TED演讲者：Enric Sala | 安瑞克沙拉

演讲标题：Let's turn the high seas into the world's largest nature reserve | 我们来把公海转变为世界上最大的自然保护区

内容概要：What if we could save the fishing industry and protect the ocean at the same time? Marine ecologist Enric Sala shares his bold plan to safeguard the high seas -- some of the last wild places on earth, which fall outside the jurisdiction of any single country -- by creating a giant marine reserve that covers two-thirds of the world's ocean. By protecting the high seas, Sala believes we will restore the ecological, economic and social benefits of the ocean. "When we can align economic needs with conservation, miracles can happen," Sala says.

如果我们能够拯救捕鱼业，同时又能保护海洋会怎样？海洋生态学家安瑞克沙拉分享了他大胆的公海捍卫计画——公海是地球上最后的野生地区，在任何国家的辖区之外——他想要建立一个巨大的海洋保护区，涵盖全世界海洋的三分之二。沙拉相信，透过保护公海，我们将能恢复海洋的生态、经济、和社会利益。「当我们能让经济需求与保育配合，奇迹就会发生。」

www.XiYuSoft.com | **锡育软件**

If you were to jump into any random spot in the ocean, you would probably see something like this.	如果你要跳入海洋中 一個隨機選擇的地點, 你可能會看到這樣的景象。[00:13]
Empty of large animals.	沒有大型動物。[00:20]
Because we have taken them out of the water faster than they can reproduce.	因為我們把牠們 從水中抓出來的速度 比牠們的繁殖速度還快。[00:23]
Today I want to propose a strategy to save ocean life, and the solution has a lot to do with economics.	今天我想要提出一項策略, 來拯救海洋生命, 這項解決方案和經濟 有密切的相關性。[00:29]
In 1999, a little place called **Cabo Pulmo** in Mexico was an **underwater** desert.	1999 年,墨西哥 一個叫普爾莫角的小地方 是水底的沙漠。[00:36]
The **fishermen** were so upset not having enough fish to catch that they did something that no one expected.	沒有魚可以捕,讓漁夫非常沮喪, 他們做了一件沒人預期到的事。[00:42]
Instead of spending more time at sea, trying to catch the few fish left, they stopped fishing completely.	他們沒有花更多時間在海上, 試著抓出所剩無幾的魚, 他們反而完全停止捕魚。[00:49]
They created a national park in the sea.	他們在海上建立了一個國家公園。[00:57]
A no-take marine **reserve**.	一個不可捕魚的海洋保護區。[01:00]
When we returned, 10 years later, this is what we saw.	十年後,我們再返回時, 看到了這樣的景象。[01:03]
What had been an underwater barren was now a **kaleidoscope** of life and color.	本來的水底荒漠, 現在成了生命和色彩的萬花筒。[01:09]

Cabo: n.(烟草)叶柄 **Pulmo:** n.表示"肺" **underwater:** adj.在水中的;水面下的/adv.在水下/n.水下 **fishermen:** n.渔夫;渔船(fisherman的复数形式) **reserve:** n.储备,储存;自然保护区;预备队;缄默;[金融]储备金/vt.储备;保留;预约/vi.预订 **kaleidoscope:** n.万花筒;千变万化

We saw it back to **pristine** in only 10 years.	我們看到它在僅僅 十年間就回到原貌。[01:16]
Including the return of the large **predators**, like the **groupers**, the sharks, the **jacks**.	連大型捕食動物都回來了, 像是石斑魚、鯊魚、鰺科魚,[01:20]
And those **visionary** fishermen are making much more money now, from tourism.	還有那些有遠見的漁夫。 現在從觀光賺的錢更多了。[01:26]
Now, when we can **align** economic needs with **conservation**, miracles can happen.	當我們能讓經濟需求與保育配合, 奇蹟就會發生。[01:33]
And we have seen similar **recoveries** all over the world.	在全世界,我們都看過 類似的恢復狀況。[01:40]
I spent 20 years studying human **impacts** in the ocean.	我花了二十年研究 人類對海洋的影響。[01:44]
But when I saw **firsthand** the **regeneration** of places like Cabo Pulmo, that gave me hope.	但當我親眼看到 像普爾莫角這類地方的重生, 我找到了希望。[01:50]
So I decided to quit my job as a university professor to **dedicate** my life to save more ocean places like this.	所以我決定辭去大學教授的工作, 把我的人生投入拯救 更多像這樣的海洋地區。[01:58]

