Biodiversity and Biotechnology
Yong Hoi Sen

Potential activities/programmes

• Post-graduate (Master, doctorate, post-doctoral)
• Basic degree (undergraduate)
• Diploma, certificate
• ‘Summer’ camp
• Short-duration workshop
• Industry, Institution and International collaboration
Training R&D and Consultancy

• Environmental Science
  ▪ biology, chemistry, physics
  ▪ geology, geography, statistics
  ▪ engineering, ICT
  ▪ best practices – sustainability, management, energy, sanitation, wastes, pollution, toxicity ...
  ▪ public health, occupational safety...
  ▪ economics, social sciences ...

Training R&D and Consultancy

• Aquatic science/biology/chemistry
  ▪ diversity of aquatic and semi-aquatic organisms (animals, plants, microbes, fungi, parasites ...)
  ▪ aquaculture – fish, crustaceans ...
  ▪ water chemistry, toxicology ...
  ▪ water-borne pathogens/diseases
  ▪ engineering, technology, socioeconomics
Training R&D and Consultancy

- Pest management (IPM ...)
- Economic zoology/entomology
  - injurious and beneficial animals (pests, pollinators, useful products)
  - bush meat, animal products ...
- Rodent pests and management
  - agriculture importance
  - public health importance (medical zoology)

Training R&D and Consultancy

- Malacology
- Arachnology
- Animal science
Training R&D and Consultancy

- Medical (and veterinary) zoology
  - medical and veterinary parasitology
  - medical and veterinary entomology
  - medical genetics; (bio)technology
  - malacology; zoonotic diseases ...
  - poisonous/harmful animals; rodents

- Microbiology (agriculture, medical ...)
- Health science

Training R&D and Consultancy

- Weed science
- Plant nematology
- Plant pathology; Mycology
- Agrobiotechnology, plant technology
- Plant (bio)chemistry and physiology
- Economic botany
- Horticulture
Training R&D and Consultancy

- Natural products
  - health food, pharmaceuticals ...
  - pesticides/biocides/biofertilizers ...
- Natural resources, genetic resources
- Nutrition science
- Bio-tourism, eco-tourism
- Traditional knowledge

Training R&D and Consultancy

- Genetics and genomics
  - animal breeding – farm and pet animals, ornamental fish ...
  - plant breeding – agriculture and horticulture crops, forest trees, disease/drought resistance ...
  - pathogens-vectors-hosts interaction
Biodiversity Park

Transforming campus ‘naturally’, ‘harmoniously’ and ‘creatively’ ...

- Indigenous plants – fruit trees, timber trees ...
- Medicinal plants, food plants ...
- Unusual plants, fungi ...
- Orchids, Nepenthes, Epiphytes ...
- Ornamental plants, economic plants
- Aquatic plants

Biodiversity Park

- Butterflies, dragonflies, stingless bees, grasshoppers, spiders ...
- Birds (aquatic ...)
- Frogs, turtles, lizards ...
- Fish (angling ...)
- Mammals – squirrels, otters ...
  [aesthetic, recreation, education, research, tourism, income ...]
Approaches

- Multi-disciplinary
- Inter-disciplinary
- Holistic
- Integrated
- Short-term vs long-term
- Fundamental vs applied
- Income generation
- Local, regional, global

Associates, Friends

- Industry – biotechnology, pharmaceutical, health products, horticulture, agriculture, aquaculture, pest control, engineering, ICT ...
- Government/international agencies
- NGOs – orchid society, bird watching groups ...
- Interested individuals