



**Sustainable Development  
Management Solutions**

## PROJECT CONCEPT

### *Hemp4Crete*

Hemp has suffered from bad reputation in the past but is currently making a come-back all around the world because of the great contribution it can make to sustainable development efforts. It has traditionally been used to produce rope and textile but there are numerous other uses of hemp. Hemp can also be used in the production of hempcrete, a more sustainable alternative to concrete. This project would produce Hemp4Crete bricks to gradually replace concrete bricks currently used in the construction industry.

**PROJECT GOAL:** To produce and market Hemp4Crete bricks, a sustainable alternative to concrete bricks.

#### PROJECT OBJECTIVES:

1. To establish hemp farms in Fiji;
2. To construct a warehouse (using sustainable materials) for Hemp4Crete production;
3. To procure machinery for the production of Hemp4Crete;
4. To train employees in the farming of hemp and the production of Hemp4Crete.

#### THE PROJECT

Three ingredients would be required to create Hemp4Crete: hemp hurds (the woody inner parts of the hemp stalk), lime binder, and water. Hemp hurds are broken into fragments and separated from the fiber by way of breaking and scutching, separating impurities from raw materials by using a scutcher (a machine made for this purpose). Lime is used in the mixture to act as a binder. Hemp hurd contains a high silica content that helps it to bind well with lime.

The production of 1m<sup>3</sup> of regular concrete requires 2,775 MJ of energy. This energy comes mostly from petroleum products, and thus contributes to climate change. To produce 2.775 MJ of energy one needs to burn 0.37 barrels of oil. The production of Hemp4Crete would prevent production of many hundreds of cubic meters of regular concrete, making a massive contribution to our efforts at combatting climate change.

The Project will primarily aim to supply the domestic Fiji market but as production increases it would also aim to export a sustainable Fiji product of high quality.

**FUNDING:** Financing of USD 400,000 is being sought.

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Hemp fibers extracted using a scutcher



Hempcrete bricks ready for sale