INVASIVE ALIEN PLANT SPECIES IN ARMENIA:

MAIN THREATS FOR NATURAL ECOSYSEMS

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The invasive alien species pose greater risks than previously thought for biodiversity, human health and society and economies ***(European Environment Agency (EEA)***

There are more than 10 000 alien species present in Europe, and the rate of new introductions has accelerated and is still increasing. At least 15 % of these alien species are known as invasive species for all or some countries.

In some cases non-native species can also have benefits still they are not invasive.

Flora of Armenia

More than 3800 vascular plant species
Including - 142 endemics, 452 rare and endangered

Habitats of Armenia

750 habitat types 228 at first described in Armenia

wetlands

Rocks, and scatterings

semi-deserts

forests

deserts

Subalpine/alpine meadows

steppes

subalpine tall-grasses

open arid woodlands

The invasive plant species problem in Armenia

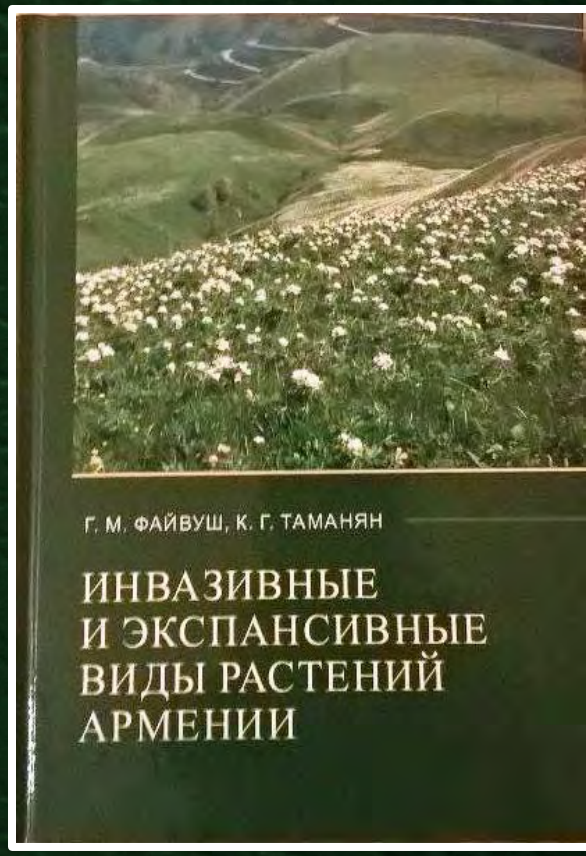
More than 100 species requiring immediate attention, which is approximately 25% of all alien plants of Armenia.

These species spread in suitable habitats, occupying relatively small areas, but as a whole, the picture is rather concerning.

They indicate a real threat to the natural ecosystems, biodiversity and agrobiodiversity of Armenia.

The investigation of distribution of invasive plants in Armenia has started; trends in their distribution over the last 40–50 years are being evaluated and forecasts for their future distribution are being processed.

Estimation of threats from invasive alien species to some ecosystems has started.



What has been done until now?

