

India's Development – reaching \$18 Tr Value addition – through Total Village Development Program – TVDP

India runs because Farmers and Working Class (total 650 Mn)
are working hard to keep the nation's wheels moving

About 200 Mn working class are from Cities and Metros

Current GDP is estimated @ \$2.75 Tr (Rs.200 Tr)

Minimum Decent Level (MDL) living conditions for entire
population (1,360 Mn) will need percapita take-home
earning of 450 Mn BoP working class @ Rs.180,000

Servicing this would need Value Additions @ Rs.1,250 Tr

YES! India can! TVDP will answer that

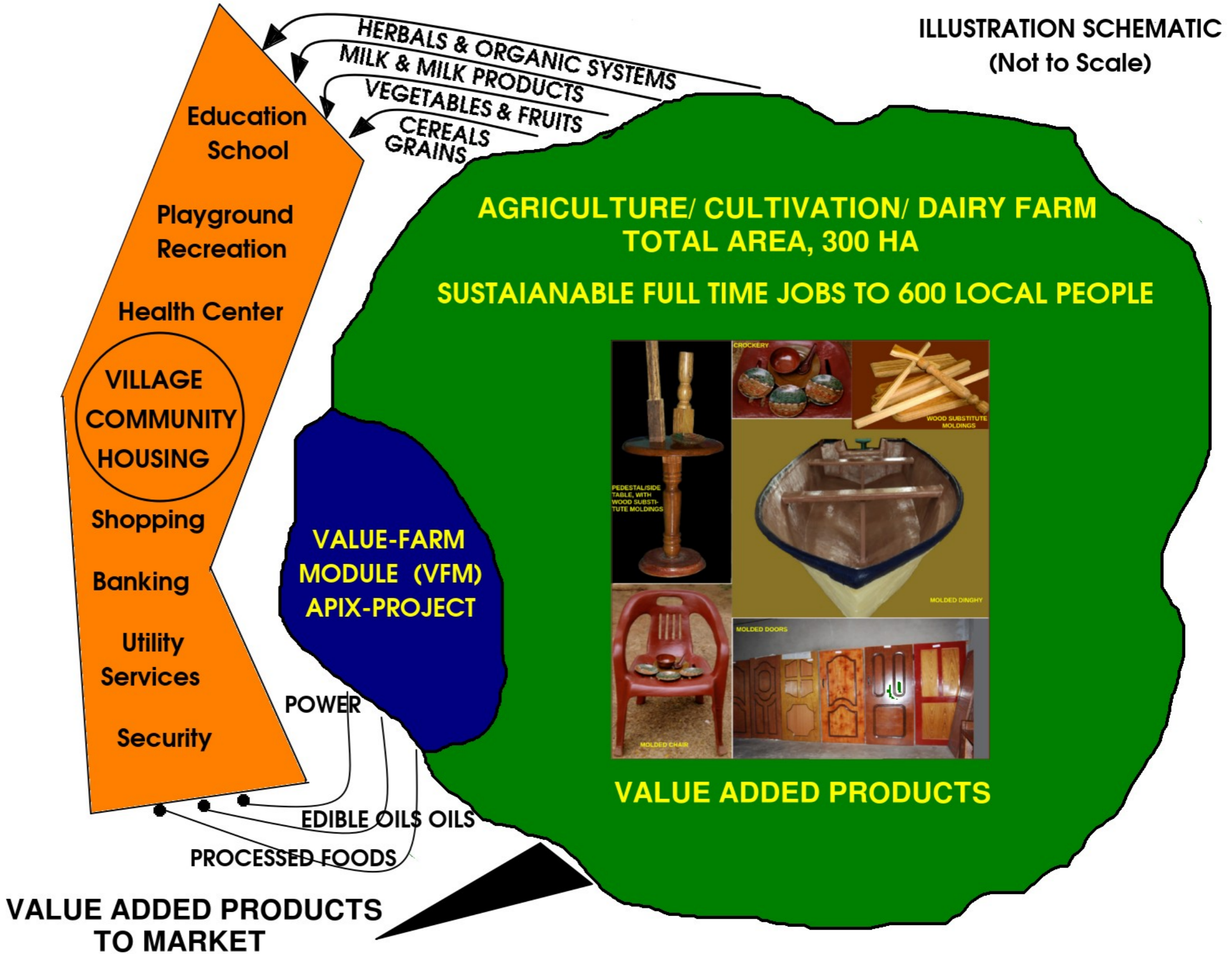
What is TVDP

- ♣ TOTAL VILLAGE DEVELOPMENT PROGRAM (TVDP) is an all-encompassing Development scheme for every Village
 - ♣ India has 650,000 Villages/Slums/Settlements
 - ♣ TVDP will create 600,000 Village Production/Conversion units, with Percapita Village Businesses @ Rs.3 Bn (Rs.300 Cr)
