
ASAPH ANYAMBA
Associate Research Scientist, NASA

1
00:00:22,630 --> 00:00:20,109
every day NASA collects information

2
00:00:26,169 --> 00:00:22,640
vital to food production all over the

3
00:00:28,269 --> 00:00:26,179
world these kinds of data can help make

4
00:00:31,380 --> 00:00:28,279
the difference for some people between

5
00:00:33,970 --> 00:00:31,390
being able to buy food and going hungry

6
00:00:36,610 --> 00:00:33,980
these data help relief agencies know

7
00:00:38,319 --> 00:00:36,620
where food will be needed most and they

8
00:00:40,420 --> 00:00:38,329
can make the difference between profits

9
00:00:45,819 --> 00:00:40,430
and losses for farmers and even entire

10
00:00:49,719 --> 00:00:45,829
food production systems this information

11
00:00:53,859 --> 00:00:49,729
is a valuable asset NASA's mission to

12
00:00:56,619 --> 00:00:53,869
give it away for free by applying our

13
00:00:59,499 --> 00:00:56,629

science and applying it in a way that's

14
00:01:03,729 --> 00:00:59,509
transparent and objective and open to

15
00:01:06,640 --> 00:01:03,739
everybody it's a great role for NASA as

16
00:01:09,429 --> 00:01:06,650
we want everyone to understand and have

17
00:01:11,440 --> 00:01:09,439
a level playing field what the issues

18
00:01:15,069 --> 00:01:11,450
aren't food supply and demand and

19
00:01:18,609 --> 00:01:15,079
everyone makes better decisions and life

20
00:01:20,740 --> 00:01:18,619
is better for us we can't monitor from

21
00:01:24,850 --> 00:01:20,750
the ground everything that is going on

22
00:01:26,680 --> 00:01:24,860
which includes vegetation rainfall sea

23
00:01:30,520 --> 00:01:26,690
surface temperatures basically the

24
00:01:32,430 --> 00:01:30,530
entire biosphere or the entire planet we

25
00:01:35,170 --> 00:01:32,440
process the data we produce specific

26
00:01:37,090 --> 00:01:35,180
products that they want customize them

27
00:01:40,390 --> 00:01:37,100
to their needs and we provide them with

28
00:01:43,180 --> 00:01:40,400
a capability to make sure that the data

29
00:01:45,310 --> 00:01:43,190
can be used so that when they make the

30
00:01:47,200 --> 00:01:45,320
assessments they are using it knowing

31
00:01:49,620 --> 00:01:47,210
that the data has actually been

32
00:01:52,450 --> 00:01:49,630
scientifically proven to be valuable

33
00:01:55,060 --> 00:01:52,460
after NASA collects this massive amount

34
00:01:57,550 --> 00:01:55,070
of data it takes a strong partnership of

35
00:01:59,530 --> 00:01:57,560
other agencies and institutions to share

36
00:02:02,590 --> 00:01:59,540
the data and then help turn the

37
00:02:04,420 --> 00:02:02,600
information into action NASA also works

38
00:02:06,429 --> 00:02:04,430

with the US Department of Agriculture

39
00:02:08,679 --> 00:02:06,439
and several major universities to

40
00:02:10,630 --> 00:02:08,689
monitor the world's food production in a

41
00:02:13,210 --> 00:02:10,640
program called the global agriculture

42
00:02:15,699 --> 00:02:13,220
monitoring partnership it's a system

43
00:02:18,550 --> 00:02:15,709
where we use satellite data from the

44
00:02:20,350 --> 00:02:18,560
NASA Modi's satellite instrument onboard

45
00:02:21,970 --> 00:02:20,360
the Earth observing satellite it's a

46
00:02:23,800 --> 00:02:21,980
moderate resolution sensing system the

47
00:02:25,720 --> 00:02:23,810
bands are selected for for agricultural

48
00:02:26,920 --> 00:02:25,730
monitoring what you're trying to

49
00:02:28,820 --> 00:02:26,930
