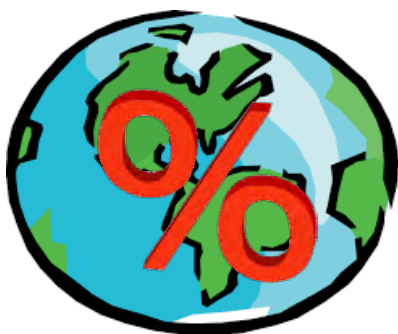


Investigating Rainforests

Christina Kalinic, Stella Maris College



What percentage of the Earth is covered by rainforest?

= _____

CONSTRUCT A COLUMN GRAPH!

Use the data in the table below to construct a column graph that shows the amount of rainforest in each country.

REMEMBER to label the axes and units of measurement!

COUNTRY	AREA OF RAINFOREST (million hectares)
Brazil	533.0
Democratic Republic of Congo	135.2
Indonesia	105.0
Angola	69.8
Peru	65.2
India	60.9
Papua New Guinea	30.6
Malaysia	19.3
Madagascar	11.7

TITLE: _____



SUSTAINABLE BIOMES: INVESTIGATING RAINFORESTS

TROPICAL RAINFOREST

Describe where tropical rainforests are located.



Types of tropical rainforests...

TYPE	DESCRIPTION
Lowland rainforests	<hr/> <hr/> <hr/> <hr/>
Montane forests	<hr/> <hr/> <hr/> <hr/>
Cloud forests	<hr/> <hr/> <hr/> <hr/>
Swamp or flooded forests	<hr/> <hr/> <hr/> <hr/>

TEMPERATE RAINFOREST

Describe where temperate rainforests are located.



SUSTAINABLE BIOMES: INVESTIGATING RAINFORESTS

Distribution of Tropical and Temperate Rainforests around the world

Complete the map below!

1. Draw and label the following on the map below:

⇒ Tropic of Cancer (_____ °N)

⇒ Equator (_____ °)

⇒ Tropic of Capricorn (_____ °S)

2. Label the following rainforests on the map below:

⇒ Amazon Rainforest

⇒ Pacific Temperate Rainforest

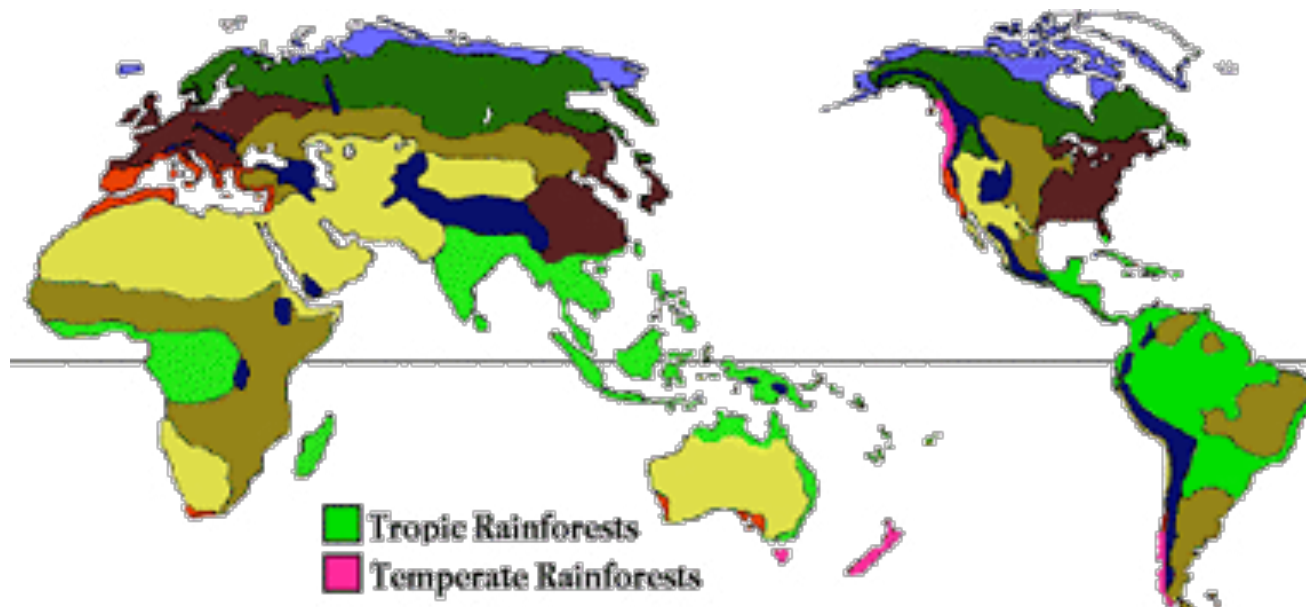
⇒ Congo Rainforest

⇒ Sumatran Rainforest

⇒ Daintree Rainforest

⇒ Valdivian Temperate Rainforest

⇒ Madagascan Rainforest



CLIMATE OF THE AMAZON

In tropical regions the sun shines for approximately the same time and intensity every day, all year round. Due to its latitude, sunlight shines on the Amazon at about a 90° angle, resulting in intense solar energy. This means that it is usually warm- ranging from 20°C to 34°C- and there is little variation in temperature throughout the year. The Amazon also experiences high rainfall of 2-10 metres per year.

