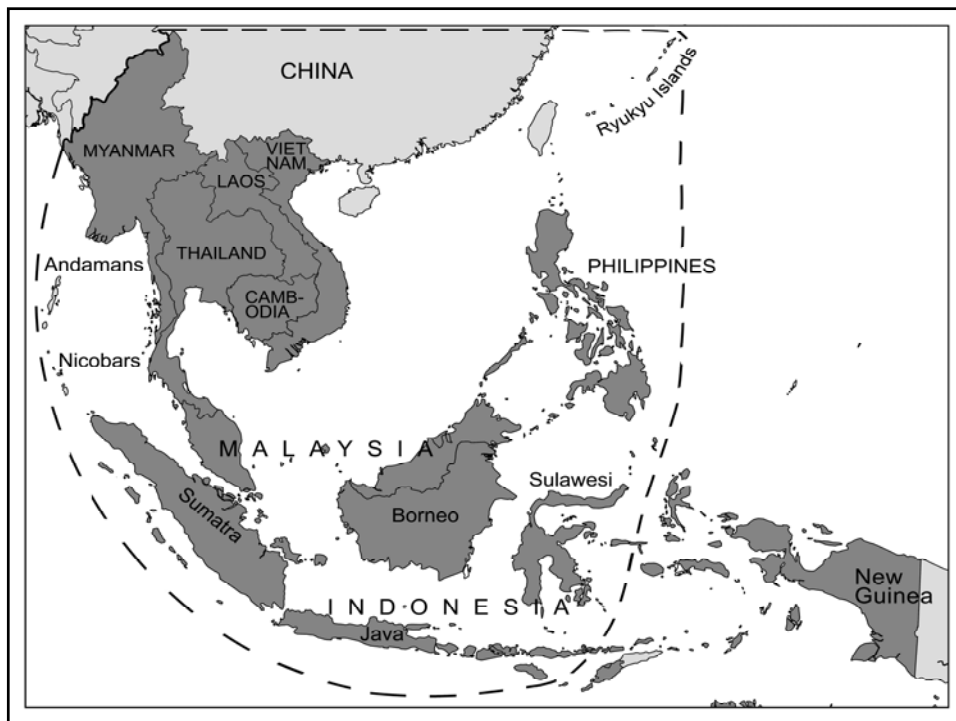


Maximizing Native Biodiversity

on
Golf Courses in Tropical Asia

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Biodiversity = Biological diversity

= the diversity of genes, species and ecosystems

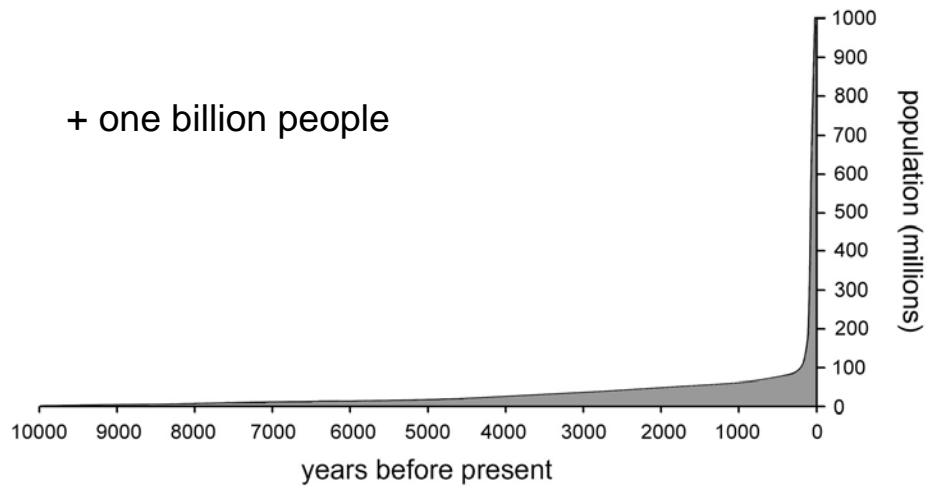
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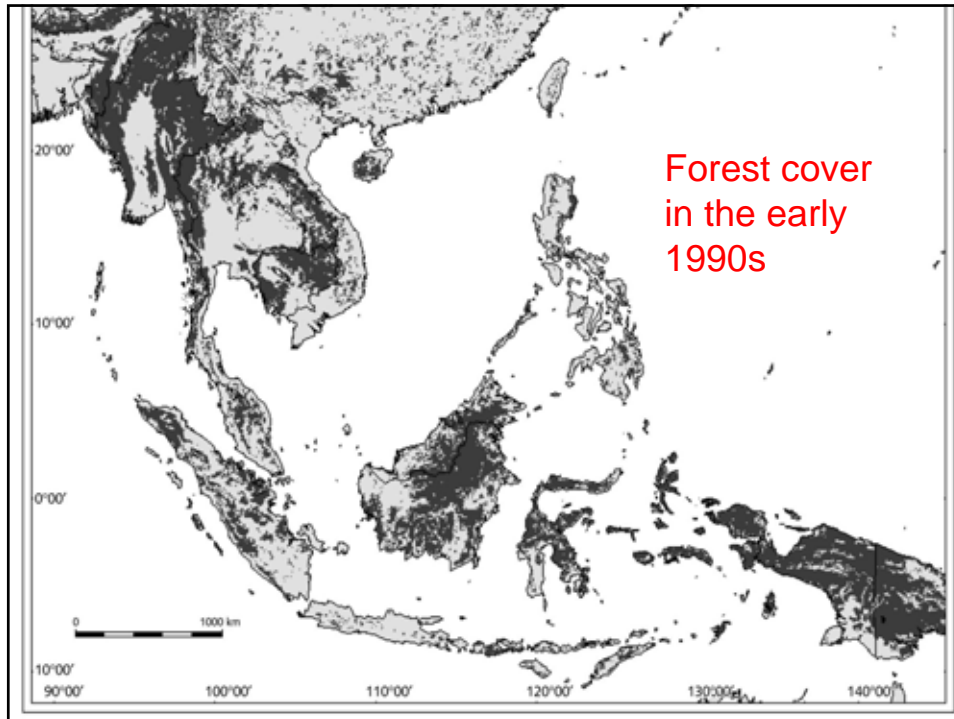
= the **diversity of** genes, **species** and ecosystems

