

HempHouse, USA





Evidence Based Design

Connection with nature





☰ **TIME**

31690 results for **forest bathing**

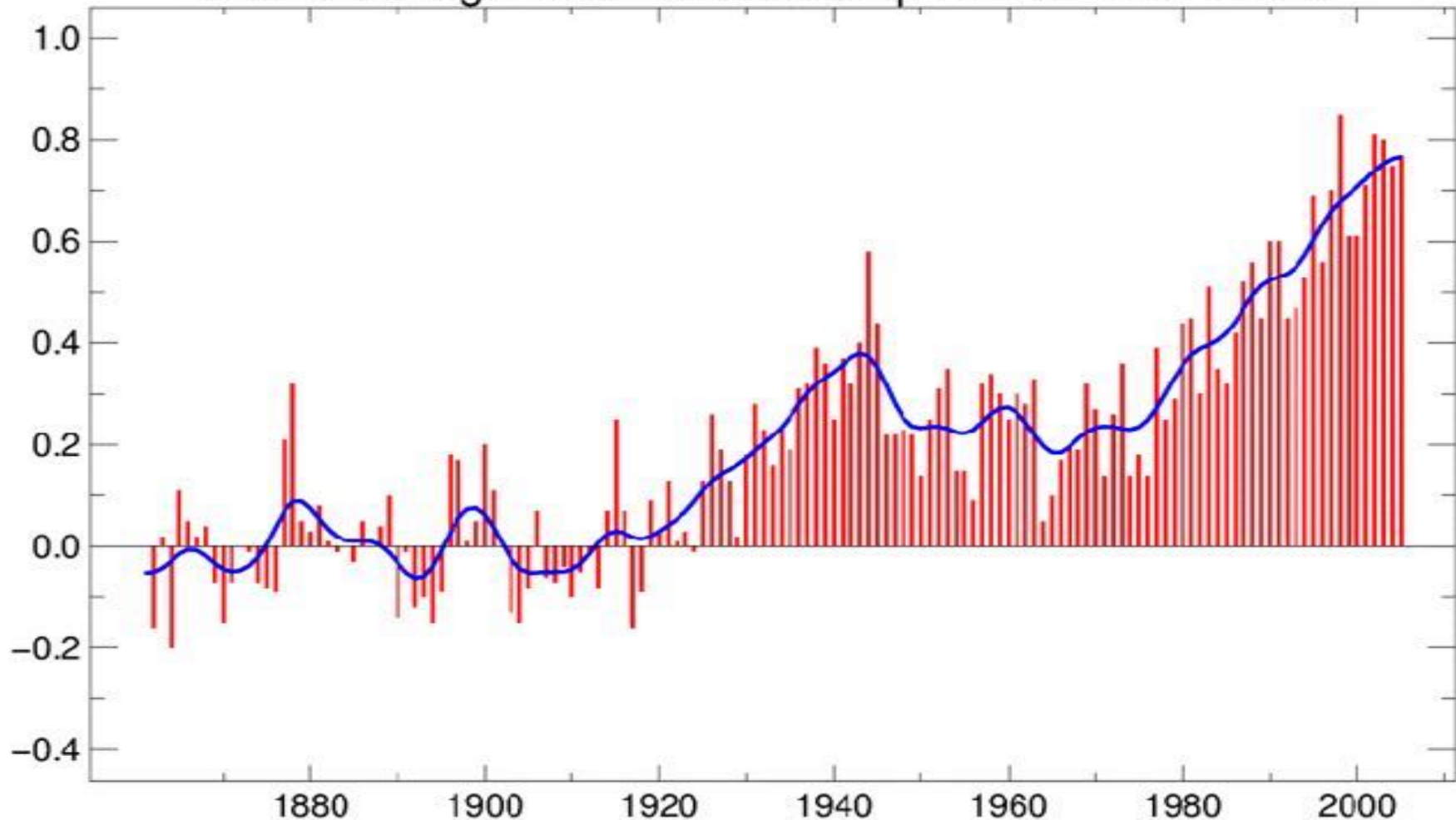


'Forest Bathing' Is Great for Your Health. Here's How to Do It

Forest Bathing

Global Average Near-Surface Temperatures 1861– 2005

Temperature Difference ($^{\circ}\text{C}$)
with respect to the end of the 19th Century





