

Public Employment and Management as per Ministerial Education, Economy and Natural Protection according to Armenian Composite Supportive Progress (ACASP)

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Abstract

Sustainable Development is a new concept represented as Composite Appraising Supportive Progress of Armenia (ACASP). Biodiversity concept is another main issue having huge influence on public management with employment emphasis. Procedures designing composite progressive indicators organize steps with defined methodology where decision making of utility function is implemented. The priorities of each categories are followed. The resulting sequence of the most important chosen category is represented as:

Genes: Society (S): Education (S3): Legislations - International Cooperation

Species: Economy (E): Economy (E5): Policy - Vacancies

Ecosystems: Nature (N) Air (N3) & Land (N1): Publications - Informative

Functions: ACASP Employment (F): Announcements-Analyses & Researches

Keywords: Armenian Composite Appraising Supportive Progress (ACASP), sustainable development, public employment, management, education, economy, natural protection, composite indicators, decision making, biodiversity

1. Introduction

Petrosyan (2014, 2010, 2005) reveals the universal researches focusing on three (3) ways of Sustainable Development (SD) depictions and as a nowadays issue with four (4) magnitudes of SD, CASP and Biodiversity Concept in Table 1.

Table 1. Depictions of SD, ACASP, Management and Biodiversity Concept

No	SD magnitudes	Biodiversity Concept	Management	Ways	References
α.	Society (S)	Genes	Education	Directional Triangle Education	Holistic Illustration of SD Framework (Lyytimaki and Rosenstrom, 2008)
β.	Economy (E)	Species	Economy	Economy Centered	SD Proposed by Russian Dolls Model (Levett, 1998)
γ.	Environment (N)	Ecosystem	Natural Protection	Intersectional Platforms	Primary Concept of SD (Walton etc, 2005)
δ.	Sustainability	Functions	Public Employment	Complete Performance	ACASP (Petrosyan, 2015 a,b, 2014)

The main emphasis of the current paper is to make a decision making based on tree implementation using computation through utility functions of Education (S₃), Economy (E₅), Land (N₁) and Air (N₃) magnitudes while managing public employment of ACASP.

2. Literature Review

Although sustainability has never been properly determined, Composite Appraising Supportive Progress (CASP) is a new index to evaluate Combined Sustainable Development Index (CSDI). The book of Petrosyan (2014), which is consistent with the paper of Petrosyan (2010) in Table 2 and Figure 1, is portrayed to incorporate three (3) magnitudes, i.e., society, economy and nature, with choice of six (6) categories per each magnitude.

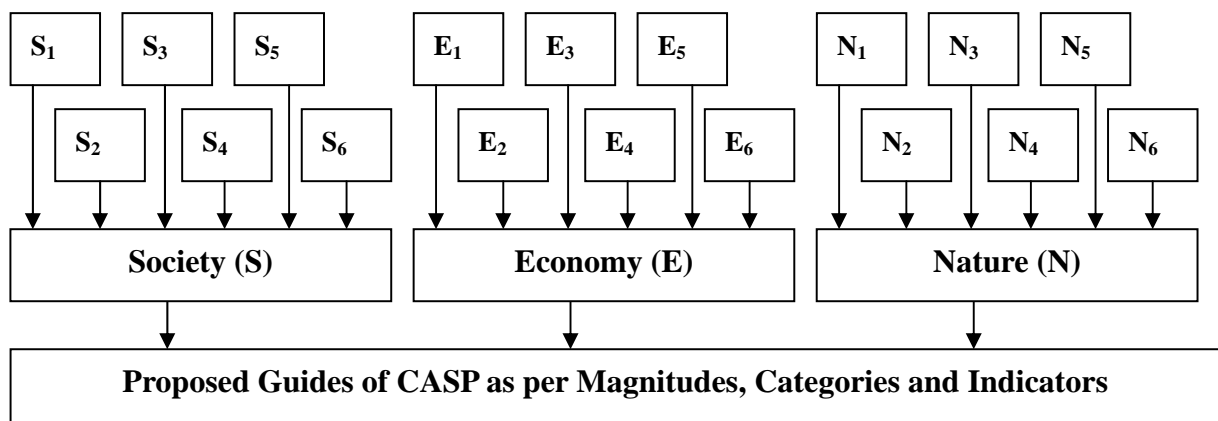


Figure 1. Proposed Guides of CASP as per Magnitudes, Categories and Indicators.

