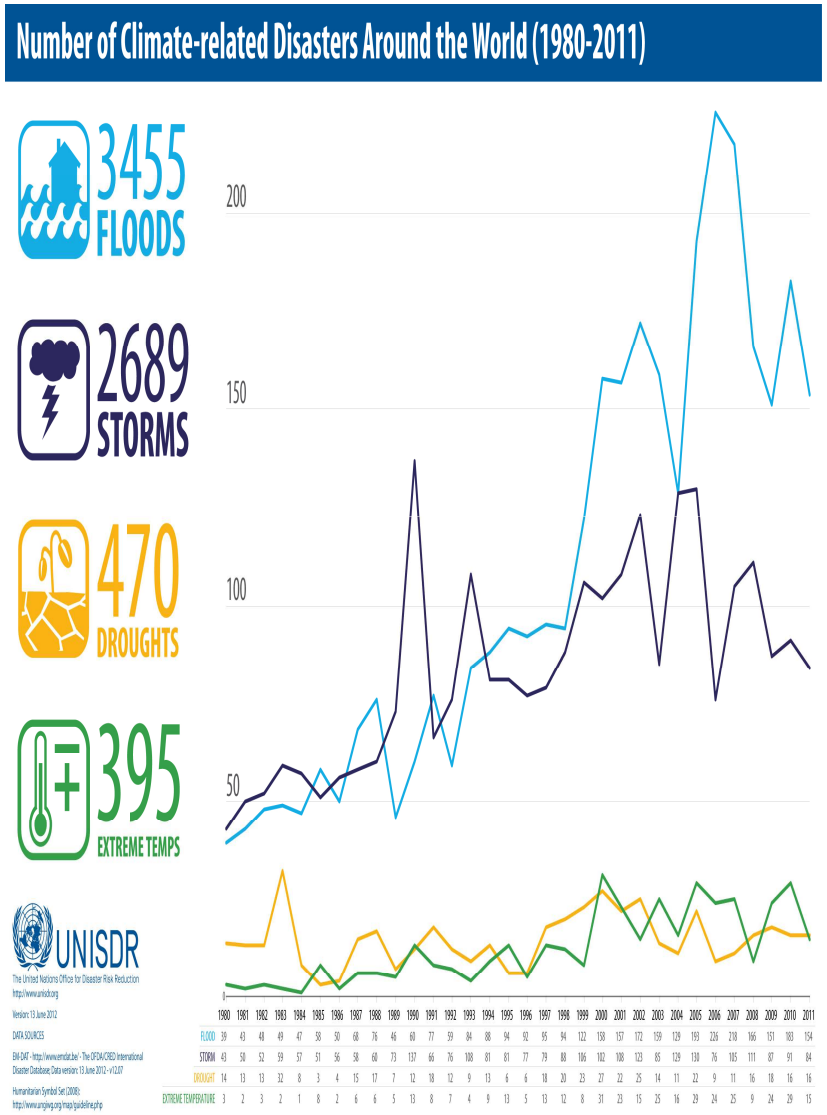
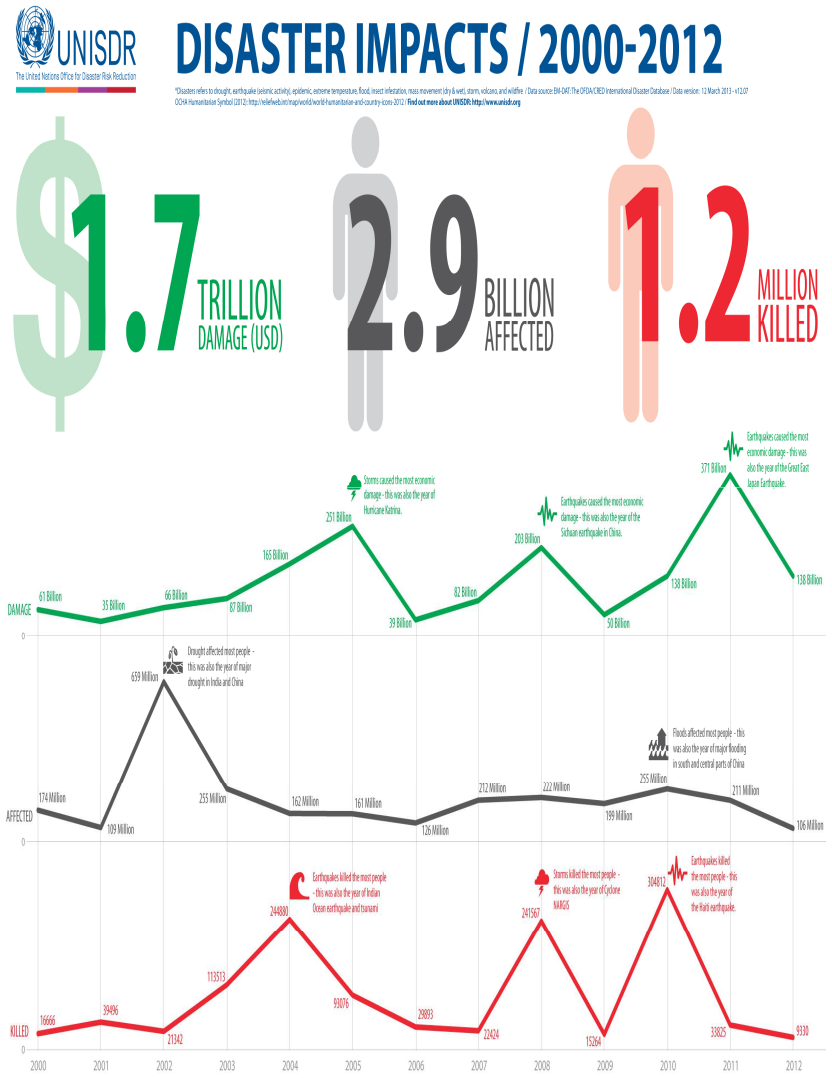
Évènements extrêmes: multipliés et aggravés

