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Delivering coherent green infrastructure: resourcing the priorities

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IT GOES WITHOUT SAYING

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- + Resources are limited
- + We need to be smart in what we do
- + Focus and Impact

BUT IT ALSO GOES WITHOUT SAYING

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- Nature is complex and dynamic – ecosystems, habitats, species – land and sea...
- Even Scotland is a large place – e.g. c. 53000 agricultural holdings
- Despite successes, there's a lot to be done
- It's all about relationships

..... And the drivers of change are BIG

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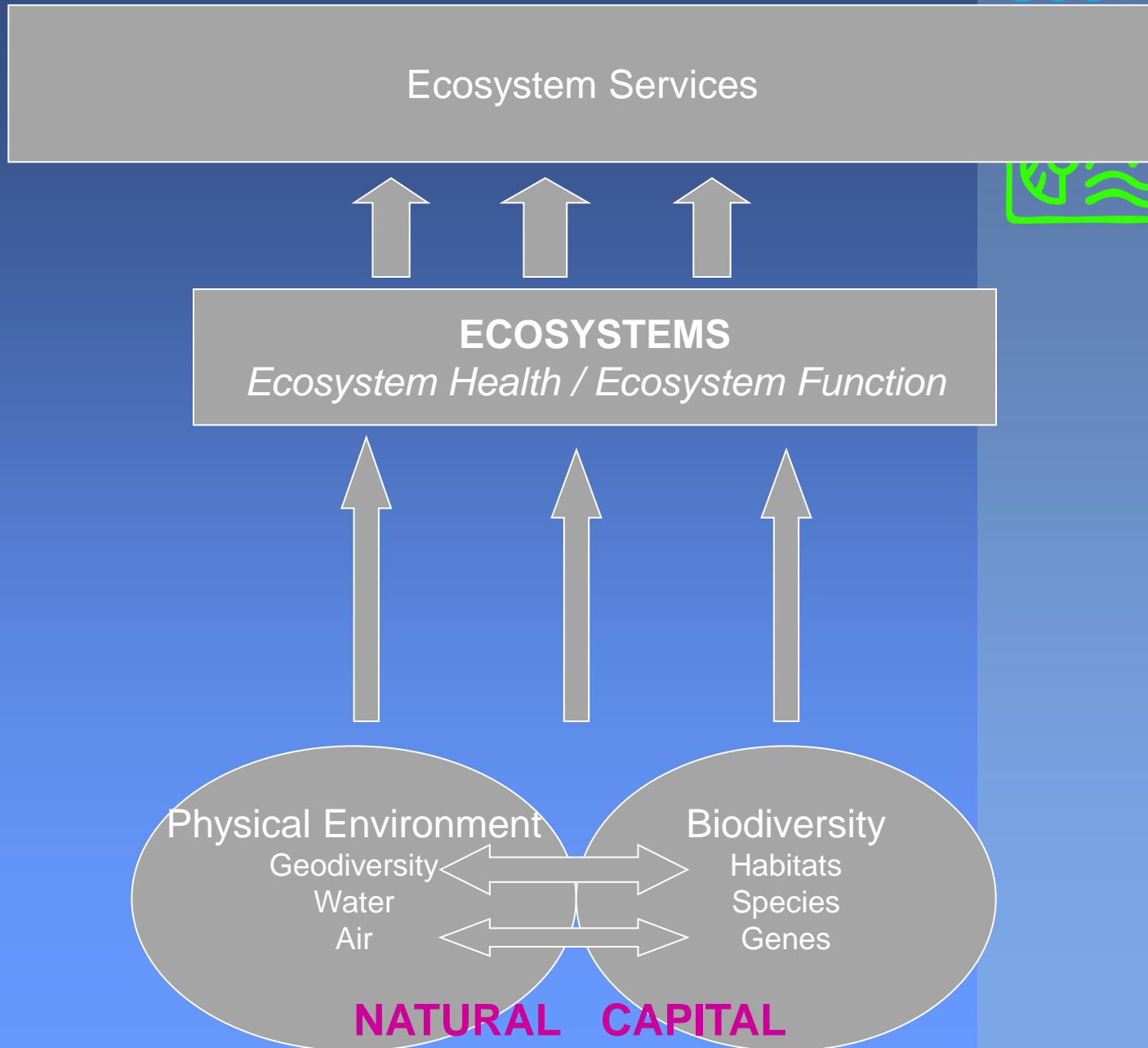
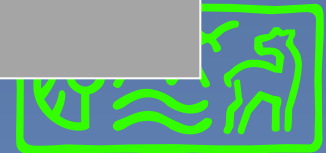
- Climate change
- Diffuse pollution.
- Fragmentation – land management practices
- Grazing pressures
- Invasive Non Native Species and Pathogens
- INTERACTIONS and COMPLEXITY

