



SNACK
TIME
WITH NASA
CEVICHE
en español



1
00:00:04,700 --> 00:00:02,480
hello and welcome to being

2
00:00:07,160 --> 00:00:04,710
with NASA my name is I am in

3
00:00:10,820 --> 00:00:07,170
Argueta and today I am going to prepare one of my

4
00:00:12,980 --> 00:00:10,830
favorite dishes, the Peruvian ceviche.

5
00:00:15,530 --> 00:00:12,990
What many people do not know about NASA is

6
00:00:17,960 --> 00:00:15,540
that we play an important role in

7
00:00:20,920 --> 00:00:17,970
helping to maintain the health of

8
00:00:23,660 --> 00:00:20,930
fisheries using satellite data

9
00:00:26,599 --> 00:00:23,670
with that scientific data you can

10
00:00:28,820 --> 00:00:26,609
look at something like the color of the ocean and

11
00:00:31,609 --> 00:00:28,830
determine the health and state of

12
00:00:34,190 --> 00:00:31,619
different populations of fish like

13
00:00:36,470 --> 00:00:34,200

this white fish that I am going to use today and

14

00:00:39,470 --> 00:00:36,480

to tell us about all this

15

00:00:41,420 --> 00:00:39,480

laura is with me lorenzón and scientist of the

16

00:00:43,850 --> 00:00:41,430

oceanic biology and

17

00:00:47,779 --> 00:00:43,860

biogeochemistry program at nasa central office

18

00:00:51,110 --> 00:00:47,789

hello laura how are you now I

19

00:00:53,869 --> 00:00:51,120

know how you are doing very well thanks for

20

00:00:55,790 --> 00:00:53,879

joining us first of all tell me

21

00:00:58,760 --> 00:00:55,800

you like ceviche

22

00:01:02,000 --> 00:00:58,770

I love it my husband prepares it with

23

00:01:04,399 --> 00:01:02,010

mango and it is absolutely delicious very

24

00:01:07,100 --> 00:01:04,409

good very good so first of all

25

00:01:09,080 --> 00:01:07,110

talking a bit about why nasa

26
00:01:11,630 --> 00:01:09,090
studies the ocean and what does that have to do

27
00:01:13,340 --> 00:01:11,640
with ceviche well you will know that

28
00:01:15,830 --> 00:01:13,350
17 percent of the world population

29
00:01:18,230 --> 00:01:15,840
depends on the ocean for their

30
00:01:20,149 --> 00:01:18,240
daily protein and we want to make sure

31
00:01:22,399 --> 00:01:20,159
that our marine resources are

32
00:01:24,740 --> 00:01:22,409
being maintained not only for us

33
00:01:26,570 --> 00:01:24,750
but for our future populations and

34
00:01:28,670 --> 00:01:26,580
since the sea covers two thirds of

35
00:01:31,310 --> 00:01:28,680
our planet it is also important to

36
00:01:33,980 --> 00:01:31,320
make sure that we are using it

37
00:01:37,130 --> 00:01:33,990
well and it plays a fundamental role in

38
00:01:38,810 --> 00:01:37,140

our climate The ocean absorbs heat and

39

00:01:41,389 --> 00:01:38,820

through ocean currents

40

00:01:43,520 --> 00:01:41,399

redistributes it around the rest of the

41

00:01:45,529 --> 00:01:43,530

planet, but as the

42

00:01:47,480 --> 00:01:45,539

climate changes, our ocean also changes, which is

43

00:01:49,340 --> 00:01:47,490

why it is very important to observe it,

44

00:01:51,710 --> 00:01:49,350

because these changes can also

45

00:01:54,440 --> 00:01:51,720

impact fishing and the UNACE mission

46

00:01:57,050 --> 00:01:54,450

in reality is to understand how

47

00:01:59,630 --> 00:01:57,060

the earth works as a clear system an

48

00:02:01,470 --> 00:01:59,640

entire system if i know that nasa observes

49

00:02:04,860 --> 00:02:01,480

the color of the ocean from it

50

00:02:07,290 --> 00:02:04,870

empty right what does that mean

51
00:02:09,690 --> 00:02:07,300
exactly what you hear what color

52