 - ♣ The standardized Village Conversion unit will be named:
VALUE-FARM-MODULE (VFM)
 - ♣ Each VFM unit would be designed to utilize all available Biomass (Plants/Vegetation systems and Animal wastes), within a total farm area of 250 Ha to 350 Ha
- ♣ Ave 600 Locals would have full time jobs @ Rs.180,000 and Housing/Education/Healthcare/Old-age care would be supported

Impact of TVDP

♣ Each VFM unit under TVDP would offer MDL living conditions for at least 300 working class families

♣ The illustration explains the fundamentals



**TOTAL VILLAGE DEVELOPMENT PROGRAM (TVDP)
 BASICS IN A VALUE-FARM-MODULE UNIT INCLDING
 BASIC PLAN OF SELF SUSTAINABLE MICRO-TOWNSHIP**

Resources for TVDP

♣ India has 160 Mn Ha arable lands and another 45 Mn Ha unused lands

♣ Non-forest vegetation is estimated @ 10 Bn T

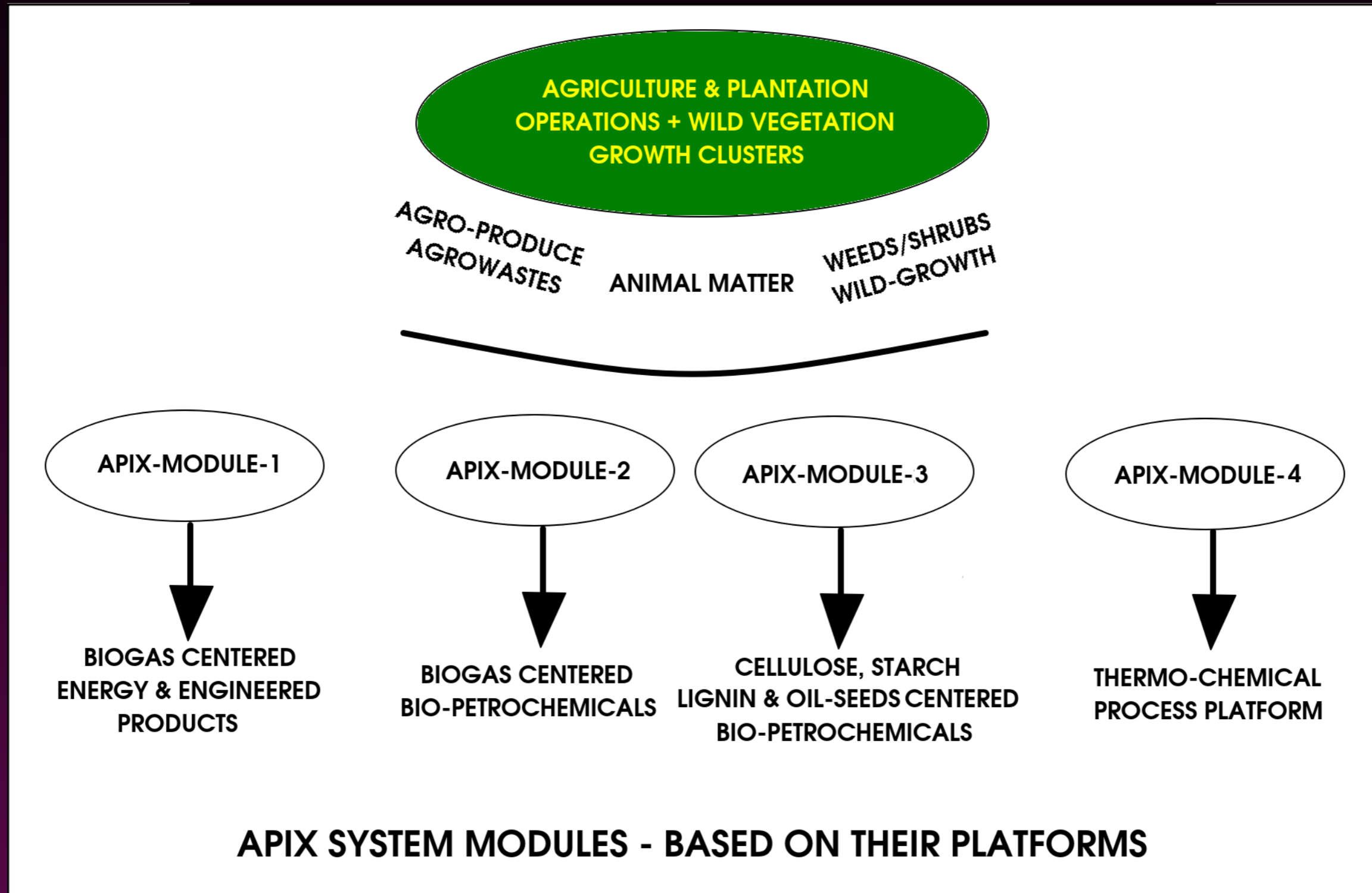
♣ Leaving Food/Fodder/Fuel, India has not less than 6 Bn T renewable Non-Forest Vegetation

