

MARSHALLING S&T TALENT FOR NATIONAL ADVANCEMENT

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REGIONAL SCIENTIFIC MEETING

NATIONAL ACADEMY OF SCIENCE AND TECHNOLOGY

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TACLOBAN, LEYTE

A SIGNIFICANT AMOUNT OF MATERIALS FOUND IN THIS PRESENTATION ARE BASED ON A RESEARCH DONE BY THE PRESENTER FOR, AND BELONG TO, THE PHILIPPINE INSTITUTE FOR DEVELOPMENT STUDIES (PIDS)

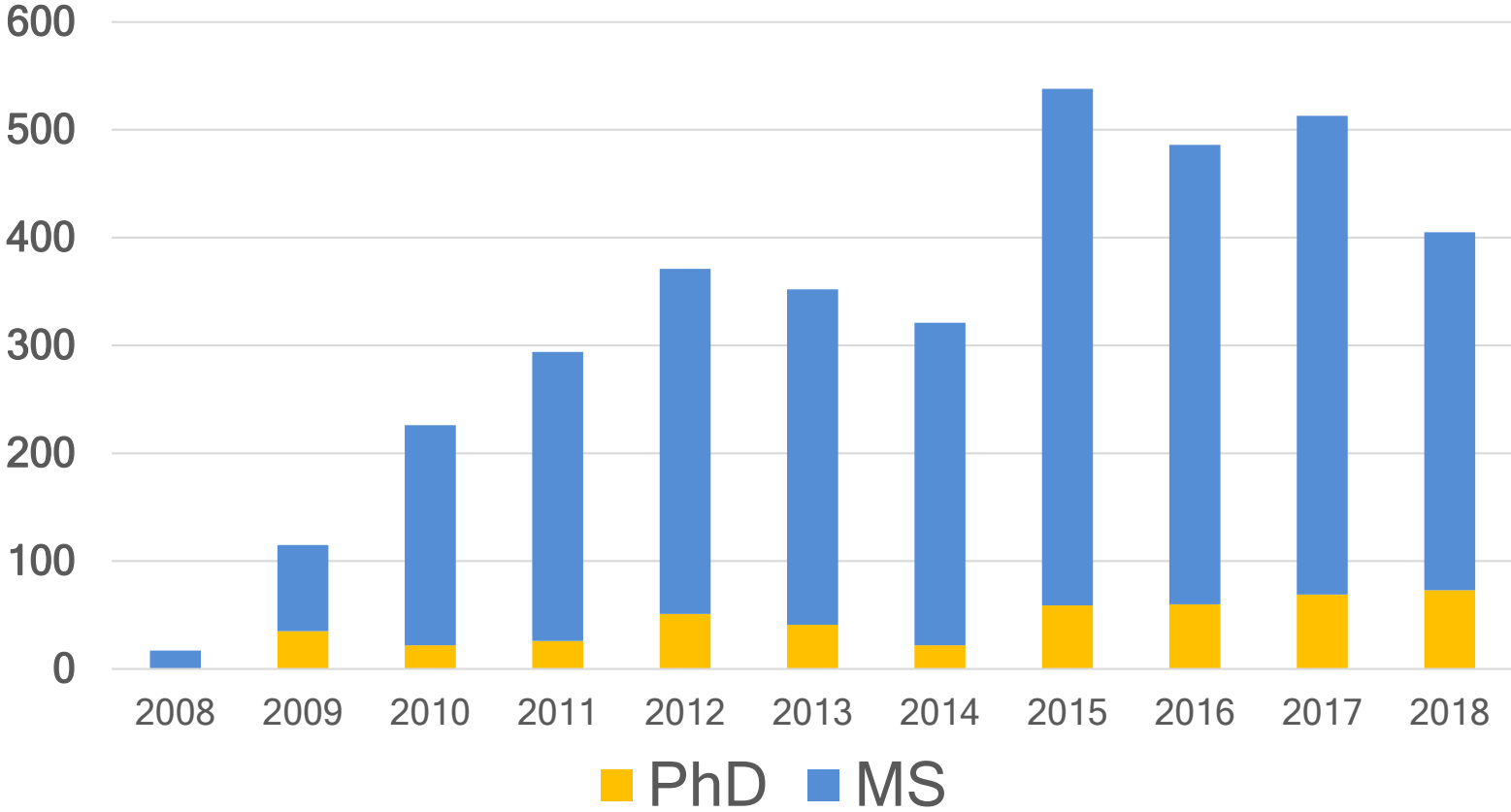
DO THE MATH.

