Donella Meadows
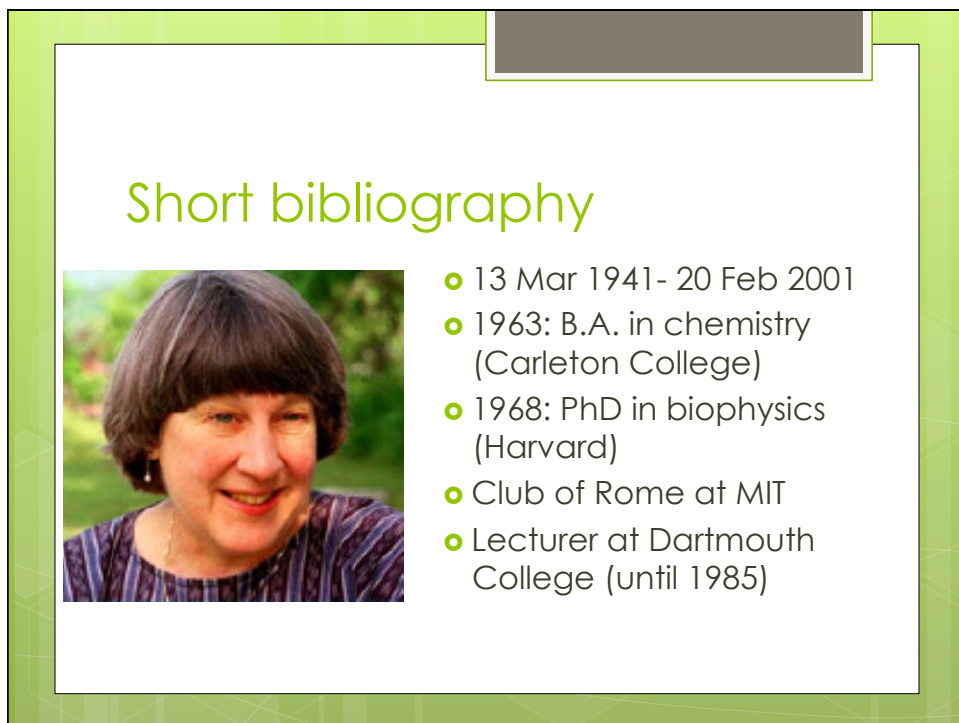
System thinkers
By Debora Doeringer

Short bibliography

- 13 Mar 1941- 20 Feb 2001
- 1963: B.A. in chemistry (Carleton College)
- 1968: PhD in biophysics (Harvard)
- Club of Rome at MIT
- Lecturer at Dartmouth College (until 1985)

Important influences in life

- 1 year travel after her PhD

"Looking with Asian eyes, we couldn't believe how much stuff people had. We saw how little the stuff had to do with happiness"

Important influences in life

- Attending of 2 week seminar at MIT by Jay Forrester

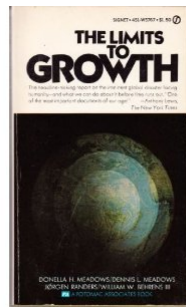- resigned from her position in Harvard to start in the new group at MIT

Life style

"she talked sustainable development and walked it"

- After 1985 concentrated on environmental activism
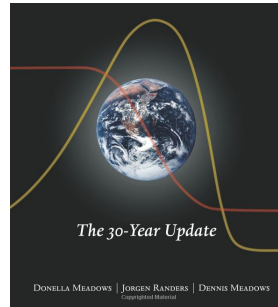- Foundation of environmental institutions, publications, organic farm…

Club of Rome

- World modelling project

- 17 researchers led by Dennis Meadows

- Donella was part of the population sector ("integrating biological, social and economic factors … in account of fertility, aging and mortality")

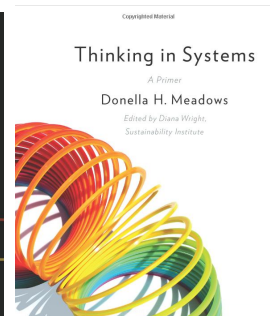# Some Publications

(1972)	(2004)	(2008)

Limits to growth (1972)

- Book published from her research at MIT

- First book with strong scientific basis

- Published in 30 languages, 10 million copies sold

Limits to growth

Presents 3 major conclusions:

1) With present growth , the limits will be reached within the next 100 years

Result will be sudden and have uncontrollable decline

Limits to growth

2) Possible to alter growth trend and to stabilize ecology and economy

Global equilibrium could be designed

Limits to growth

3) If decision is the second option, work has to be done sooner rather than later

Her systems wisdoms

1) Get the beat
   before disturbing, study behaviour

2) Listen to the wisdom of the system
   help system to run itself

Her systems wisdoms

3) **Expose your mental models to the open air**

get others to challenge your assumptions

4) **Stay humble. Stay a learner**

be prepared for surprises

Her systems wisdoms

5) **Honor and protect information**

things go wrong because of wrong or missing information

6) **Locate responsibility in the system**

ways the system creates its own behavior

Her systems wisdoms

7) Make the feedback policies for feedback systems

  design policies that change

8) Pay attention to what is important, not just what is quantifiable

  some things can't be measured, but still very important

Her systems wisdoms

9) Go for the good of the whole

  don't ignore the system as a whole

10) Expand time horizons

  short and long terms have to be considered

Her systems wisdoms

11) Expand thought horizons
Interdisciplinary communication

12) Expand the boundary of caring
expanding the caring (moral and practical reasons)

Her systems wisdoms

13) Celebrate complexity
makes it interesting and work

14) Hold fast to the goal of goodness
keep standards absolute

Important concepts

- Systems can't be controlled, but they can be designed and redesigned

- Global poverty and war have to be addressed on a systematic level

Thanks for your attention!