Study of population dynamics for some species

Astragalus

***galegiformis* – 150 sqkm**

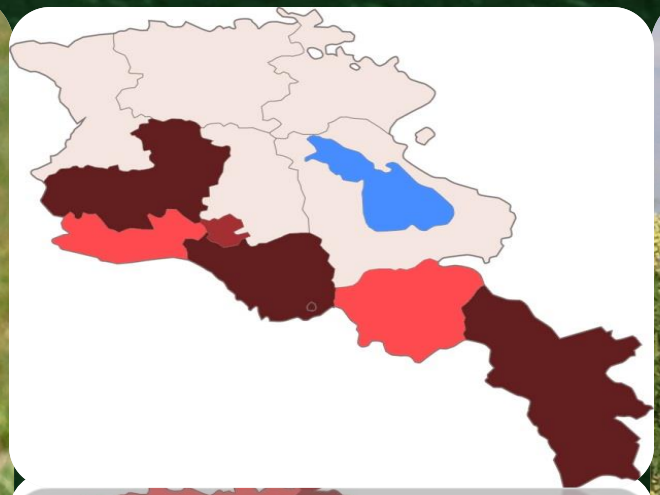
Heracleum

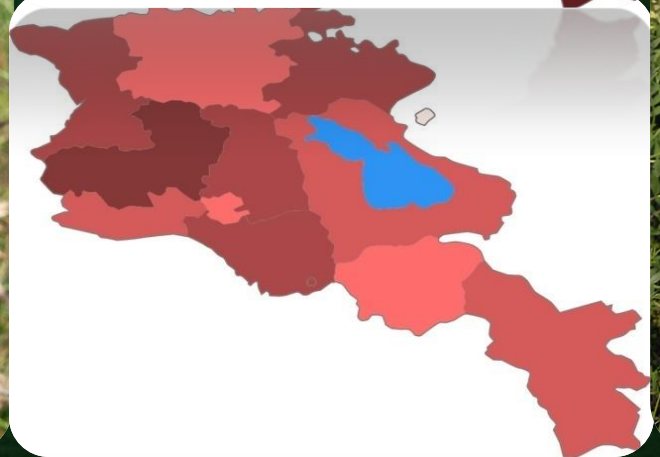
***trachyloma*- 170 sqkm**

**** sosnowskyi* – 