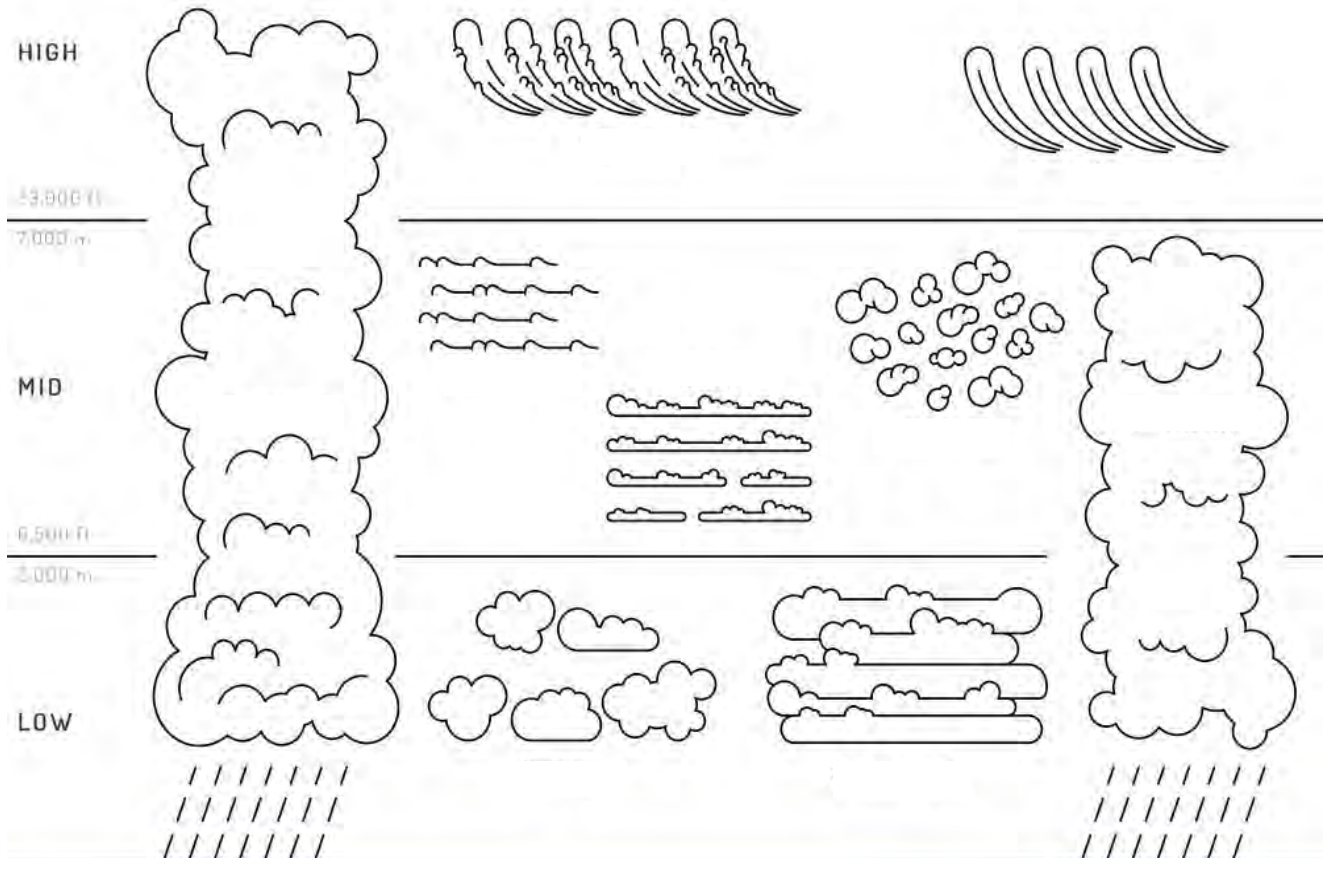
Draw a labelled diagram to explain convectional rainfall.

Paragraph- Explain convectional rainfall.

SUSTAINABLE BIOMES: INVESTIGATING RAINFORESTS

TYPES OF CLOUDS

1. Circle the image that best represents a cumulonimbus cloud.
2. Conduct some research to help you name the remaining types of clouds.

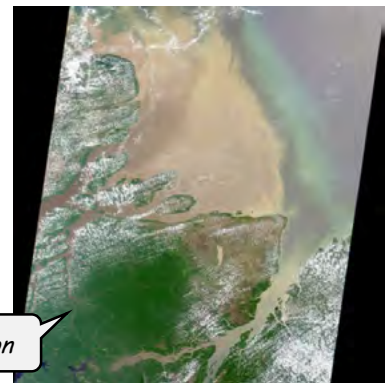


CHALLENGE TIME!



Woronora Dam, Sutherland Shire, NSW

There are 22 dams that make up the Sydney water catchment. These dams can hold more than 2.5 million megalitres.



NASA's Earth Observatory- Mouth of the Amazon

The Amazon River has a daily discharge at its mouth of around 30.3 million megalitres per day.

How many hours would it take for the Amazon River to fill all the dams used to supply Sydney with water if the dams were completely empty?



Show working out...

