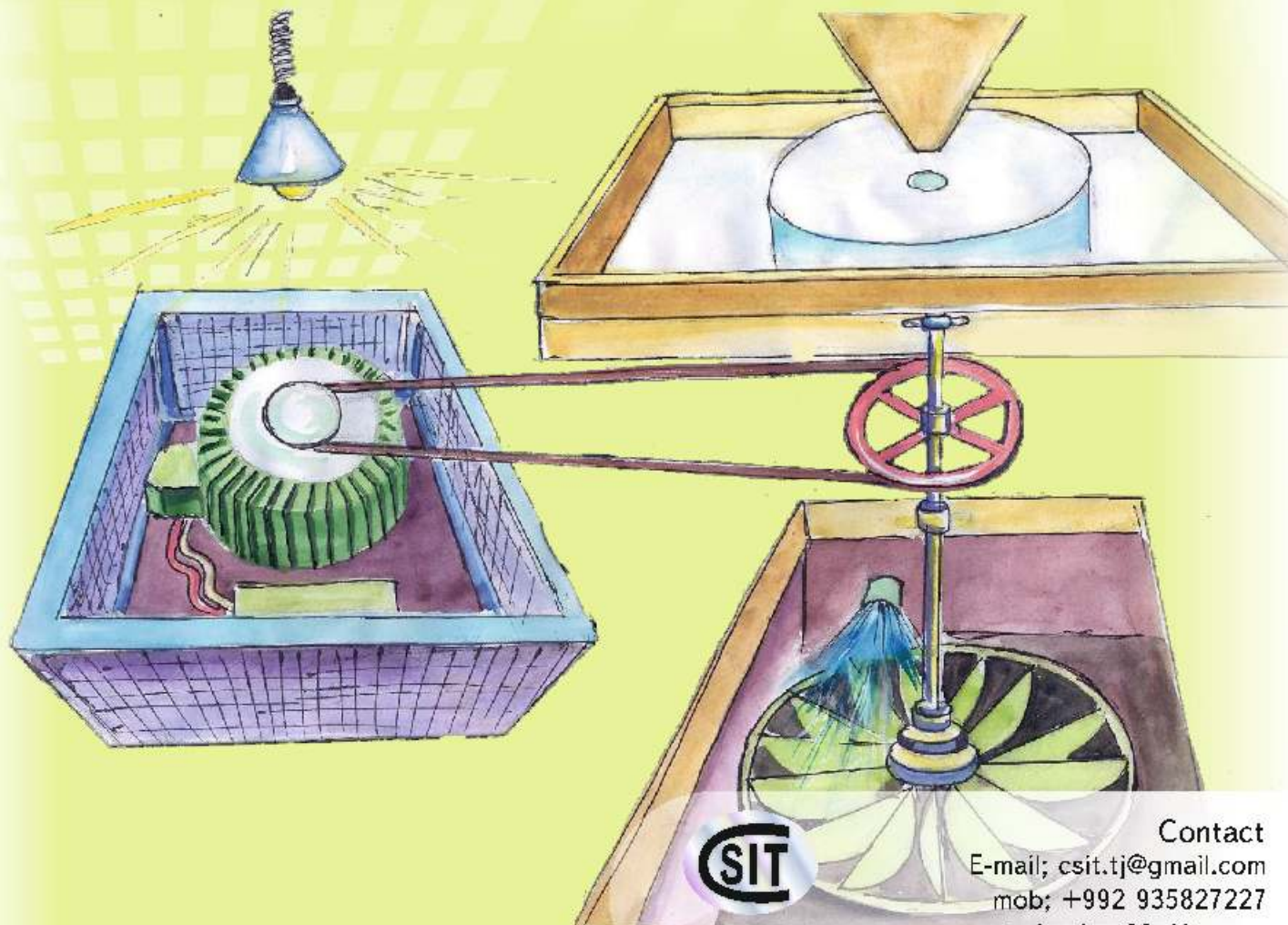


Hydro electric generator



Center for Sustainable
and Innovative Technology
A project of MSDSP

Contact
E-mail; csit.tj@gmail.com
mob; +992 935827227
str; Lenina 32, Khorog,
GBAO, Tajikistan