75sqkm**

Study of current and future distribution for some species

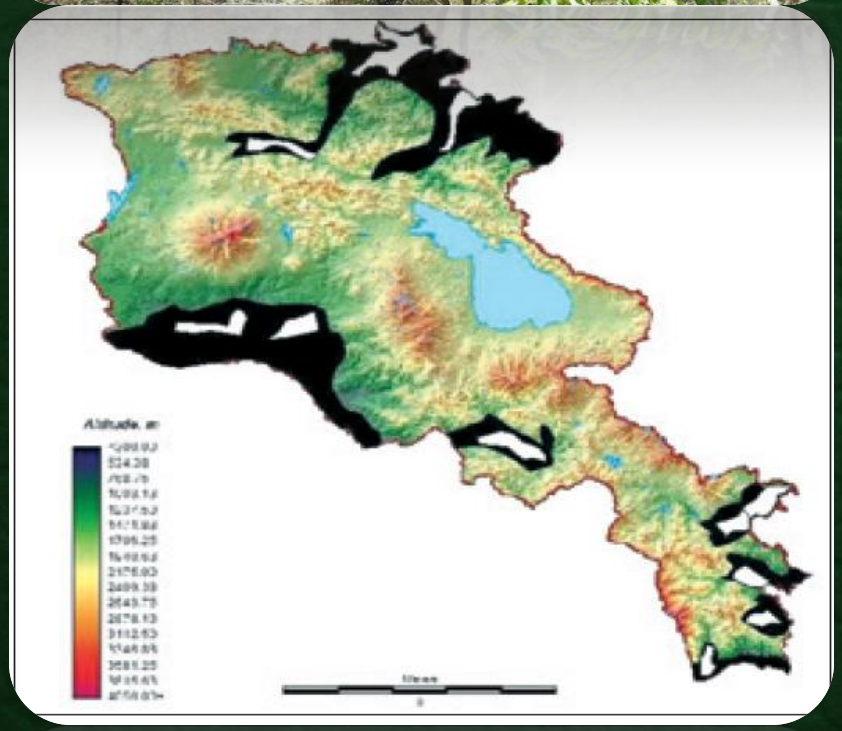
Consolida orientalis



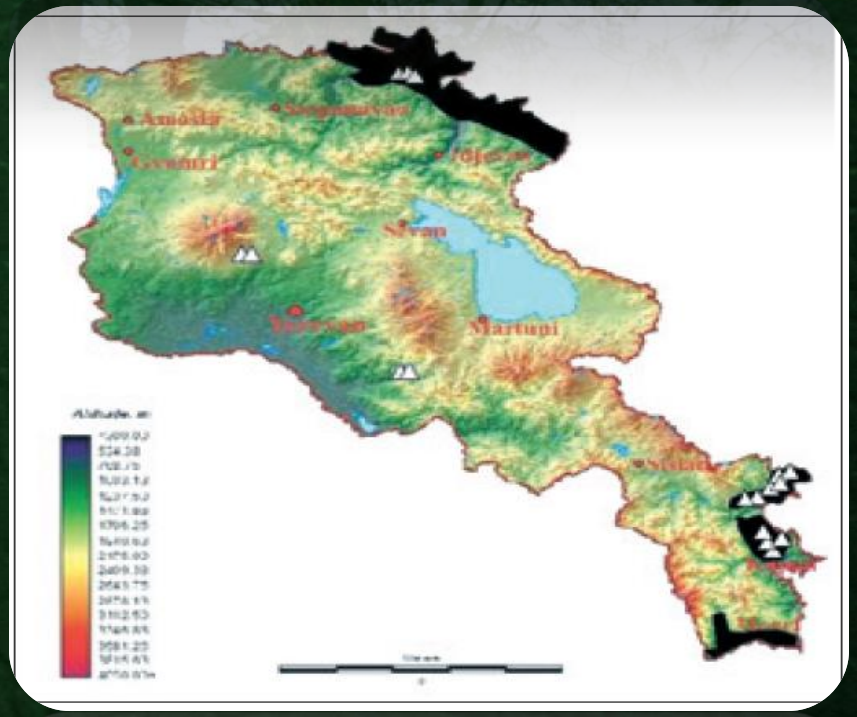


Goebelia alopecuroides