pristine: adj.原始的，古时的；纯朴的 **predators:** [动]捕食者/[动]食肉动物(predator的复数) **groupers:** n.石斑鱼类(grouper的复数) **jacks:** n.抓子游戏;家伙;小伙子(jack的复数)/v.抬起;提醒(jack的三单形式) **visionary:** adj.梦想的;幻影的/n.空想家;梦想者;有眼力的人 **align:** vt.使结盟;使成一行;匹配/vi.排列;排成一行 **conservation:** n.保存，保持；保护 **recoveries:** n.恢复;追回款;补偿(recovery的复数) **impacts:** n.影响(impact的复数);[力]冲击/v.压紧;冲撞;对...产生不良影响(impact的三单形式) **firsthand:** adj.直接的;直接采购的;直接得来的/adv.直接地 **regeneration:** n.[生物][化学][物]再生,重生;重建 **dedicate:** vt.致力;献身;题献

In the last 10 years, our team at National **Geographic** Pristine Seas has explored, **surveyed** and **documented** some of the wildest places left in the ocean and worked with governments to protect them.	在過去十年,我們的 「國家地理原始海洋」團隊 探索、調查,並記錄了 海洋中一些最野生的地方, 並和政府合作,來保護這些地方。[02:08]
These are all now protected, covering a total area half the size of Canada.	這些現在都受到保護了,[02:22]

(Applause) These places are the Yellowstones and the Serengetis of the sea.	（掌聲） 這些地方是海洋的 黃石公園和塞倫蓋提。[02:27]
These are places where you jump in the water and are immediately surrounded by sharks.	在這些地方,當你跳入水中, 就會馬上被鯊魚圍繞。[02:39]
(Laughter) And this is good, because the sharks are a good **indicator** of the health of the **ecosystem**.	（笑聲） 這是好現象, 因為鯊魚是很好的指標, 表示生態系統很健康。[02:44]
These places are time machines that take us to the ocean of 1,000 years ago.	這些地方是時光機, 帶我們回到一千年前的海洋。[02:52]
But they also show us what the future ocean could be like.	但它們也讓我們看到, 未來的海洋可能是什麼樣子。[02:58]
Because the ocean has extraordinary **regenerative** power, we have seen great recovery in just a few years.	因為海洋有超凡的新生力, 短短幾年我們就已經 看到了了不起的恢復狀況。[03:02]

We just need to protect many more places at risk so they can become wild and full of life again.	我們得要保護更多 面臨風險的地方, 讓它們能回復野生,再次充滿生命。[03:10]
But today, only two percent of the ocean is fully protected from fishing and other activities.	但,現今只有 2% 的海洋 能得到完整的保護, 不受捕魚和其他活動影響。[03:17]
And that's not enough.	那並不足夠。[03:25]
Studies suggest that we need at least 30 percent of the ocean under protection not just to save marine life, but to save us, too.	研究指出,我們至少 要有 30% 的海洋受到保護, 這樣不僅能拯救海洋生命, 也能拯救我們。[03:28]
Because the ocean gives us more than half of the oxygen we breathe, food, it **absorbs** much of the carbon pollution that we throw in the atmosphere.	因為我們呼吸的氧氣和食物 有一半以上都來自海洋, 海洋吸收了大氣中大量 由我們造製的碳污染。[03:36]
We need a healthy ocean to survive.	要有健康的海洋,我們才能生存。[03:46]
Now, is there a way to accelerate ocean protection?	有什麼方式可以加速海洋保護嗎?[03:50]
I think so.	我認為有。[03:55]
And it involves us looking at the high seas.	這個方法需要我們去研究公海。[03:56]
Now, what are the high seas?	什麼是公海?[04:00]
Now **coastal** countries have **authority** over 200 **nautical** miles from shore.	沿岸國家擁有海岸起算 兩百海浬範圍內的主權。[04:02]
Everything beyond those areas are called the high seas.	在那之外的區域就叫做公海。[04:09]