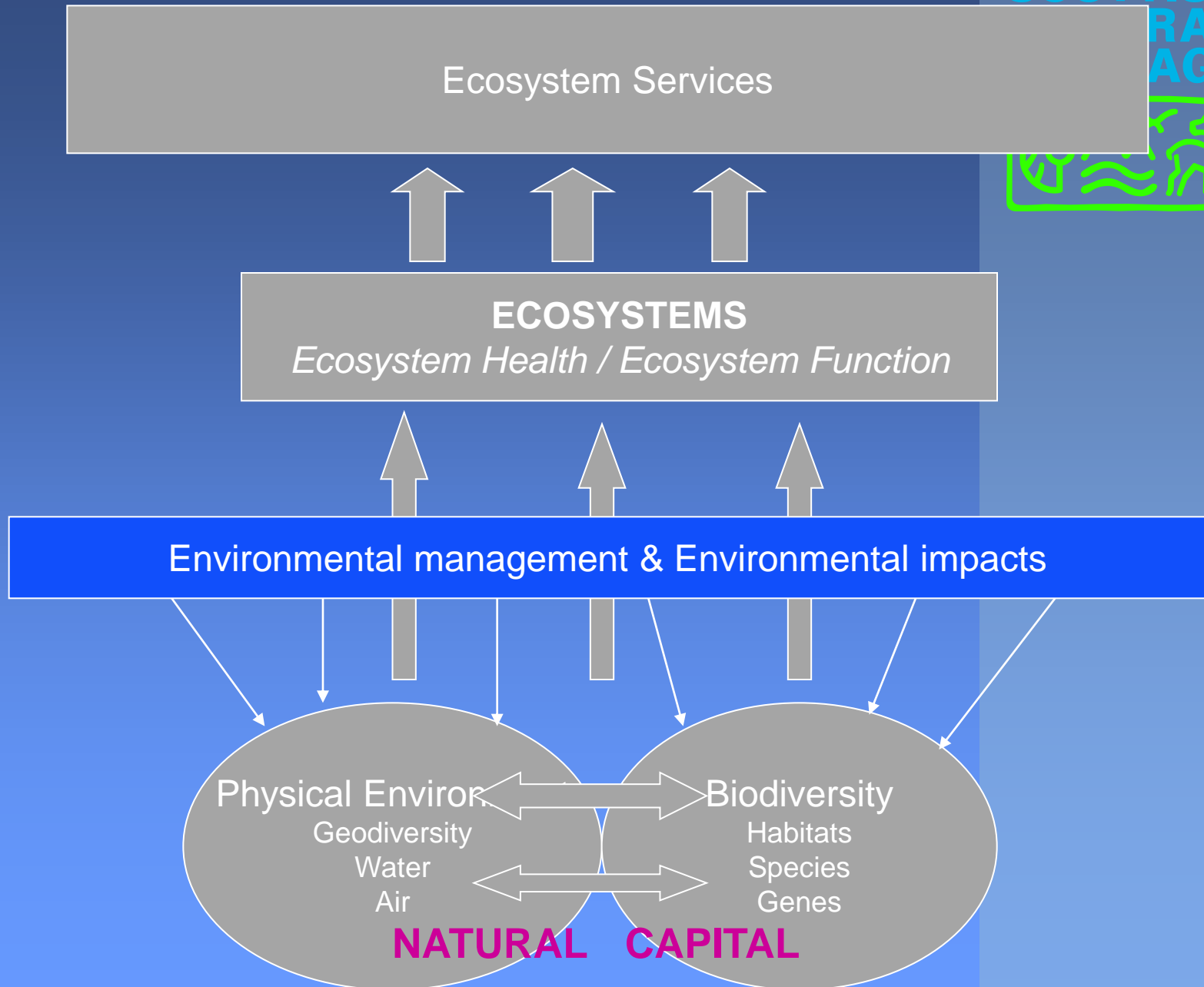
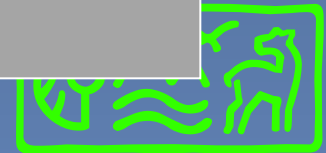
What do we need Ecological Networks For?

