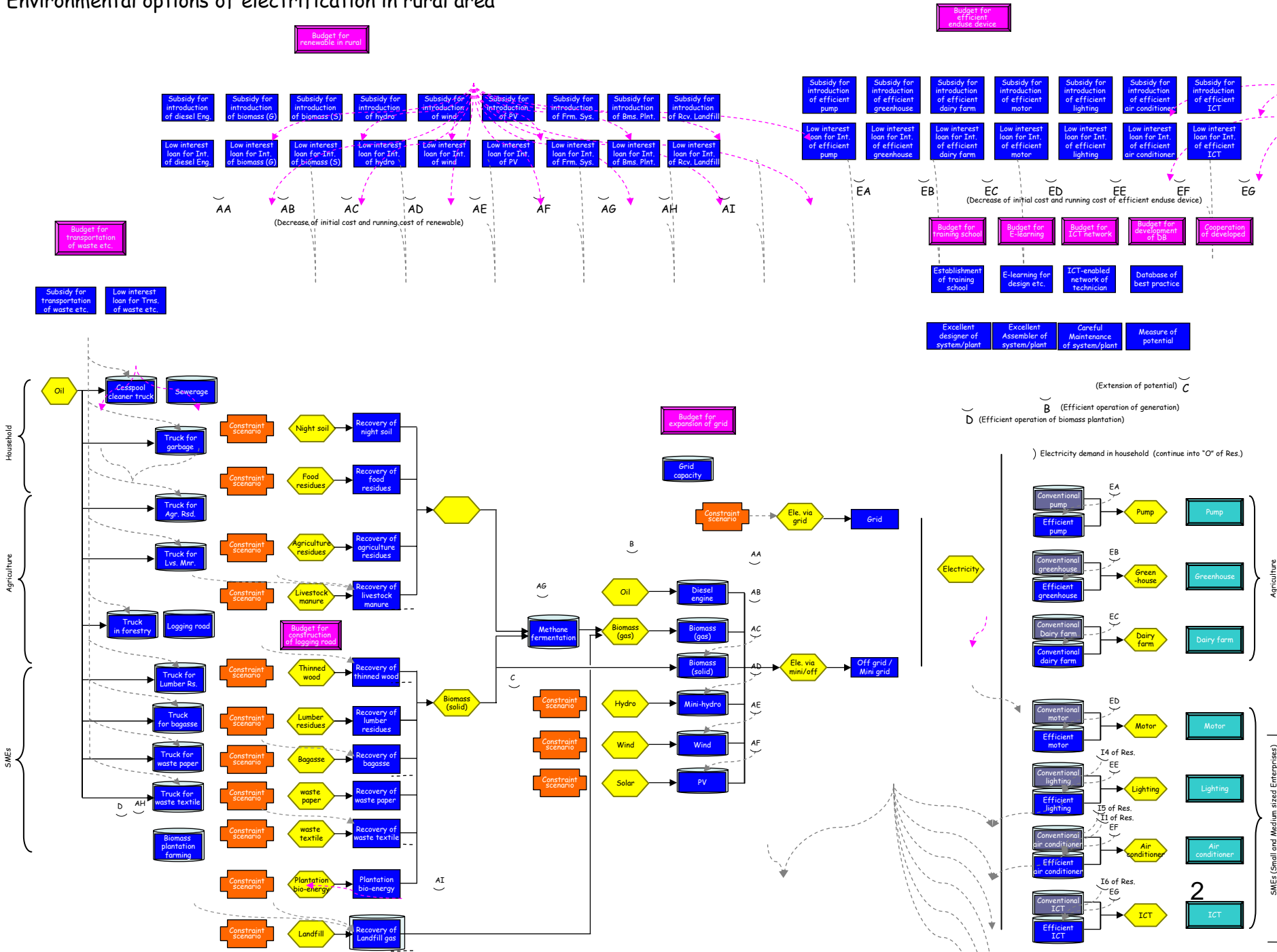


Electrification in rural area (Biomass) SDB for APEIS/IEA and APEIS/RISPO

Junichi Fujino (NIES)

The 10th AIM International Workshop; 10-12, March 2005,
National Institute for Environmental Studies, Tsukuba, Japan

Environmental options of electrification in rural area



Electrification in rural area (Biomass)

