Environmental impact assessment (EIA) processes are intended to help understand and manage the environmental and social impacts of proposed development projects, such as a mine or a hydro-electricity project. They are meant to aid governments in determining if a development project strikes an appropriate balance between the project’s economic benefits and any negative consequences for the environment or affected peoples and communities. This can include considering the effects of a proposed project on a local watershed, endemic species, or on the cultural practices of Indigenous peoples who may hold ancestral rights to the area of the proposed development. We focus on the latter, specifically whether EIAs advance Indigenous self-determination, understood to encompass considerations of the rights, worldviews, and knowledges of Indigenous peoples. We seek answers to these questions by conducting a systematic literature review of English language peer-reviewed literature that examine either an EIA process (intervention focus), or a project(s) that underwent an EIA process (case-study focus). A literature search and screening process identified 130 articles that examine the intersection between EIA processes in the natural resource sectors and the rights, roles and interests of Indigenous peoples. These included case studies from around the world, with approximately 25% being focused on developing countries. We developed a coding procedure to document what each article had to say about how the EIA process considered Indigenous rights, worldviews and knowledges, as well as problems with current approaches and means to improve them, as indicated by the authors. We find that despite an evolving and expanding policy framework around the protection of Indigenous rights, there also exists a persistent gap between formal policy and implementation on the ground. Even constitutionally enshrined protections can be undermined by countervailing forces that originate in the political economy of resource governance. The evidence suggests that decision-making structures need to move toward co-management or Indigenous-led processes, something that is consistent with International Labour Organisation Convention 169, the United Nations Declaration on the Rights of Indigenous Peoples (UNDROP), and the 2030 Agenda for Sustainable Development, as well as international scholarship on environment rights and environmental justice.