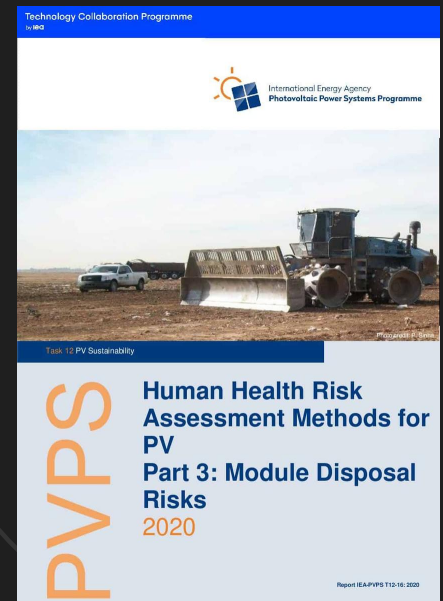


REPORT

AUGUST 2020



HUMAN HEALTH RISK ASSESSMENT METHODS FOR PV

PART 3: MODULE DISPOSAL RISKS

INTERNATIONAL
ENERGY AGENCY
PV Power Systems Task 12



AUSTRALIAN
PV INSTITUTE

OBJECTIVE

Determine potential health risks resulting from disposal of PV modules in land-fill.

SUMMARY

There are no significant human health hazards for land-fill waste disposal of PV modules.

KEY POINTS

01

Recycling is expected to be the dominant and preferred strategy for sustainable end of life management.

02

There are still concerns regarding improper disposal of PV modules.

03

The report looked at the potential health risks (including cancer) of disposal.

04

The researchers compared predicted exposure in soil, air, groundwater and surface water of the most hazardous chemical elements for three PV technologies.

TESTED PREDICTED EXPOSURE OF:

1. lead (Pb) in crystalline-silicon (c-Si) PV modules
2. cadmium (Cd) in thin film cadmium telluride (CdTe) PV modules
3. selenium (Se) in thin film copper indium selenide (CIS) PV modules

FINDINGS

Overall, the report found cancer risk and non-cancer hazards to be below screening thresholds for all assessed chemical elements, even in the worst case scenarios.