understand is what are going to be the

50
00:02:32,150 --> 00:02:28,830
supply and demand

51
00:02:33,710 --> 00:02:32,160
for food and to locate where those

52
00:02:36,470 --> 00:02:33,720
places are so both for food security

53
00:02:39,650 --> 00:02:36,480
issues for food aid and also for market

54
00:02:43,070 --> 00:02:39,660
intelligence we release our information

55
00:02:46,070 --> 00:02:43,080
to the public our crop estimates to the

56
00:02:48,850 --> 00:02:46,080
public so that everybody has that data

57
00:02:51,650 --> 00:02:48,860
and so that farmers can get a fair price

58
00:02:55,280 --> 00:02:51,660
well ultimately you'd like to see crop

59
00:02:57,740 --> 00:02:55,290
production increase for every country so

60
00:03:01,220 --> 00:02:57,750
that you know all countries are food

61
00:03:03,260 --> 00:03:01,230
secure but for now famine remains a very

62
00:03:06,170 --> 00:03:03,270
real possibility for many parts of the

63
00:03:09,440 --> 00:03:06,180

world though the famine early warning

64
00:03:12,110 --> 00:03:09,450
systems network uses a lot of satellite

65
00:03:15,020 --> 00:03:12,120
remote sensing in its analysis but it

66
00:03:17,630 --> 00:03:15,030
really focuses on the conditions on the

67
00:03:20,150 --> 00:03:17,640
ground the social the political and the

68
00:03:21,800 --> 00:03:20,160
economic conditions and uses remote

69
00:03:23,810 --> 00:03:21,810
sensing as a critical piece of

70
00:03:25,850 --> 00:03:23,820
information about production of

71
00:03:28,130 --> 00:03:25,860
agricultural products it's really

72
00:03:30,110 --> 00:03:28,140
fascinating because it's very much one

73
00:03:32,780 --> 00:03:30,120
of those organization that brings the

74
00:03:35,750 --> 00:03:32,790
social side and the biophysical side

75
00:03:39,080 --> 00:03:35,760
together in the same analysis we are

76
00:03:41,750 --> 00:03:39,090
much more able to be very specific about

77
00:03:44,900 --> 00:03:41,760
the conditions of food insecurity in

78
00:03:47,449 --> 00:03:44,910
some very difficult places to to monitor

79
00:03:49,640 --> 00:03:47,459
it's very particularly evident in

80
00:03:51,890 --> 00:03:49,650
countries where for a variety of reasons

81
00:03:54,080 --> 00:03:51,900
access to the ground is limited they may

82
00:03:56,690 --> 00:03:54,090
have conflict they may have bandits

83
00:03:59,180 --> 00:03:56,700
there may be terrorism in those places

84
00:04:01,610 --> 00:03:59,190
satellite imagery still remains one of

85
00:04:03,320 --> 00:04:01,620
our primary tools and one of our most

86
00:04:07,550 --> 00:04:03,330
important tools for measuring food

87
00:04:09,530 --> 00:04:07,560
availability and even food access most

88
00:04:11,660 --> 00:04:09,540

people don't know that NASA satellites

89
00:04:14,090 --> 00:04:11,670
provide so much data about how we grow

90
00:04:16,310 --> 00:04:14,100
food on this planet and that with these

91
00:04:19,130 --> 00:04:16,320
data teams of researchers work to

92
00:04:20,960 --> 00:04:19,140
increase crop yields ease famine and

93
00:04:23,120 --> 00:04:20,970
keep the global agricultural system

94
00:04:24,590 --> 00:04:23,130
functioning but NASA and its many

95
00:04:26,900 --> 00:04:24,600
partners will keep providing this

96
00:04:29,690 --> 00:04:26,910
agricultural data so that governments

97
00:04:31,340 --> 00:04:29,700
agencies farmers and food producers can

98
00:04:33,620 --> 00:04:31,350
have the information to make the best