SUSTAINABLE BIOMES: INVESTIGATING RAINFORESTS

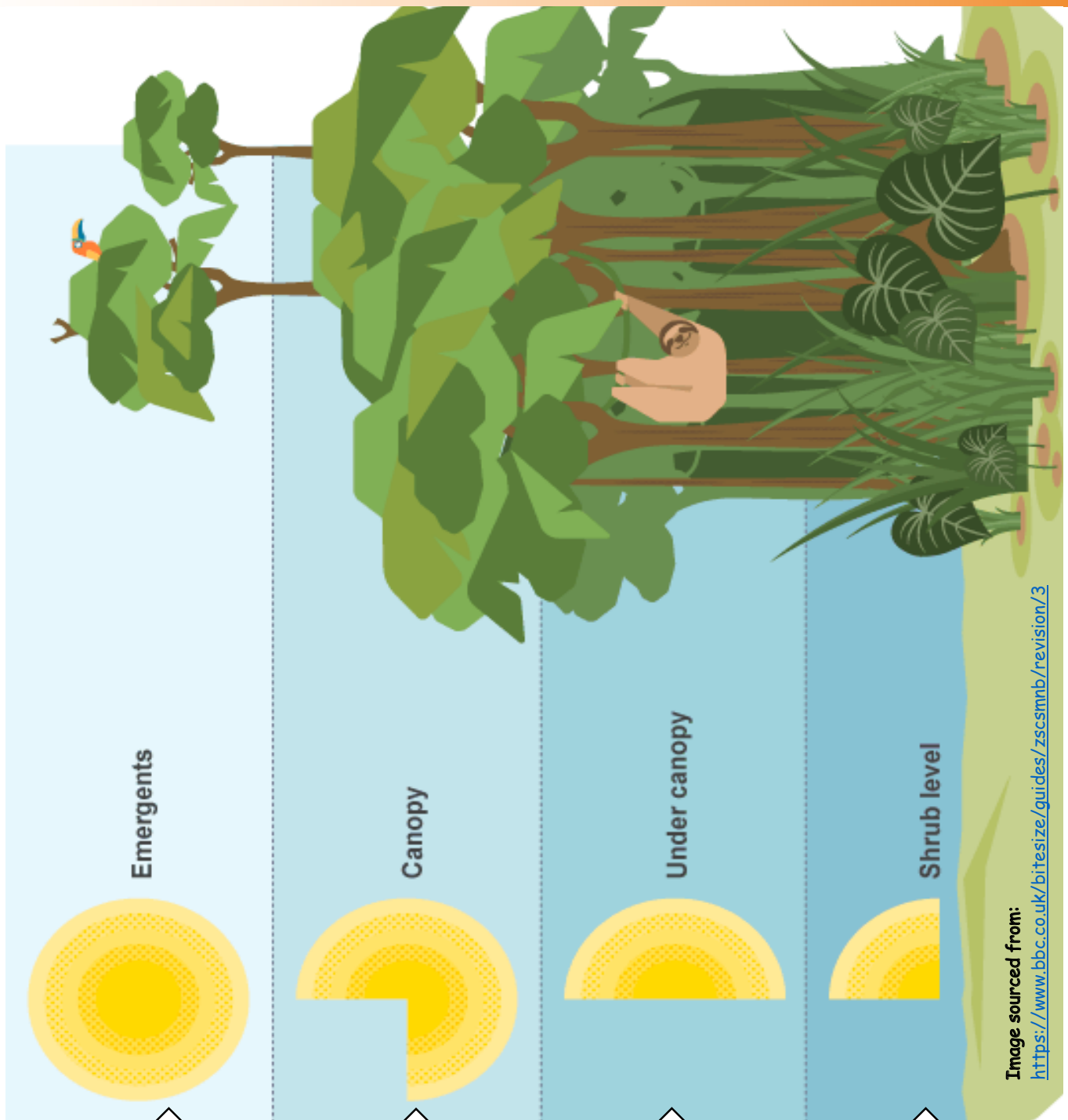












Image sourced from:

<https://www.bbc.co.uk/bitesize/guides/zscsmnb/revision/3>

LAYERS OF THE RAINFOREST...

PLANTS AND ANIMALS OF THE RAINFOREST...

Determine which layer of the rainforest each of the following plants and animals belong to.

<p>The Kapok Tree belongs to the _____ layer of the rainforest.</p> 	<p>The Greater Bulldog Bat belongs to the _____ layer of the rainforest.</p> 	<p>The Sloth belongs to the _____ layer of the rainforest.</p> 	<p>The Philodendron belongs to the _____ layer of the rainforest.</p> 	<p>The Giant Anteater belongs to the _____ layer of the rainforest.</p> 
<p>The Harpy Eagle belongs to the _____ layer of the rainforest.</p> 	<p>The Strangler Fig belongs to the _____ layer of the rainforest.</p> 	<p>The Heliconia belongs to the _____ layer of the rainforest.</p> 	<p>The Hercules Beetle belongs to the _____ layer of the rainforest.</p> 	<p>The Sparkling Violetear belongs to the _____ layer of the rainforest.</p> 



How many centimetres can bamboo grow in the rainforest in one day?
= _____

SUSTAINABLE BIOMES: INVESTIGATING RAINFORESTS

THE RAINFOREST PRODUCES FOOD...

[List foods that you consume that originally derived from the rainforest]

Fruit	Grains	Nuts	Vegetables	Spices

Investigate the following foods:

- ⇒ Acai berries
- ⇒ Maca
- ⇒ Maqui berries
- ⇒ Camu Camu
- ⇒ Lucuma

1. Map where these foods grow in South America.



2. What are the traditional uses for;

⇒ Maca?

⇒ Camu Camu?

3. What properties do some of these foods possess?

Animals in the rainforest are also seen as sources of food...

The giant ditch frog and green iguana are being consumed for their chicken-like meat!

THE FACTS ON IGUANA MEAT:

- ⇒ The iguana is a delicacy in Mexico and Central and South America
- ⇒ Iguana is served in several trendy US restaurants- e.g., iguana popcorn nuggets
- ⇒ It is high in protein and low in fat
- ⇒ Iguana meat is well-suited for tacos, burritos, curries, soups, stews, etc.

Sourced from: <https://www.usatoday.com/story/news/nation/2020/01/24/falling-iguanas-meat-sales-people-eat-chicken-trees/4553457002/>



SUSTAINABLE BIOMES: INVESTIGATING RAINFORESTS



BUSHMEAT TRADE

What is the "bushmeat trade"?

Why has the bushmeat trade grown?

To help you answer this question, watch *Illegal Commercial Bushmeat Trade* at:

<https://www.youtube.com/watch?v=56jJsHJFIm8>.

How much is the bushmeat trade industry worth?

In Kinshasa, The Democratic Republic of Congo, it is possible to purchase the meat of almost any forest animal.

In Australian dollars:

- ⇒ 1 kilogram of elephant meat costs \$1.50
- ⇒ A whole smoked chimpanzee costs up to \$30
- ⇒ A whole gorilla costs up to \$200
- ⇒ A pouched rat costs \$1
- ⇒ A monkey costs \$7.50

Label the following on the map of Africa:

- Democratic Republic of Congo
- Kinshasa



A Kinshasa hunter who sells ONE gorilla will give them one-quarter of their annual income!

PROPOSE A SOLUTION!

Hunters are resistant to stop participating in the bushmeat trade.

Propose a solution that stops the bushmeat trade AND supports the hunters.



This chimpanzee was injured by a hunter's snare



SUSTAINABLE BIOMES: INVESTIGATING RAINFORESTS

DEFORESTATION OF THE RAINFOREST...

What is deforestation?



Deforestation is the deliberate removal of forests. This is done by cutting down trees and shrubs, starting fires and removing too many trees during logging.

Between 1990 and 2015, the world lost

129 million ha of forest



An area the size of South Africa

This happens so that the land can be used for other things- *e.g., soybean crops, grazing cattle, mining and the development of towns and cities.*

Deforestation destroys the habitats of many flora and fauna species.