Source: Petrosyan (2014)

Table 2. Armenian categories representation as per ministries and areas of Armenia and Nagorno Karabakh Republics

No	Armenian Categories	CASP Categories	Ministries	Areas
Society (S)				
S ₁	Demography	Humans	Ministry of Territorial Administration and Emergency Situations http://www.mta.gov.am	Askeran Marz
S ₂	Employment	Society Concerns	Ministry of Labor and Social Affairs http://www.mlssa.am	Syunik Marz
S ₃	Education	Knowledge in Practice	Ministry of Education and Science http://www.edu.am	Shirak Marz
S ₄	Science	Space Science	Ministry of Defense http://www.mil.am/	Lori Marz
S ₅	Economic Activities	Political Performance	National Assembly of the Republic of Armenia http://parliament.am/	Yerevan Marz
S ₆	Transport & Communication	Transport	Ministry of Transport and Communication http://www.mtc.am	Vayots Dzor Marz
Economy (E)				
E ₁	Finances	Investment	Ministry of Finance http://www.minfin.am/	Qashatagh Marz
E ₂	Living Conditions	Human Standards	Ministry of Culture http://www.mincult.am	Armavir Marz
E ₃	Prices Tariffs	Production - Consumption	Ministry of Urban Development http://www.mud.am/	Shushi Marz
E ₄	Agriculture	Agriculture	Ministry of Agriculture www.minagro.am/	Ararat Marz
E ₅	Industry	Industry	Ministry of Economy www.mineconomy.am	Aragatsotn Marz
E ₆	Trade and Services	Tourism	Ministry of Diaspora www.mindiaspora.am/ Ministry of Foreign Affairs http://www.mfa.am	Martuni Marz
Nature (N)				
E ₁	Land	Ministry of Nature Protection http://www.mnp.am		Hadrut Marz
E ₂	Water			Gegharkuniq Marz
E ₃	Air			Martakert Marz

No	Armenian Categories	CASP Categories	Ministries	Areas
E ₄	Biodiversity			Tavush Marz
E ₅	Energy		Ministry of Energy and Natural Resources www.minenergy.am/en	Kotayk Marz
E ₆	Eco-Resources		Ministry of Nature Protection http://www.mnp.am	Shahumyan Marz

Source: Petrosyan (2015a,b)

Petrosyan (2014) presents an interesting relation between three (3) biodiversity stages (Nijkamp and Vindigni, 2003) in Figure 2 derived from Lefevre (2004) paper.

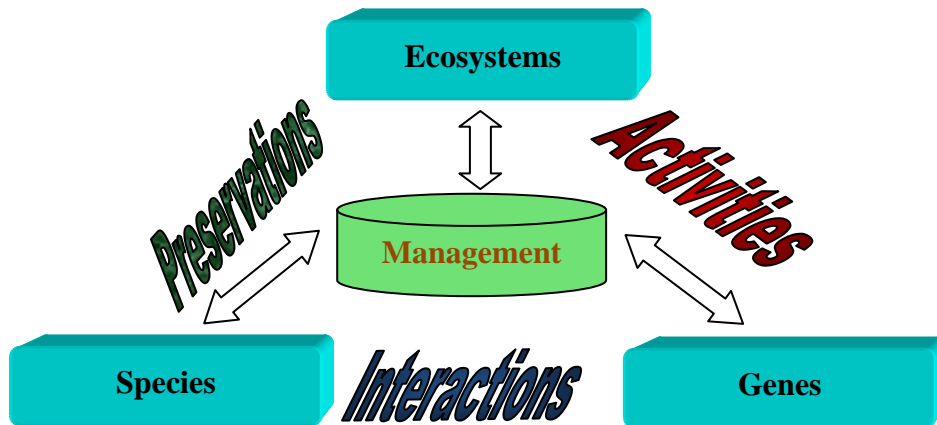


Figure 2. Management as Process of Preservations, Activities and Interactions between Biodiversity Stages. *Source: Petrosyan (2014)*

Petrosyan (2015 a) provides a management process of three (3) types of Recommendation 1 to construct Society (S) in Figure 3, Economy (E) in Figure 4 and Environment (N) in Figure 5 with emphasis on Biodiversity Concept two (2) & five (5) categories of each magnitude is presented as a species stages with control over one (1) & four (4) categories of each magnitude as for gene stages and three (3) & six (6) categories of each magnitude as for ecosystem stages.