REQUIRED NUMBER OF NEW RSE'S PER YEAR TO SATISFY UNESCO BENCHMARK

ASSUMPTIONS: UNESCO BENCHMARK OF 380 RSE'S PER MILLION POPULATION & 2% ANNUAL POPULATION GROWTH RATE

YEAR	POPULATION	REQUIRED RSE's	ADDITIONAL REQUIREMENT		
			FROM A BASE OF 20,790 IN 2018 OR 189 RSEs PER MILLION*	REQUIRED NUMBER OF NEW RSE'S PER YEAR	
2018	0	110,000,000	41,800	21,010	
2019	1	112,200,000	42,636	21,846	21,846
2020	2	114,444,000	43,489	22,699	11,349
2021	3	116,732,880	44,358	23,568	7,856
2022	4	119,067,538	45,246	24,456	6,114
2023	5	121,448,888	46,151	25,361	5,072
2024	6	123,877,866	47,074	26,284	4,381
2025	7	126,355,423	48,015	27,225	3,889
2026	8	128,882,532	48,975	28,185	3,523
2027	9	131,460,183	49,955	29,165	3,241
2028	10	134,089,386	50,954	30,164	3,016
2029	11	136,771,174	51,973	31,183	2,835
2030	12	139,506,597	53,013	32,223	2,685
2031	13	142,296,729	54,073	33,283	2,560
2032	14	145,142,664	55,154	34,364	2,455
2033	15	148,045,517	56,257	35,467	2,364
2034	16	151,006,428	57,382	36,592	2,287
2035	17	154,026,556	58,530	37,740	2,220
2036	18	157,107,087	59,701	38,911	2,162
2037	19	160,249,229	60,895	40,105	2,111
2038	20	163,454,214	62,113	41,323	2,066

ASTHRDP & ERDT Graduates 2008-2018



105 Disciplines

- ASTHRDP awarded scholarships for **5,009 MS** and **1,069 PhD**
- ASTHRDP graduates: **2,111 MS** and **304 PhD**

26 Disciplines

- ERDT awarded scholarships **2,520 MS** and **389 PhD**
- ERDT graduates **1,009 MS** and **119 PhD**

RESOLUTION:

**TRIPLE THE ORDER OF MAGNITUDE IN
PhD SCHOLARSHIPS;**

OR AT LEAST

**DOUBLE THE ORDER OF MAGNITUDE IN
COMBINED (MS + PhD) SCHOLARSHIPS**

BUT WHERE WILL THE PROSPECTIVE
TAKERS COME FROM?

THE THREE NATIONAL SYSTEMS OF SCIENCE HIGH SCHOOLS

1. PSHS SYSTEM

16 campuses nationwide

8,358 students as of SY 2018-2019

Approximately 1,400 graduates per year

2. Regional Science High School (RSHS) Union

- Established by the DepEd during the school year 1994-1995
- Had **18 campuses** nationwide by 2013
- Some were formerly annexes of public secondary schools Some were already established as specialized science high schools prior to 1994
- Each given by the government an allocation for Maintenance and Other Operating Expenses (MOOE) separate from other public high schools in the Philippines.

3. ESEP High Schools or the Science and Technology High Schools.

- A product of the DOST-OECD supported Engineering and Science Education Project (ESEP)
- Upon project completion they were turned over to the DepEd. They now maintain special sections for science.
- Originally numbering 100 but as of 2013 totaling 198 schools

ALL TOGETHER...

- The PSHS system graduates about 1,400 students every year from all campuses.
- The RSHS Union graduates about 1,700.
- As of SY 2011-2012, there were 47,776 students in the special science sections of all 4 year-levels of the ESEP High Schools. Very roughly, dividing the total by 4, there could be 10,000 graduates every year from this pool.
- Combined, the graduates from the three science high school systems number roughly **13,100** every year!

AND THEN SOME...

- A good number of cities and municipalities have their own science high schools.
- Furthermore, there are private science high schools.

MARSHALLING OUR RESOURCES ...

- One ISSUE is if we have enough capacity in our colleges and graduate schools.
- The high school graduates can be funneled to the CHED COD's and COE's in engineering, math and the sciences. These may be gathered based on geography.
- They can be then further funneled through the various MS and PhD programs in science and engineering
- If need be they can be sent to schools abroad.

MARSHALLING OUR RESOURCES ...

- Another issue is who will finance such a programs.
DOST and CHED should.

RESOLUTION:

**FORMULATE AND IMPLEMENT A MULTI-
AGENCY DECADES-LONG S&T TALENT
DEVELOPMENT PROGRAM**

**ACTIVATE THE Science and Technology
Human Development Council**

RA No. 7687 was amended by **RA No. 8248**, which provides for the creation of a **Science and Technology Human Development Council** chaired by the DOST Secretary and composed of the CHED Chairman, DepED Secretary, TESDA Director-General, DBM Secretary and the President of the Philippine Association of State Universities and Colleges (PASUC). The Council performs the following functions: 1) coordinate science and technology human resource development programs; 2) formulate a medium and long term science and technology human resource development plan in accordance with the national medium-term plan; 3) formulate policies for the allocations of science and technology scholarships; 4) formulate broad policies on advanced degree programs for science and technology; 5) formulate a career system for technologists and technicians to complement the scientific career system; and 6) formulate programs to train and retrain scientists, engineers, researchers and technologists and encourage them, through various incentives, to return and practice their professions in the Philippines, to enhance and accelerate the technological development of the country.

THANK YOU!!