

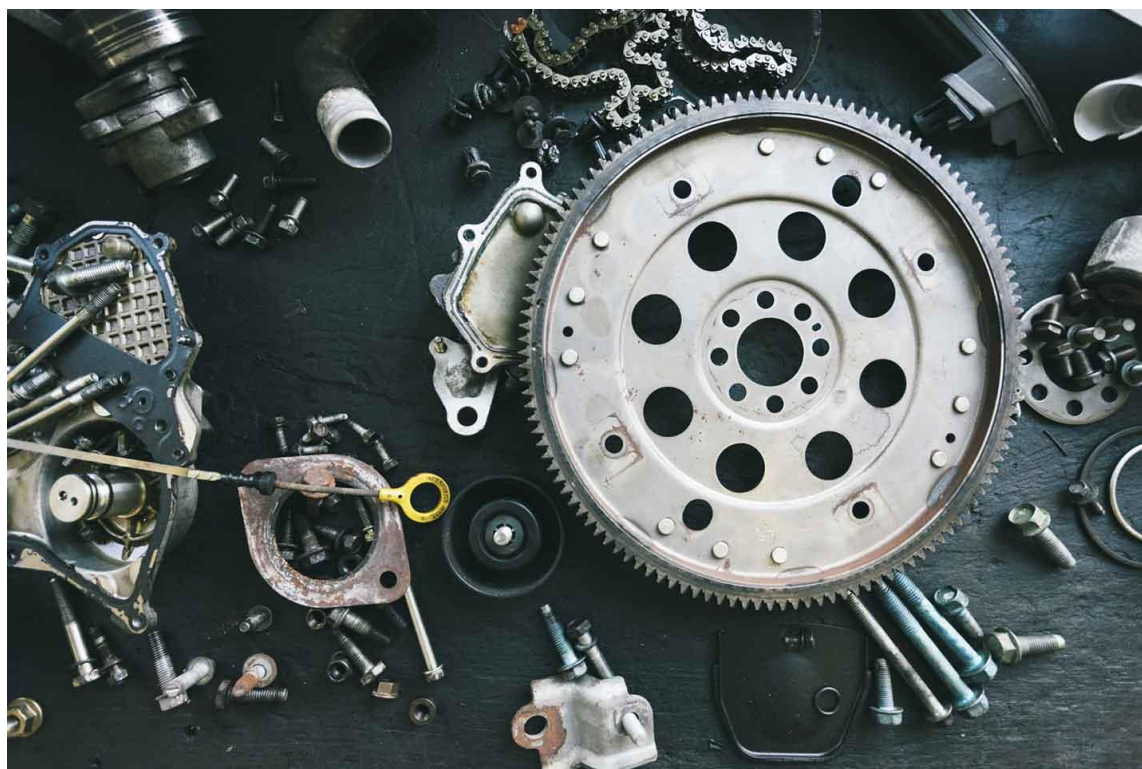
# FOOD CROPS

*Regenerative agriculture*

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## CLIMATE CHANGE EFFECTS

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The effects of the solar flares is studied and analyzed in the analysis of the climate change effects.

This study of the climate impact is analyzed via the tools and product solutions based on the subject areas of artificial intelligence.

The climate impact of the solar flares on the food crops production is studied and analyzed in this product solution.

Based on the study and the observations of the impact of the climate change, best practices of the agricultural food crops production is created.

Also the other various types of cross – cutting issues due to the effects of the solar flares is also studied – on the subject areas of the food crops production.

There could be occurrences of natural disasters due to the effects of the solar flares in that region of the agricultural lands.

Thus for the objective of enabling the mitigation of the effects of the solar flares, the algorithms of prediction mechanisms of the possible occurrences of the solar flares is built.

The remote sensing tools and mechanisms of the objective of earth observation for the prediction use cases is implemented.

The earth observation scenarios are input into an artificial intelligence product solution.

This artificial intelligence product solution studies and analyses whether that region could experience the occurrence of the climate change effects of the solar flares.

Based on the best agricultural practices, the small – scale farmers cultivate the growth of the crops of the agriculture.

The climate and environment in that region determines the type of agricultural crops that could be grown. The examples of the food crops are rice, barley, wheat, jute etc.

