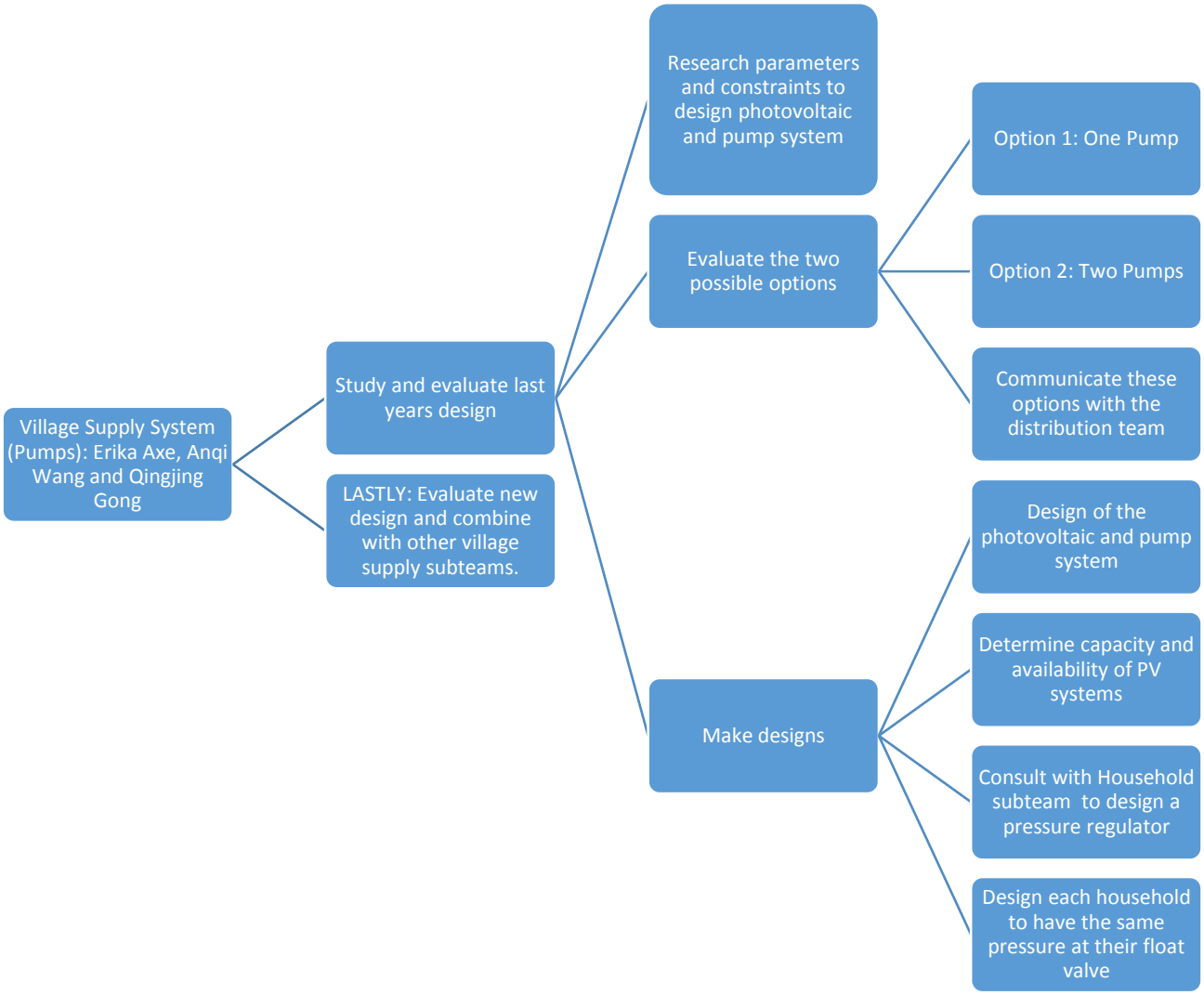
Village Supply System (Pumps): Erika Axe, Anqi Wang and Qingjing Gong

TASK GRAPH/LIST:



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1. Study and evaluate last year's design (Organizer: Erika Axe; Dates: Sep. 21st) ***COMPLETED***

   The design should be based on what systems are already present. New design should consider economic boundaries while still be efficiently providing clean water. Cost of operation and maintenance should also be considered so that the whole design is beneficial.

2. What kind of pumps/pressure requirements (Organizer: Anqi Wang; Date: Sep. 23rd) ***Continued work, contacting May for more information, combining original step 3 with step 2 (New Date: By October 15th)***

   Evaluate whether it would be useful or possible to design a pressure regulator. Note that each household has the same pressure at their float valve.

   Research parameters and constraints and design photovoltaic and pump system

   (Also research pump curves, making solar panel angles manually adjustable, and coordinating both pumps to be in sync)

3. Evaluate the two options

   Option One (Organizer: Qingjing Gong; Date: Oct. 3rd) ***(New Date: By October 15th)***

      Divide the power between the two pumps. Chlorine contact tank at the effluent from the treatment plant remains at the target level. The control system of this option is simple and easy to maintain. The photovoltaic system design can handle cloudy days of winter.

   Option Two: (Organizer: Erika Axe; Date: Nov. 2nd) ***(New Date: By October 15th)***

      Divert all of the power to the first pump on cloudy days, and make sure that villagers can collect water from the ground level chlorine contact tank. In this option, the control system should automatically divert all of the power to the well pump when the chlorine contact tank isn't full.

4. Evaluate new design and combine with other village supply sub-teams. (Organizer: Anqi Wang; Date: Nov. 24th)