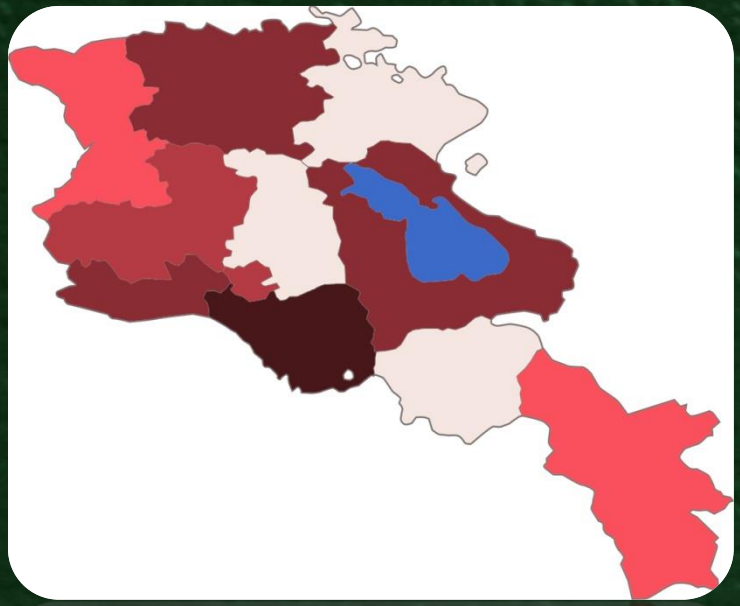
Ailanthus altissima



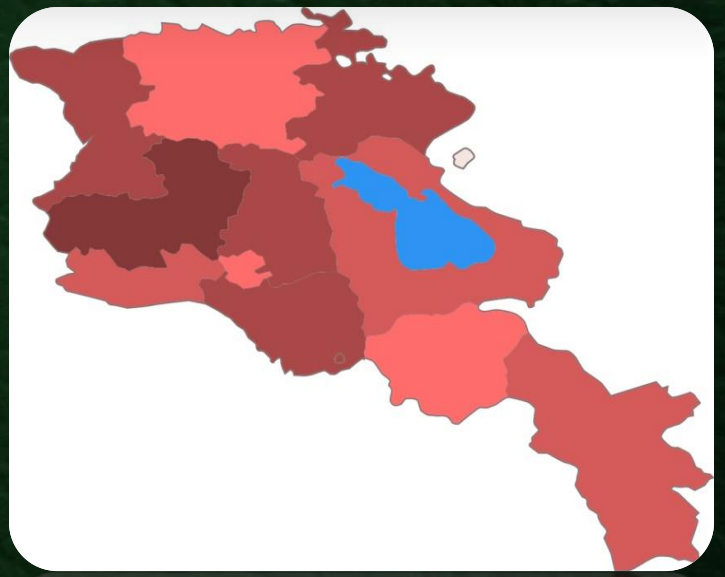
Robinia pseudoacacia



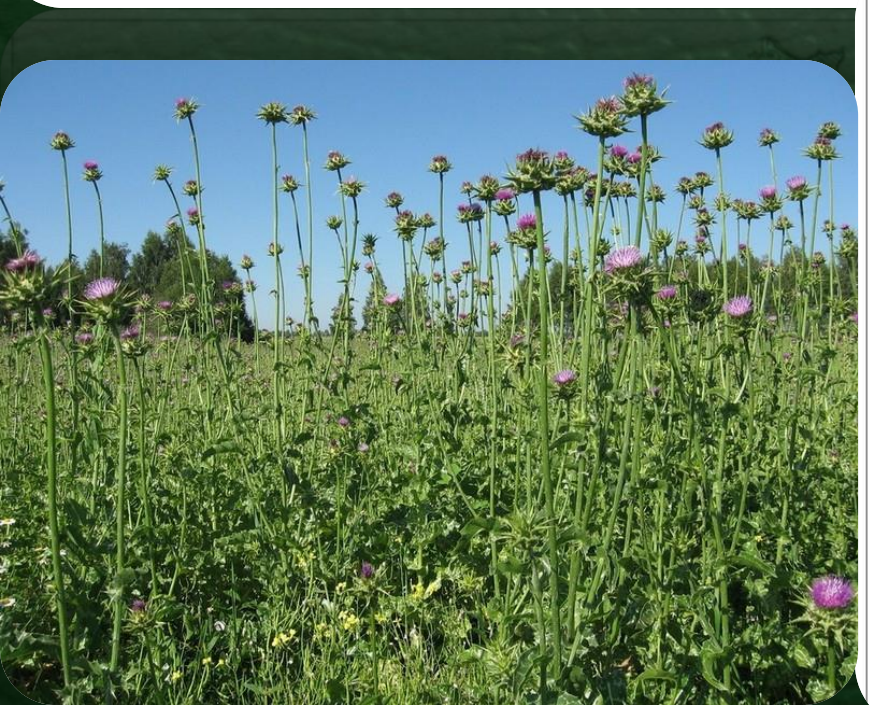
Verbascum georgicum



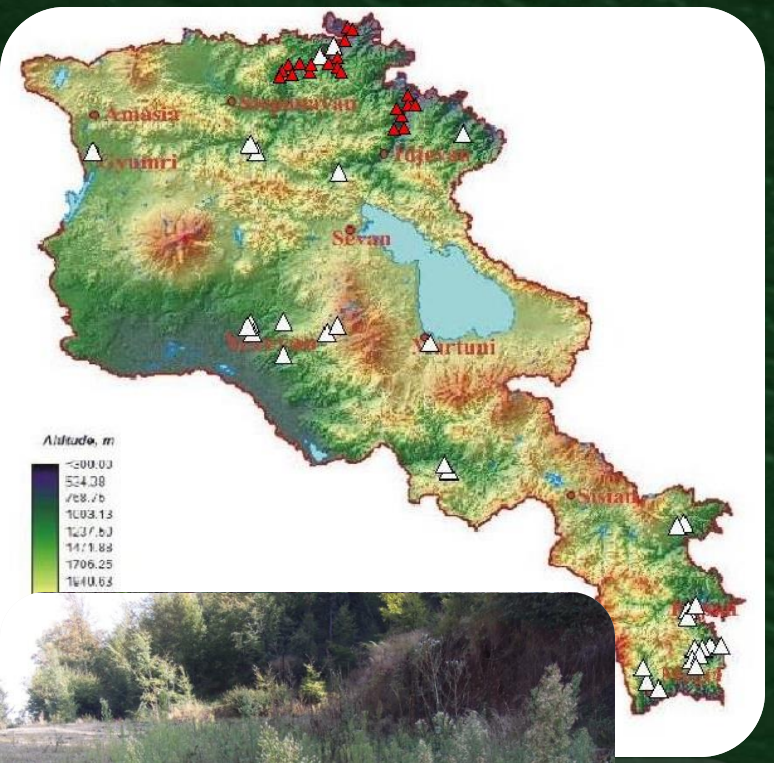