Figure 3. Recommendation for Society (S)

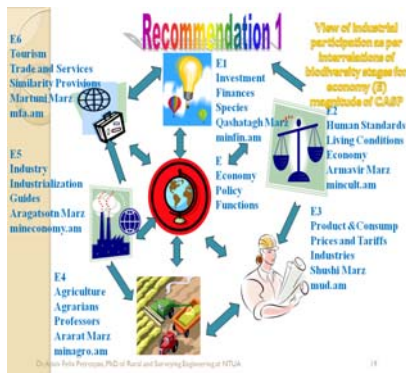


Figure 4. Recommendation for Economy (E)



Figure 5: Recommendation for Environment (N)

Source: Petrosyan (2015a)

Petrosyan (2015a) further illustrates the final view of smart development as per University (U) - Industry (I) - Organization (O) is depicted in Figure 6 as per biodiversity concept for Society (S), Economy (E) and Environment (N) Magnitudes of CASP.



Figure 6. Final view of UIO as SEN Magnitudes for CASP.

Source: Petrosyan (2015a)

Runge (2012) views Decision Trees & Utility Theory with sum of multiplication of apt utility function (U_i) and suitable probability (P_i) in Equation 1.

$$\text{Equation 1: } DM_i = \sum_{i=1}^n P_i U_i$$

Due to normal probability distribution implementation, a Synthetic Measure (SM) or variation of Decision Making (DM) concept is applied by Balcerzak (2015) as per Utility

function (U_i) with its equally distributed probabilities (P_i) and the number (n) of Utility Function, according to already defined subcategories within a branch or an applicable category in Equation 2.

$$\text{Equation 2: } DM_i = SM_i = \frac{\sum_{i=1}^n U_i}{n}$$

3. Materials and Methods

3.1 Study Area

Armenia (Figure 7) is located in the southern Caucasus and covers almost 10% of the Armenian upland (29,800 km²). Mainly, the military phase complies with theoretical and logic asymmetric conflicts during 1992-1994 over Nagorno-Karabakh with specific factors led to victory (Deriglazova and Minasyan, 2011). Nowadays, Nagorno-Karabakh Republic, i.e. Artsakh, (Figure 7) is a smaller (4400 km²) autonomous area between Armenia and Azerbaijan. Armenia and Nagorno-Karabakh support diversity of landscapes with a range of species, due to their geographic position (Arakelyan and Parham, 2008). ARMSTAT (2015) represents eleven (11) Armenian areas and NKRSTAT (2015) presents seven (7) areas of Nagorno Karabakh Republic as depicted in Figure 7.

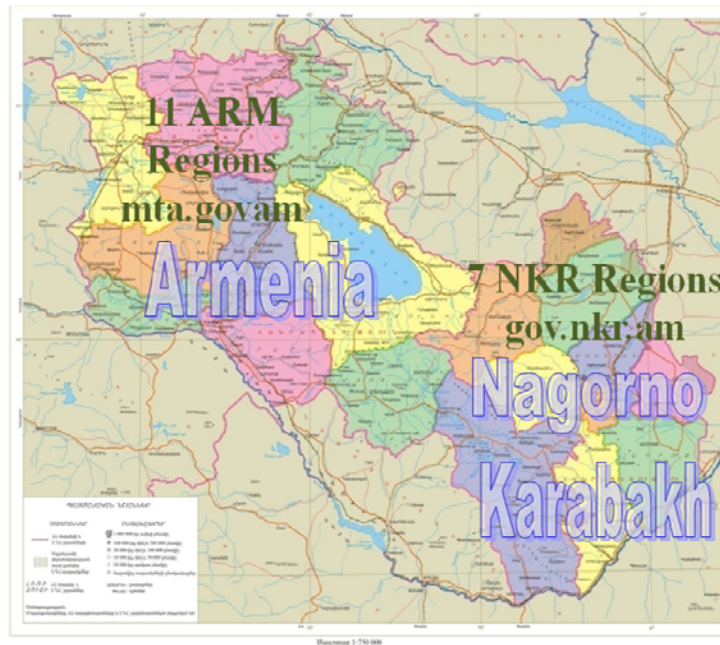


Figure 7. Map of eleven (11) Armenian and seven (7) Nagorno-Karabakh areas.