♣ India also has about 1.5 Bn T animal wastes

♣ The above materials, now unused form huge Resources



Ground level VFM Processes



♣ There are FOUR Platforms of Technical Processes; these would form base APIX-systems in various VFM units

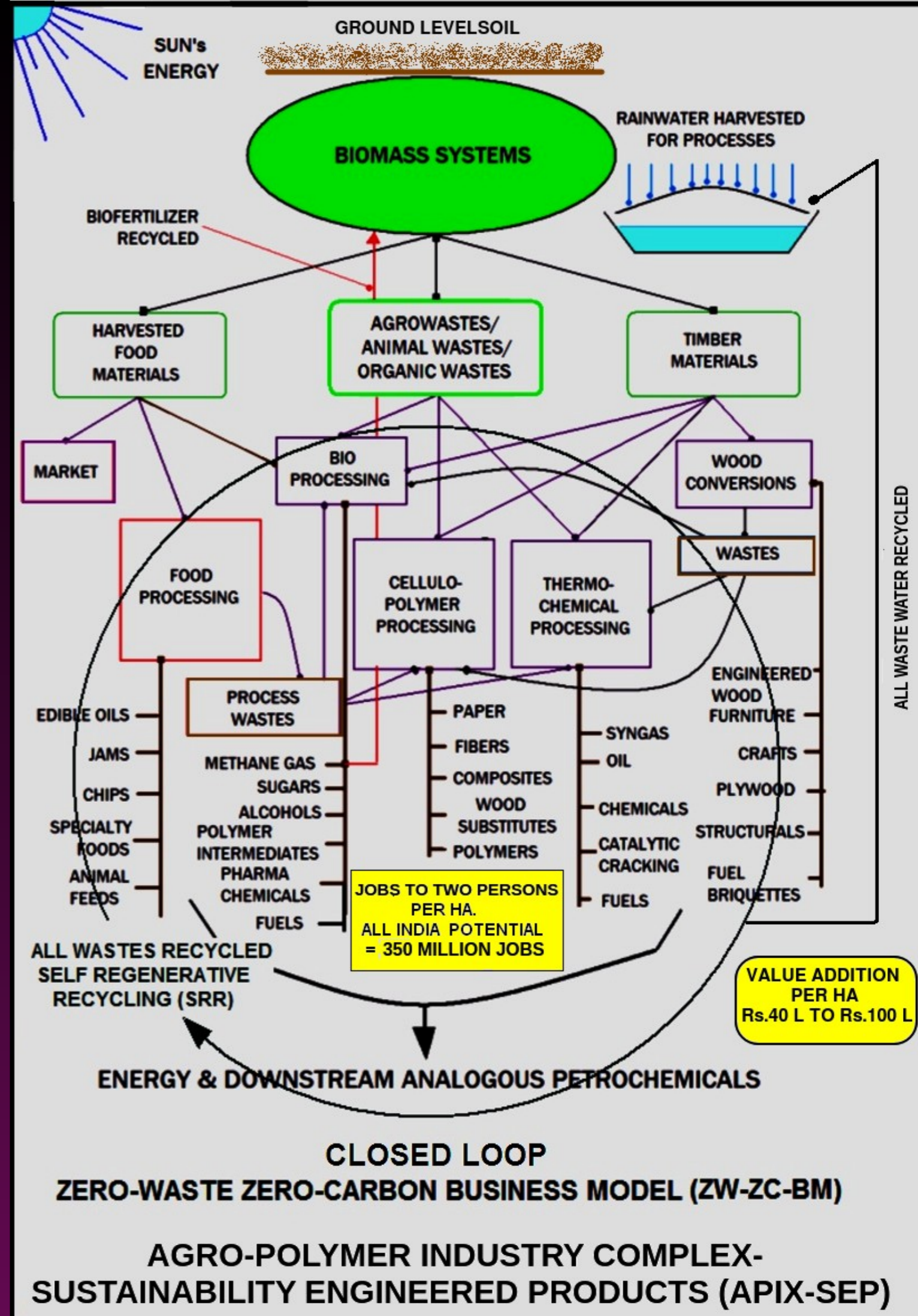
What are APIX-system Modules?

