

Understanding how practitioners conceptualize agricultural ecosystem services (ESs) and translating this into farm management decisions helps to achieve sustainable agro-ecosystem management. The present study explored mental models of farmers and experts for agricultural ESs using cultural consensus analysis. The study ~~was~~ analyzed qualitative data from semi-structured interviews, pile sorting and questionnaires to determine the ~~amount of~~ similarity and differences ~~of between~~ mental models within and across groups of farmers and experts in Dezful County, Iran. ~~Results~~ The results showed that soil fertility and food production services were scored as the most important ESs, followed by job creation and biodiversity. The cluster derived from priorities at the pile sorting stage ~~reveals~~ revealed that the ontology of the two groups ~~is~~ was similar; however, they differed ed in terms of epistemology. Farmers ~~understand~~ understood an agricultural ecosystems as being a system that has both production (services) and potentials~~s~~. ~~Against,~~ Experts ignored some of the agricultural potentials~~s~~, and ~~they~~ considered ~~the an~~ agricultural systems ~~as to be~~ a set of structural factors ~~with~~ under distinctive management~~..~~. ~~Lastly,~~ To reach consensus between the two groups, ~~the~~ the model of co-creation of knowledge method is recommended to create ~~a movement toward~~ balance among ESs through the implementation of sustainable agricultural procedures.

Assessment of agro-ecosystem sustainability is an important challenge.

~~Methods~~ that can be used implemented to estimate the sustainability, adaptability, and resilience of agroecosystems (Hatt 2013) should consider the ecosystem as a whole. This allows decision-makers to better understand the consequences of ~~different their~~ choices ~~and to~~ achieve a solution to sustainable development in agroecosystems. ~~Accordingly, this~~ The current study applied the ecosystem properties, potentials, services (EPPS) framework (Bastian et al. 2012). The EPPS framework considers ecosystem properties through its structures (~~i.e.,~~ components) and processes (~~i.e., functions in the sense of~~ functioning), as the fundamentals for the existence of society and of ~~any~~ services (Busch et al. 2012). ~~In the EPPS~~ This framework, also includes potentials (~~i.e.,~~ carrying capacity, risks, ~~and~~ resilience) ~~have explicitly been included, to that~~ create a link between the ~~functions~~ functioning of the properties and the services (~~i.e.,~~ food, fiber, water regulation, carbon sequestration, etc.).