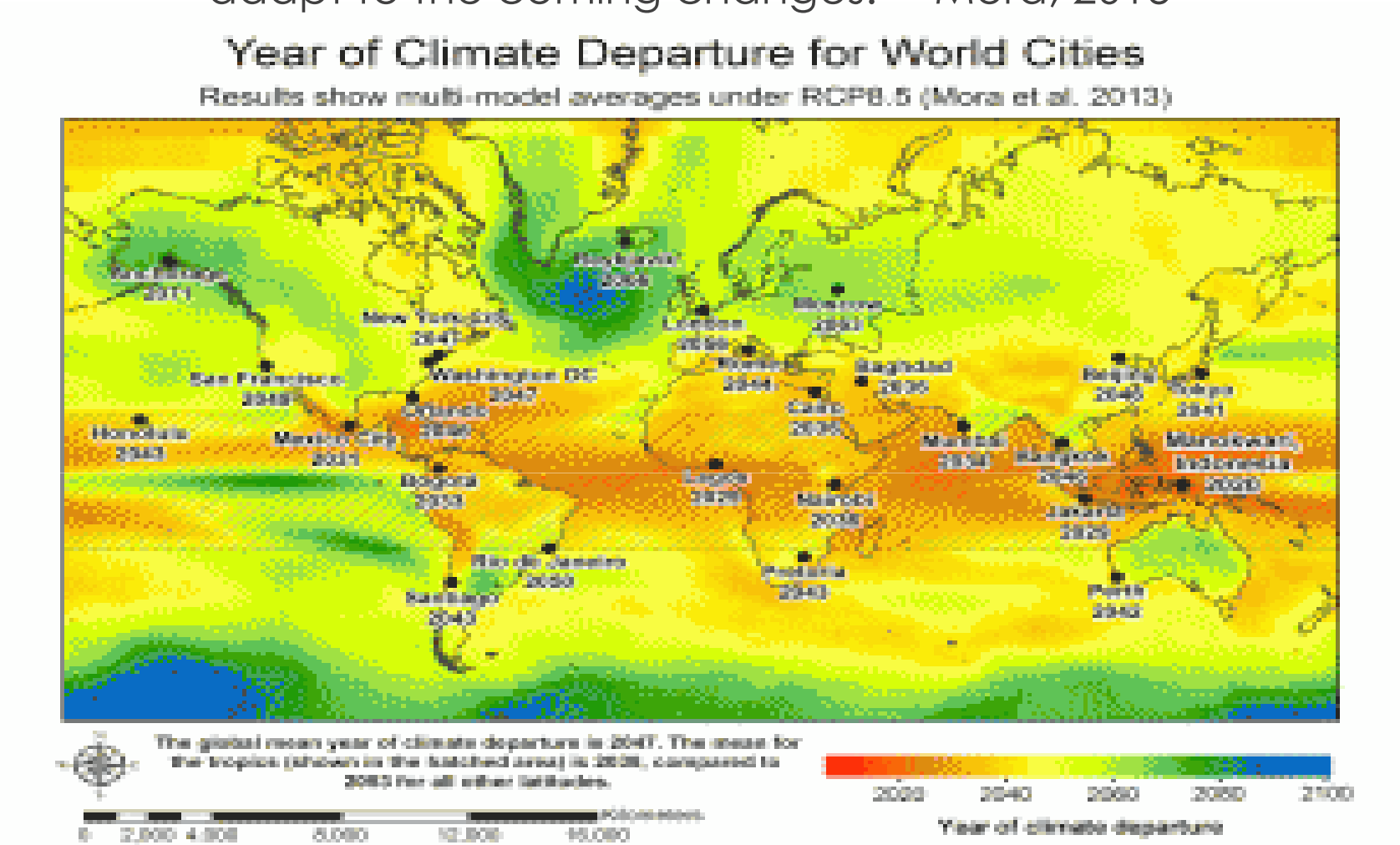


	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
FLOOD	39	43	48	49	47	58	50	68	76	46	60	77	59	84	88	94	92	95	94	122	158	157	172	159	129	193	226	218	166	151	183	154
STORM	43	58	52	59	57	51	56	58	60	73	137	66	76	108	81	81	77	79	88	186	182	108	123	85	129	130	76	165	111	87	91	84
DROUGHT	14	13	13	32	8	3	4	15	17	7	12	18	12	9	13	6	6	18	20	23	27	22	25	14	11	22	9	11	16	18	16	16
EXTREME TEMPERATURE	3	2	3	2	1	8	2	6	6	5	13	8	7	4	9	13	5	13	12	8	31	23	15	25	16	29	24	25	9	24	29	15



Louise Vandelac, ISE, UQAM, 2014

This can buy time for species, ecosystems, and ourselves to adapt to the coming changes." Mora, 2013