00:02:12,120 --> 00:02:09,700
is the water the color of our waters

53
00:02:13,650 --> 00:02:12,130
is impacted by what is dissolved

54
00:02:16,620 --> 00:02:13,660
or what is suspended in it

55
00:02:19,050 --> 00:02:16,630
then the satellites work just

56
00:02:21,900 --> 00:02:19,060
as our eyes work and

57
00:02:24,000 --> 00:02:21,910
we can see if there is something

58
00:02:26,970 --> 00:02:24,010
different in terms of the color of the water

59
00:02:29,480 --> 00:02:26,980
for example if we see a large stain or

60
00:02:32,070 --> 00:02:29,490
large areas of green We can

61
00:02:35,160 --> 00:02:32,080
assume that this is a

62
00:02:37,410 --> 00:02:35,170
very healthy population of phytoplankton now that with

63
00:02:39,480 --> 00:02:37,420

the phytoplankton, well, the zooplankton and

64

00:02:41,280 --> 00:02:39,490

that he started planting, well, the

65

00:02:42,960 --> 00:02:41,290

small fish and who eats the

66

00:02:44,280 --> 00:02:42,970

small fish at times bigger

67

00:02:47,460 --> 00:02:44,290

then YouTube

68

00:02:48,860 --> 00:02:47,470

you understand more or less how everything is

69

00:02:51,350 --> 00:02:48,870

connected at

70

00:02:53,800 --> 00:02:51,360

other times We can also see what

71

00:02:56,509 --> 00:02:53,810

we call several red

72

00:02:58,160 --> 00:02:56,519

phytoplankton expansions, which in this

73

00:03:01,220 --> 00:02:58,170

case is toxic because they produce toxins

74

00:03:02,990 --> 00:03:01,230

in coastal areas where many people

75

00:03:04,880 --> 00:03:03,000

go, this can be a problem for

76

00:03:07,309 --> 00:03:04,890

local health not only for people but

77

00:03:09,500 --> 00:03:07,319

also for ecosystems. how

78

00:03:12,860 --> 00:03:09,510

interesting that the color of the ocean

79

00:03:15,710 --> 00:03:12,870

gives us so much information and what impact does

80

00:03:17,899 --> 00:03:15,720

the observation of the color of the ocean have and the

81

00:03:21,619 --> 00:03:17,909

health of the ecosystems in the

82

00:03:23,839 --> 00:03:21,629

fisheries all by seeing phytoplankton the

83

00:03:25,789 --> 00:03:23,849

fisheries the fish depend on

84

00:03:28,580 --> 00:03:25,799

lotito planto which is the base the base of

85

00:03:30,470 --> 00:03:28,590

the trophic chain and it also helps us

86

00:03:32,660 --> 00:03:30,480

understand where the fish may be

87

00:03:34,670 --> 00:03:32,670

because of course we depend on the

88

00:03:37,360 --> 00:03:34,680

fish that are caught to be able to

89

00:03:39,589 --> 00:03:37,370

consume them and we know that the fish

90

00:03:41,720 --> 00:03:39,599

have are the favorites so

91

00:03:43,520 --> 00:03:41,730

we can use other data such as

92

00:03:45,920 --> 00:03:43,530

sea surface temperature or

93

00:03:47,479 --> 00:03:45,930

altitude of the sea to know in which areas

94

00:03:50,210 --> 00:03:47,489

maybe the good fish will be

95

00:03:52,580 --> 00:03:50,220

found to get food

96

00:03:55,130 --> 00:03:52,590

all our data is free and

97

00:03:57,110 --> 00:03:55,140

open to the public

98

00:03:59,930 --> 00:03:57,120

therefore we love that people

99

00:04:02,660 --> 00:03:59,940

use the zipi and our users are

100

00:04:04,310 --> 00:04:02,670

very varied from the scientists who

101
00:04:06,590 --> 00:04:04,320
generate these algorithms and other

102
00:04:08,510 --> 00:04:06,600
research, but also the public

103
00:04:11,210 --> 00:04:08,520
in general, we have non-

104
00:04:13,280 --> 00:04:11,220
profit organizations, private entities, educators,