SDB for IEA and RISPO

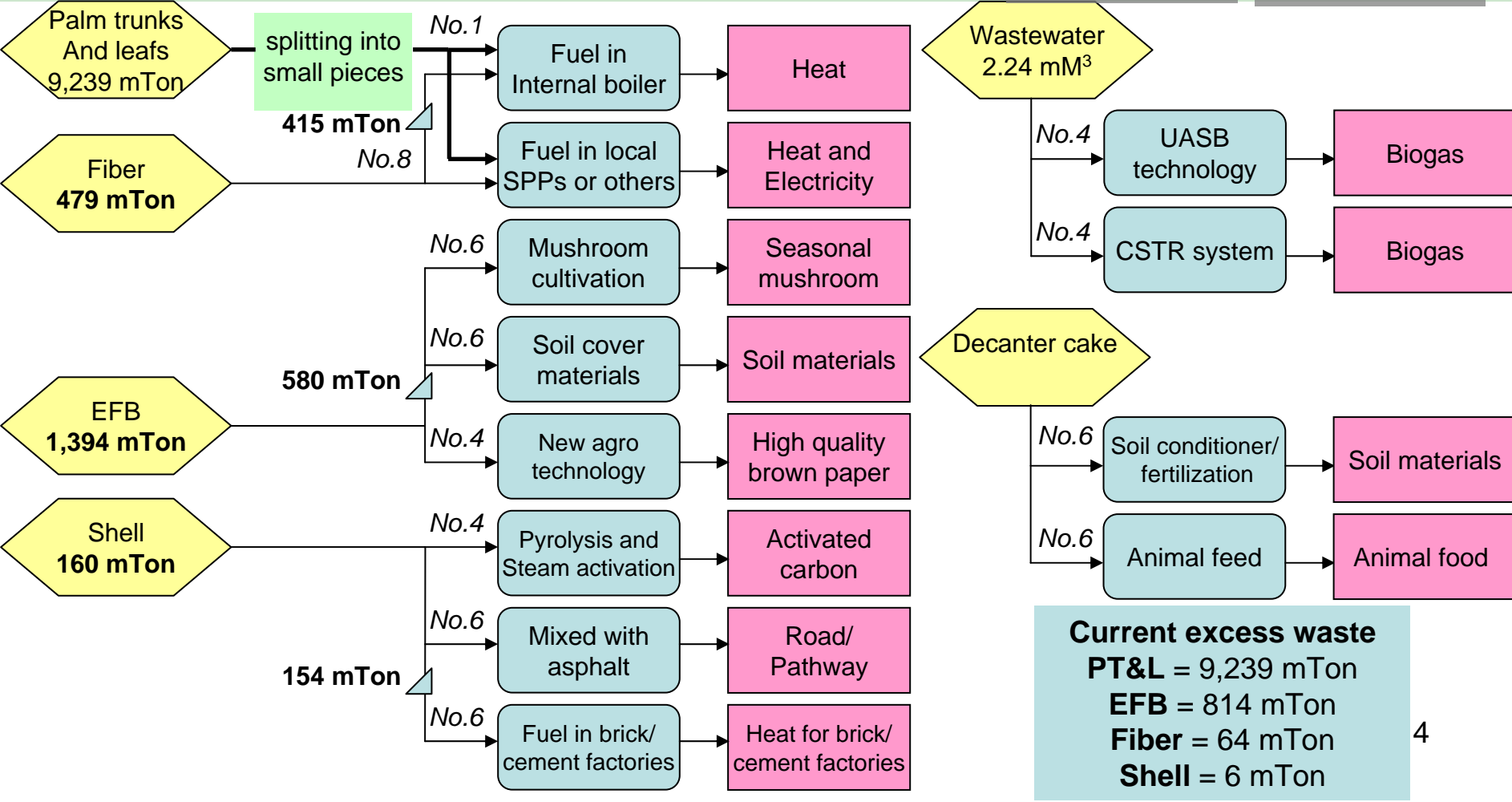
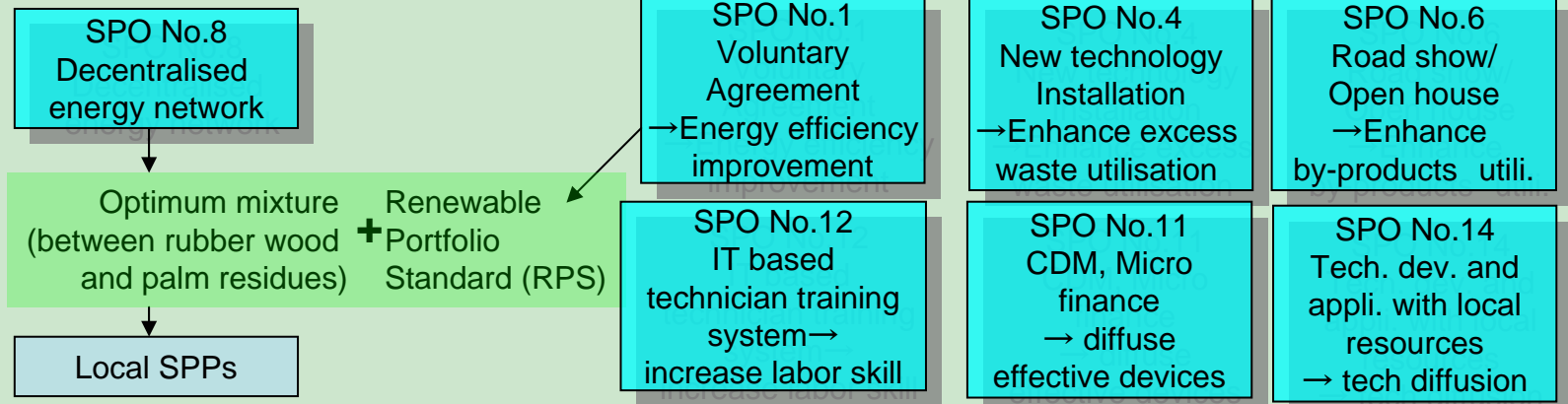
For IEA