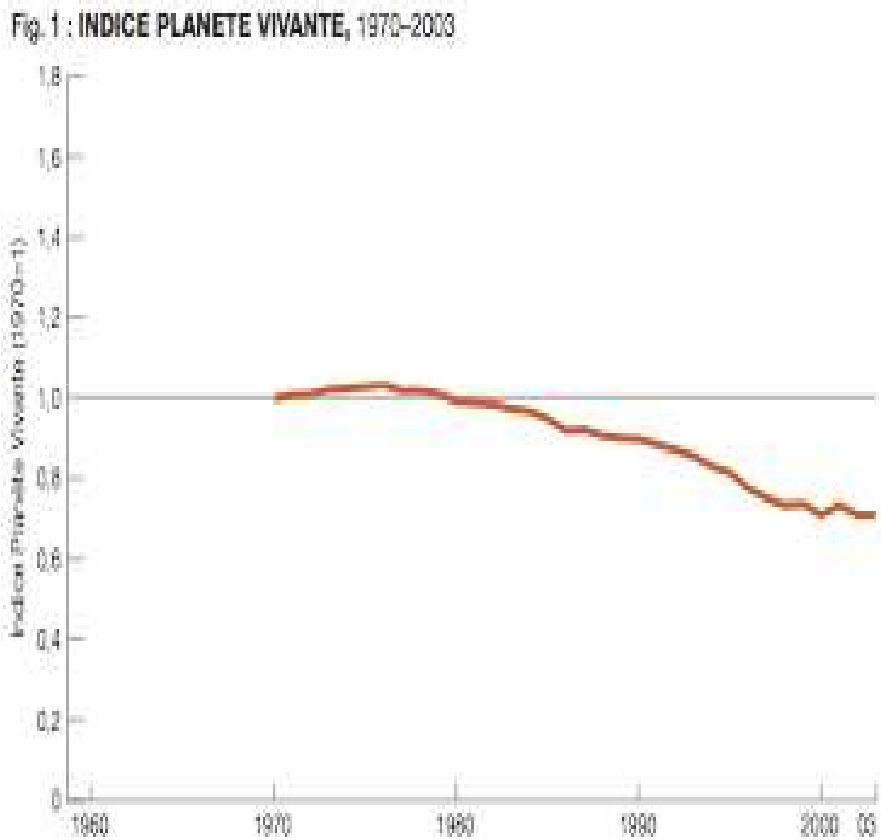


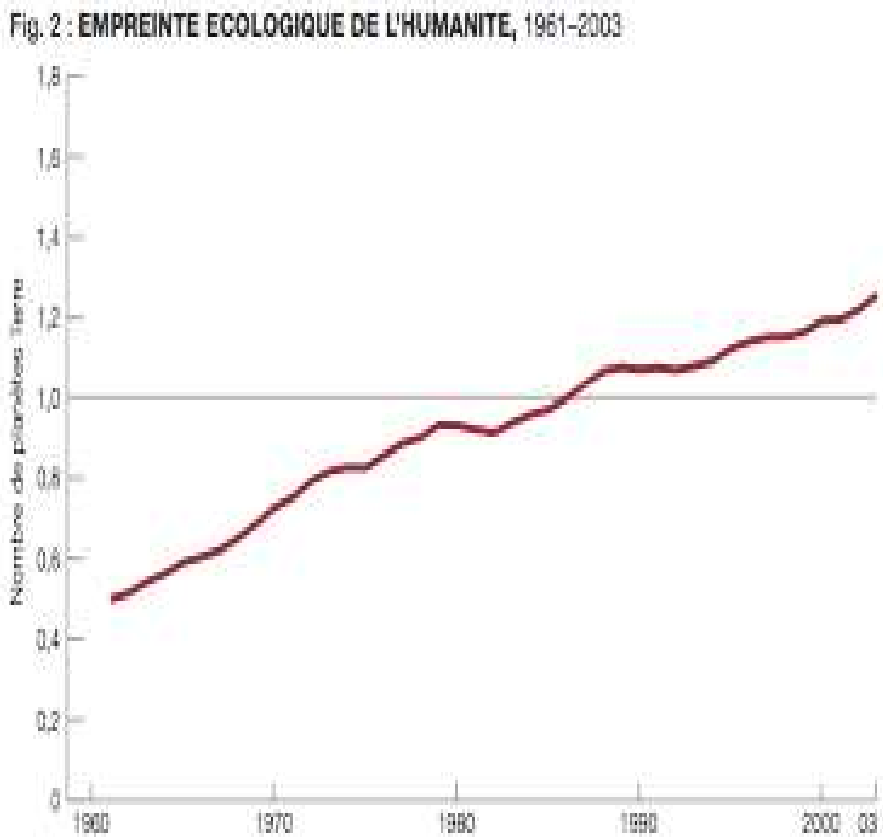
"The projected timing of climate departure from recent variability,"