The fully – grown cultivated crops are harvested and loaded into the storehouses for the objective of distribution and utilization.

The schools which are located in the rural areas could be the consumers of this food crops production suppliers.

The crops – requiring schools procure the food crops for the objective of feeding the school children.

School children's requirements and necessities for the objective of food consumption is studied via their inputs and suggestions.

Their day – to – day food requirements is captured on a daily basis during the morning schedule, via an online survey form.

The survey form provides a variety of food items' options such as rice and rasam, lemon rice, puliyogare and so on and so forth.

The majority votes of the food items is captured from the online survey form, and that menu is served to the school children, on that particular day.

This sequence of activities of the online survey form methodology is a web – based analytical tool that studies the food consumption patterns of that particular school in that rural area location.

The methodology of collecting the survey information is performed on a continuous basis.

On the last day of every month, a statistics is worked upon via a mathematical model derivative works.

This statistics derives the particular food items that are preferred by the school children, during that month.

The top five chosen food items is selected with the aid of the online survey form's data and the computation of this data via the statistics modelling methodology. These five selected food items are added to the food menu for the upcoming month schedule duration.

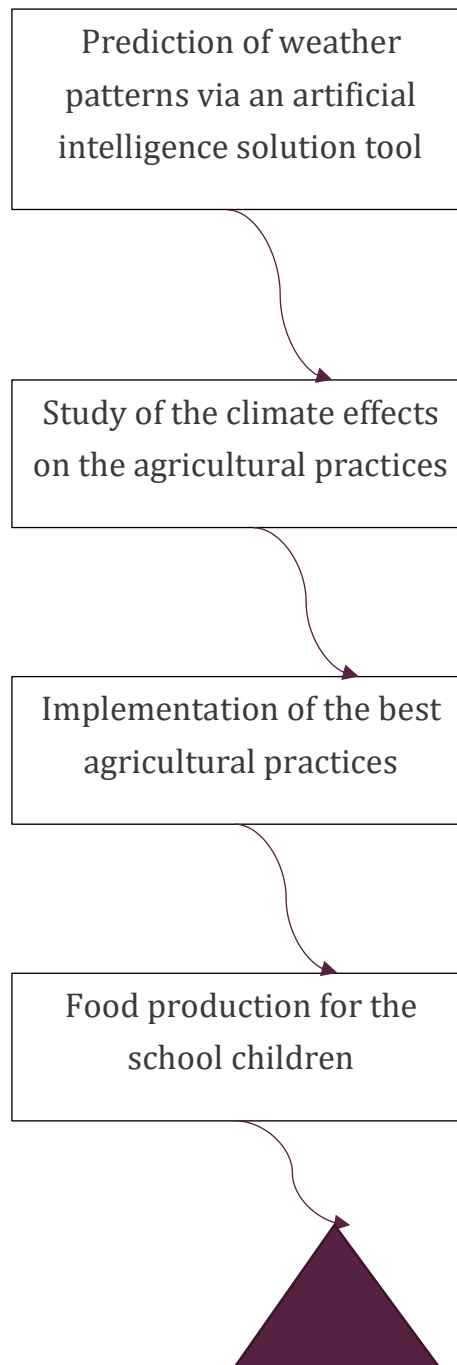
Then the entire food consumption procedures, as described above, is worked upon for the next month. And the process is an ongoing effort.