- Detailed but rough flow sketch than the others (transportation, residential, water)
- Kindly ask your idea to enhance this flow

For RISPO

- Focused on industry-wise, residential-wise flow analysis including SPO (Strategic Policy Options)

Win-Win Situation Palm Oil Industries



Win-Win Situation
Palm Oil

SPO No.8
Decentralised energy network

SPO No.1
Voluntary Agreement
→ Energy efficiency improvement

SPO No.4
New technology Installation
→ Enhance excess waste utilisation

SPO No.6
Road show/ Open house
→ Enhance by-products utili.

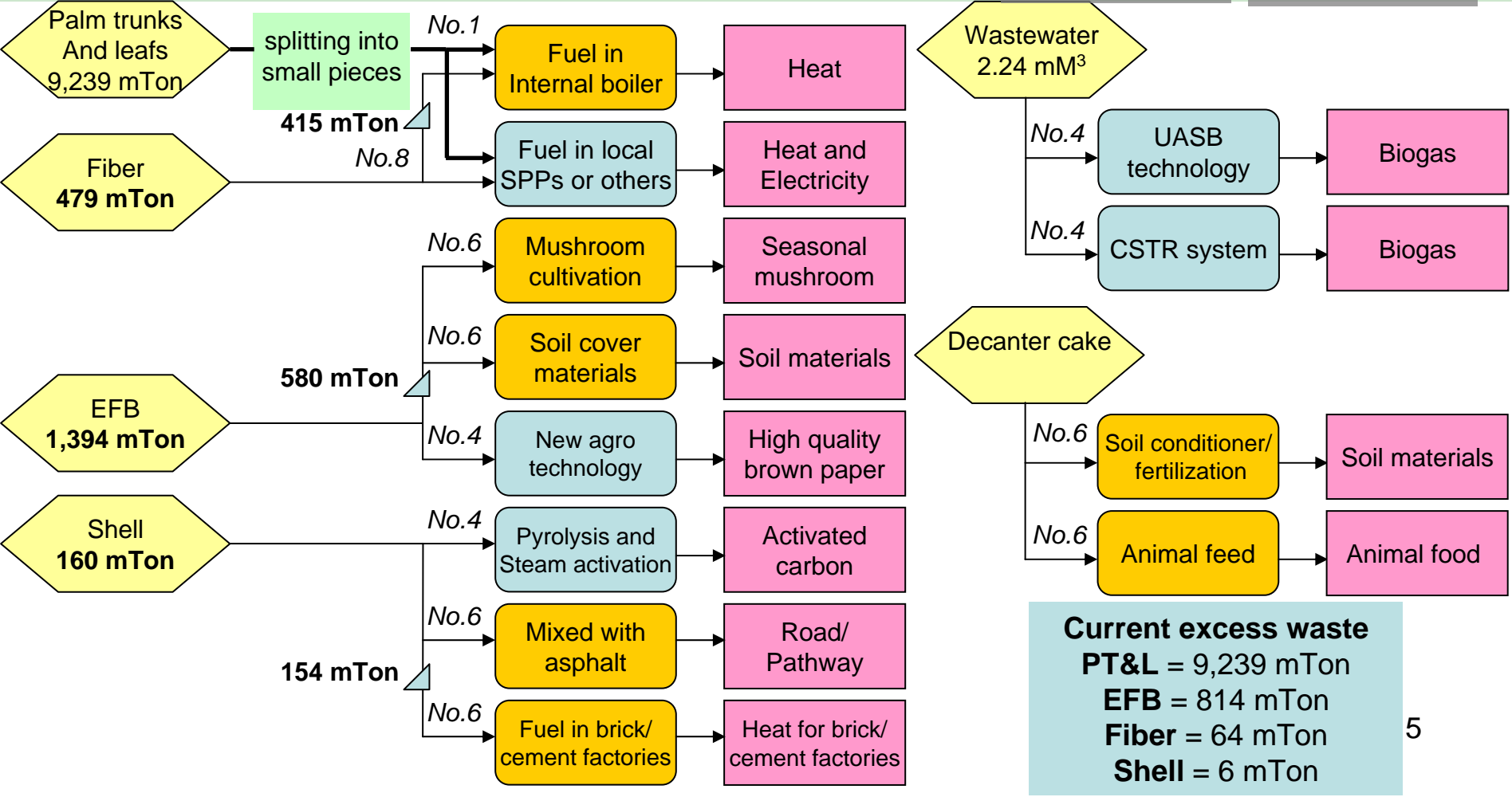
Package of Voluntary based, Less cost Policy Options