Tropical East Asia has approximately:

- 20% of the world's plant species
- 23% of the world's bird species
- 15% of the world's mammal species
- 16% of the world's frog species
- 20% of the world's butterfly species
- 25% of the world's dragonfly species
- etc.

+ one billion people





Native species = species that occur naturally in the area

Alien or exotic species = species introduced deliberately or accidentally by people

Some of these aliens 'escape' and run wild. They are then called **naturalized** species.

Some of these spread widely and cause a variety of problems: these are **invasive** species





Why is Native Biodiversity Worth Conserving?



It is part of what
makes each place
unique

Why is Native Biodiversity Worth Conserving?



It is potentially
valuable

Why is Native Biodiversity Worth Conserving?



Once we have lost it,
it has gone forever

Why is Native Biodiversity Worth Conserving?



It is also good for
public relations



Biodiversity in people-dominated landscapes?

A simple rule:

“ The **greater the contrast** between the land-use and the natural ecosystem, the **fewer native species** will survive”

or, conversely

“The **more similar** the land-use is to the natural ecosystem, the **more native species** it can support”

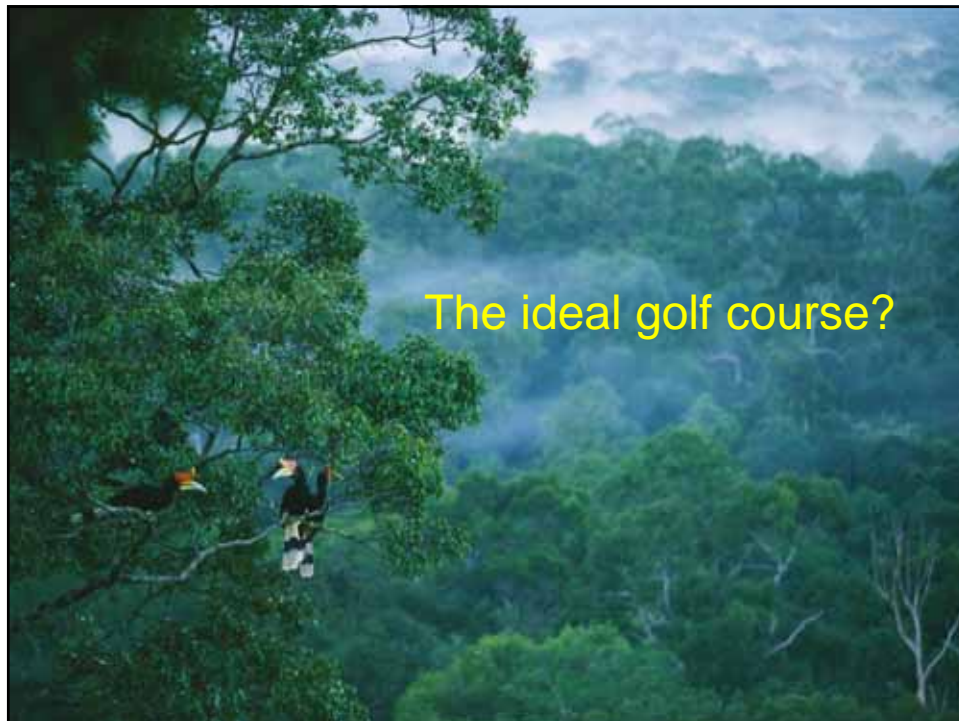
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Biodiversity on golf courses:

A realistic compromise:

Opportunities:

1. The structure of the vegetation
2. The choice of plant species

Biodiversity on golf courses:

No opportunities for biodiversity enhancement:

Greens }
Fairways } these have to be short, alien grass

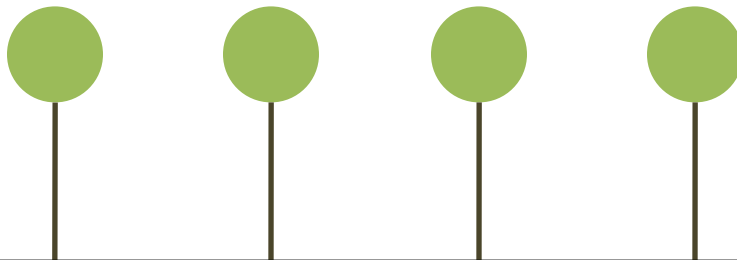


Biodiversity on golf courses:

Opportunities for biodiversity enhancement:

Rough - can be taller, native grass

Planted trees & shrubs - use native species,
- increase the density & diversity

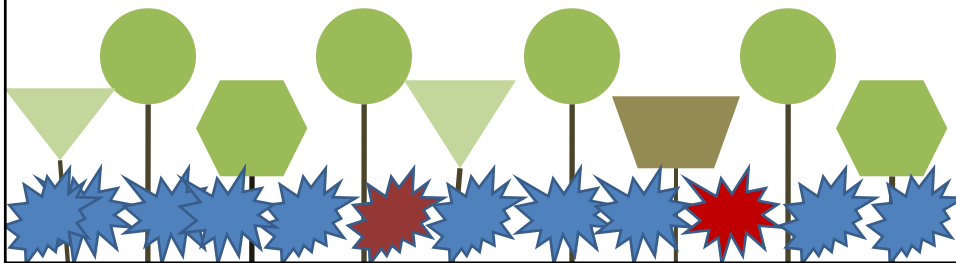


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Biodiversity on golf courses:

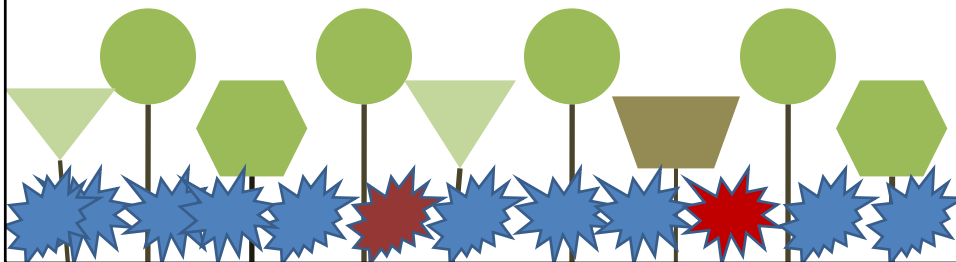
Opportunities for biodiversity enhancement:

Diverse, native plantings

→ fewer pest and disease problems

→ less pesticide use

→ more native birds & butterflies



Biodiversity on golf courses:

Opportunities for biodiversity enhancement:

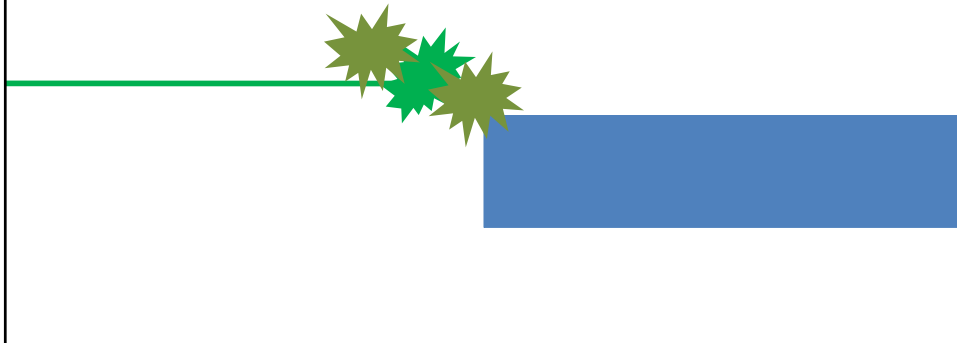
Water features - need “soft” edges



Biodiversity on golf courses:

Opportunities for biodiversity enhancement:

Water features - need “soft” edges - shrubs, tall grass or water plants



Biodiversity on golf courses:

Opportunities for biodiversity enhancement:

Unmanaged areas:

- **preserve** existing natural vegetation
- **restore** natural vegetation if necessary

How then can native biodiversity be maximised in a golf course?



Convincing all concerned



Engaging stakeholders



Selecting a competent landscape designer/contractor



Planning and Implementation

Vet plans and plantings



Order plants early from suppliers



Salvage plants

Propagate plants



Maintenance

Actively
maintain native
plants theme

Upgrade
habitats



Fauna and flora
surveys



Thank you!
Questions are welcome

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