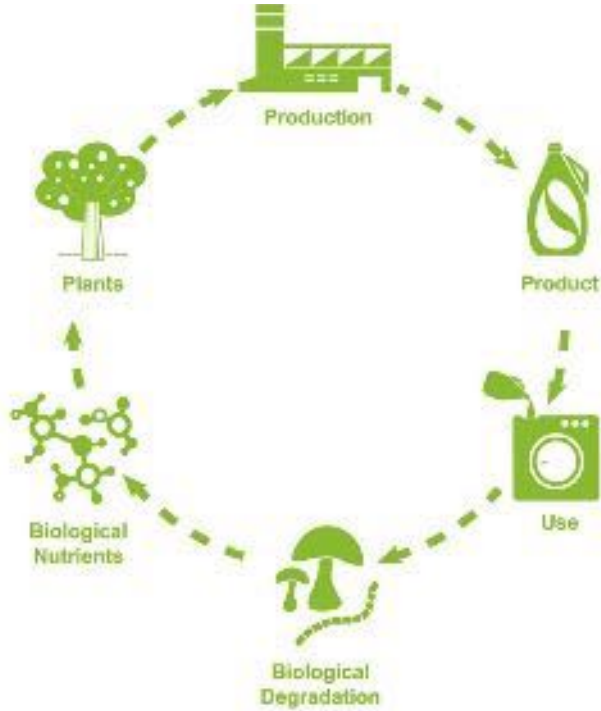
Voorraden van resources

Resource		Verbruik per jaar	Aangetoonde economisch winbare voorraad	Resterende gebruiksduur			
				<i>Bij 0% groei</i>	<i>Bij 2% groei</i>	<i>Bij 5% groei</i>	<i>Bij 10% groei</i>
				(Jaren)	(Jaren)	(Jaren)	(Jaren)
Energie	Steenkool	4830	985000	204	82	49	32
	Aardolie	3680	202000	55	37	27	19
	Aardgas	1880	117000	62	41	29	20
	Uranium	0,062	3,93	61	40	28	20
Metalen	IJzer	560	74000	132	65	41	27
	Aluminium	124	25000	202	81	49	32
	Koper	12,1	340	28	22	18	14
	Zink	7,75	190	25	20	16	13
	Lood	3,07	64	21	17	14	11
	Nikkel	1,13	46	41	30	22	17
	Tin	0,208	8	39	29	22	16
	Zilver	0,016	0,28	17	15	13	10

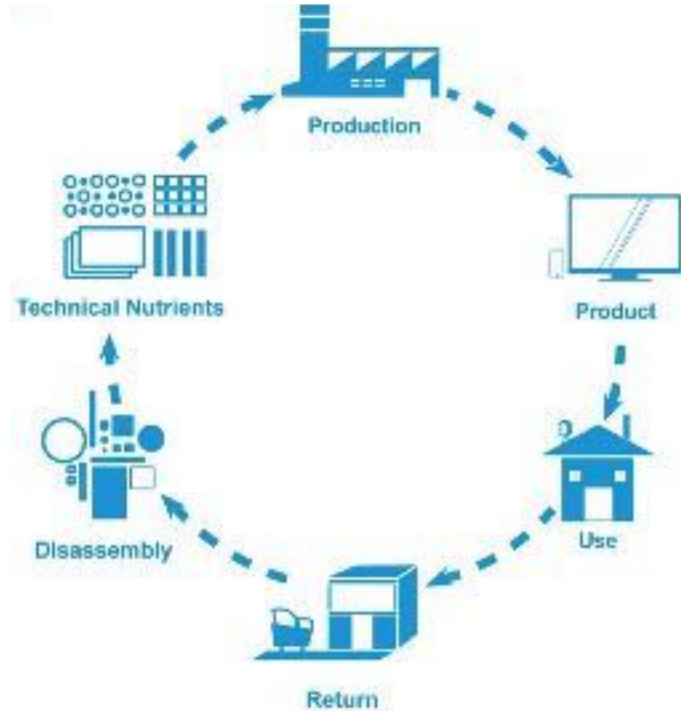
Bouw in beeld

- **10%** van het totale Nederlandse energieverbruik is nodig voor de productie van traditionele bouwmaterialen
- **25%** van al het wegtransport is gerelateerd aan de bouw; het transport veroorzaakt luchtvervuiling, fijnstof en uitstoot van CO₂ door verbruik van fossiele brandstof
- **50%** van delfstoffen gebruikt voor bouwproces
- **20-40%** energiegebruik voor gebouwen
- **40%** van de totale afvalberg in Nederland bestaat uit bouw- en sloopafval, gedeeltelijk gerecycled
- **5–10%** van de mondiale CO₂ emissie is gerelateerd aan gebruik beton

(BIO) Circulaire Economie



Biologische cyclus



Technische cyclus

What are bio-based products?