SPO No.12
IT based technician training system
→ increase labor skill

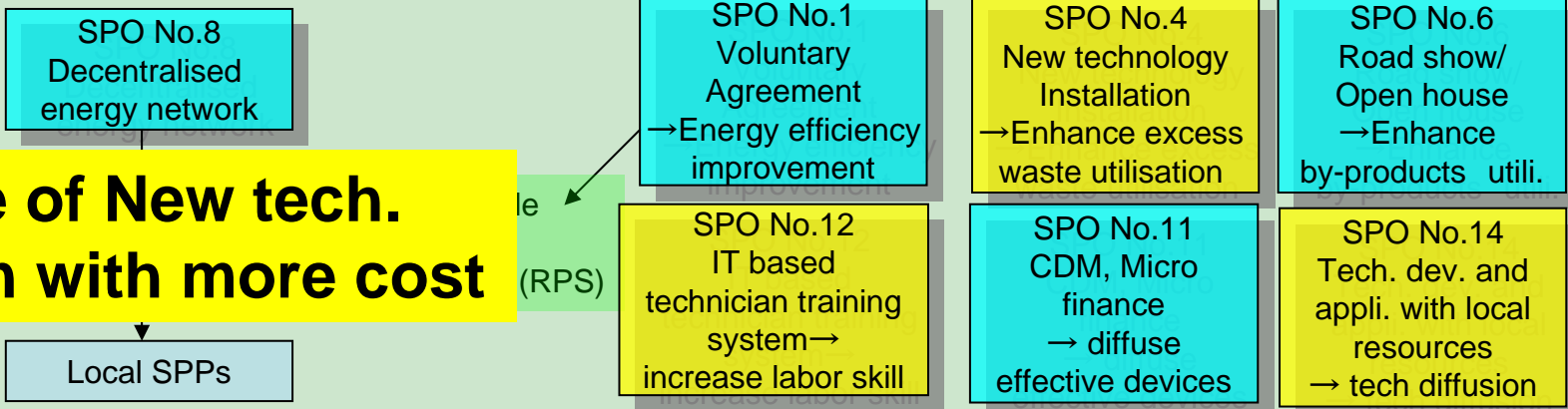
SPO No.11
CDM, Micro finance
→ diffuse effective devices