Nature 502, 183–187 (10 Oct. 2013) C. Mora and

ahttp://www.hawaii.edu/news/article.php?aId=6034

Indicateurs planète vivante et empreinte écologique de l'humanité ou l'impasse…



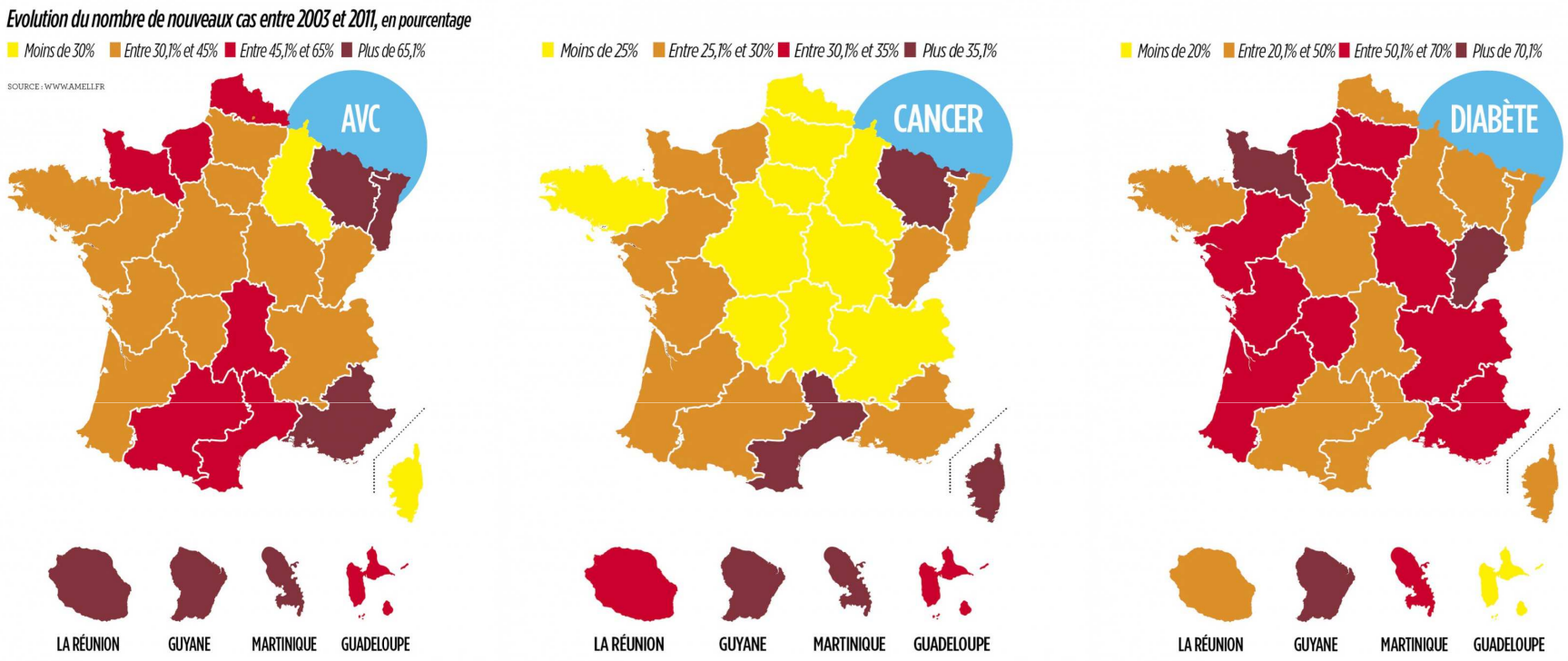


L'indice planète vivante mesure l'évolution de la diversité biologique de la terre

WWF. 2006. *Rapport planète vivante 2006*. Gland (Suisse): WWF, p. 2.

