Abstract-**Recent advances in low-power integrated circuit design, coupled with smaller and more compact processor and radio frequency hardware, have allowed for the development of cheaper, more easily deployable wireless sensor network, or WSN, technologies. These low-cost, low-power approaches to wireless sensor deployments have allowed for the consideration of deployments in areas, and for purposes, which would have been previously cost-prohibitive. One of the areas of particular interest in this emerging field is environmental monitoring in remote locations, where the cost and maintenance required would make wired monitoring installations undesirable or infeasible. One of the main obstacles, however, to effective use of wireless sensors for the purpose of remote phenomenological monitoring is the constraint introduced by the highly limited power-supply of these wireless sensors. Wireless sensors are almost always powered by small batteries, which limit the effective broadcast radius over which the respective collected data can then be transmitted. This work leverages the use of a micro-aerial vehicle, or MAV, an autonomous(robotic) quad-rotor helicopter in this case, as a data mule for the transport of data from, and between, remote embedded WSNs. This method allows for greatly extended transport radius of the collected data without greatly increasing either the cost or size of the individual wireless sensor node. Further, this work explores the use of a technique of phase-shifted cooperative broadcast, whereby each wireless sensor acts as an element in a phased antenna array, extending the the transmit radius of the sensor network to more easily coordinate the location of the WSN by the MAV. Finally this work concludes with a case study of the proposed MAV/WSN symbiotic relationship with a specific hardware system designed and developed using current state of the art low-power wireless sensor technologies coupled with low-cost compact MAV robotic hardware developed for this work.**