Tanacetum parthenium



Distribution of *Silybum marianum* in Armenia

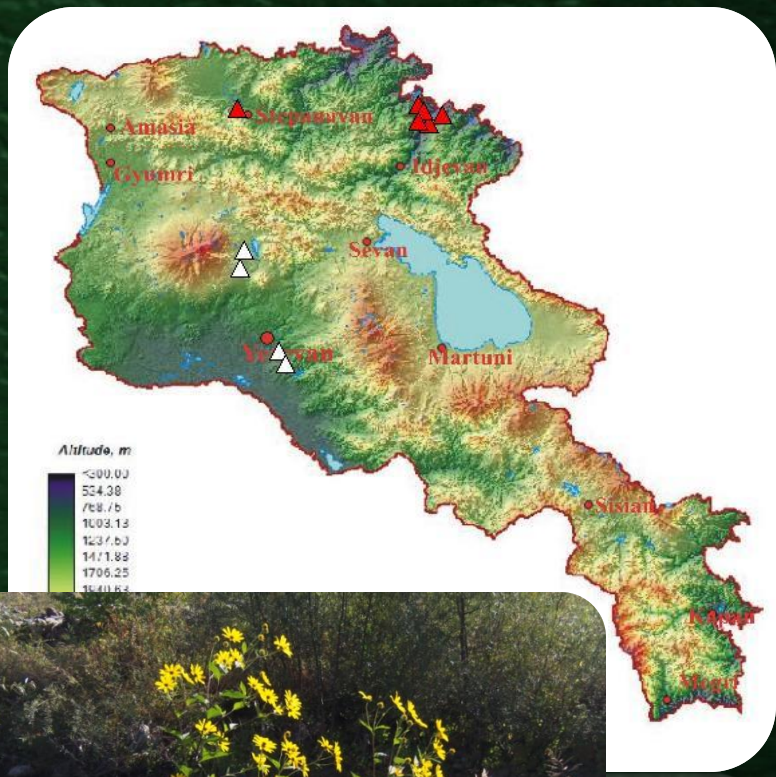


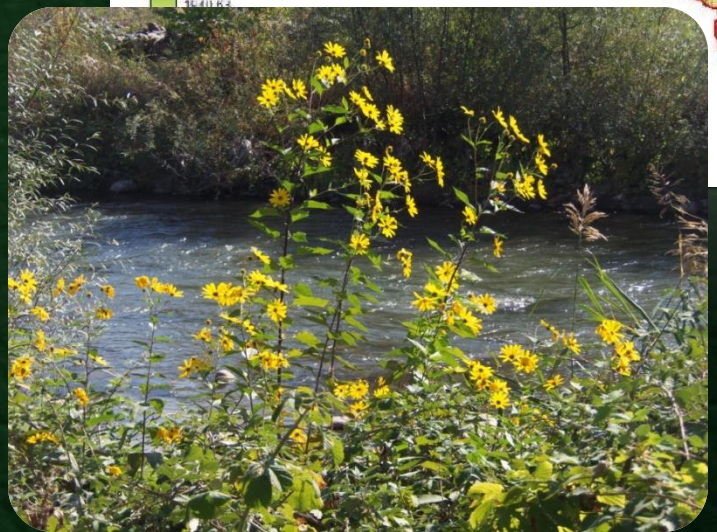
New data on the distribution of invasive plant species in Armenia



