

# Fishing with photovoltaic panels in Liuzhuang Mine Subsidence Area

Does fishery complementary photovoltaic (FPV) power plant affect radiation and energy flux?

Meanwhile, the underlying surface of PV in land is significantly different from those in lake. The fishery complementary photovoltaic (FPV) power plant is a new type of using solar energy by PV power plant in China. The studies of the impact of FPV on the balance of both radiation and energy flux have been less presenting.

Does a PV plant in a lake affect radiation and energy?

The total installed power generation of PV plant is accelerating in recent years. But the studies of the impact of PV plant in lake on radiation and energy were less reported. Meanwhile, the underlying surface of PV in land is significantly different from those in lake.

What is the study area of FPV power plant?

Study area of FPV power plant. a The FPV power plant is located in Yangzhong City, Jiangsu Province. The red pin represents the position of the meteorological tower inside the photovoltaic (PV) power plant.

What is the difference between FPV power plant and Lake underlying surface?

The development of FPV power plant is a make a breakthrough at harnessing solar power field because of the installed region without the land limitation. However, there is a big difference of property between solar panels and lake underlying surface. That is an integrated underlying surface after installing the solar panels on original area.

Does FPV power station affect aquatic environment?

Based on the above analysis, the construction of FPV power station has limited impact on aquatic environment, mainly reflected in the impact on DO. However, the development of "fishery and photovoltaics integration" project will lead to serious eutrophication of water bodies.

How FPV will affect the fishery and photovoltaics integration project?

With the increase of coverage ratio, FPV will lead to the overall reduction of  $T_w$  in the construction water area, and the distribution of  $T_w$  will be more uniform. For the "fishery and photovoltaics integration" project, reducing the peak  $T_w$  in summer and reducing the diurnal fluctuation are more conducive to the growth of fish.

Although the area is still dominated by poor and very poor quality grade areas in the final area, the construction of the PV power station weakens the negative impact of the original mine on the ...

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The subsidence pond is an important water resource for coal mining areas in China. In order to take full advantage of the subsidence pond, a floating photovoltaic cover or a pillaring ...

Water 2022, 14, 2257 2 of 14 Keywords: heavy metals; subsidence pond; solar photovoltaic system; coal mining 1. Introduction During coal mining, some parts of the ground sink and ...

In practice, some dumps were developed into dual-use of land for agricultural and solar photovoltaic electricity production (Figure 3 a), photovoltaic and pasture-raised farms (Figure 3 ...

Another possible usage of the area within the PV system is for a fish farm. A study in China reported an increase in fish production under PV panels as much as 166.2 kg/acre compared to the area ...

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