SPO No.14
Tech. dev. and appli. with local resources
→ tech diffusion

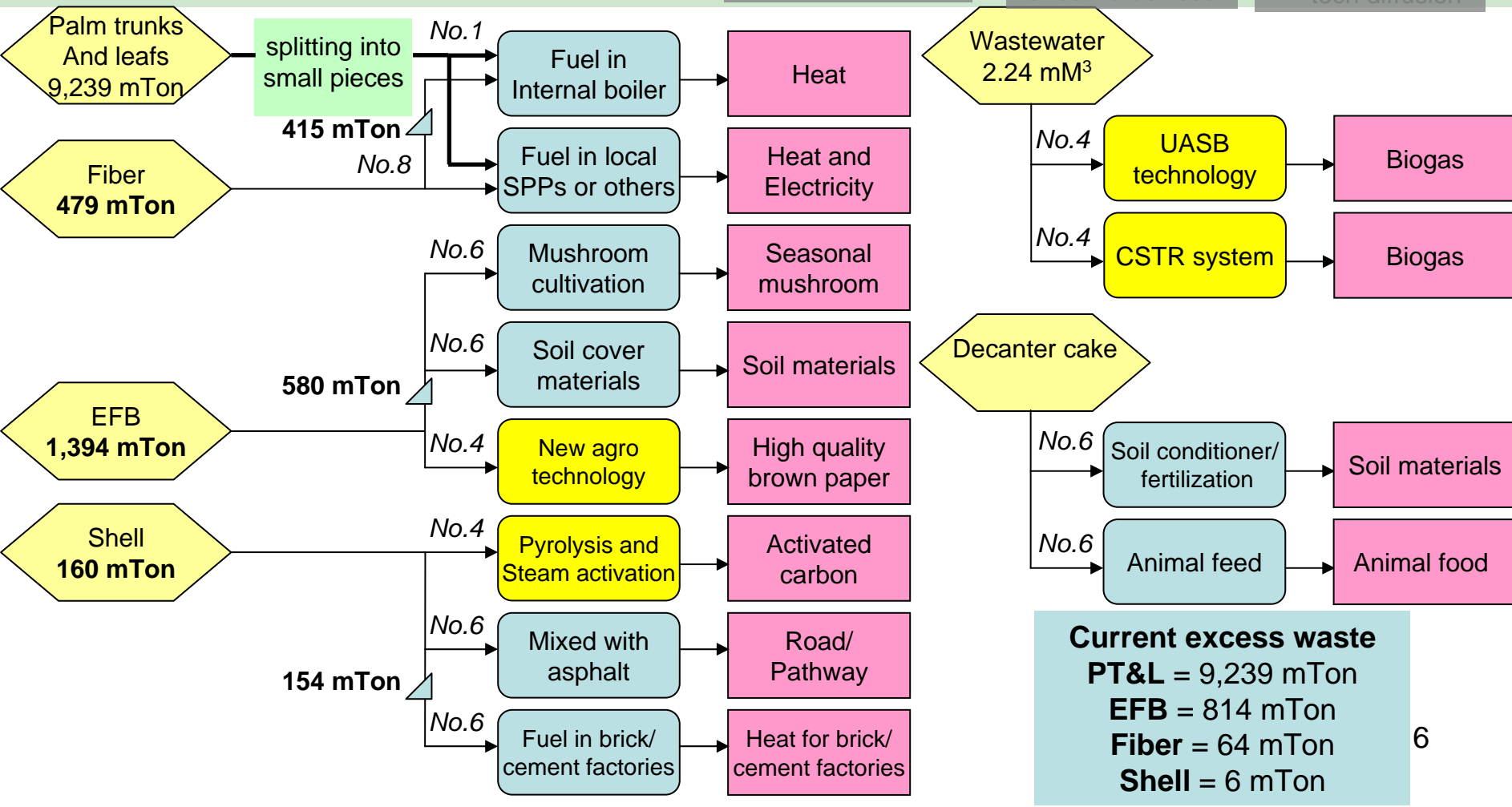
Local SPPs



Win-Win Situation
Palm Oil

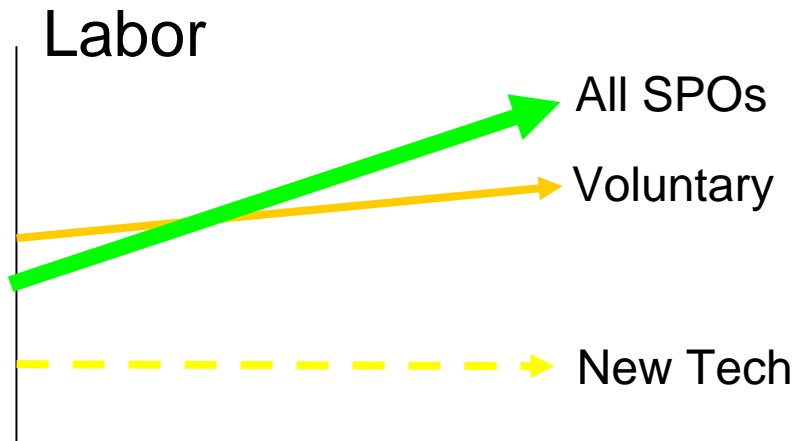
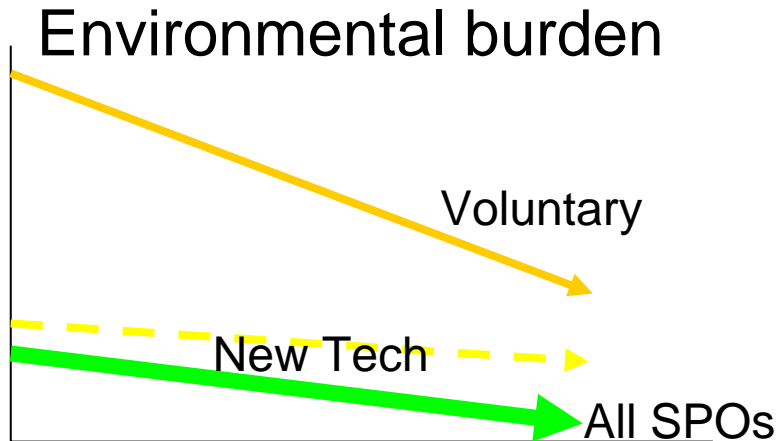
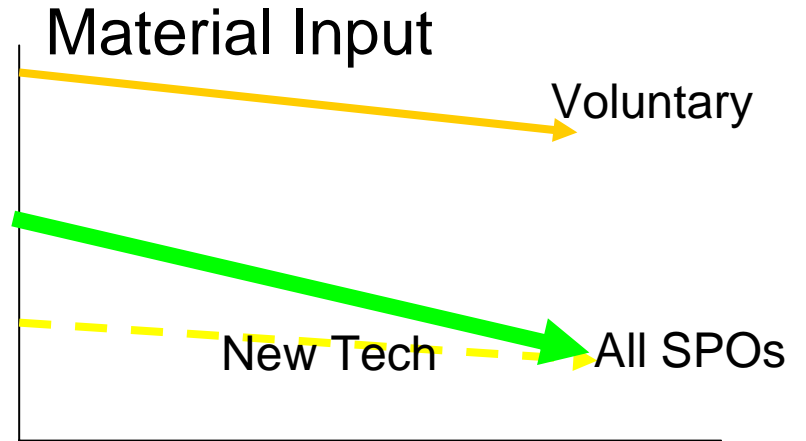
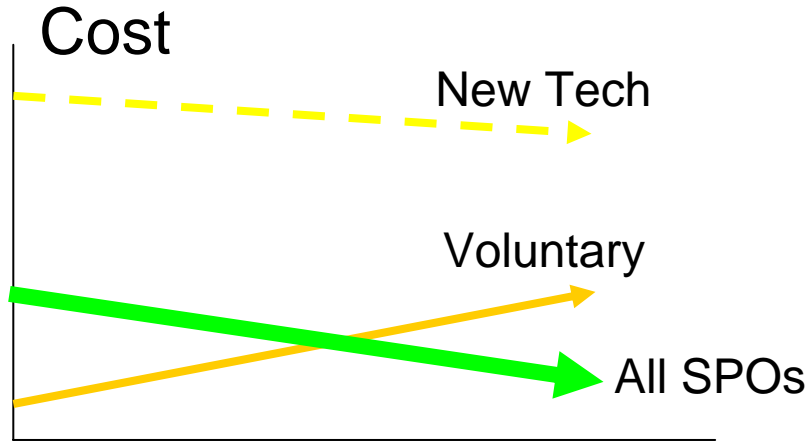


Package of New tech. diffusion with more cost



Current excess waste
PT&L = 9,239 mTon
EFB = 814 mTon
Fiber = 64 mTon
Shell = 6 mTon

Conceptual output from SDB and SPO



Electrification in rural area (Biomass)

SDB for IEA and RISPO

For IEA

- Detailed but rough flow sketch than the others (transportation, residential, water)
- Kindly ask your idea to enhance this flow

For RISPO

- Includes more social and economical options. Difficulty in quantification.