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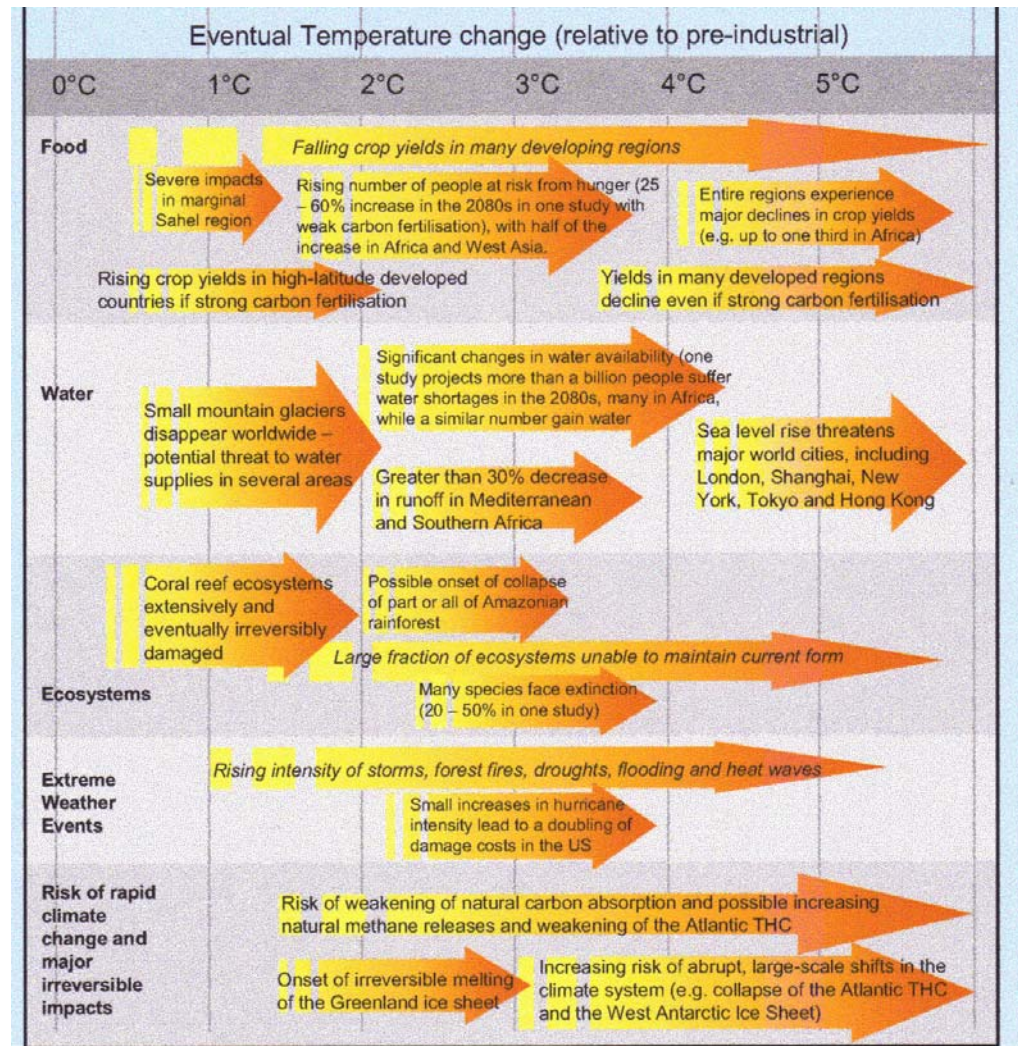
New Generation Co-operative

The purpose of a Co-operatively based supply chain is to manage out the 'risks' between the various parties.

It is looking to ensure a sustainable continuous supply of green energy to customers.

Guided by an acknowledged set of values.