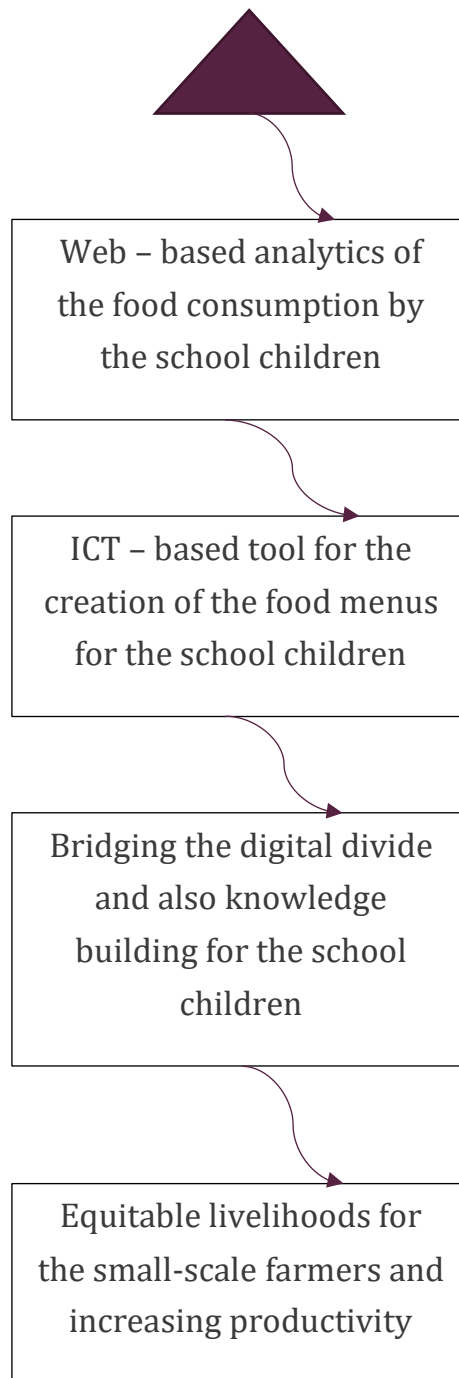
Since all the procedures of the food processing steps are integrated on the digital technologies, ensuring the affordability and availability of the mobile handset device is primary. Also enabling a low – cost or cost – effective mobile handset device for the small-scale farmers and the school children is a vital parameter.

This is ideally for the objective of enabling the market outreach to the small-scale farmers. Also knowledge building and knowledge enabling resources and packages based on the subject areas of the utilization mechanisms of the product solution is provided for the objective of awareness generation.

This leads to an access to the equitable livelihoods for the small-scale farmers. Thus leading to the achievement of an increased rate of productivity and enhanced income generation.

Thus leading to the reduction in poverty of the small-scale farmers and also achieving zero hunger of the school children in the rural areas!





***Figure: Flowchart illustration of the product solution of the food crops production and processing***



# SOLAR FLARES

Study of the prediction of the climate change effects of the solar flares on the food crops in the agricultural lands

## ARTIFICIAL INTELLIGENCE

The technical architectural design documentation material for the product solution which studies and analyses the prediction of the solar flares radiation exposure on the food crops in the agricultural lands

*Product solution of the “prediction of the climate change effects of the solar flares” requirements definition documentation material*

- The prediction of the weather patterns of the solar flares radiation exposure on the food crops in the agricultural lands is defined in – detail in the below attached section in this documentation material!



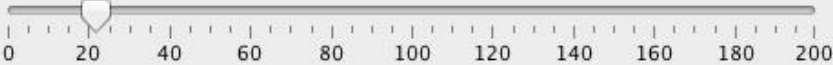
1. There could be a possibility of occurrence of the solar flares which could be incident on the surface of the Earth.
2. This incident solar flares could be visible on a particular region on the surface of the Earth.
3. The particular agricultural region which is located in this region on the Earth is equipped with sensors.
4. These sensors read whether there is an exposure of this agricultural land to the solar flares.
5. The application then calculates the intensity of this solar flares based on the sensor readings.
6. The value of the intensity is then passed onto the artificial intelligence module.
7. This artificial intelligence application verifies and validates the impact of this intensity of solar flares radiation on the agricultural crops.
8. This results in the outcome of the solar flares radiation on the yield of the food crops.
9. This creates a value to measure the supply demand planning of the food crops for the objective of enabling the human food consumption.
10. If the supply is less than the demand, then the measurement of the possibility of requirements of an Accessibility product solution is verified.
11. This measurement is based on the likelihood of the humans to utilize the Accessibility product solution for mitigating the health issues which could occur due to the lack of food consumption!

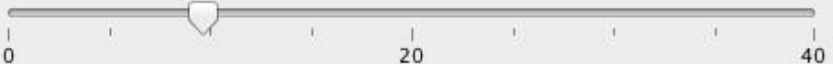
Elliptical-Aperture Attributes

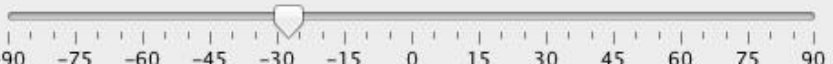
The aperture overlay is red, and, if shown, the sky-annulus overlay is green (inner) and yellow (outer).