MINISTRY OF NATURAL RESOURCES DEVELOPMENT
OF THE REPUBLIC OF TAJIKISTAN



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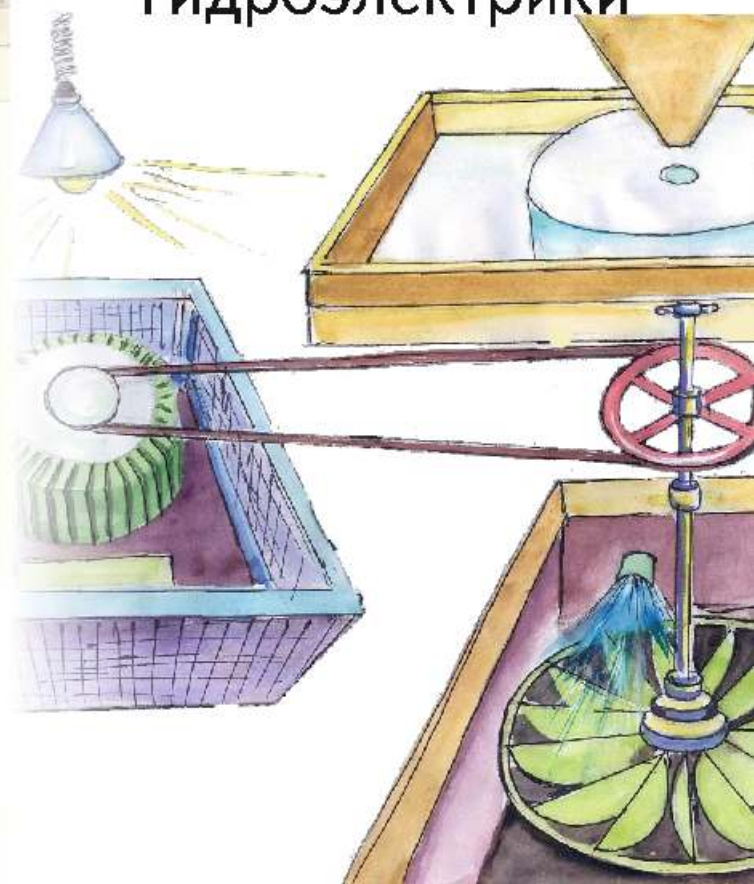


Департаменти Ҷабиботи Ҷумҳурии Тоҷикистон
Ба номи М. Назаров

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Hydro electric generator

Генератори гидроелектрики



Traditional grain grinding machines are widely used in the mountainous regions of Central Asia. These machines rely on diverting some of the water in small streams to a series of paddles that turn a horizontal or vertical crankshaft. This crankshaft is typically attached to a large stone that rotates to grind grain.

These machines are wonderfully inexpensive for those communities that already have them, and provide a very useful service. However, today's communities often have need for more energy services that in the past, in particular electricity is a very sought after type of energy that is too often unavailable. With simple improvements to the traditional grain grinding machine, people in several countries have managed to dramatically improve the amount of energy available from the same volume of water falling the same distance.

These improvements include: replacing the wooden water chute with one made of plastic or metal, replacing the wooden paddles with ones made of metal, replacing the wooden shaft with one made of metal. With these simple improvements in place, the additional energy available can be used to generate electricity, by adding a simple generator to the shaft. This electricity can then be transformed and carried to neighbouring households along copper wires. An improved water mill can typically generate up to 3kW of electricity, enough for lighting and some small appliances.

Мошини майдакунии гандум дар минтақаҳои кӯхистони Осиёи Марказӣ ба таври аъҷаба истифода бурда мешавад. Ин мошинҳо чараёни обро дигар намуда, ба қатори педалҳос, ки хокрези (вал) зочумонандаи горизонталӣ чарх мезананд. Ин хокрез ба санги калон маҳкам буда онро чарх зада гандумро майда мекунад. Ин мошинҳо барои ҷамоате ки дорон онҳо мебошанд хеле хуб ва дастрас ҳастанд.

Аммо дар давраи ҳозира мардум бештар ба сарф намудани барқ ниез доранд, нисбат ба замони пештара. Ин навоариҳо дар бар мегиранд: гирдоб ҷубинро ба оҳанин с пластики, кайки ҷубинро ба оҳанин с дастаи ҷубинро ба оҳанин иваз намоянд.

Бо ин дигаргуниҳои оддӣ энергияи иловагӣ пайдо шуда, барои истифодаи намудани барқ бо иловаи даста ба генератори оддӣ.

Ин барқро тавассути кабел ба хоҷагҳои ҳамеоя тақсим кардан мумкин аст.

Осиёи Обии муқкамал метавонад то 3 кв барқро диҳад ки, барои равшании хурд ва асбобҳои майда, истифода бурда мешавад.