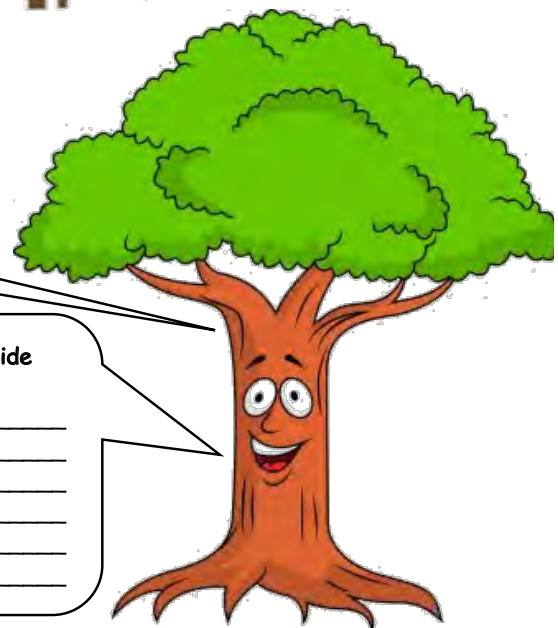


1km of rainforest is home to over 1000 species!

How much carbon dioxide does the Amazon rainforest absorb per year?

= _____

If deforestation continues, what impact will this have on carbon dioxide levels in the atmosphere?



SUSTAINABLE BIOMES: INVESTIGATING RAINFORESTS

VALUE OF THE RAINFOREST: DEAD AND ALIVE

Setting a value on nature is a complex process, and certainly not without its critics, but it offers a way to make decisions about natural resources such as rainforests.



Academics in the US and the Netherlands have calculated the economic value of Leuser National Park in Sumatra, Indonesia – one of the two remaining habitats for Sumatran orangutans – which is under threat of deforestation for the cultivation of palm oil and rubber. They calculated the value of the forest to people in the region over a 30-year period if it were protected, and the value if it were destroyed for logging and subsequent cultivation.

Visit The Guardian's *Rainforest Interactive* at: <https://www.theguardian.com/sustainable-business/ng-interactive/2014/nov/10/palm-oil-rainforest-cupboard-interactive> to complete the table below.

COMPARING ECOSYSTEM BENEFITS-
value per hectare/per year

ECOSYSTEM BENEFIT	CONSERVATION	DEFORESTATION FOR CULTIVATION
Water Supply		
Fisheries		
Flood prevention		
Agriculture		
Hydropower		
Tourism		
Biodiversity		
Carbon sequestration		
Fire prevention		
Non-timber forest products		
Timber		

Conservation
Value per hectare/per year

\$128



Deforestation for cultivation
Value per hectare/per year

\$91







Conservation outweighs the economic benefits of deforestation.

[illegible]

DEBUNKING MYTHS ABOUT DEFORESTATION!

Visit WWF's 10 Myths About Deforestation webpage at: <https://www.wwf.org.uk/10-myths-about-deforestation#:~:text=Myth%201.&text=While%20growing%20demand%20for%20wood,accounted%20for%2073%25%20of%20deforestation> AND record WHY these myths about deforestation are just that- MYTHS!

DEBUNK THE MYTH- EVIDENCE	
NO.	MYTH
1	 <p>Most trees are cut down for paper or wood</p>
2	 <p>Deforestation is inevitable- there are too many people to feed</p>
3	 <p>Beef is the only food that causes deforestation</p>
4	 <p>Boycotting products that contain palm oil will help stop deforestation</p>

ACTIVITY TIME- Get Deforestation #OffOurPlates!

While we can try our best to eat more sustainably, there's no way of knowing where deforestation might be hiding in our food. Our government has the power to take deforestation #OffOurPlates! Using recycled materials, design your own placard for your school lunch.

Think about what you'll be eating. If it's meat or dairy, the supply chain may well have included soy. If it's vegan it may contain unsustainable palm oil. Then conjure up your best food jokes and puns.

Just remember, you don't want any of your food to cause deforestation.



SUSTAINABLE BIOMES: INVESTIGATING RAINFORESTS

PALM OIL...

Palm oil is an edible vegetable oil. It comes from the fruit of oil palms. This oil is used in food manufacturing, cosmetics, biofuel, etc.



