

# Managing Growth

(from the perspective of Ecological Economics)

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efficiency

distribution

sustainability

$$\max \left( \frac{\text{Human wellbeing}}{\text{Human appropriation of planetary resources}} \right)$$

subject to biocapacity



ecosystem  
*goods*

ecosystem  
*services*

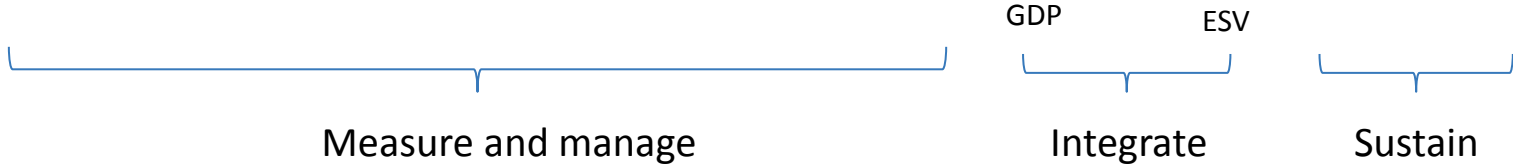
**Built Capital  
and  
Human Capital**

**Human  
wellbeing**



**Natural capital**

	Economic benefits	Market value	Non-Market value	Biophysical supply
<b>ecosystem goods</b>	Food	\$\$		
	Building materials	\$\$		
	Fuel	\$\$		
<b>ecosystem services</b>	Local water quality regulation	0	\$\$ / time	## / time
	Local water filtration	0	\$\$ / time	## / time
	Regional aesthetic enjoyment	0	\$\$ / time	## / time
	Global GHG sequestration	0	\$\$ / time	## / time
	Continental wildlife benefits	0	\$\$ / time	## / time
	(Plus others)			



economic value = market value + non-market value

unpriced benefits  
unpriced damages

(growth in market activity may or may not be economic)



**Natural  
capital**

ecosystem  
*goods*

ecosystem  
*services*

**Built Capital  
Human Capital**

***Biophysically  
Sustainable  
Human  
wellbeing***

Bio-capacity supplied

Bio-capacity demanded by humans

(growth may or may not be sustainable)

# Phosphorous footprint of Lake Simcoe has overshoot local bio-capacity

- More *growth as usual* is not sustainable
- Growth makes sustainability even harder to achieve
- Sustainability not achieved by no further growth

	<i>degrowth in P needed per year over each of the next 30 years</i>
growth as usual	2.5%
growth only from low impact development	2.2%
no growth or no-impact development	1.6%

(my calculations based upon LSPRS (MOE, 2010))



# Conclusions

- Growth needs to be managed because no automatic mechanism that ensures it is economically efficient and sustainable
- Efficiency informed by considering ecosystem services
- Sustainability informed by capacity of natural capital vs demand
- Growth makes environmental objectives harder to meet
- No growth is not sufficient to meet environmental objectives
- Economic instruments for P-reduction can help to minimize costs, reveal information, and provide ongoing rewards for reductions

# Support a transformation to post-growth economics

- Seek out the advice of ecological economists  
E.g. Canadian Society for Ecological Economics ([CANSEE.ORG](http://CANSEE.ORG))
- Uncover and communicate nature's non-market values  
E.g. Ontario Network on Ecosystem Services  
([ONEcosystemServices.CA](http://ONEcosystemServices.CA))
- Gain economic literacy to support the transformation  
E.g. Sustainability Network's EL Course for ENGO Professionals  
([SustainabilityNetwork.CA/Economic-Literacy-Project/](http://SustainabilityNetwork.CA/Economic-Literacy-Project/))