In dark blue on this map.	在這張地圖上用深藍色標示。[04:12]
No country owns the high seas, no country is responsible for them, but they all are, so it's a little like the Wild West.	公海不屬於任何國家, 也沒有任何國家要為公海負責, 但公海有一點像是蠻荒的美國西部。[04:15]
And there are two main types of fishing in the high seas.	在公海,有兩種主要的捕魚方式。[04:23]
At the bottom and near the surface.	在海底和在海面。[04:26]
Bottom **trawling** is the most **destructive** practice in the world.	海底拖網捕魚是世界上 最具破壞性的做法。[04:29]
Super **trawlers**, the largest fishing **vessels** in the ocean, have nets so large that they can hold a dozen 747 jets.	超級拖網漁船是 海上最大的捕魚船, 它的魚網大到可以網住 12 台 747 噴射機。[04:34]
These huge nets destroy everything in their paths -- including deep **corals** that **grow on** sea **mounds**, which can be thousands of years old.	這些大型魚網會把它們 經過的地方都摧毀—— 包括長在海底山上的深海珊瑚, 有些已經好幾千歲。[04:46]
And fishing near the surface targets mostly species that **migrate** between the high seas and country's waters, like tuna and sharks.	海面的捕魚,目標是在公海 和國家領海之間遷徙的物種, 比如鮪魚和鯊魚。[04:57]
And many of these species are threatened because of too much fishing and bad management.	這些物種當中有許多 都因為過度捕撈和不良管理 而受到威脅。[05:05]

Now, who **fishes** in the high seas?	那麼誰會在公海捕魚?[05:10]
Until now, it was difficult to know exactly, because countries have been very **secretive** about the **long-distance** fishing.	到目前為止,都很難明確知道, 因為國家對於遠洋捕魚 都是保密到家。[05:14]

But now, satellite technology allows us to track individual boats.	但現在,衛星技術 讓我們能夠追蹤個別船隻。[05:22]
This is a game-changer.	這改變了遊戲規則。[05:28]

English	Chinese
And this is the first time we are **presenting** the data that you are going to see.	這是第一次, 我們把接下來各位 將會看到的資料公開呈現。[05:31]
I'm going to show you the tracks of two boats over the course of a year, using a satellite **automated** identification system.	我等下要讓各位看的是, 在一年間兩艘船的軌跡, 用的是衛星自動化辨識系統。[05:36]
This is a long-liner, fishing around the southern coast of Africa.	這是一艘延繩漁船, 沿著非洲南海岸捕魚。[05:46]
After a few months fishing there, the boat goes to Japan to **resupply**, and shortly after, here it is, fishing around Madagascar.	在那裡捕魚了幾個月之後, 這艘船到日本去做再補給, 沒多久,在這裡, 到馬達加斯加捕魚。[05:51]
This is a Russian trawler fishing, probably, for cod, in Russian waters, and then across the high seas of the north Atlantic.	這是一艘俄國拖網漁船, 可能是在捕鱈魚, 這是俄國水域, 接著橫越了北大西洋的公海。[06:00]

English	Chinese
Thanks to Global Fishing Watch, we have been able to track over 3,600 boats from more than 20 countries, fishing in the high seas.	有了 Global Fishing Watch, （全球捕魚監看網站） 我們能夠追蹤來自 超過 20 個不同國家, 在公海上捕魚的至少 3600 艘船。[06:10]
They use satellite **positioning** and **machine-learning** technology to **automatically** identify if a boat is just **sailing** or fishing, which are the white spots here.	他們用衛星定位及機器學習技術, 自動辨識出一艘船 是在航行或是在捕魚, 就是這裡的白點。[06:21]
So with an international group of colleagues, we decided to investigate not only who fishes in the high seas, but who benefits from it.	所以,我們和同事決定組成 一個國際團體,來調查 誰在公海上捕魚,以及誰從中獲益。[06:32]
My colleague, Juan Mayorga, at the University of California, Santa Barbara, has produced detailed maps of fishing effort, which means how much time and fuel is spent fishing in every pixel in the ocean.	我的同事,華安馬尤勒加, 來自聖塔芭芭拉的加州大學, 針對捕魚耗資做出了細節地圖, 耗資指的是花在海洋中 每一個像素內捕魚 所花的時間和燃料。[06:41]
We have a map for every country.	每個國家,我們都有一張地圖。[06:53]
China, Taiwan, Japan, Korea and Spain alone **account for** almost 80 percent of the fishing in the high seas.	光是中國、台灣、日本、 韓國,和西班牙, 就幾乎佔了公海捕魚的 80%。[06:56]
When we put all of the countries together, this is what we get.	當我們把所有這些國家加在一起, 就得到這個。[07:04]