71%

Food products



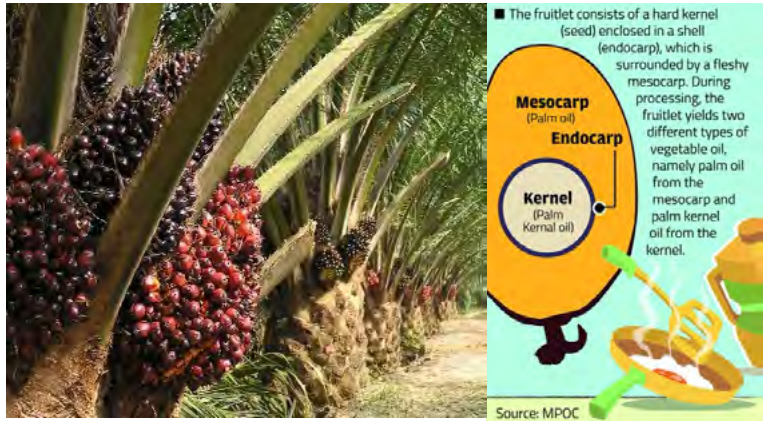
24%

Consumer goods

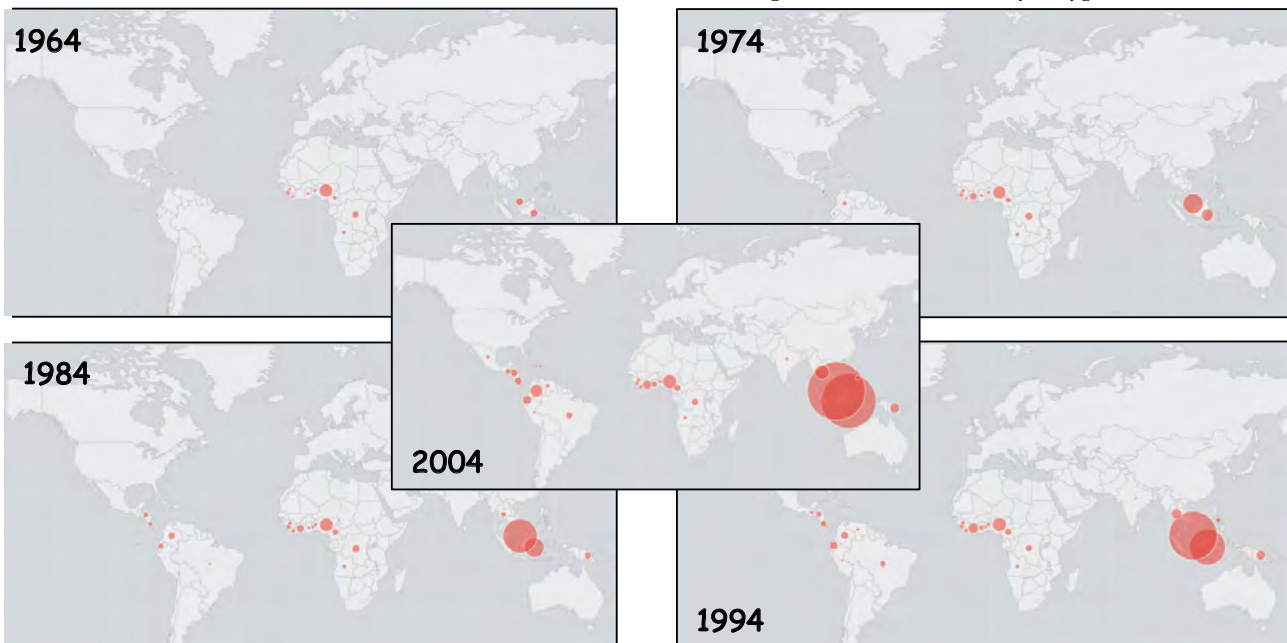


5%

Energy



PALM OIL PRODUCTION BY COUNTRY [in metric tonnes (MT)]



Visit The Guardian's *Rainforest Interactive- Palm Oil Production by Country* at:

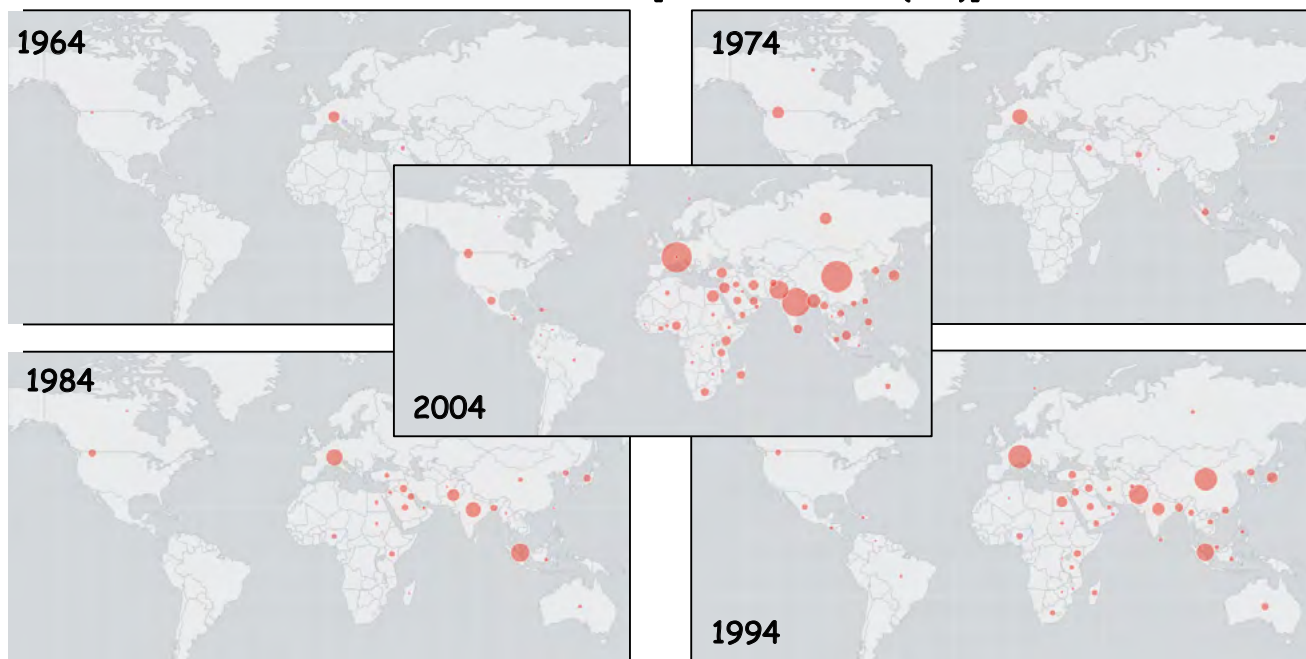
<https://www.theguardian.com/sustainable-business/ng-interactive/2014/nov/10/palm-oil-rainforest-cupboard-interactive>.

1. Label the countries that produced palm oil in 2014
2. Draw in the metric tonnes (MT) produced by each of these countries



SUSTAINABLE BIOMES: INVESTIGATING RAINFORESTS

PALM OIL IMPORTS [in metric tonnes (MT)]



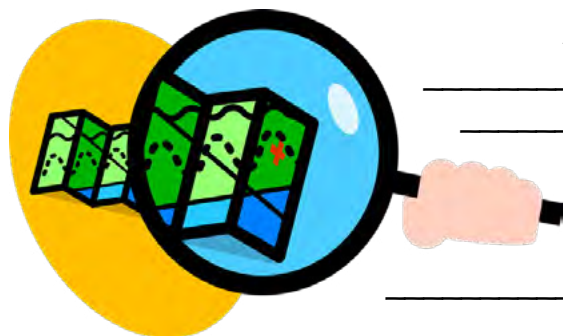
Visit The Guardian's *Rainforest Interactive- Palm Oil Imports* at: <https://www.theguardian.com/sustainable-business/ng-interactive/2014/nov/10/palm-oil-rainforest-cupboard-interactive>.