105
00:04:15,740 --> 00:04:13,290
children, we love it when real people take

106
00:04:19,370 --> 00:04:15,750
advantage of NASA data to

107
00:04:22,099 --> 00:04:19,380
better understand and protect

108
00:04:25,130 --> 00:04:22,109
and use it wisely. sustainable our

109
00:04:27,860 --> 00:04:25,140
ocean yes it seems like a very

110
00:04:32,060 --> 00:04:27,870
important investigation since we depend so much on the

111
00:04:34,190 --> 00:04:32,070
ocean our ocean is gigantic 70%

112
00:04:37,160 --> 00:04:34,200
of our planet it is not for nothing we call

113
00:04:39,680 --> 00:04:37,170

our planet our blue planet and

114

00:04:42,170 --> 00:04:39,690

we are all interconnected with the

115

00:04:44,300 --> 00:04:42,180

ocean did you know that at least half

116

00:04:46,550 --> 00:04:44,310

of The oxygen that we breathe comes

117

00:04:48,620 --> 00:04:46,560

from the sea generated by phytoplankton and

118

00:04:50,720 --> 00:04:48,630

other marine algae. It is important

119

00:04:52,970 --> 00:04:50,730

to remember that we are all

120

00:04:55,510 --> 00:04:52,980

interconnected and whatever I

121

00:04:58,719 --> 00:04:55,520

do on land, for example,

122

00:05:00,820 --> 00:04:58,729

where I put my waste or the

123

00:05:03,850 --> 00:05:00,830

fertilizers that I put on the land,

124

00:05:05,710 --> 00:05:03,860

all of that Somehow or another it

125

00:05:08,080 --> 00:05:05,720

eventually reaches the ocean through

126

00:05:11,200 --> 00:05:08,090

our rivers that connect the continent

127

00:05:13,180 --> 00:05:11,210

to the ocean and from the coastal zone which is

128

00:05:15,610 --> 00:05:13,190

an area where there is a lot of population

129

00:05:17,920 --> 00:05:15,620

that eventually reaches the

130

00:05:20,290 --> 00:05:17,930

open ocean and the ocean played an

131

00:05:20,290 --> 00:05:21,250

important role in regulating the earth's climate

132

00:05:25,730 --> 00:05:22,460

[Music]

133

00:05:28,010 --> 00:05:25,740

not only absorbs heat and redistributes it

134

00:05:30,230 --> 00:05:28,020

but also absorbs

135

00:05:32,420 --> 00:05:30,240

carbon dioxide from the atmosphere and the fact

136

00:05:34,370 --> 00:05:32,430

that we haven't absorbed that much

137

00:05:37,460 --> 00:05:34,380

carbon dioxide

138

00:05:39,500 --> 00:05:37,470

in the last of the last 100 years has It has

139

00:05:41,870 --> 00:05:39,510

helped our climate change to

140

00:05:43,670 --> 00:05:41,880

be much slower if in the ocean

141

00:05:46,130 --> 00:05:43,680

our temperatures would be much

142

00:05:47,900 --> 00:05:46,140

higher and in NASA we have been

143

00:05:50,860 --> 00:05:47,910

studying the role that the ocean has

144

00:05:52,790 --> 00:05:50,870

in climate change, especially

145

00:05:55,910 --> 00:05:52,800

trying to understand what is this

146

00:05:58,720 --> 00:05:55,920

connection between human influences and

147

00:06:01,310 --> 00:05:58,730

how our planet has been changing

148

00:06:03,230 --> 00:06:01,320

and one of the missions we are

149

00:06:06,050 --> 00:06:03,240

working on what is the planetary mission

150

00:06:08,240 --> 00:06:06,060

airshow cloud in evolution and constance or

151
00:06:11,140 --> 00:06:08,250
pace for its acronym in English is going to

152
00:06:13,340 --> 00:06:11,150
help us is a new mission is

153
00:06:15,650 --> 00:06:13,350
hyperspectral what it means is

154
00:06:17,090 --> 00:06:15,660
that we are seeing more colors of the

155
00:06:19,670 --> 00:06:17,100
ocean than we can see right now, that

156
00:06:22,130 --> 00:06:19,680
is, it will be truly revolutionary and it will

157
00:06:24,320 --> 00:06:22,140
allow us to better understand what

158
00:06:24,320 --> 00:06:26,120
type of phytoplankton is there.