English	Chinese
Because we know the **identity** of every boat in the database, we know its size, its **tonnage**, the power of its engines, how many crew are on board.	因為我們知道資料庫中 每一艘船的身份, 我們就能知道它的大小、 噸位、引擎馬力、 有多少船員。[07:09]
With this information, we can calculate fuel costs, labor costs, etc.	有這些資訊,我們就能計算出 燃料成本、勞力成本等等。[07:21]
So for the first time, we have been able to map the costs of fishing in the high seas.	所以,第一次, 我們得以在地圖上繪製出 公海的捕魚成本。[07:26]
The darker the red, the higher the costs.	紅色越深,表示成本越高。[07:34]
Thanks to our colleagues at the University of British Columbia, we know how much every country is actually fishing.	有賴我們在英屬 哥倫比亞大學的同事, 我們知道每個國家的實際捕魚量。[07:37]
And we know the price of the fish as it comes off the vessel.	我們也知道當魚獲 離開船的時候的價格。[07:44]
Combined with the data on effort, we have been able to map the revenue of fishing the high seas.	和耗資的資料結合, 我們就能夠在地圖上繪製出 在公海捕魚的收入。[07:47]
The darker the blue, the higher the revenue.	越深的藍色,表示越高的收入。[07:54]
We have costs, and we have revenue.	我們有成本,我們有收入。[07:57]
So for the first time, we have been able to map the **profitability** of fishing in the high seas.	所以,第一次, 我們能夠在地圖上繪製出 在公海上捕魚的利潤。[08:00]
Now I'm going to show you a map.	現在我要展示一張地圖。[08:08]

English	Chinese
Red colors mean we are losing money by fishing in that part of the ocean.	紅色表示在海洋的那個區域 捕魚是會損失錢的。[08:10]
Blue colors mean it's **profitable**.	藍色表示是有利可圖。[08:16]
Here it is.	就是這張圖。[08:19]
It seems mostly profitable.	似乎大多有利可圖。[08:21]

English	中文
But there are two more factors we have to **take into account**.	但我們還需要考量兩個因子。 [08:23]
First, recent **investigations** reveal the use of forced labor, or slave labor, in high seas fishing.	第一,近期的調查顯示, 在公海捕魚時, 有人會使用強迫的勞工 或是奴隸勞工。 [08:28]
Companies use it to cut costs, to generate profits.	公司用這些人 來縮減成本,產生利潤。 [08:37]
And second, every year, governments **subsidize** high seas fishing with more than four billion dollars.	第二,每年政府會補助公海捕魚, 金額超過 40 億美元。 [08:41]
Let's go back to the map of profits.	我們再回來看利潤地圖。 [08:51]
If we assume fair **wages**, which means not slave labor, and we remove the **subsidies** from our calculation, the map turns into this.	如果我們假設薪資是公平的, 也就是說沒有奴隸勞工, 且我們在計算時把補助給排除, 地圖就會變成這樣。 [08:52]
Fishing is truly profitable in only half of the high seas fishing grounds.	只有在一半的公海上, 捕魚才是有利可圖的。 [09:05]

English	中文
In fact, on **aggregate**, subsidies are four times larger than the profits.	事實上,從總計來看, 補助是利潤的四倍之多。 [09:12]
So we have five countries doing most of the fishing in the high seas and the economics are **dependent on** huge government subsidies, and for some countries, on human rights **violations**.	所以有五個國家 大部分的捕魚都在公海進行, 而經濟方面則大量依賴政府補助, 有些國家,則是依賴違反人權的方式。 [09:20]
What this economic analysis reveals, is that **practically** the entire high seas fishing proposition is **misguided**.	這項經濟分析揭示出一個狀況, 實際上整個公海補魚的 主張就已經被誤導了。 [09:31]
What **sane** government would subsidize an industry **anchored** in **exploitation** and fundamentally destructive?	神智清楚的政府怎麼會 去補助一個產業, 如果這個產業靠的是剝削, 且從根本上就是具有摧毀性的? [09:38]
And not so profitable, anyway.	而且還不是很能獲利。 [09:46]
So, why don't we close all of the high seas to fishing?	所以,為什麼我們不停止 所有的公海捕魚? [09:49]
Let's create a giant high seas reserve, **two-thirds** of the ocean.	我們來建立一個巨大海洋保護區, 佔海洋比例的三分之二。 [09:56]
A **modeling** study from --	一篇建模的研究——[10:03]