Bio-based products are wholly or partly derived from materials of biological origin, excluding materials embedded in geological formations and/or fossilised.

In industrial processes, enzymes are used in the production of chemical building blocks, detergents, pulp and paper, textiles, etc. By using fermentation and bio-catalysis instead of traditional chemical synthesis, higher process efficiency can be obtained, resulting in a decrease in energy and water consumption, and a reduction of toxic waste.

As they are derived from renewable raw materials such as plants, bio-based products can help reduce CO₂ and offer other advantages such as lower toxicity or novel product characteristics (e.g. biodegradable plastic materials).





Scheidingswand - Faay VP70



Vlaspaanplaat - Linex Pro Grass



Dakbedekking - Riet



Isolatie - Cellulose - Thermofloc



Muurverf - Wijzonol



Hennepvezel isolatie - Hemplax



Gevelbekleding Platowood - Plato® Hout Fraké



Hennepbeton - DunsAgro



Vlaswolisolatie - Isolima



Biobased plaatmateriaal - ECOBoard



Agrovezelplaat - Compakboard



Paneelproducten - Plexwood



Houten heipalen



Massief verduurzaamd hout - Accoya



Gevelbekleding Nova Lignum - Celanex



Vloerafwerking - Plexwood



Prefab bouwstelsel - Rease Projects - Houtwoicement



Gelamineerde houtconstructies - De Groot Vroomsthoop



Hennepvezelisolatie - Thermohennep Premium+



Cementgebonden houtvezelplaat - Cempanel Basic



Houten kanaalplaten - Kerto-Ripa



Bouwsteen - Chamvibloc - Hennepbeton



Gevel- en afbouwelementen - Holonite - Compositiesteen



Trillingsdemper en drukverdelers - Nevima - Bouwvilt



Gevelelement - ScanaBouw BV



Interface - Fotosfera Micro/Structured



Vloerbedekking - Forbo - Marmoleum



Biobased plaatmateriaal - Rezyta



Hout voor buisentoepassing - Finn



Wandelement - NUR-HOLZ Houtbouwsystemen - Bouwpuur







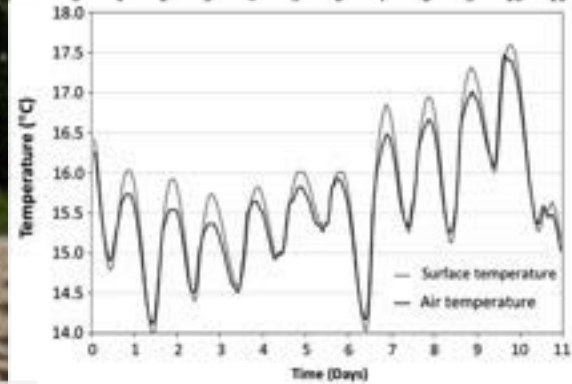
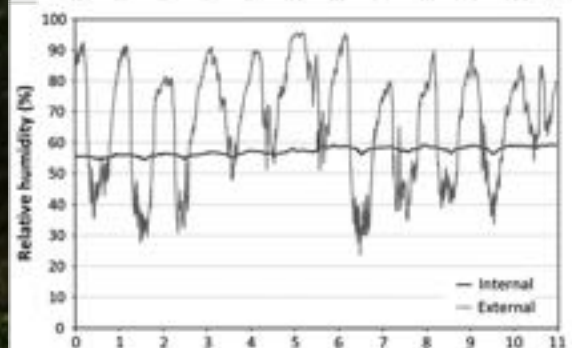
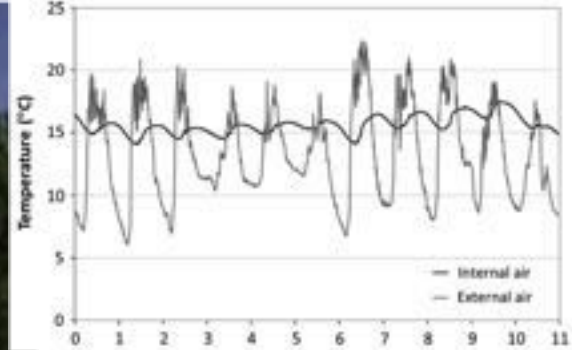