Épidémie mondiale de maladies chroniques

FRANCE: 2003/2011 Évolution du % de nouveaux cas: ACV, CANCER DIABÈTES

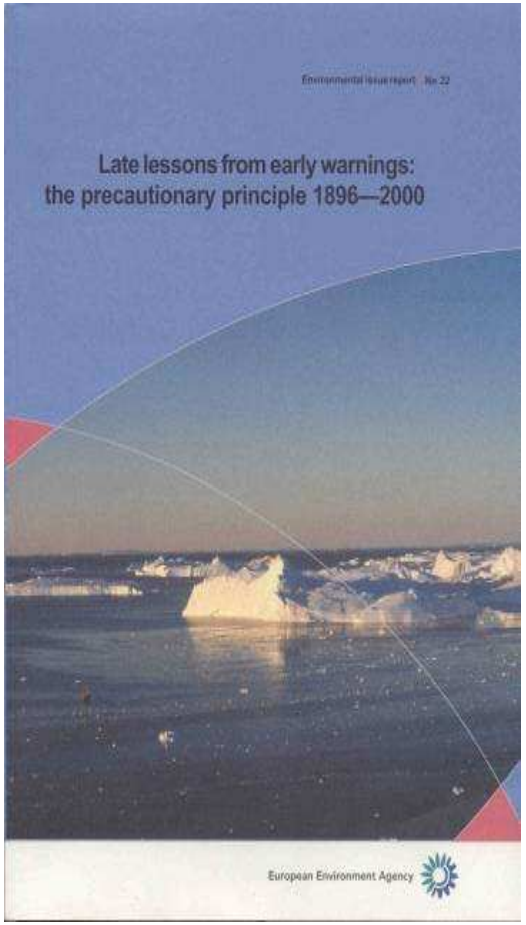


FRANCE: CANCER: PROGRESSION de 89% de 1980 à 2000

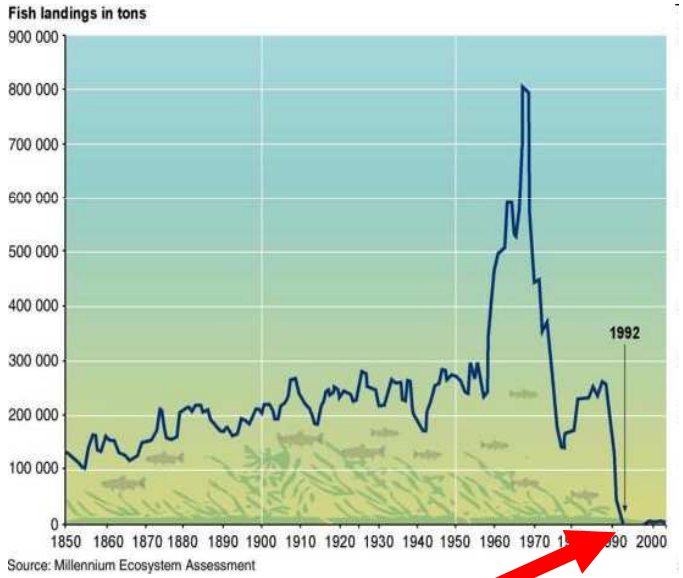
USA Près d'un enfant sur 88 atteint du « autism spectrum disorder (ASD) » selon des estimations du CDC's Autism and Developmental Disabilities