Conyza canadensis

Helianthus tuberosus





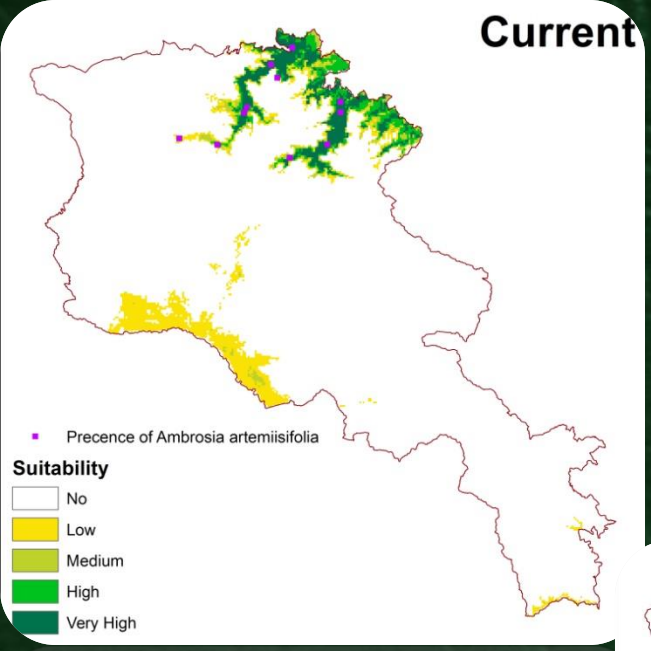
Ambrosia artemisiifolia L. in Armenia

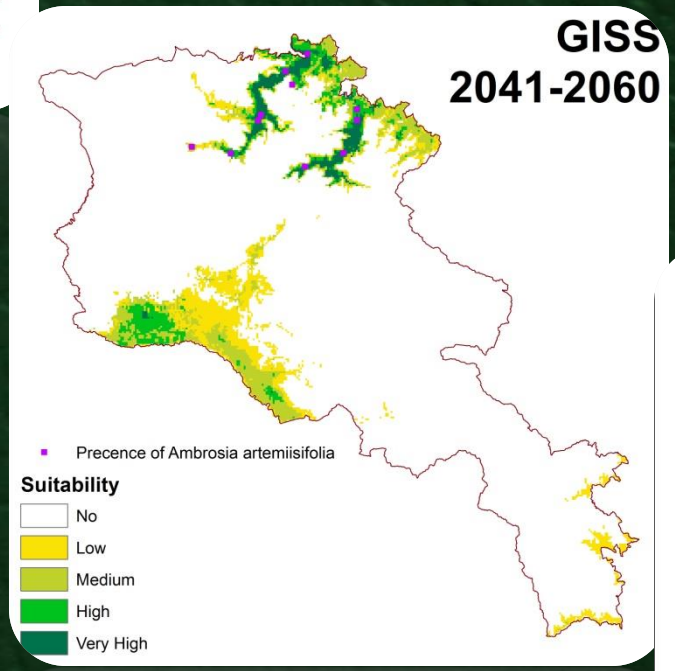
Large scale research, including:

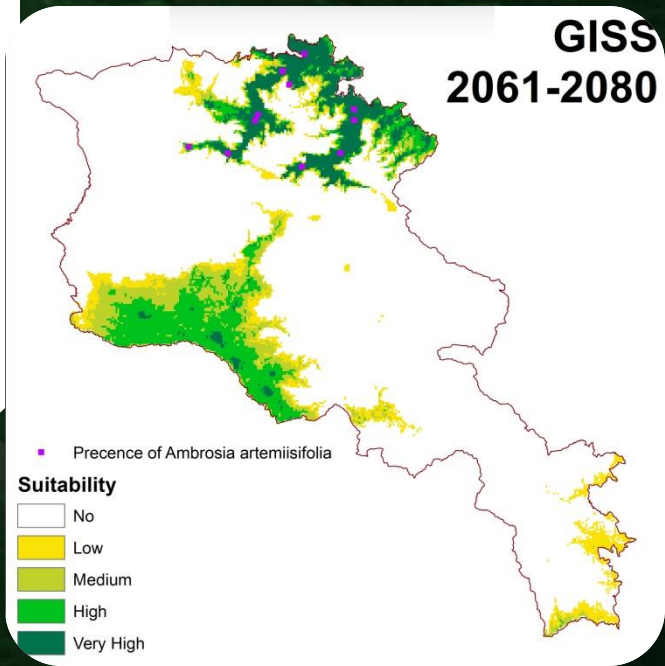
- Population dynamics
- Modeling of distribution
- Population genetics
- Cytogenetics
- Biochemistry
- Interaction between ragweed and vegetation types and habitats
- Impacts on human health

Habitats of distribution of common ragweed

Modeling of possible distribution of *Ambrosia artemisiifolia L.* under climate change scenarios in Armenia







Ongoing research for 2016-2017

- To conduct new inventory of invasive species of Armenia
- Development of risk assessment systems for invasive species in Armenia
- To define top 20 invasive species for Armenia
- Monitoring of population dynamics of invasive species
- Modeling of distribution of invasive species under climate change scenarios
- Other researches related to main traits, human health impacts, germination etc.

We have no any legislative regulation or strategy, management, control and prevention system related to invasive species in Armenia

What should be done ?

Elaboration and implementation

- National strategy for Invasive alien species
- National program for Invasive alien species
- national plan of action for Invasive alien species

Should be developed

- regional system of observations
- Long-term monitoring system of population dynamics
- Prevention and control measures
- Researches for understanding pathways and mechanisms of invasion, further distribution and behavior under climate change

Thanks to my team and collaborators!

Thank You For Attention !