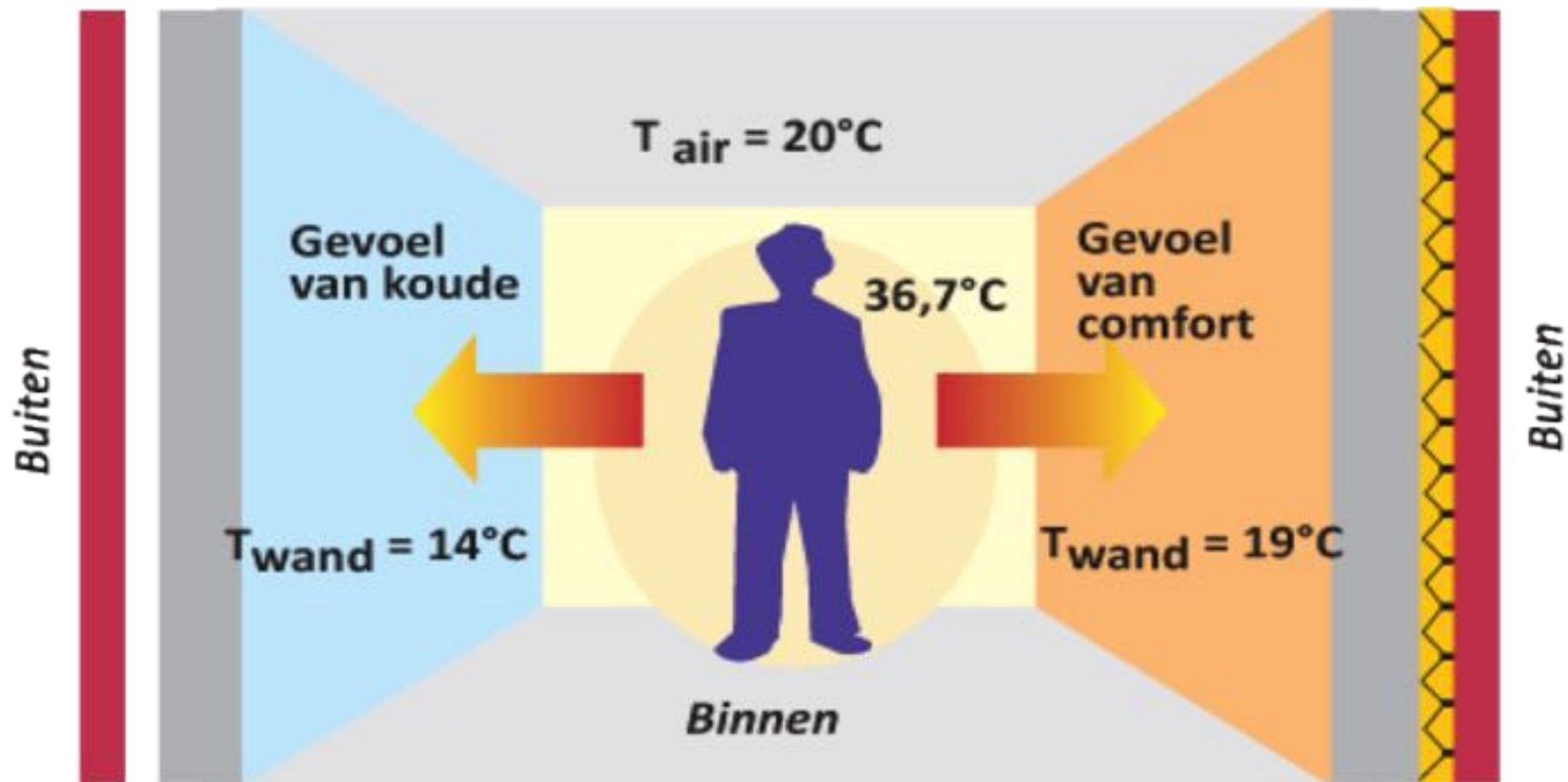




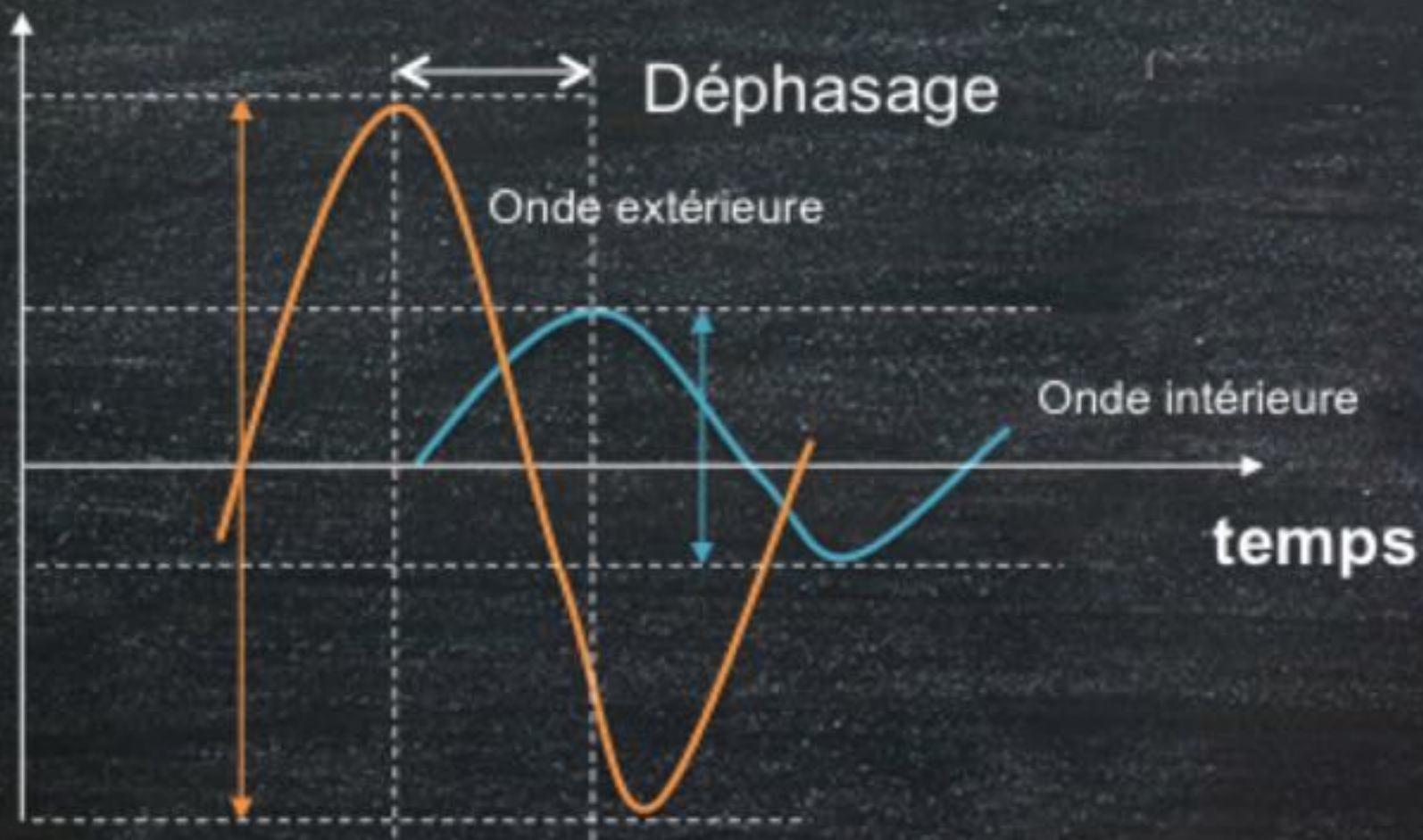


Koude muur:
 $T_{rs} = 17^{\circ}\text{C}$

Warme muur:
 $T_{rs} = 19,5^{\circ}\text{C}$

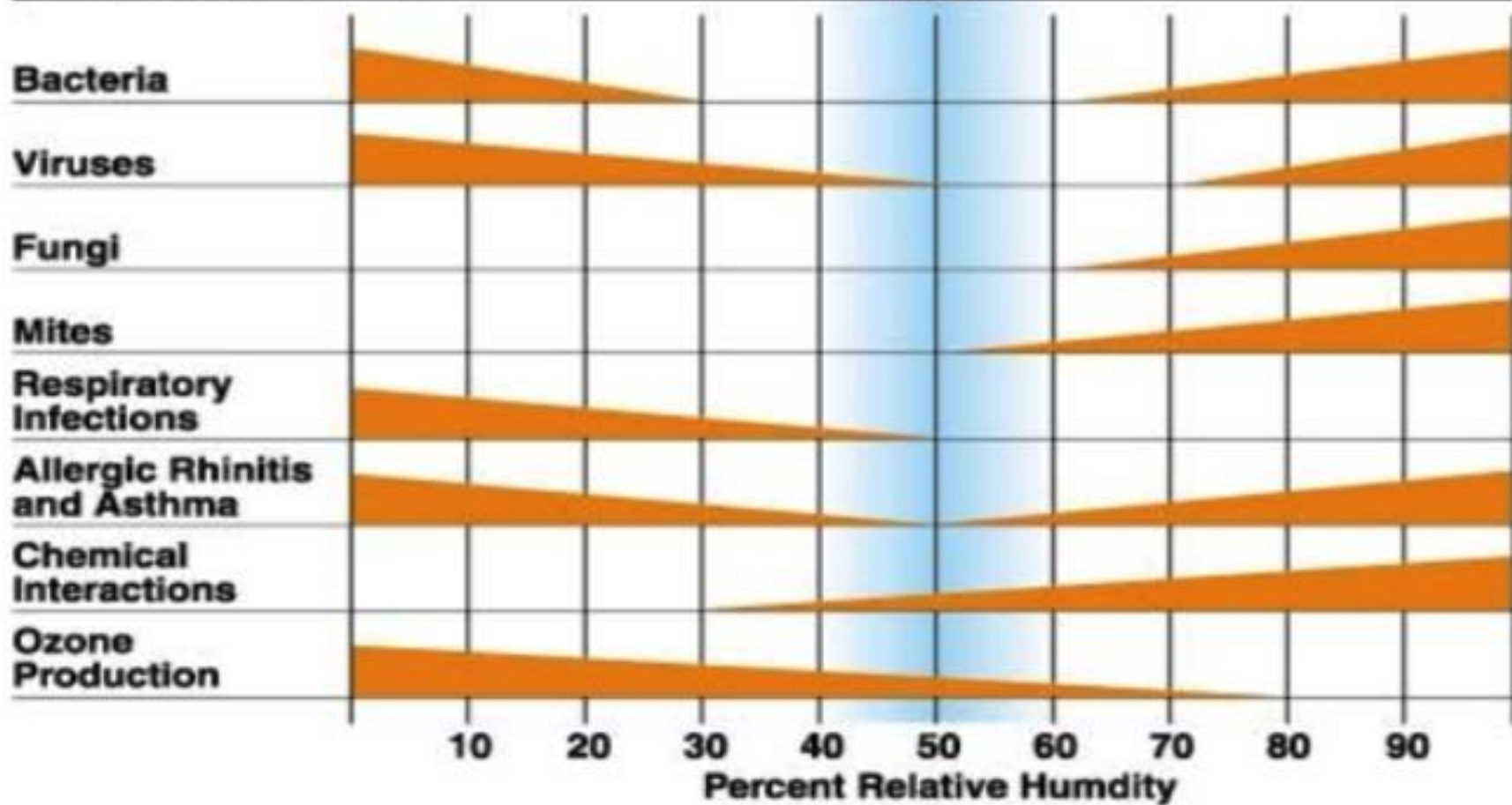


$T^{\circ} [^{\circ}\text{C}]$



Decrease in bar width indicates decrease in effect

Optimum Zone





Kevin mc Cloud



Marks & Spencer, Chesire Oaks



Spa Resort, Coworth

An aerial photograph of the Sinclair Meadows residential development in South Shields. The image shows a row of modern, two-story houses with white lower levels and light-colored wood cladding on the upper levels. The houses are arranged around a central courtyard area with paved walkways, small trees, and a bench. A dark car is parked in a paved area to the left. In the background, a row of older, traditional houses is visible under a blue sky with scattered white clouds. The foreground on the left shows a wooden balcony railing and a silver downspout.

Sinclair Meadows, South Shields

Science Museum, Wroughton



Adnams Brewery, Suffolk





Case di Luce, Bisceglie





“Alleen ga je
snel,
samen kom je
verder.”

-CHINEES SPREEKWOORD-

Biobased Bouwen

WIL JE MEEDOEN ??? GRAAG !!!





3 oktober 2018
John van de Wetering
johnvdwetering@gmail.com