Monitoring (ADDM) Network, **Hypothèse: perturbateurs endocriniens**

Adapté de André Cicollella, Toxique planète, 2013 et Nouvel Obs. 2013

Homo Stupidus…



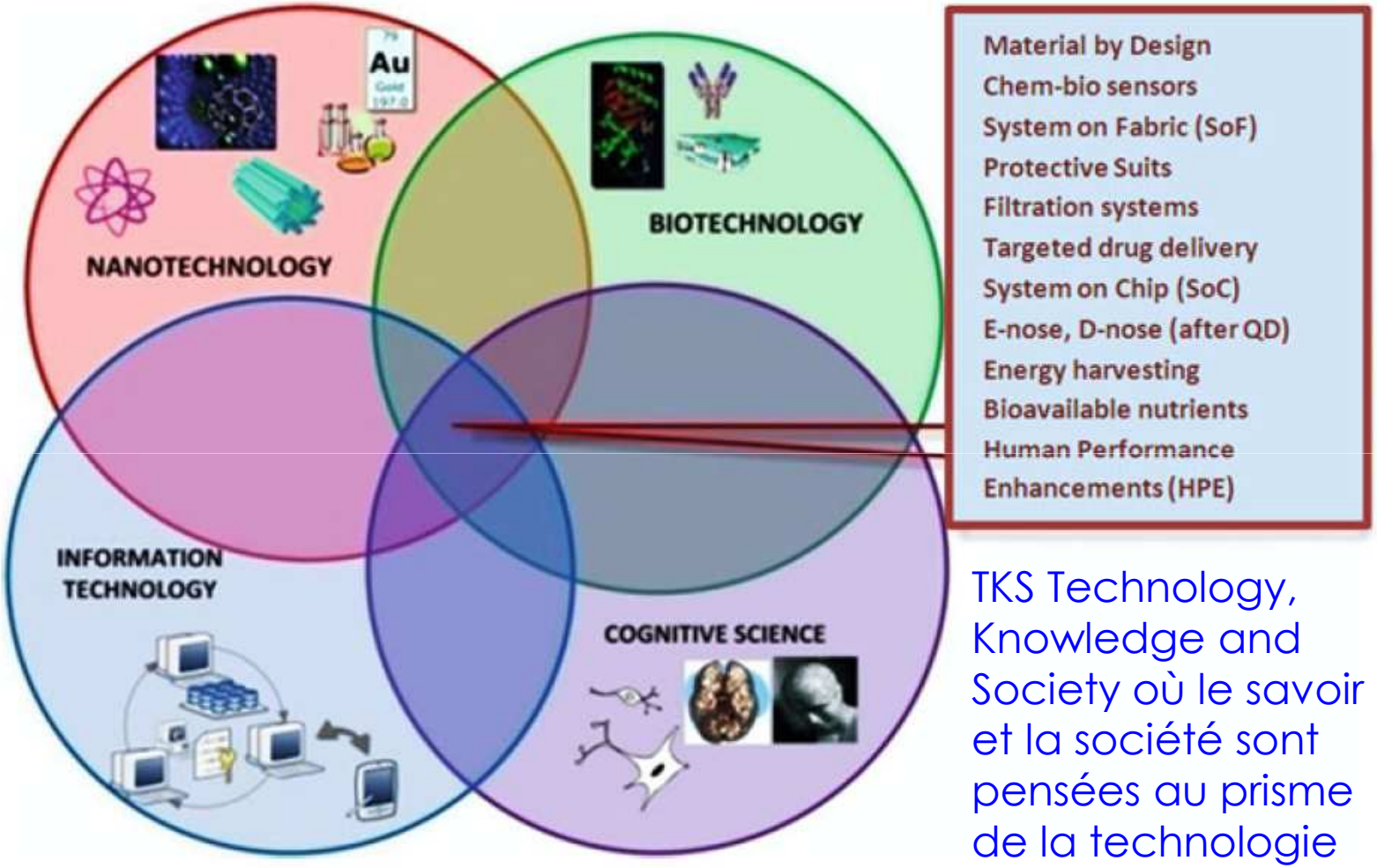
The Newfoundland Cod fishery is being overfished (Keates, **1986**) ……dismissed by Canadian Dept of Fisheries & Oceans as "biased pseudoscience written to support a political agenda".