159
00:06:31,850 --> 00:06:30,140
Right now it's not, I do

160
00:06:34,610 --> 00:06:31,860
n't know, it's a bit difficult to distinguish

161
00:06:37,370 --> 00:06:34,620
between the two with pace looking towards the

162
00:06:37,370 --> 00:06:40,040
ocean.

163
00:06:48,830 --> 00:06:46,820

so much to do

164

00:06:51,710 --> 00:06:48,840

with getting this fish to

165

00:06:53,570 --> 00:06:51,720

prepare a dish like ceviche and the

166

00:06:55,520 --> 00:06:53,580

satellites again as our

167

00:06:58,370 --> 00:06:55,530

relative is so big and we have so many

168

00:07:01,040 --> 00:06:58,380

oceans come a critical role to

169

00:07:03,110 --> 00:07:01,050

really be able to observe the changes that

170

00:07:05,180 --> 00:07:03,120

occur day by day and those that occur over the

171

00:07:07,100 --> 00:07:05,190

long term and this is important because it

172

00:07:08,990 --> 00:07:07,110

allows us to avoid being better

173

00:07:10,530 --> 00:07:09,000

prepared for the changes that are

174

00:07:13,140 --> 00:07:10,540

to come

175

00:07:16,110 --> 00:07:13,150

and that is exactly where food security also comes into play.

176

00:07:18,120 --> 00:07:16,120

In

177

00:07:20,160 --> 00:07:18,130

fact, one of the fisheries in Costa

178

00:07:21,690 --> 00:07:20,170

Rica is part of the early adoption program

179

00:07:24,150 --> 00:07:21,700

of the data from pace which

180

00:07:25,680 --> 00:07:24,160

means that before page launches

181

00:07:28,230 --> 00:07:25,690

they are ready to be able to

182

00:07:31,560 --> 00:07:28,240

incorporate this type of data into

183

00:07:33,420 --> 00:07:31,570

local fisheries and we really

184

00:07:35,280 --> 00:07:33,430

are very lucky to have the

185

00:07:37,980 --> 00:07:35,290

support of scientists and users who

186

00:07:39,930 --> 00:07:37,990

are always pushing the limits of what

187

00:07:43,110 --> 00:07:39,940

that shows and our technology can

188

00:07:44,370 --> 00:07:43,120

do incredible, a lot is being done

189

00:07:47,550 --> 00:07:44,380

right now in the world of

190

00:07:50,730 --> 00:07:47,560

ocean monitoring and this ceviche

191

00:07:57,220 --> 00:07:50,740

is almost ready but we can't

192

00:08:03,100 --> 00:08:00,160

and to assemble the dish I'm just going to put

193

00:08:14,480 --> 00:08:03,110

some slices of sweet potato some

194

00:08:22,850 --> 00:08:18,800

some chopped onion cilantro and the

195

00:08:29,240 --> 00:08:27,200

and here we have it looks delicious thank you so much for

196

00:08:30,939 --> 00:08:29,250

the time I can't thank you

197

00:08:34,100 --> 00:08:30,949

enough for being here with us

198

00:08:35,630 --> 00:08:34,110

cheers for this ceviche for all the

199

00:08:38,269 --> 00:08:35,640

science it takes for lunch

200

00:08:41,540 --> 00:08:38,279

today and also how

201

00:08:44,149 --> 00:08:41,550

the ocean and earth systems are connected

202

00:08:48,130 --> 00:08:44,159

thank you jocelyn please thank you

203

00:08:50,690 --> 00:08:48,140

now i want potato ceviche and i'll pass it on to you

204

00:08:53,930 --> 00:08:50,700

thank you for joining us where hopefully