♣ APIX is acronym for AGRO-POLYMER INDUSTRY COMPLEX

♣ It is an all-encompassing Production-process system starting with Agro-Resources and other Biomass wastes

♣ It would have series of interconnected and interrelated process-conversion operations, as per illustration

♣ Ground level commercial operations are under Four sub-Modules (as in previous slide)



APIX-MODULE-1

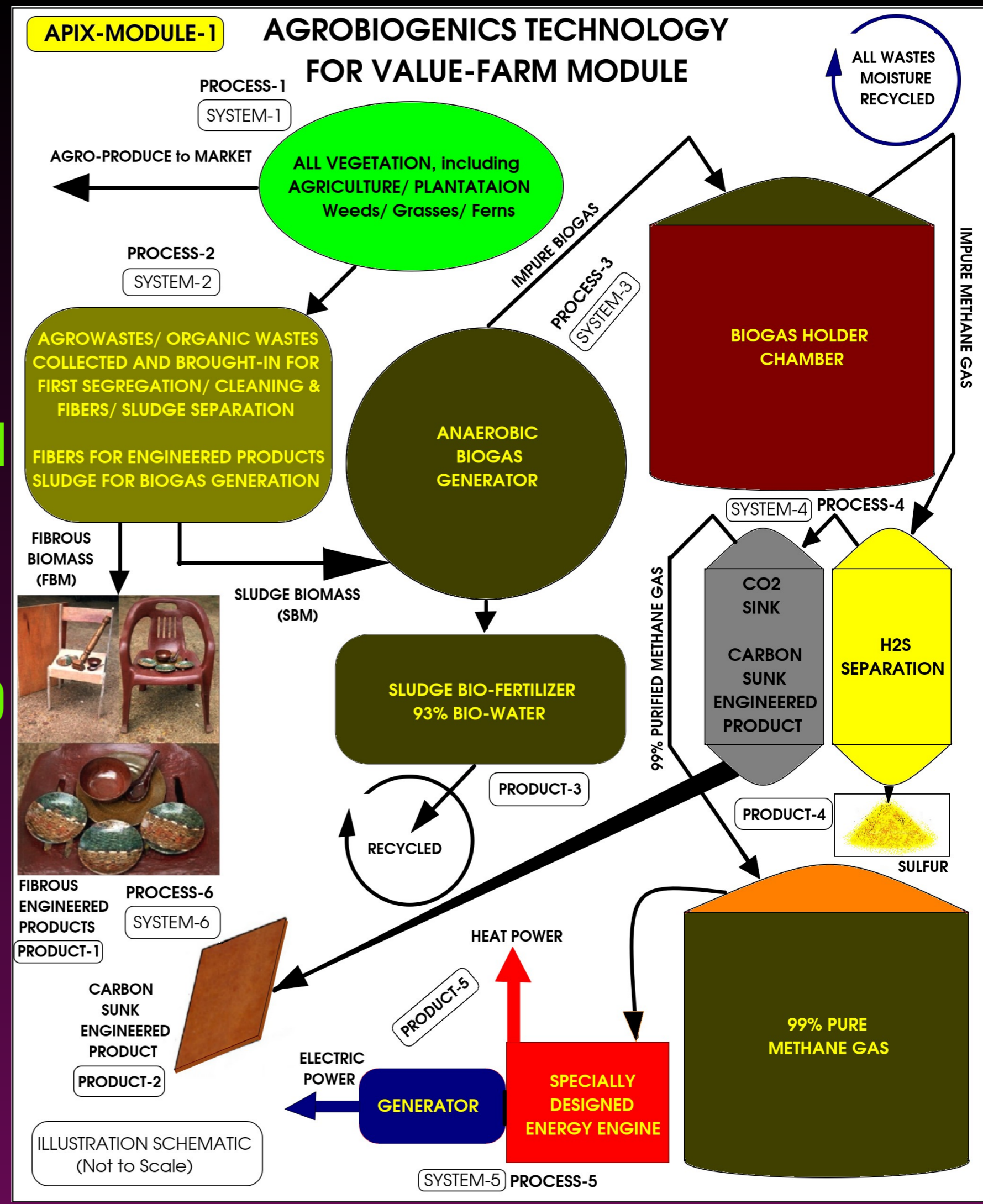
♣ This would be the initial APIX Module

♣ There are SIX Interrelated Processes and FIVE Products, incl. Power

♣ As pointed out, each unit would source from 250 Ha to 350 Ha farmland

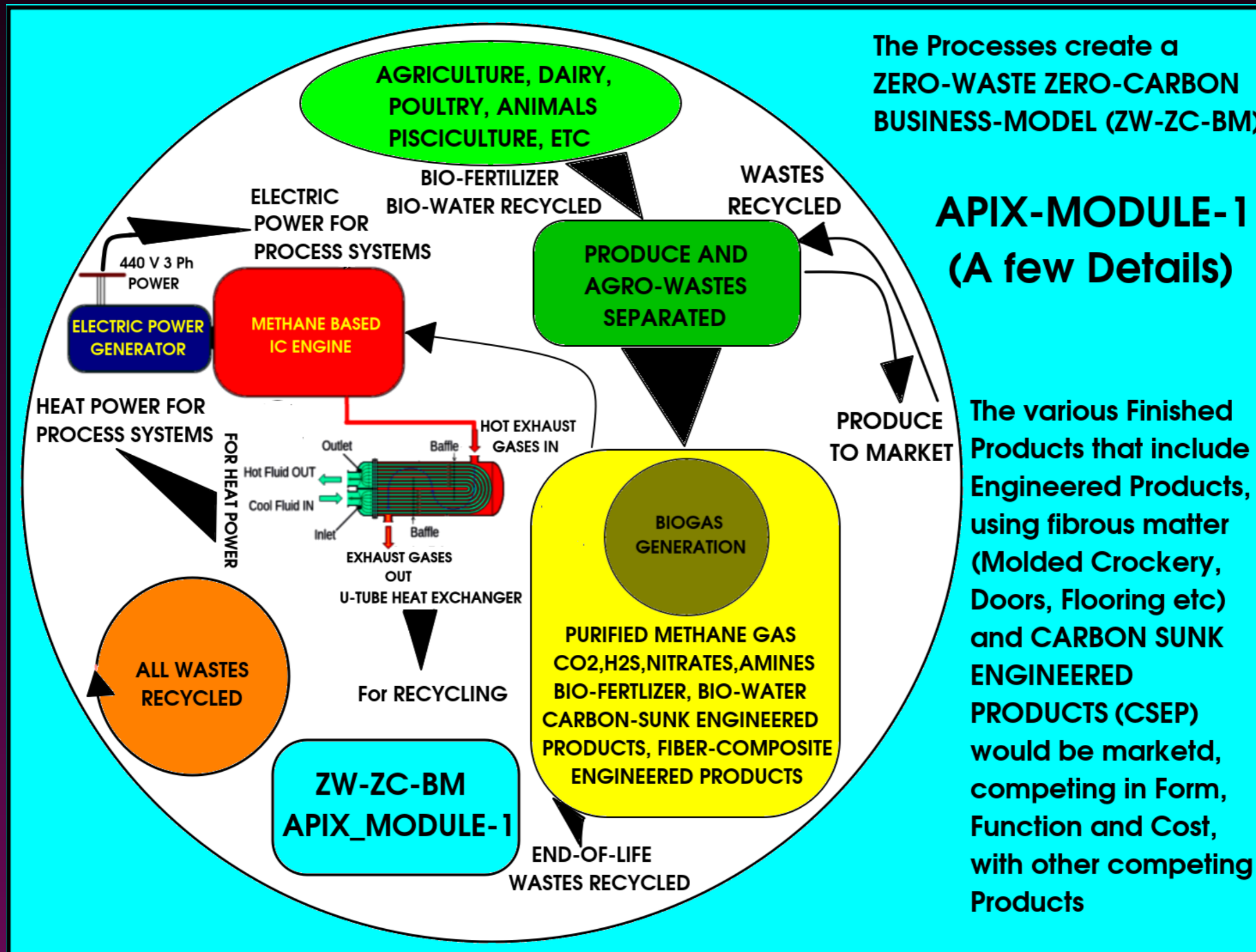
♣ Value Additions would be in the range Rs.275 Cr to Rs.400 Cr

