Major findings of the *State of the Arctic Coast 2010* report\(^1\) included recognition of the need for integrated approaches to coastal change in the circumpolar Arctic and for monitoring, detecting, and projecting future change. The report noted that “understanding and prognosis of change is an essential component of resilience in Arctic coastal communities” and that “future research should focus on increasing support, opportunity, and capacity for local decision-making or effective resident input to decisions … with local impacts.” These conclusions provided a catalyst for the initiation of the Circumpolar Arctic Coastal Communities Observatory Network (CACCON), conceived as a web of community-based knowledge hubs that combine and assimilate information produced locally and remotely to inform and support local and regional decision-making. This introduction to the session provides an overview of the CACCON initiative and the preliminary network of nine local nodes in Russia, USA, Canada, Greenland, and Norway. It highlights the need for solutions-based, co-designed and co-produced knowledge generation and management involving residents, stakeholders, and decision-makers in collaboration with research partners to inform and support effective adaptation and sustainable development in the Arctic coastal zone. This presentation introduces a series of short presentations by panel members to stimulate a wider discussion in the CACCON session.