1. Label the countries that imported palm oil in 2014
2. Draw in the metric tonnes (MT) imported by each of these countries

2014



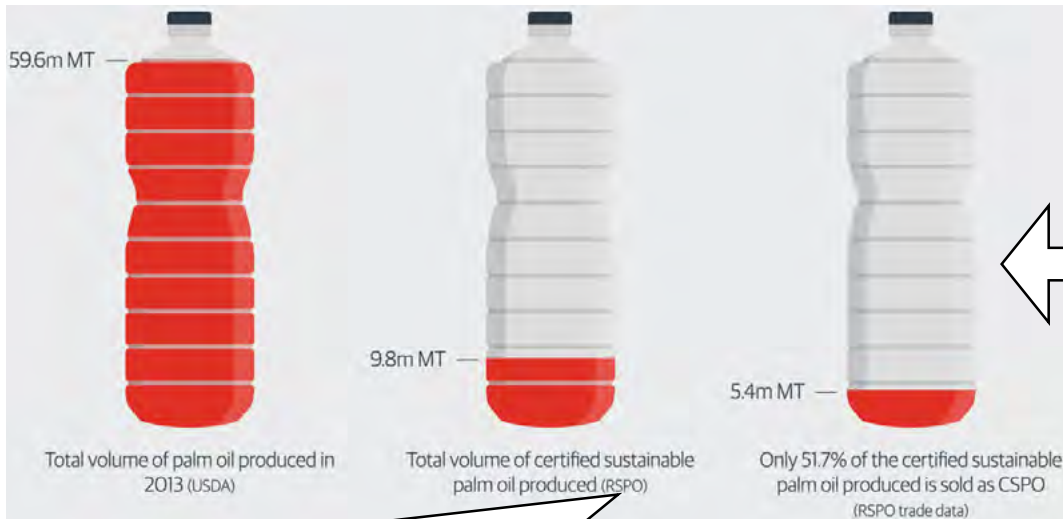
MAKE OBSERVATIONS...



What do you notice about the two maps?

SUSTAINABLE BIOMES: INVESTIGATING RAINFORESTS

Sustainably sourcing palm oil...



Write an informative caption for this graph.

RSPO stands for...

Visit <https://rspo.org/about> to help you outline what RSPO is all about.

IKEA- Palm Oil

- ⇒ IKEA uses approximately 29,000 tonnes of palm oil annually. About 90% of the total volume is used in home furnishing products, mainly in candles. Around 10% can be referred to food. IKEA suppliers currently buy palm oil mainly from Malaysia and Indonesia.
- ⇒ Since 2015, 100% of the palm oil used in our home furnishing products such as candles is certified sustainable palm oil from segregated RSPO sources. In total we use approximately 99.9% palm oil from more sustainable sources. Our goal is 100%.
- ⇒ The Roundtable on Sustainable Palm Oil (RSPO) is a multi-stakeholder organisation whose mission is to advance the production, procurement, finance and use of sustainable palm oil products. IKEA is an active member of RSPO.
- ⇒ Until we have reached 100% certified segregated palm oil, we buy RSPO Credits for the volume not secured as segregated. Buying credits supports sustainable palm oil production at the plantation level.



Sourced from: <https://about.ikea.com/en/about-us/our-view-on/palm-oil>

Explain what RSPO credits are.

Visit RSPO's webpage *What is a Credit?* at: <https://www.rspo.org/rspo-credits/introduction>.



SUSTAINABLE BIOMES: INVESTIGATING RAINFORESTS



Palm Oil in Disguise!

It is incredibly difficult to avoid palm oil. This is because products often do not list "palm oil" as an ingredient.

Currently, only three vegetable oils **MUST** be labelled in food products in Australia and New Zealand. **These are- peanut oil, sesame oil and soybean oil.**

This means, palm oil is often disguised. **Below is a list of ingredients that is commonly derived from palm oil or have palm content.**

Please note: Palm sugar and vegetable gum is NOT palm oil!