♣ 10% to 12% of Power generated would be for Village families



More on APIX- MODULE-1

- ♣ A SELF-SUSTAINABLE interrelated and inter-connected Process system
- ♣ CARBON Credits: 1 T/each T biomass used in processes



A few Value-Added Products

♣ Here we see a few exquisite high-value Engineered products – that are Wood Substitutes; Plastics substitutes; Concrete/Cement substitutes

♣ The CSEP Molded Building Bricks are innovative products, converting CO2 into Concrete substitutes

♣ Products can range from Buttons; Electrical Devices; Auto Body Parts; Building Hardware – many more

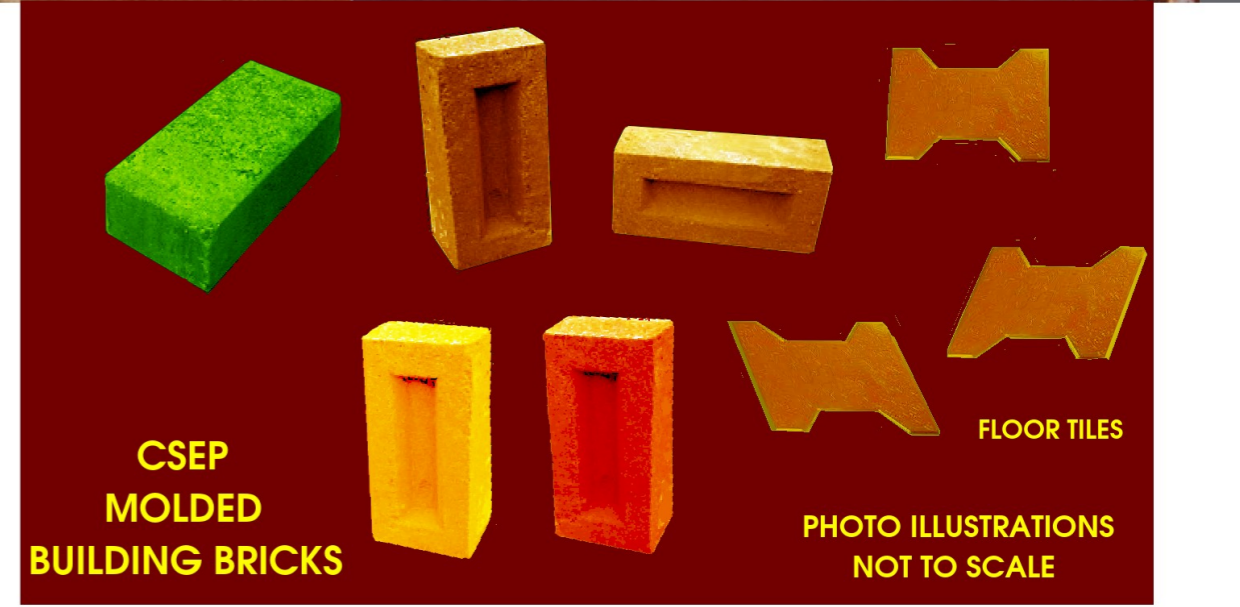
PEDESTAL/SIDE TABLE, WITH WOOD SUBSTITUTE MOLDINGS



MOLDED DINGHY



MOLDED CHAIR



Skill Development

Village based unskilled workers (male/female) are trained in sophisticated skill-works. The quality Doors are made by them