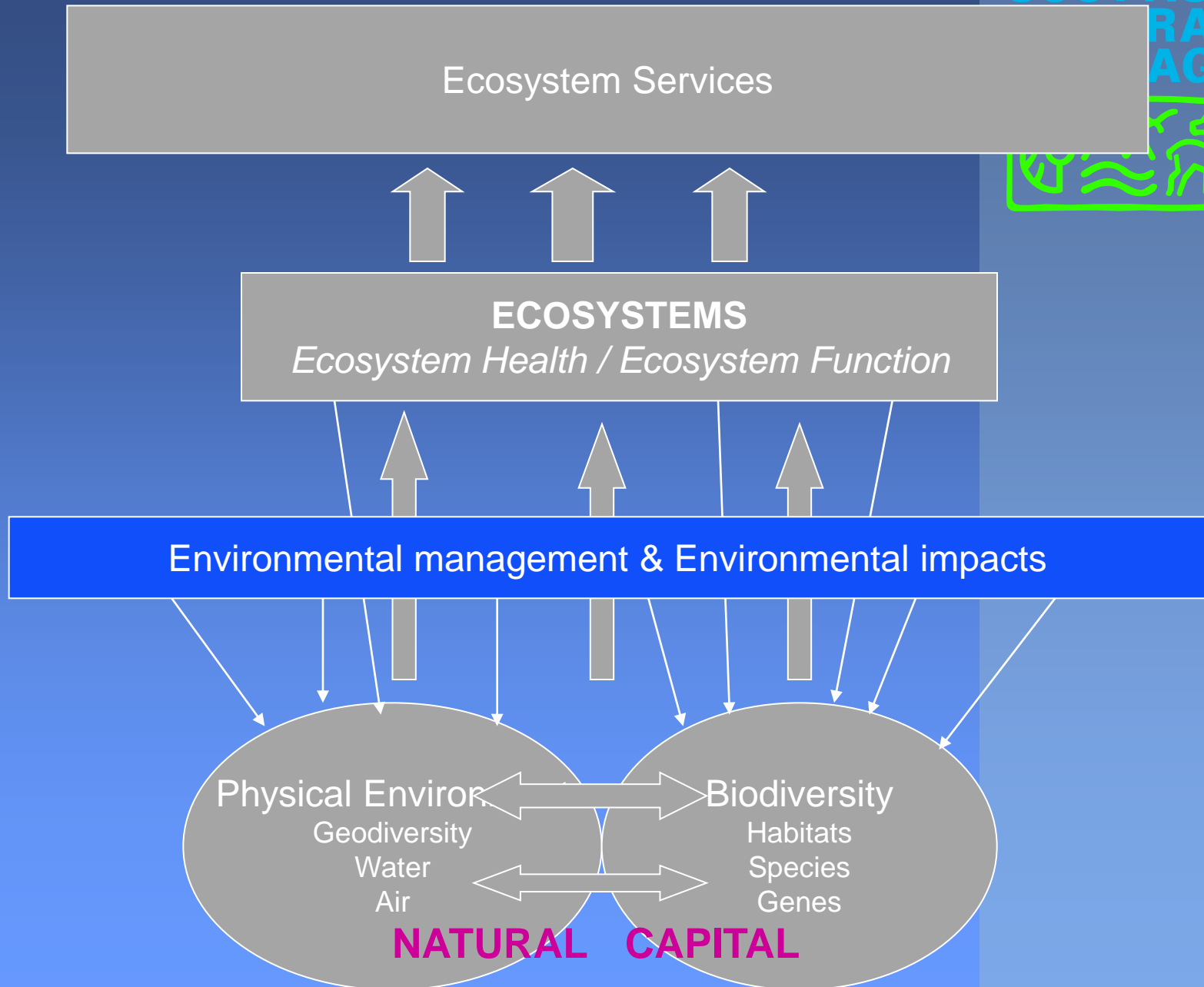
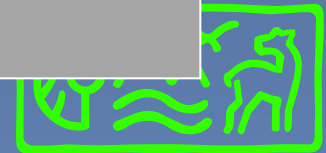
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- + Two Studies –
 - UK National Ecosystems Assessment (UKNEA)
 - The Economics of Ecosystems and biodiversity (TEEB)
- + Its good for our country, its people and its economy
- + Conserve and Build Natural Capital
 - Resilience and Prevention of further loss of Biodiversity
 - Secure and enhance Ecosystem Services
- + Intrinsic values – because we should







And What Are Ecological Networks For?

