

BiomassPLUS

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BiomassPlus

Supporting MBI with novel crops

Objective

- Maximise 'resource space' within oil palm plantations through selection, management and use of products from novel crops

Outcomes

- Greater productivity and sustainability of oil palm plantations through novel crops and technologies using space not fully occupied by oil palm

Deliverables

- High value biomass crops to support energy security and added value products
- New SME's and socio-economic development of rural communities

Space available in oil palm plantations

- Space not suited to cultivation of oil palm
Marginal land = 350,000 ha (est., excluding those planted with oil palm)
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- Land under oil palm = 5,000,000 ha
 - Space around oil palm
Inter-row space in new replants = 380,000 ha (est.)
 - Space in oil palm
Below aged oil palm canopy = 500,000 ha (est. 10% of total)
Below pylon corridors = 250,000 ha (est. 5% of total)
 - Potential available space = 1,130,000 (est. 23.6% of total)
(NB. Unsuitable areas within oil palm not included)

Space not suited to production of oil palm

Hilly land



Low-lying land



Space not utilised around oil palm

Early life of plantation

- Without legume cover crop



- With legume cover crop



Space not utilised in oil palm plantations

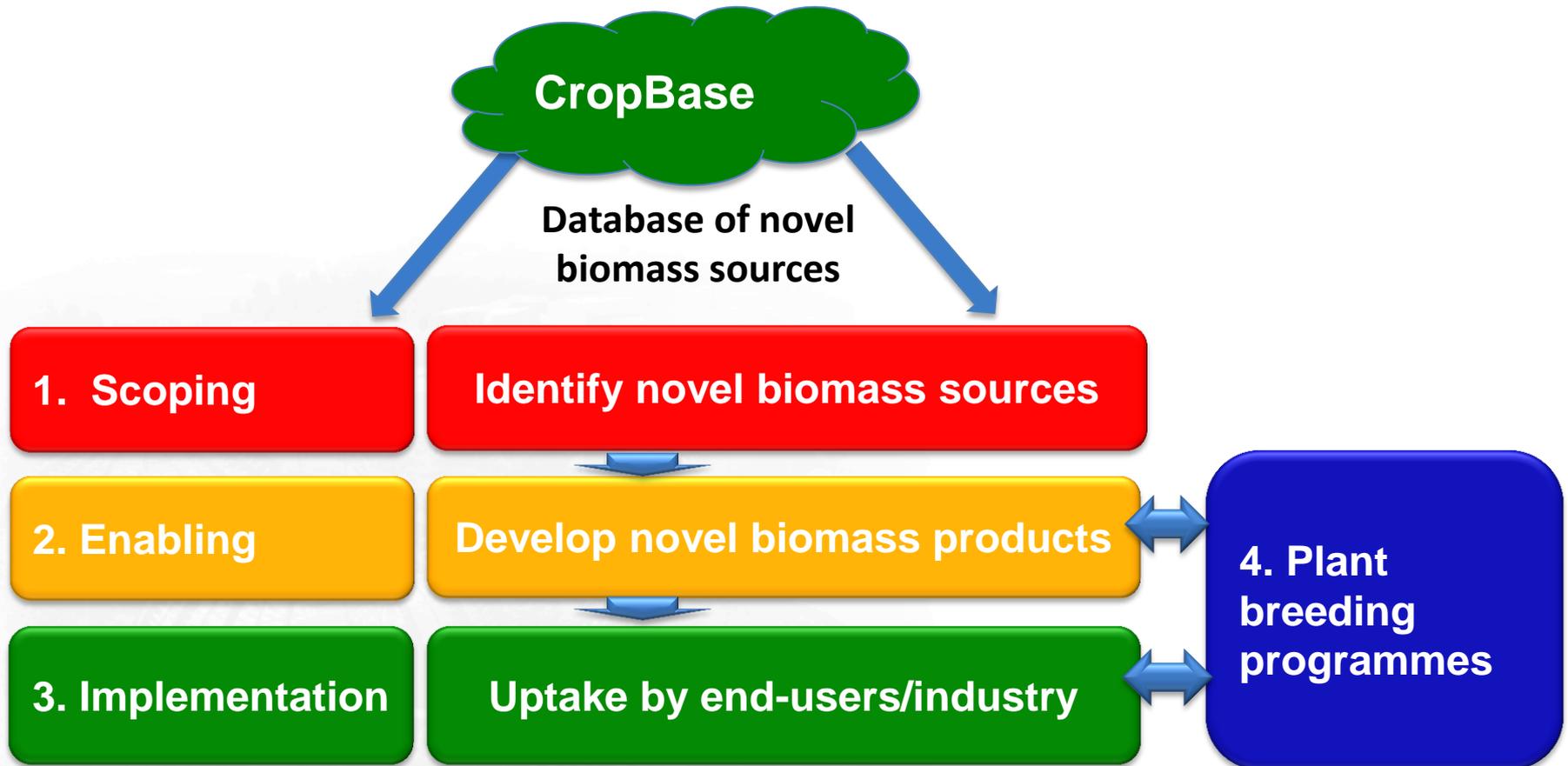
Resource capture space available

- Under aged oil palm canopy
- Below pylon corridors

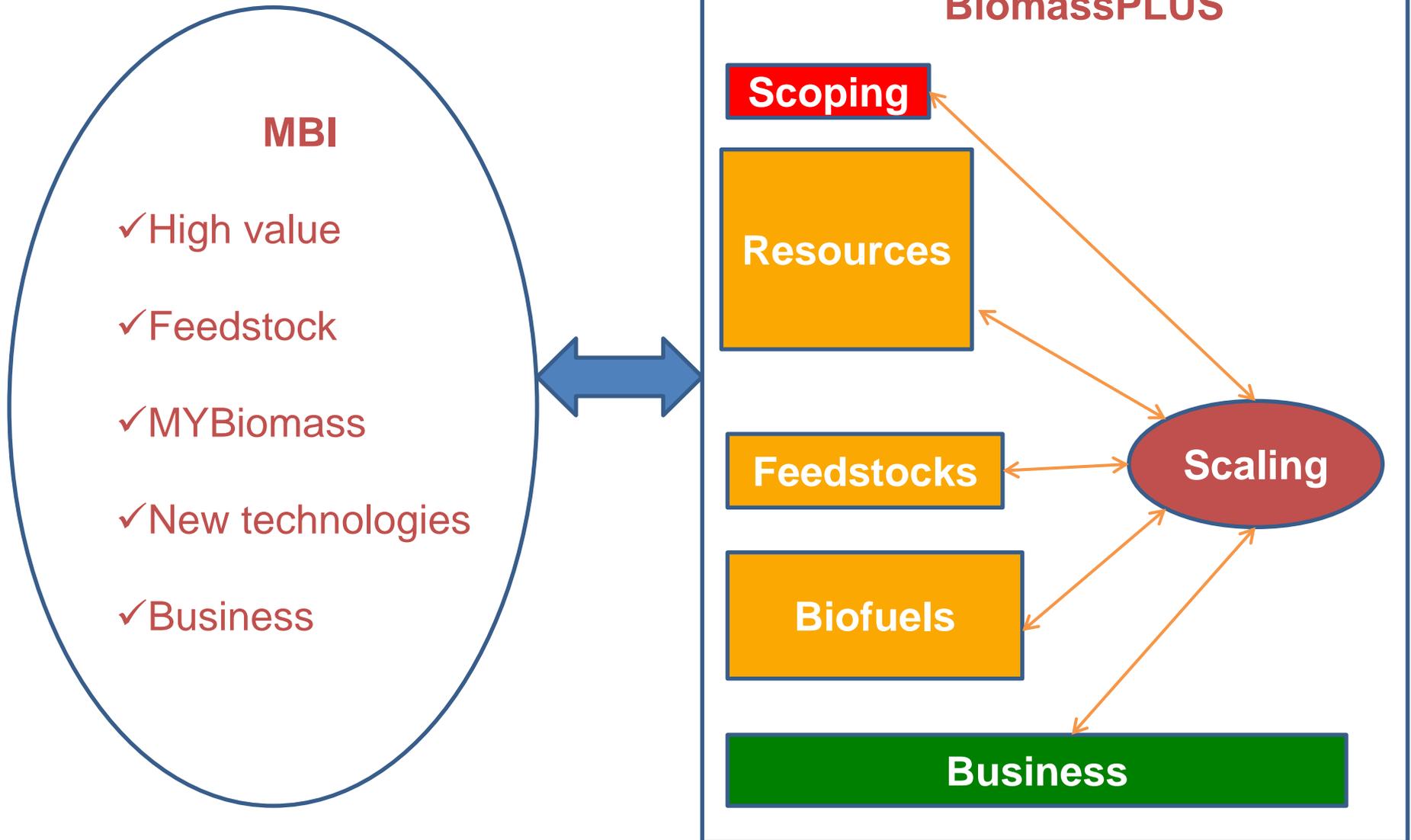


BiomassPLUS

Programme Structure



Supporting MBI with novel crops and technologies



Exemplar Underutilised Biomass Crops

Established Biomass Crop

1. Sugarcane
biogas, sugar
2. Maize
biogas, sugar, grain/meal/
food/feed
3. Soyabean
biodiesel, protein/oil
(food/feed), N-fixing
4. Miscanthus
cellulosic biofuel, animal feed
5. Eucalyptus

Novel Biomass Crop e.g.