English	中文
(Applause) A modeling study from colleagues at UC Santa Barbara, suggests that such reserve would help **migratory** species like tuna recover in the high seas.	(掌聲) 聖塔芭芭拉加州大學的同事 有一篇建模的研究, 指出這類保護區能夠協助 遷徙型物種,比如鮪魚, 在公海中恢復原來的狀況。 [10:05]
And part of that increased abundance would **spill over** into the countries' waters, helping to **replenish** them.	這些物種夠豐足之後, 有一部分就會進入到國家的領海, 協助補充領海的生物。 [10:17]
That would also increase the catch in these waters, and so would the profits, because the cost of fishing would be **lowered**.	那就會增加在這些領海的漁獲量, 利潤跟著提升, 因為捕魚的成本會下降。 [10:23]
And the **ecological** benefits would be huge, because these species of large predators, like tuna and sharks, are key to the health of the entire ecosystem.	經濟的利益會很大, 因為這些大型捕食動物, 比如鮪魚和鯊魚, 是整個生態系統健康的關鍵。 [10:30]
Therefore, protecting the high seas would have ecological, economic and social benefits.	因此,保護公海 會帶來生態、經濟, 以及社會的益處。 [10:41]
But the truth is that most fishing companies don't care about the environment.	但真相是大部分的捕魚公司 都不在乎環境。 [10:48]
But they would make more money by not fishing in the high seas.	但如果不在公海捕魚, 他們會賺更多錢。 [10:52]
And this would not affect our ability to feed our growing population, because the high seas provide only five percent of the global marine catch, because the high seas are not as productive as **near-shore** waters.	這不會影響到我們供應 食物給不斷成長的人口, 因為全球海洋的漁獲, 只有 5% 是來自公海, 因為公海不像近海水域 那麼有生產力。 [10:56]

English	中文
And most of the catch of the high seas is sold as **upscale** food items, like tuna **sashimi** or shark fin soup.	在公海上大部分的漁獲都是 以高檔商品的定位來銷售, 比如鮪魚生魚片或是魚翅湯。 [11:12]
The high seas catch does not **contribute to** global food	公海漁獲對於全球的糧食保障 並沒有什麼貢獻。

security.	[11:21]
So how are we going to do it?	那麼,我們要如何做？ [11:27]
How are we going to protect the high seas?	我們要如何保護公海？ [11:29]
As we speak, **negotiators** at the United Nations are beginning discussions on a new agreement to do just that.	就在這個時候,聯合國的談判專家 已經開始討論關於 保護公海的新協議。 [11:31]
But this cannot happen behind closed doors.	但關起門來是不可能讓它實現的。 [11:38]
This is our greatest opportunity.	這是我們最大的機會。 [11:41]
And we all should ensure that our countries will support the protection of the high seas and get rid of subsidies to industrial fishing.	我們都應該要確保 我們的國家會支持對公海的保護, 不要再對工業捕魚提供補助。 [11:44]
In 2016, 24 countries and the European Union agreed to protect the Ross Sea, the wildest places in Antarctica, full of wildlife like killer whales, **leopard** seals, penguins.	2016 年,24 個國家以及歐盟 同意要保護羅斯海, 那是南極洲最野生的地方, 充滿了野生動物, 像是逆戟鯨、豹海豹、企鵝。 [11:55]
And this included fishing nations, like China, Japan, Spain, Russia.	這些國家還包含了捕魚國家, 如中國、日本、西班牙、俄國。 [12:10]

upscale: adj.迎合高层次消费者的;质优价高的/vt.升高一级 **sashimi:** n.(日)生鱼片 **contribute to:** 有助于;捐献
negotiators: n.谈判代表(negotiator的复数) **leopard:** n.豹;美洲豹

But they decided that protecting such a unique environment would be worth more than **exploiting** it for relatively little benefit.	但他們會決定要保護 這麼獨特的環境, 是因為保護它的價值更高, 不需為了相對少的利益來利用它。 [12:16]
And this is exactly the type of cooperation and **willingness** to **set aside** differences that we are going to need.	就是要靠這種合作和意願, 來排除歧見, 這才是我們會需要的。 [12:25]
We can do it again.	我們可以再做一次。 [12:32]
If 20 years from now, our children were to jump into any random spot in the ocean, what would they see?	如果 20 年之後, 我們的孩子要跳入海洋中 一個隨機選擇的地點, 他們會看到什麼？ [12:35]
A barren landscape, like much of our seas today, or an abundance of life, our **legacy** to the future?	貧瘠的地景, 就像現在大部分的海洋？ 或是充滿生命的景象, 我們留給未來的遺產？ [12:45]
Thank you very much.	非常謝謝。 [12:53]
(Applause) Thank you.	（掌聲） 謝謝。 [12:54]
(Applause)	（掌聲） [12:59]

exploiting: n.利用;开拓/v.利用;开发(exploit的ing形式) **willingness:** n.乐意；心甘情愿；自动自发 **set aside:** 留出;驳回,撤销;不顾 **legacy:** n.遗赠，遗产