1992

MacGarvin, "Fisheries: Taking Stock", in Late Lessons from Early Warnings (EEA, 2001

NBIC: TECHNOLOGIES CONVERGENTES

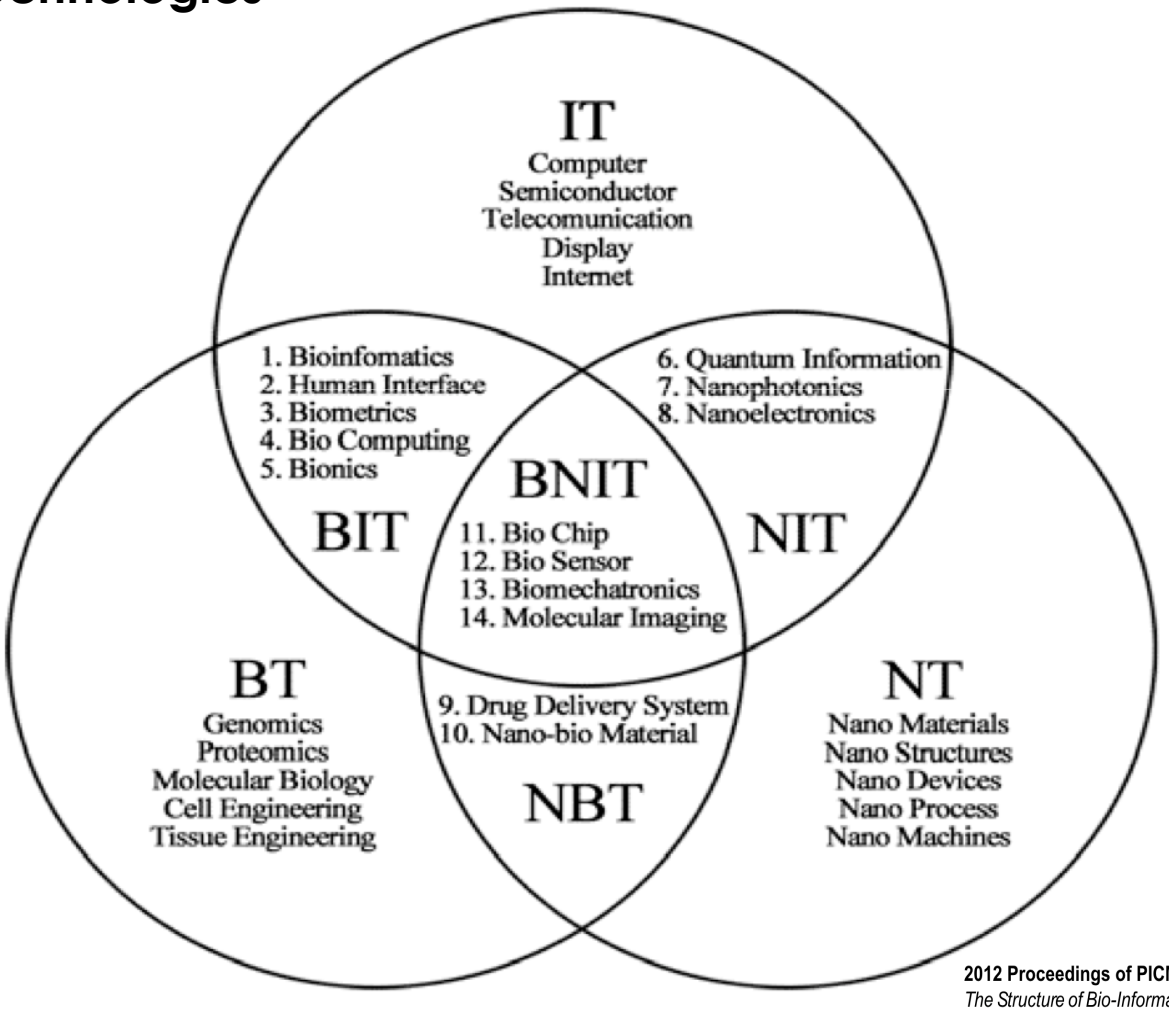


TKS Technology, Knowledge and Society où le savoir et la société sont pensées au prisme de la technologie

Vaseashta A (2012) The potential utility of advanced sciences convergence. In: Giordano J (ed) Advances in neurotechnology – ethical, legal, and social issues. CRC Press, Boca Raton, pp 15–36. Dans Smith, J.E., et A. Vaseashta. 2013. «Chapter 7. Advanced sciences convergence to analyze impact of nanomaterials on environment, health and safety». In *Advanced Sensors for Safety and Security. NATO Science for Peace and Security Series B: Physics and Biophysics,, A. Vaseashta et S. Khudaverdyan, p. 83-91. Dordrecht: Springer Science/Business Media Dordrecht.*

NBIC: Divers champs de convergence

Figure 1: New converging fields(BIT, NIT NBT, BINT) and their submajors technologies



"On the base of the new emerging technologies that the United States and European Union emphasized, the Korea Science and Engineering Foundation (KSEF) in 2006 defined the convergence fields into 4 categories: BIT, NIT, NBT, and BINT and then sub-major technologies were individually selected in each category. [3,4]

2012 Proceedings of PICMET'12: technology Management for Emerging Technologies
The Structure of Bio-Information-Nano Technology Convergence from Firms' Perspective
Keun-Hwan Kim[1], We Shim[1], Young-Ho Moon[2], Kang-hoon Kim[2], Jong-ku Son[2], Oh-Jin Kwon[2]
[1]University of Science & Technology, Information of Science and Technology, Daejeon, Korea, [2]Korea Institute of Science and Technology Information, Seoul, Korea

Agroalimentaire 8,7trillions US > Énergie 7 trillions US 2009

* Marché hyper concentré
* **En 2013-14, 3 multinationales contrôlent 54% du marché des semences**
* en 2009, **6 multinationales** contrôlaient
  * **60% du marché des semences**
  * **76% de l'agrochimie**
  * **76 % de la R&D privée dans ces deux secteurs**
* 10 multinationales contrôlaient
  * **56% des fertilisants**
  * **90% des pesticides**
  * **73% des semences**
  * **76% du secteur «pharmaceutique pour animaux»**
* **Et mouvement d'appropriation mondiale des terres**:
  * alimentation, élevage, biomasse, hydrocarbures, métaux, bois

Source: ETC Group