1. Sweet sorghum
2. Millet, Nipah , Sago
3. Bambara groundnut
4. Napier grass
5. Leucaena



Cassava planting under TNB pylons

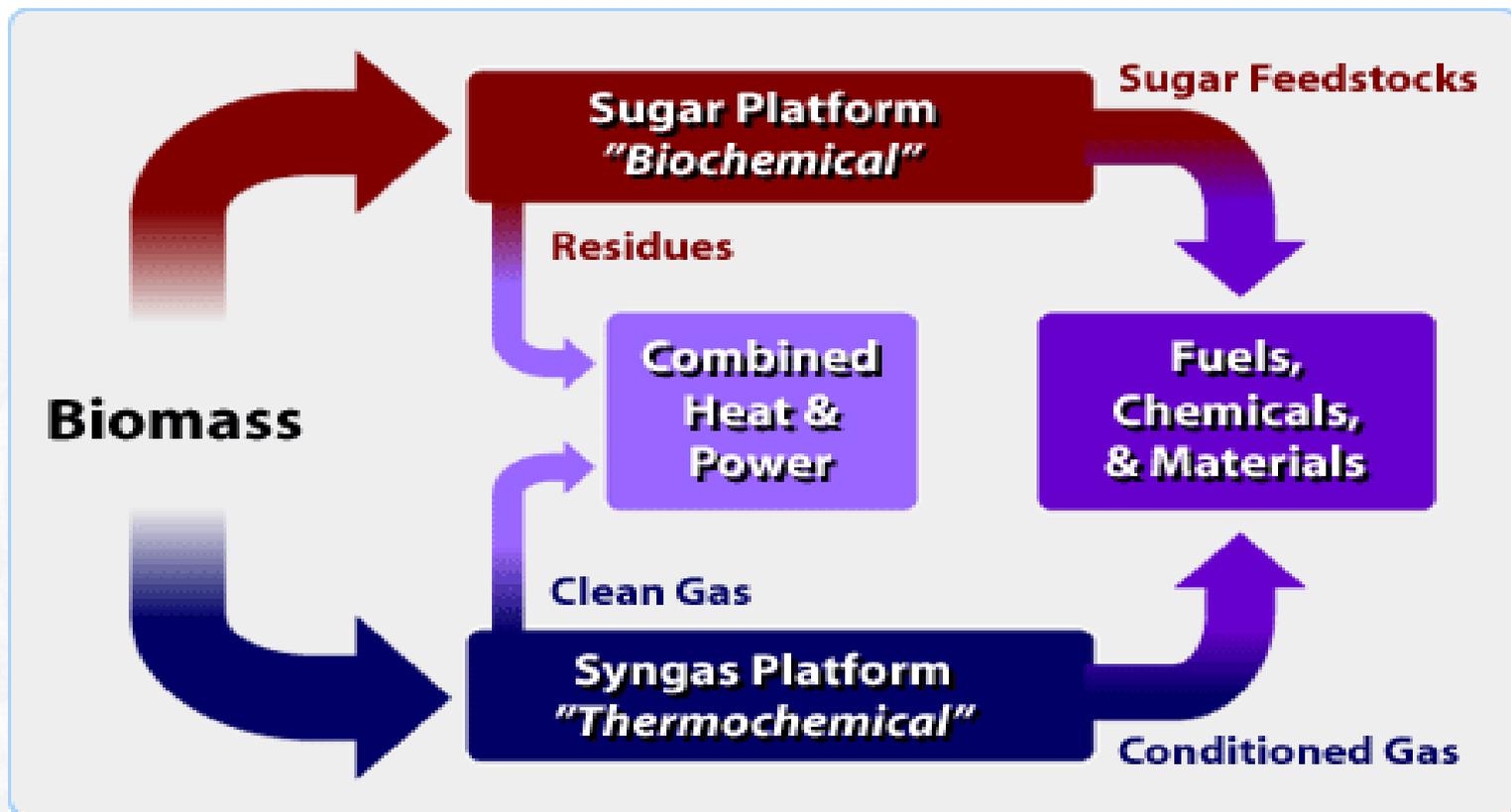


Peach palm intercropped with oil palm in MPOB



Pineapple intercropped with oil palm in MPOB

Integrated Biorefinery



BiomassPlus

Programme Capabilities

Hosting Partners

CFFRC/UNMC

- Expertise in agronomy, breeding , biotechnology, postharvest, end-use , modelling and mapping and economics of oil palm and tropical crops
- UNMC Facilities and CFFRC HQ and Field Research Centre
- Strong links with UoN UK Campus with similar expertise

Collaborative partners (current and prospective)

- Research Institutions: MPOB, MARDI, overseas research institutions
- Universities: UPM, UTP, UTM, UNIMAP, UNIMAS, De La Salle University (Philippines), Others (e.g. Thailand, China).
- Palm oil plantations and millers: FELDA, Boustead, KLKepong, Sime Darby
- BAE, Others.

Objective & Expected Outcomes of Workshop

Objective

- To bring together R&D stakeholders to brainstorm & formulate coherent strategy for development of under-utilised biomass crop industry

Expected outcomes

- A priority list of biomass products
- A priority short-list of underutilized biomass crops
- R&D strategies and programmes/projects in production, processing, end-use, supply & value chains
- Prospective collaborators & funding opportunities

'CFFRCPLUS' Scholarships