THE STERN
REVIEW
'Climate
Change . . .
is the
greatest and
widest-
ranging
market
failure ever
seen'



Two basic organisational strategies

- Organise horizontally
 - Achieve bargaining scale
 - Provide service proposition
- Organize Vertically
 - Add value
 - Own brand
 - Market position closer to consumer

Business organisation - features

- Ownership
- Control
- Beneficiaries

Define a Co-op as

- User owned
- Control by democratic vote
- Returns on capital are limited
- Margins (benefits) according to patronage

Common characteristics of NGC's

- Equity investment establishes delivery rights.
- Delivery rights are also a 'Delivery Obligation'
- Delivery rights within Members' agreement.
- Rights are linked to equity units in the coop.
- Co-op can purchase commodity in place of undelivered rights.
- Rights allocated according to capacity.
- Rights share issue is closed at (plant) capacity

Delivery Rights

- Are in the form of equity shares
 - The delivery right is directly linked to a share
- Can be sold to other eligible producers
- BoD approves transfers – ownership control
- May appreciate or depreciate
 - dependent on Co-op performance
- High level of patronage refunds

Advantages of NGC approach

- Adequate equity raised at outset to realise B. Plan
- Burden of capitalisation distributed equitably
- Up front investment means members want the business to succeed
- Assuming performance – existing members can sell invested equity
- Value reflects performance of the Co-op
 - The net assets of the Co-op
- Co-op capital is permanent

NGC success depends on

- Well founded business strategy
- Identification of a ready market
- Proper capitalisation
- Sound management
- Strong role by BoD overseeing policy direction and protection of members' assets
- Following sound co-operative practices

NGC negatives

- Only open to those who can afford up-front capital investment
- Democracy can be based on number of rights owned
 - not one member – one vote
- Some begin to assume an ‘investor’ culture
 - driven by RoC rather than Return on Use
- Leasing rights a way hold on to appreciated value
 - ownership moves from active producers

Conclusions

- NGC's are successful – US, Canada, Antipodes
- They are successful Co-ops
- Benefits accrue to supply chain players
- Provide capital exit for investing members
- The legal model is available in UK
- Need careful business planning

THE STERN REVIEW

“If these investments (strong actions to reduce emissions) are made wisely, the costs will be manageable, and there will be a wide range of opportunities for growth and development along the way.

For this to work well, policy must promote sound market signals, overcome market failures and have equity and risk mitigation at its core.”

**Outline business plan for a forest bio-mass timber-to-heat
New Generation Co-operative**

Objective

To increase returns to timbers growers for SRW
and sell 'heat' to school / community centre at below carbon fuel cost.

Costings based on a per unit heat requirement circa **0** MWh per year

Income

Oil cost / litre **0.00**
Kw/h per litre 9.76
Cost of fuel per Kwh £0.0000

Marketable price of green heat expressed as
a percentage of carbon fuel **0.00%**
Sales price of green fuel per Kwh £0.0000

Income **£0**

Capital requirement

**Net
Cost**

Capital grant expectation **40.00%**
Boiler installation **£0** £0
Chip storage **£0** £0
Crane fed chipper **£0** £0
Capital contingency **0.00%** £0

Total capital requirement after SBSS grant **£0**

Depreciation term in years **0**
Annual cost of depreciation #DIV/0!

KWh/t of green material (50% moisture) **0**
Annual tonnage required #DIV/0!

Production costs

Cost of timber per tonne (SWR) **0** #DIV/0!
Harvesting cost per green tonne **0** #DIV/0!
Haulage to yard **0** #DIV/0!
Chipping and plant mobilisation **0** #DIV/0!
Delivery to boiler site **0** #DIV/0!
Management cost **0** #DIV/0!
Plant repair & mtnce % of gross capital **0.00%** £0

Cost of capital

Fixed capital

Equity cash provided as proportion of total 33.00%
Remaining fixed capital to be financed £0
Flat rate finance cost **0.00%** £0

Working capital

Number of months creditor taken **0**
Number of months debtor to finance **0**
Average working capital required #DIV/0!
Overdraft cost **0.00%** #DIV/0!

Total costs #DIV/0!

Net profit #DIV/0!

Equity capital employed £0

Return on equity capital #DIV/0!

Profit distributed at **0.00%** £0.00 return on equity invested

Amount distributed as bonus on timber sales #DIV/0!

Additional bonus on timber sales per tonne #DIV/0!

**Value of timber provided by growers
sold as heat.** #DIV/0!

**Equity required investment per tonne
of timber commitment** #DIV/0!