After 20 years of a mutually beneficial relationship between climate science and climate policy there are signs of a paradigm change. The approach of “science-based policy-making” has worked pretty well in terms of policy formulation, but not with respect to appropriate policy action. But expecting real-world climate policy to be based on comprehensive scientific rationality (e.g. 2°C target, carbon budgets) has always been quite misleading, since inconsistencies between policy discourse, decisions, and implementation are a defining feature of everyday political life – which holds true even for climate policy leaders like the European Union. In the near future, scientific policy advisors will have to accept that their political influence is no greater than the influence of scientists in other policy areas.