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- + Defined by function
 - space for nature to deliver the goods and services; and
 - to provide for the rest of wildlife.
- + Joined Up - Functional connectivity
- + Big areas too
- + Fractal scales
 - National,
 - Catchment
 - Forest and Farm
 - Field margins, road verges, gardens, streets, parks, green roofs
- + Modularity and Resilience: Catchment and Farm

STRATEGY, TACTICS, PLAYERS

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Scarce resources, enormous task, limited time

- + Convention on Biological Diversity (CBD)
European Union Biodiversity Strategy (EUBS)
Scottish Biodiversity Strategy (SBS)
- + SBS – building natural capital, landscape scale approach, opportunity mapping, resources to follow priorities; tackle drivers of change (farmland a priority)
- + Working with land managers (“you cannot antagonise and influence at the same time”)
- + Direction rather than destination
- + Dealing With Uncertainty
- + Learning rather than reporting

THE TOOLS FOR THE JOB

Money

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- + **The Scotland Rural Development Programme (SRDP))**
- + **Scottish Natural Heritage grants**
- + **The Water Environment Fund (SEPA)**
- + **Green Stimulus package** (Funding for peat land restoration)
- + **The Central Scotland Green Network Development fund.**
- + **EU LIFE** and other EU funds (integrated projects)
- + **Heritage Lottery Fund** (landscape partnerships)
- + **Landfill Tax Credit Scheme** (under review)
- + **Various charitable trusts.**

THE TOOLS FOR THE JOB

Standards and Regulation

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- + Biodiversity Duty on Public Bodies
- + Good Agricultural and Environmental Condition (GAEC)
- + United Kingdom Forestry Standard (UKFS)
- + Development planning and Development management (including EA)
- + Protected Areas (NATURA, SSSIs, MPAs, LNRs etc.)
- + Protected Species (EU and national – prevention of uprooting, killing, reckless disturbance etc)
- + Licensing (development, fisheries, protected species etc)
- + Control Orders (INNS, pathogens etc)
- + Regulating Orders (shell fisheries)
- + Water Environment (Controlled Activities) Regulations (CAR)
- + Pollution Prevention and Control (PPC)

THE TOOLS FOR THE JOB

The Market – “to promote the public interest..... led by an invisible hand”

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- + Efficiency in use of fertilisers and sprays;
Biological controls; husbandry of soils etc.
Technological fixes
- + Market/Consumer pressures and signals
 - Quality
 - Brand - place/reputation
 - food Marques
 - Protected Geographical Indication (PGI)
- + Corporate Social Responsibility
- + Information, labelling, awareness

“A perfection of means but a confusion of aims seems to be our main problem”

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- + Benefits.. Improved natural capital and ecosystem services
- + A understood strategy that delivers clear agreed priorities
 - Opportunity mapping against an assessment of ecosystem health at a catchment scale
- + The “Means” need to be aligned to deliver the strategy. And used imaginatively (especially the broad and general ones (GAEC, UKFS, CAR, Development plans, Marine plans) These can be aligned with market benefits.
- + Regulation and Standards should “protect the best and prevent further degradation.
- + Funds (incentives) targeted where they are needed and should deliver enhancement

Applying Funds to Enhance Ecosystems

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- + Tackle the drivers of change
- + National priorities: which in greatest need of remediation/treatment
- + National priorities: what is most prevalent/ systemic problem
- + Local priorities – what issues matter most in individual catchments
- + Local priorities – how do we add value locally

CONCLUSION

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- + Defined clear priorities – the shared agenda for all of government and its agencies (roles and responsibilities; joined-up)
- + Health indicators – assess success of treatment; inform adaptive management
- + One simplified agenda for land managers. Increased confidence and success.
- + Opportunity for reduced regulation
- + SCARCE RESOURCES / MAXIMUM IMPACT

Acknowledgements

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- + Pursuing self interest will “promote the public good.. led by an invisible hand” (Adam Smith)
- + “You cannot antagonise and influence at the same time” (John Knox)
- + “A perfection of means but a confusion of aims seems to be our main problem” (Albert Einstein)
- + “Nature is not only more complex than we think but it is more complex than we can think” (Frank Egler)
- + “The 'control of nature' is a phrase conceived in arrogance, born of the Neanderthal age of biology and philosophy, when it was supposed that nature exists for the convenience of man.” (Rachel Carson)
- + **form ever follows function.** This is the law (Louis Sullivan)
- + Pride goes before disaster and a haughhty spirit before a fall” - (Proverbs 18 (The Bible))

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