

Appendix 8. Identification of PAFPS in four city sites

Systems

- By Country/site.
- What systems?
- Location, importance, ethnicity, development history

Groups

- **Hanoi**; Cam, Tuan, Luan, Phoung, Anders
- **HCMinh City**; Hung, Huy, Stuart, Song Ha, Jonathan
- **PP**; Borin, Harvey, Albert, Dave
- **Bangkok**; Ruangvit, Toe, Peter, Lucy

Definitions-urban/peri-urban?

- Where? possible locations Likely major issues
- Location-built up area to 'relative rurality' ?

Emerging issues

- Nature of settlement-density/land use (eg industry,,road access, historical development)
- Using waste water/waste-water-fed pond water for horticulture-complementary/competitive?
- Synergisms-technical/health benefits

Bangkok

- Capture fisheries?
- Aquatic plants
 - Water spinach; open water-ponds
 - Water mimosa, open water-ponds
 - Lotus, ponds
 - Duckweed, ponds
 - Water lily, ponds
 - Water chestnut, open water and ponds
 - Informal and formal wastewater use
 - Open water includes irrigation canals, natural waterways, swamps

Bangkok

- Fish
 - Integrated/livestock fish-ponds
 - Agro-industrial wastes-fish ponds
 - Canteen waste/fish-fish ponds
 - Pellet-fed-ponds only
 - Ornamental fish-ponds only
 - No cages-too polluted ?
 - Recreational fishing

Appendix 8. Identification of PAFPS in four city sites

Phnom Penh

- Sewage-fed swamps
 - Boeng Cheng Ek-Phnom Penh south
 - Morning glory/mimosa
 - Boeng Kok-small, central
- associated capture fishing

Phnom Penh

- Pangasius/hybrid catfish ponds
 - Prek Pnou,
 - Factors contributing to its location
 - Close to Dai fishery, river, access to Kompang Chnang,
 - Close to Lakes area for water
 - Cheap to construct ponds
 - Market organisations-live fish
 - Easy to export live fish to Vietnam
- Borrow pits Dangkor District
- Relative importance of human waste, by-products, trash fish?

Hanoi: Thanh Tri district sewage-fed system

- Fish culture in ponds
 - Major production and sewage treatment – 800 ha
 - Export of fish outside of Hanoi
 - Fingerling production (nurseries)

Hanoi: Thanh Tri district sewage-fed system

- Aquatic plant production
 - Morning glory, mimosa etc – wet and “half-wet” (irrigated-ricefields and raised bed)
 - Possible major production and supply to Hanoi markets
 - Livestock/fish feeds

Hanoi: Thanh Tri district sewage- fed system

- Aquatic plant production
 - Morning glory, mimosa etc – wet and “half-wet” (on land production)
 - Possible major production and supply to Hanoi markets

Hanoi: the lakes

- Hanoi lakes
 - Minor fish production
 - Major importance for tourism – recreation
 - Importance ?

Appendix 8. Identification of PAFPS in four city sites

Hanoi-non-sewage

- New emerging area-close to 2000 ha-VAC-traditional and bid-rent-fish and aquatic plants
- Feedlot livestock linked aquaculture increasing
- Conversion of Thanh Tri to non-sewage fed (can't get it or don't want it!)
- Cartage of night-soil, ? septage?- Provincial centres-more important?
- Recreational fishing

Ho Chi Minh City +sewage

- Tilapia seed production
- Fish only growout
 - Monoculture
 - Polyculture
 - Ornamental
- Integrated fish/livestock/aquatic plants/rice
- Aquatic plants
- All ponds
- polluted canals/rivers-tubifex harvested

Ho Chi Minh City non-sewage

- Clarias/carps seed production
- Fish only growout
 - Monoculture
 - Polyculture
 - Cage culture –river
 - (ornamental?)
- Integrated fish/livestock/aquatic plants/rice
- Aquatic plants-relatively less

Ho Chi Minh City -siting

- Flood intensity relevant