<p>Acetic and fatty acid esters of glycerol</p> <p>Alkyl Poly Glucoside</p> <p>Aluminium stearate</p> <p>Aluminium, calcium, sodium, magnesium salts of fatty acids</p> <p>Ammonium laureth sulphate</p> <p>Ammonium lauryl sulphate</p> <p>Arachamide mea</p> <p>Ascorbyl palmitate (304)</p> <p>Ascorbyl stearate</p> <p>Azelaic acid</p> <p>Butyl stearate</p> <p>Calcium lactylate</p> <p>Calcium oleyl lactylate</p> <p>Calcium stearate</p> <p>Calcium stearoyl lactylate</p> <p>Capric triglyceride</p> <p>Caprylic acid</p> <p>Caprylic / Capric Glycerides</p> <p>Caprylic triglyceride</p> <p>Caprylic/capric triglyceride</p> <p>Caprylic/capric/stearic triglyceride</p> <p>Capryloyl glycine</p> <p>Caprylyl glycol</p> <p>Carotene (Sometimes made from palm)</p> <p>Castile soap (often from palm)</p> <p>Ceteareth (2-100)</p> <p>Cetearyl alcohol</p> <p>Cetearyl ethylhexanoate</p> <p>Cetearyl glucoside</p> <p>Cetearyl isononanoate</p> <p>Ceteth-20</p> <p>Ceteth-24</p> <p>Cetyl acetate</p> <p>Cetyl alcohol</p> <p>Cetyl ethylhexanoate</p> <p>Cetyl hydroxyethylcellulose</p> <p>Cetyl lactate</p> <p>Cetyl octanoate</p> <p>Cetyl palmitate</p> <p>Cetyl ricinoleate</p> <p>Citric and fatty acid esters of glycerol</p> <p>Cocoa butter equivalent (CBE)</p> <p>Cocoa butter substitute (CBS)</p> <p>Cocamide DEA</p> <p>Cocamidopropyl betaine</p> <p>Decyl Glucoside</p> <p>Decyl oleate</p> <p>Diacetyltartaric and fatty acid esters of glycerol</p> <p>Dilinoic acid</p> <p>Disodium laureth sulfosuccinate</p> <p>Disodium lauryl sulfosuccinate</p> <p>Distilled Monoglyceride Palm</p> <p>Elaeis guineensis oil</p> <p>Emulsifiers: E304, E422, E430, E431, E432, E433, E434, E435, E436, E470, E470a, E470b, E471, E472, E472a, E472b, E472c, E472e, E472f, E473, E474, E475, E476, E477, E478, E479, E480, E481, E482, E483, E493, E494, E495</p>	<p>Emulsifying wax</p> <p>Epoxidized palm oil (uv cured coatings)</p> <p>Ethyl lauroyl arginate (243)</p> <p>Ethylene glycol monostearate</p> <p>Ethylhexyl hydroxystearate</p> <p>Ethylhexyl Palmitate</p> <p>Ethylhexyl palmitate</p> <p>Ethylhexyl stearate</p> <p>Ethylhexylglycerin</p> <p>Fatty acids</p> <p>Fatty alcohol sulphates</p> <p>Glycerin</p> <p>Glycerin or glycerol (442)</p> <p>Glyceryl distearate</p> <p>Glyceryl laurate</p> <p>Glyceryl monostearate</p> <p>Glyceryl myristate</p> <p>Glyceryl oleate</p> <p>Glyceryl polymethacrylate</p> <p>Glyceryl Rosinate</p> <p>Glyceryl stearate</p> <p>Glyceryl stearate SE</p> <p>Glycol distearate</p> <p>Guicol stearate</p> <p>Guineesis (palm)</p> <p>Hexadecylic</p> <p>Hexyl laurate</p> <p>Hexyldecanol</p> <p>Humectant glycerol</p> <p>Hydrogenated palm glycerides</p> <p>Isopropyl isostearate</p> <p>Isopropyl palmitate</p> <p>Isopropyl titanium triisostearate</p> <p>Isostearamide DEA</p> <p>Isostearate DEA</p> <p>Isostearic acid</p> <p>Isostearyl alcohol</p> <p>Lactic and fatty acid easters of glycerol</p> <p>Lauramide DEA</p> <p>Lauramide MEA</p> <p>Lauramine oxide</p> <p>Laureth</p> <p>Lauric acid</p> <p>Lauroyl sarcosine</p> <p>Lauryl betaine</p> <p>Lauryl lactate</p> <p>Lauryl glucoside (from palm)</p> <p>Lauryl pyrrolidone</p> <p>Linoleic acid</p> <p>Magnesium myristate</p> <p>Magnesium stearate</p> <p>Mixed tartaric, acetic and fatty acid esters of glycerol</p> <p>Mono-and- di-glycerides of fatty acids</p> <p>Mono-glycerides of fatty acids</p> <p>Myristate</p> <p>Myristic acid</p> <p>Myristic Cetrimonium Chloride Acid</p> <p>Myristoyl</p> <p>Myristyl alcohol</p> <p>Myristyl myristate</p> <p>Ocyl palmitate</p>	<p>Ocyl stearate</p> <p>Octyldodecyl myristate</p> <p>Octyldodecyl stearoyl stearate</p> <p>Oleamide MIPA</p> <p>Oleic acid</p> <p>Oleyl betaine</p> <p>Palm fruit oil</p> <p>Palm kernel oil</p> <p>Palm oil</p> <p>Palm olein</p> <p>Palm stearine</p> <p>Palmitate</p> <p>Palmitate</p> <p>Palmitic acid</p> <p>Palmitamidopropyltrimonium chloride</p> <p>Palmitoyl myristyl serinate</p> <p>Palmitoyl oxostearamide</p> <p>Palmitoyl oligopeptide</p> <p>Palmitoyl tetrapeptide-3</p> <p>Pentaerythrityl tetraisostearate</p> <p>Peptide complex</p> <p>Polyethylene (40) stearate (431)</p> <p>Polyglycerol esters of fatty acids</p> <p>Polyglycerol esters of interesterified ricinoleic acid</p> <p>Polyglycerol-2 oleyl ether</p> <p>Polyglyceryl-3 dilisostearate</p> <p>Polyglyceryl-4 isostearate</p> <p>Polyglyceryl-4 oleyl ether</p> <p>Polysorbate 60 or polyoxyethylene (20) sorbitan monostearate</p> <p>Polysorbate 65 or polyoxyethylene (20) sorbitan tristearate</p> <p>Polysorbate 80 or polyoxyethylene (20) sorbitan monooleate</p> <p>Polysorbate-20</p> <p>Polysorbate-40</p> <p>Polysorbate-80</p> <p>Polysorbate-85</p> <p>Potassium stearate</p> <p>PPG-15 stearate ether</p> <p>Propylene glycol esters of fatty acids</p> <p>Propylene glycol laurate</p> <p>Propylene glycol stearate</p> <p>Retinyl palmitate</p> <p>Saponified elaeis guineensis</p> <p>Sleareth</p> <p>SLES</p> <p>SLS</p> <p>Sodium cetearyl sulphate</p> <p>Sodium Dodecyl Sulphate (SDS or NaDS)</p> <p>Sodium Isostearoyl Lactylate</p> <p>Sodium lactylate; sodium oleyl lactylate; sodium stearoyl lactylate</p> <p>Sodium laurate</p> <p>Sodium laurel</p> <p>Sodium laureth sulfate</p> <p>Sodium laureth sulphate</p> <p>Sodium laureth-13 carboxylate</p> <p>Sodium lauroyl lactylate</p> <p>Sodium lauryl</p> <p>Sodium lauryl ether sulphate</p>	<p>Sodium lauryl glucose carboxylate</p> <p>Sodium lauryl sulfate</p> <p>Sodium lauryl sulfoacetate</p> <p>Sodium lauryl sulphate</p> <p>Sodium palm kernelate</p> <p>Sodium palmitate</p> <p>Sodium palmitate</p> <p>Sodium stearate</p> <p>Sodium stearoyl lactylate</p> <p>Sorbitan isostearate</p> <p>Sorbitan laurate</p> <p>Sorbitan monostearate (491)</p> <p>Sorbitan oleate</p> <p>Sorbitan palmitate</p> <p>Sorbitan sesquioleate</p> <p>Sorbitan trioleate</p> <p>Sorbitan tristearate</p> <p>Sorbitan tristearate (492)</p> <p>Stearalkonium chloride</p> <p>Stearalkonium hectorite</p> <p>Stearamide MEA</p> <p>Stearamidopropyl dimethylamine</p> <p>Steareth-10</p> <p>Steareth-2</p> <p>Steareth-20</p> <p>Steareth-21</p> <p>Stearic acid (vegetable oil)</p> <p>Stearic acid or fatty acid (570)</p> <p>Stearoyl sarcosine</p> <p>Stearyl alcohol</p> <p>Stearyl dimethicone</p> <p>Stearyl heptanoate</p> <p>Sucrose stearate</p> <p>Sucroseesters of fatty acids</p> <p>Taxanomic</p> <p>TEA-lauryl sulphate</p> <p>TEA-stearate</p> <p>Tocopheryl linoleate</p> <p>Triacetin</p> <p>Triacetin (1518)</p> <p>Tribehenin</p> <p>Tricaprylin</p> <p>Tristearin</p> <p>Vegetable glycerin</p> <p>Vegetable Oil</p> <p>Vitamin A palmitate</p> <p>Zinc stearate</p>
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Sourced from: <https://thelincolnpantry.co.nz/palm-oil-in-disguise/>

LET'S GET SHOPPING...

