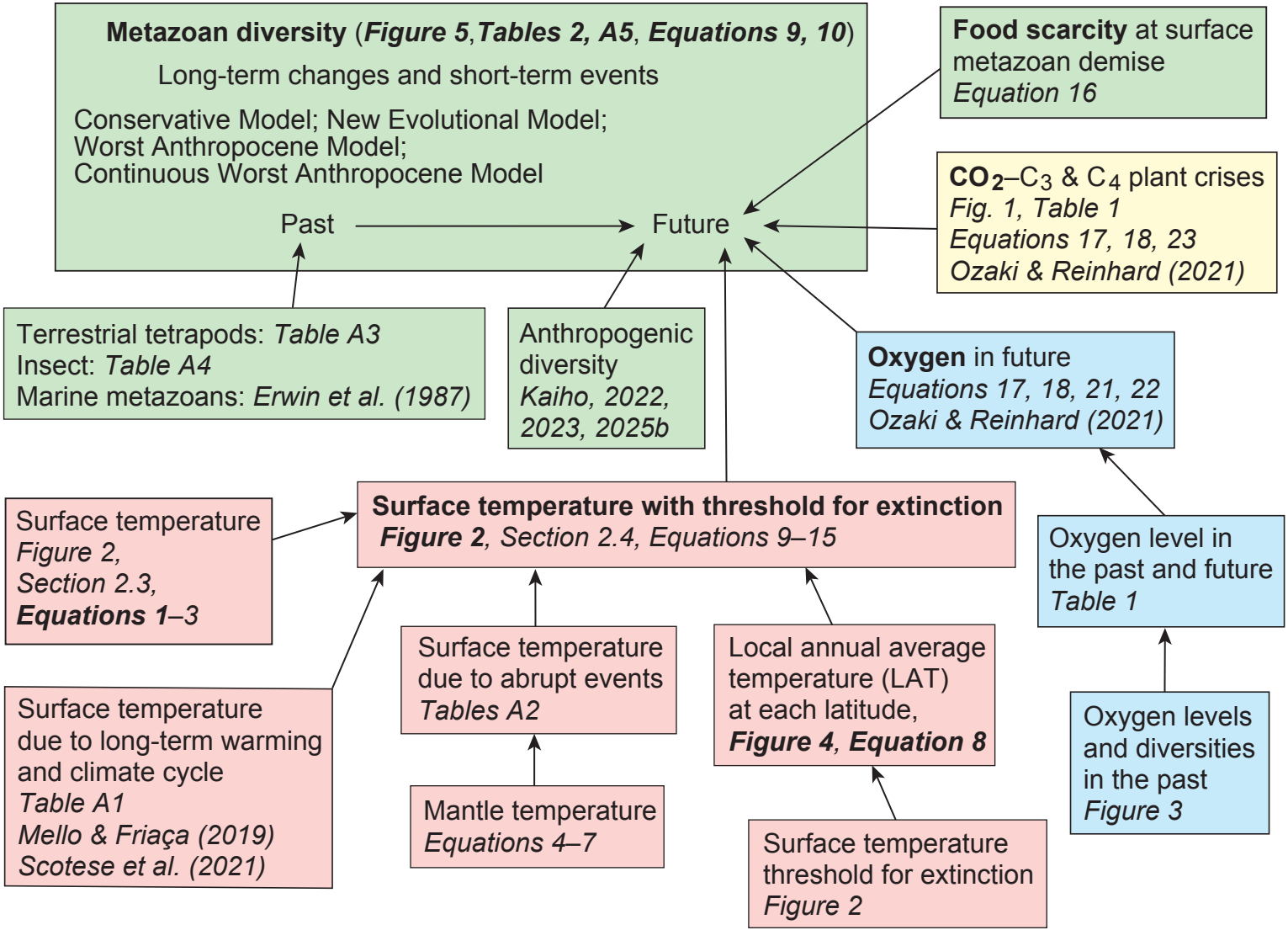
Metazoan diversity (Figure 5, Tables 2, A5, Equations 9, 10)
Long-term changes and short-term events
Conservative Model; New Evolutional Model;
Worst Anthropocene Model;
Continuous Worst Anthropocene Model
Past
Future
Food scarcity at surface metazoan demise
Equation 16
CO2–C3 & C4 plant crises
Fig. 1, Table 1
Equations 17, 18, 23
Ozaki & Reinhard (2021)
Terrestrial tetrapods: Table A3
Insect: Table A4
Marine metazoans: Erwin et al. (1987)
Anthropogenic diversity
Kaiho, 2022, 2023, 2025b
Oxygen in future
Equations 17, 18, 21, 22
Ozaki & Reinhard (2021)
Surface temperature
Figure 2,
Section 2.3,
Equations 1–3
Surface temperature with threshold for extinction
Figure 2, Section 2.4, Equations 9–15
Oxygen level in the past and future
Table 1
Surface temperature due to long-term warming and climate cycle
Table A1
Mello & Friaça (2019)
Scotese et al. (2021)
Surface temperature due to abrupt events
Tables A2
Local annual average temperature (LAT) at each latitude,
Figure 4, Equation 8
Oxygen levels and diversities in the past
Figure 3
Mantle temperature
Equations 4–7
Surface temperature threshold for extinction
Figure 2