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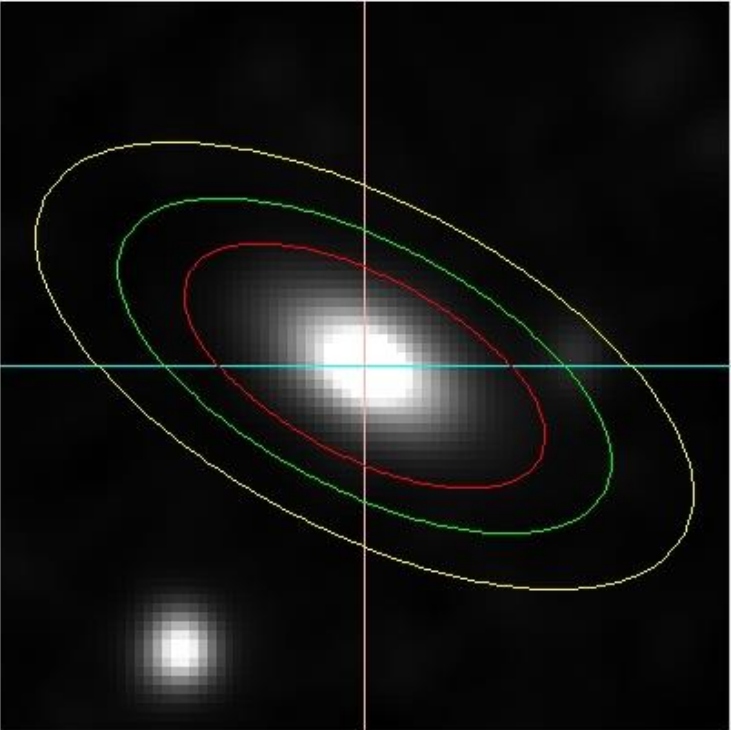
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**Technical specification of the product solution is provided here below:-**

Step 1: Brief description of the solar flares and the concept of incidence of the radiation exposure on the surface of the Earth is provided to the farmer.

Step 2: In the agricultural land, the land that is exposed to the radiation, the sensor is placed.

Step 3: The readings of the sensor is continuously monitored.

Step 4: If the readings of the sensor is greater than a minimum threshold value, then this leads to an inference of an existence of the solar flares eruption.

Step 5: The sensor that is utilized for the objective of reading the values of the intensity of the solar flares is the magnetometer.

Step 6: If the intensity of the magnetic field in the magnetometer is greater than 100 gauss, then it is an inference of the existence of the solar flares and the solar storm.

Step 7: This value of the intensity of the solar flares is transmitted to the artificial intelligence modules.

Step 8: The farmer then inputs the amount of the expected quantity of the food crops in that agricultural land.

Step 9: The total amount of the quantity of the food crops from that agricultural land, during the normal times, is also captured from that farmer.

Step 10: If the food crops output is less than the normal times' food crops output, then it is derived that the solar flares has created an impact on the food crops.

Step 11: Then this food crops is supplied to the marketplaces.

Step 12: The marketplace measures the value of the demand for those food crops.

Step 13: If the supply is less than the demand, then this evaluation leads to a concept of "inadequate supply of the food crops".

Step 14: This inadequacy leads to increased hunger.

Step 15: The lack of food for human consumption could lead to the possibility of human health issues.

Step 16: Thus leading to a necessary requirement of the product solutions based on the subject areas of Accessibility and inclusive development.

Step 17: The occurrence of a particular type of the health issues is indicated by the human.

Step 18: If there is a visual impairment, then audio – enabled solutions are recommended to the particular human.

Step 19: If there is a hearing impairment, then visual – cues based solutions are recommended to the particular human.

Step 20: If cognitive development health issues are noticed, then artificial intelligence solutions are recommended to the particular human.

Step 21: Thus finally providing a concluding statement of advice to the human, based on the concept of hunger!