Previous work

The first protocol which dealt with the cluster based wireless sensor network was the leach protocol. The [leach] approach makes the communication in a wireless sensor network energy efficient by involving the concept of threshold value which is used to elect the cluster heads as per the number of rounds. The approach includes measuring the amount of residual energy in the nodes which will help them to elect and re-elect the cluster heads. The paper [cmpr] discusses about the centralized clustering approach to provide the base station with most of the responsibilities which helps in lower the energy consumption by decreasing the latency and increasing throughput. The base station generates the neighbour and then elects the cluster heads and forms the clusters as well. As per any network failure, the base station is responsible to provide multiple paths which can be followed in case of a failure which makes it more reliable than the previous approaches.

The paper [sdn wsn survey] proposes a design of SDWSN which consists of sensor nodes in data plane and SDN controller in the control plane. Sensor nodes in data plane communicate wirelessly with each other, and can perform data aggregation and fusion before communicating to utilize less energy, besides maintaining flow tables. The control plane devices are serially connected to the sensor nodes and use the programming API's to communicate to data and application plane and use the East/westbound API's to communicate among themselves. The control plane is logically centralized instead of physically centralized.

The paper [1] talks about the proposed routing protocol by having the SDN layer in the application and having the context and policy based routing approach. The protocol consists of 5 phases, initiation phase, topology discovery phase, decision phase, policy based routing phase and enforcement phase. The scenario talks about having the control plane dealing with all the routing policies and the data plane being the area where all the policies are implemented. This lack a real life implementation and the knowledge about the latency, packet delivery and quality of service. Fig.1. shows a model scenario of the proposed model.