ACTIVITY TIME- Let's get shopping



1. Visit Coles online at <https://shop.coles.com.au/a/national/home>.

2. Use the search bar to help you locate the grocery items identified in the table below.

Search for a product e.g. milk

Search for a list of items

3. Carefully read the ingredients list for each grocery item- *does the product include palm oil?*
[Hint: refer to the previous page for a list of ingredients that is commonly derived from palm oil or has palm content]

4. Record your findings.

Fantastic Beef Noodle Cup, 70g 	Arnot's Original Chocolate Tim Tam, 200g 	Nutella Hazelnut Chocolate Spread, 750g 	Bega Smooth Peanut Butter, 780g 	Hershey's Cookies and Crème Sticks 4 Pack, 360ml 
Palm oil present: Yes / No Sustainable and Certified: Yes / No Coles Baker Super Soft White Sandwich Loaf, 680g 	Palm oil present: Yes / No Sustainable and Certified: Yes / No Meadow Lea Original Margarine Spread, 500g 	Palm oil present: Yes / No Sustainable and Certified: Yes / No Betty Crocker Devil's Food Cake Mix, 540g 	Palm oil present: Yes / No Sustainable and Certified: Yes / No Kellogg's Coco Pops Chocolatey Breakfast Cereal, 650g 	Palm oil present: Yes / No Sustainable and Certified: Yes / No Lindt Cornet Assorted, 333g 
Palm oil present: Yes / No Sustainable and Certified: Yes / No OMO Sensitive Top and Front Loader Laundry Liquid Detergent, 2L 	Palm oil present: Yes / No Sustainable and Certified: Yes / No Palmolive Naturals Replenishing Milk and Honey Soap, 4 pack 	Palm oil present: Yes / No Sustainable and Certified: Yes / No Pantene Pro-V Classic Clean Shampoo, 900ml 	Palm oil present: Yes / No Sustainable and Certified: Yes / No L'Oréal Paris Paradise Mascara Black, 6.4ml 	Palm oil present: Yes / No Sustainable and Certified: Yes / No My Dog with Gourmet Beef and Roast Vegetable Flavour Dry Dog Food, 1.5kg 
Palm oil present: Yes / No Sustainable and Certified: Yes / No	Palm oil present: Yes / No Sustainable and Certified: Yes / No	Palm oil present: Yes / No Sustainable and Certified: Yes / No	Palm oil present: Yes / No Sustainable and Certified: Yes / No	Palm oil present: Yes / No Sustainable and Certified: Yes / No

How many grocery items used sustainably sourced and certified palm oil? _____ Did this surprise you? Yes / No

SUSTAINABLE BIOMES: INVESTIGATING RAINFORESTS

HOUSEHOLD CHALLENGE (1)- Pantry Audit

Have you ever thought about whether your family consumes palm oil products? Check out your pantry now!



Complete the table below- take a tally ###

PANTRY CATEGORY	Includes palm oil	Sustainably sourced/ certified	Does not include palm oil
Grains/pasta			
Dry ingredients (e.g., flour, sugar)			
Wet ingredients (e.g., oil, honey)			
Healthy snacks (e.g., nuts)			
Junk food (e.g., lollies, potato chips)			
Breakfast foods (e.g., cereal)			
Canned goods			
Spices			

Report your findings to your family- record their thoughts.



HOUSEHOLD CHALLENGE (2)- Cook a meal without palm oil

Design and cook a meal for your family.

This needs to be free of palm oil OR uses palm oil that has been sourced sustainably and certified.

Upload to MS Teams:

- ◇ A list of ingredients and method
- ◇ A photograph of the final product




SUSTAINABLE BIOMES: INVESTIGATING RAINFORESTS

PALM OIL FREE OR SUSTAINABILITY CERTIFIED PRODUCT SHOPPING GUIDE

Find palm oil free or sustainably certified products for the following grocery categories.

[Hint: Access Sustainable Table's *Palm Oil- the oily truth* pdf (pp.3-4) at: https://sustainabletable.org.au/wp-content/uploads/Palm_Oil.pdf]

SNACK FOOD	CEREALS	ICE CREAM	SAVOURY BISCUITS	SWEET BISCUITS
CHOCOLATE	SPREADS	CLEANING PRODUCTS	PERSONAL CARE	



THE CAMPAIGN

Since 2009, Zoos Victoria has been campaigning to get labelling laws changed in Australia so that palm oil is no longer hidden as 'vegetable oil' or any other names on the products you buy. So far, more than 470,000 Australians have spoken up for palm oil labelling through *Don't Palm Us Off* and you can too!

By having mandatory labelling of palm oil on products, this will put the power back into the hands of consumers who will have the choice to buy products containing certified sustainable palm oil.

This will put pressure on manufacturers to clean up their act and only source 100% Segregated and sustainable palm oil as certified by the independent governing body the Roundtable on Sustainable Palm Oil (RSPO).

Tell your Minister that you want palm oil to be clearly labelled.

Because you have the right to know where that palm oil came from.

Choose your state or territory to send a message to your minister:

ACT

New South Wales

Northern Territory

Queensland

South Australia

Tasmania

Victoria

Western Australia

OPTIONAL:

Message the NSW Minister to let them know that you want palm oil to be clearly labelled at: <https://www.zoo.org.au/dont-palm-us-off>