MOLDED DOOR PRODUCTION SEQUENCE & THE WORK GROUP

Refurbishing Salient aspects

- ♣ TVDP is an all-encompassing Development Scheme to be setup in each Village
 - ♣ India would have 600,000 Units (named VALUE-FARM-MODULES), each averaging Rs.300 Cr in Business-values
 - ♣ Each VFM unit would employ ave 600 local people (male/female) on Full-time work with decent earning values
 - ♣ Each VFM would support about 250 to 300 Families for sustainable living – with Education/ Healthcare/ Nutrition/ Housing/ Water/ Power/ Old-age-support
 - ♣ Simultaneous answer to India's Farmer-problems/ Job-problems/ Education/ Healthcare/ Housing – for over 150 million Families
 - ♣ India can claim CARBON CREDITS of 5 Bn to 6 Bn Tons

Promoters & Team/ Associates

PROMOTER & CO-PROMOTER (AGROBIOGENICS, pioneering the Scheme)

1. Hariharan PV: <https://www.linkedin.com/in/hariharanpv/>

2. Anand Kumar: Co-Promoter: Involved with Agrobiogenics (from: 2010) ...
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ASSOCIATES/ VOLUNTEERS

1. Senthil Mahesh Subramaniam: Involved with Agrobiogenics (from 2017)

2.

ASSOCIATE LEARNERS

1. KinanathKT Thattanchery: Associate – Learner (from January 2020)

2. Basant Kumar Patra: Associate – Learner (from January 2020)

3. Aditi Misra: Associate – Learner (from January 2020)

SKILLED LEVEL PERSONNEL

There are many Skilled personnel, trained at Village levels

Brief History

- ♣ The Concept/Subject of TVDP has germinated through observations, interactions, practical works/experiments, value-addition process developments, market interactions and juxtaposing problem-needs of both farmers and village communities – over a period, starting 1991 to 2009
- ♣ Hariharan PV (Chief Promoter) had interacted in over 1,000 villages (All-India): Rajkot to Dibrugarh; Pathankhot to Kanyakumari; Dhule to Nellore; Mangalore to Puri – and in-between across almost all the States in India
- ♣ 2010 to 2014 was a period when practical ground level works had been carried out in studying and observing the following: Biogas generation and Energy Conversions; Worked out design for utilizing Heat lost in IC engines (Petrol); Conversion of Vegetation Fibers into Engineered products; Sequestering CO² in Biogas, combined with certain Industrial wastes – converted into Innovative CARBON SUNK ENGINEERED PRODUCTS (CSEP); Organizing Skills-development programs to enhance the skill levels in low-skilled labor in villages
- ♣ The following Concepts/Designs have been created/defined: AGRO-POLYMER INDUSTRY COMPLEX (APIX); ZERO-WASTE ZERO-CARBON BUSINESS-MODEL (ZW-ZC-BM); VALUE-FARM MODULE (VFM); TOTAL VILLAGE DEVELOPMENT PROGRAM (TVDP)

Plan of ACTION

- ♣ In order that we are able to Pilot VFM unit under TVDP, we would have to set up a PoC, based on Biomass in at least 100 Ha of farmland region
- ♣ We shall look at the following Processes, based on APIX-MODULE-1 – as in Slide-7: Biogas generation; Biogas purification; CO² sequestration; H²S scrubbing; Power generation using Pure (99%) Methane; Manufacture of Engineered Products (at least Two products)
 - ♣ Annual Biomass (estimated) would be 5,000 T
 - ♣ Estimated Products: Power (heat + Electricity) ~ 300 KW; Engineered Products ~ Molded Doors 2,000 T and CSEP Molded Bricks ~ 4,500 T; Bio-Fertilizer ~ 150 T (dry); Bio-Water ~ 3,250 Cu.M
 - ♣ Estimated Value-Addition/Turnover potential ~ Rs.75 Cr
 - ♣ Estimated CARBON CREDITS ~ 6,000 T ~ valued \$60,000 (at only \$10/T credit)
- ♣ We intend to connect with dynamic Entrepreneurs, to associate with us to take the subject/concept forward
 - ♣ Estimated Pilot PoC project cost is Rs.20 Cr; estimated ROI is 12%; details can be worked out

THANK YOU

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