BENIGN BY DESIGN fabrics with minimal impact















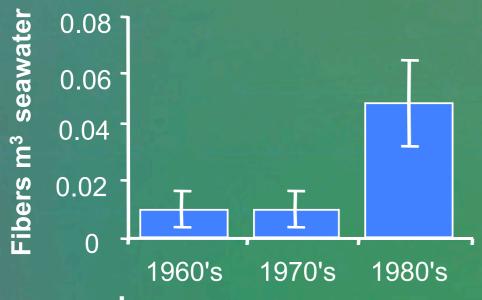




THE PROBLEM

Clothing fibers:

- most abundant global debris
- problem worsening



Beyond oceans

- land: sewage fertilizer
- air we breath



Laundry Lint Pollutes the World's Oceans

011-10-21 15:15 2 Comments





APRIL 30, 2012 -- When you pull your favorite fleece Jacket snugly around you, you probably never think about how it could be contributing to marine pollution.

lowever, recent research has investigated exactly that, exploring whether synthetic fabric products (such is fleece) could be a potential source of microscopic plastic fibers in the ocean and on beaches.





licroplastics from washing machine wastewater are polluting beaches

Tiny plastic particles from laundry wastewater are being washed into the marine environment, according to recent research. The plastic, from synthetic clothes cleaned in domestic washing machines, is a significant source of contamination and, unless measures are taken to address the problem, growing coastal populations will only exacerbate the situation.



HARMFUL

CHEMICALS:

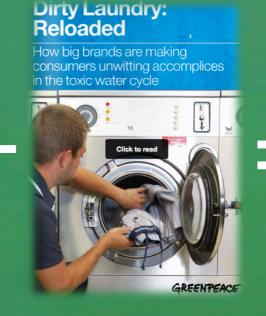


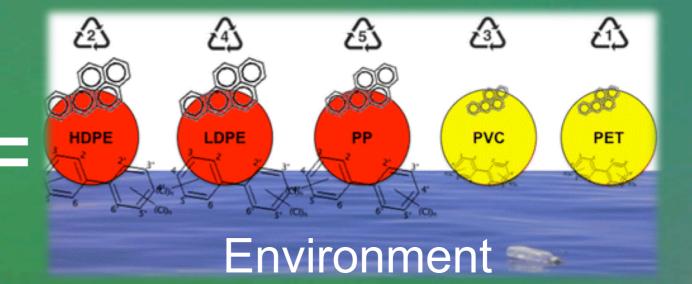
Classify plastic waste as hazardous

Policies for managing plastic debris are outdated and threaten the health of people and wildlife, say Chelsea M. Rochman, Mark Anthony Browne and colleagues.

LIFE-CYCLE







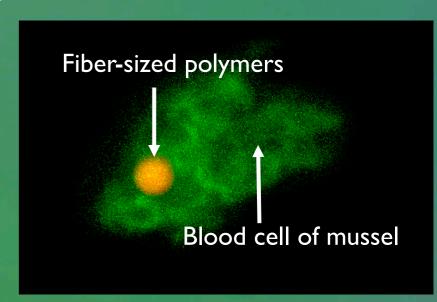
WHAT IS IMPACT?

WILDLIFE



FOOD WE EAT

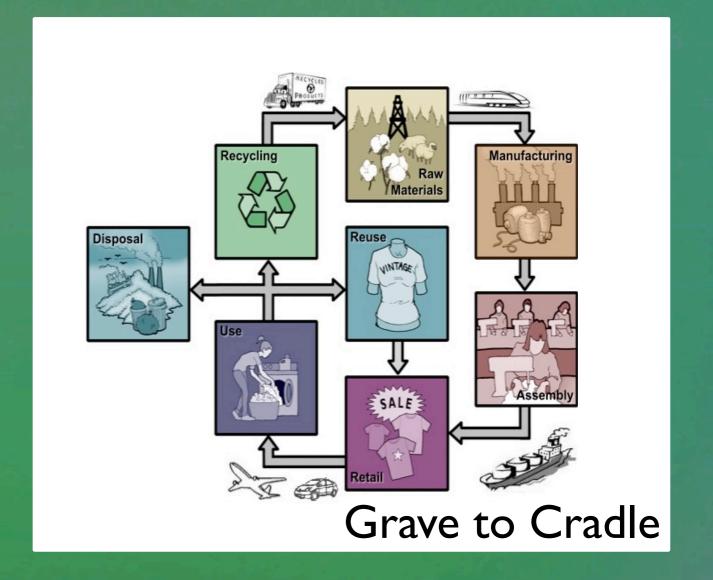
HUMANS



BENIGN BY DESIGN



BENIGN BY DESIGN IN 5 COST-EFFECTIVE FABRICS WITH MINIMAL IMPACTS

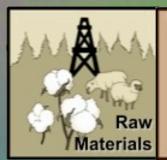


How do we meet our mission?

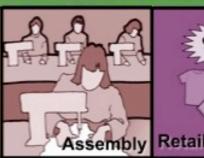
SYSTEMS APPROACH: CHOOSING FABRICS

- MINIMIZE IMPACTS
- EMIT FEWER TOXIC FIBERS

HOW IT WORKS









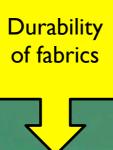








New data: Not currently available



Emissions of fibers



Human **Impacts**





Possible Fabrics



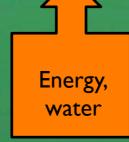


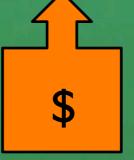
Best Fabric

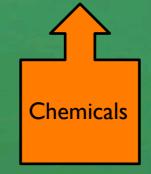


Existing data: current indices









HOW IS IT UNIQUE?



WHAT WILL IT CHANGE?



Our TEAM OF NETWORKED RESEARCHERS



Prof. Peter Lay



Dr Elizabeth Carter



Dr James Browne



Dr Chelsea Rochman



Mr Blair **Jollimore**

























Dr Richard Engler



Prof. Patricia Holden



Prof. Sangwon Suh



Prof. Ben Halpern



Prof. Steven Gaines

OUR VISION

Focused R&D approach







Biocompatible fibers

HELP NEEDED

- I. Generate awareness of issue: within industry
- 2. Further develop research agenda
 - biocompatibility: I I polymers
 - emissions: different knits
 - persistence
- 3. Partner: additional organizations
 - integrate: data & existing indices
 - execute research agenda
 - develop: platforms & tools
 - best case practices

BUILD ECOSYSTEM: FULFILL MISSION