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Groundwater is a vital resource crucial for sustaining life, agriculture, industry, and the environment. However, the sustainability of these underground water reservoirs faces significant challenges due to overexploitation, contamination, and the impacts of climate change. To ensure the long-term viability of groundwater resources, it is imperative to devise a comprehensive action plan and policy framework aimed at conservation, efficient management, and equitable utilization.

Promoting sustainable extraction practices through implementing regulations and incentives to encourage sustainable usage is a significant part of the action plan to maintain the sustainability of this profound water source in the upcoming water scarcity crisis. Also, the adoption of water-saving technologies and practices in agriculture, industry, and domestic sectors to minimize water demand. Investing in artificial water recharge techniques can help in the restoration of wetlands and restocking aquifers. Controlling groundwater contamination through implementing stringent regulatory frameworks and emphasizing the importance of the IWRM principles adoption to balance competing water needs and ensure equitable access while maintaining ecological balance, as well as raising awareness will help in saving groundwater quality, and reduce the cost of purifying these resources, especially in poor countries which suffer economic or physical water scarcity (or both).

Moreover, the partnerships between research institutions, and industries to foster technological advancements for groundwater sustainability can't be neglected, such as artificial Intelligence, which can play a significant role in addressing and monitoring various challenges related to groundwater sustainability, offering innovative solutions, and enhancing management practices.