Source: Petrosyan (2015a,b)

3.2 Data Sets

Even though the Armenian Composite Supportive Progress (ACASP) reviews 18 categories as per Armenian or Nagorno Karabakh areas, the current paper is based on the book of

Petrosyan (2014) prescribing management as process of preservations, activities and interactions between biodiversity stages. Data sets and indicators choice are offered as per corresponding ministry of Republic of Armenia (RA) in Table 3.

Table 3. Data sets and indicators choice as per corresponding ministry of RA

No	SD magnitudes	Biodiversity Concept	Management	Ministry	Area / Figure
α .	Society (S)	Genes	Education (S ₃)	Ministry of Education and Science http://www.edu.am	Shirak Marz / Figure 8
β .	Economy (E)	Species	Economy (E ₅)	Ministry of Economy www.mineconomy.am	Aragatsotn Marz / Figure 9
γ .	Environment (N)	Ecosystem	Land (N ₁)	Ministry of Nature Protection http://www.mnp.am	Hadrut Marz / Figure 10
			Air (N ₃)		Martakert Marz / Figure 11
δ .	Sustainability	Functions	Public Employment (ACASP)	State Employment Agency www.emplyment.am	Yerevan / Figure 12



Figure 8. S₃ Shirak Marz.



Figure 9. E₅ Aragatsotn Marz.



Figure 10. N₁ Hadrut Marz.



Figure 11. N₃ Martakert Marz.



Figure 12. ACASP Yerevan Marz.

3.3 Methodology

Petrosyan (2015d) provides an interesting approach showing not only the premium supervision of indicators but also bases of the current methodology through several steps, as the strong emphasis on sustainable development and the composite appraisal of supportive progress as:

- (1) Creating aspects - approximation of public management to ACASP;
- (2) Defining goals - choice of magnitudes as per ACASP;
- (3) Prescribing criteria - selection of categories within each magnitude as per ACASP;
- (4) Categorizing though principles - assortment of sub-categories within each category and magnitude as per ACASP;
- (5) Designing the process - appliance of preferred indicators to sub-categories within each category and magnitude as per ACASP;
- (6) Modeling the framework - application of Decision Making (DM) procedures as utility function;
- (7) Applying bottom-up approach - implementation of directional computation of subcategories into categories and magnitudes of ACASP;
- (8) Using pressure-state-response (PSR) frameworks - creation of PSR frameworks through categorized implementation of ACASP;
- (9) Constructing the composite indicators - building the final view of public employment and management through education, economy and nature protection magnitudes of ACASP.

4. Results

4.1 Education (S_3) - Shirak Marz

4.1.1 Data Sets Retrievals

The methodology of data sets retrieval from RA Ministry of Education and Science (MES) guides to the following results of the first (1st) and the second (2nd) versions of Education (S_3) - Shirak Marz in Tables 4 & 5, respectively.

Table 4. 1st Version of Education (S_3) - Shirak Marz

Magnitude (Category)		Category (Sub-category)		Indicators' Number
No.	Name	No.	Name	
S ₃₁₁	Legislation	S ₃₁₁₁	Constitutions	5
		S ₃₁₁₂	Laws	95
		S ₃₁₁₃	Decisions	84

Magnitude (Category)		Category (Sub-category)		Indicators' Number
No.	Name	No.	Name	
		S ₃₁₁₄	Commands	100
		S ₃₁₁₅	Memorandum	16
S ₃₁₂	Education	S ₃₁₂₁	Pre-School Education	10
		S ₃₁₂₂	Secondary Education	34
		S ₃₁₂₃	Special Education	6
		S ₃₁₂₄	Extracurricular Education	4
		S ₃₁₂₅	Disaster Risk Reduction Education	7
		S ₃₁₂₆	Qualification of Teachers	2
		S ₃₁₂₇	Vocational Degrees	49
		S ₃₁₂₈	Higher education	56
		S ₃₁₃₉	Postgraduate Education	21
S ₃₁₃	Science	S ₃₁₃₁	Scientific Committee	17
		S ₃₁₃₂	Concept	1
		S ₃₁₃₃	Programs	32
S ₃₁₄	Inspections	S ₃₁₄₁	Laws	3
		S ₃₁₄₂	State Reports	13
		S ₃₁₄₃	State Timetables	100
		S ₃₁₄₄	Administrative Offenses Proceedings	4
		S ₃₁₄₅	Anticorruption Programs	16
		S ₃₁₄₆	Hot Lines	4
S ₃₁₅	Licensing	S ₃₁₅₁	Licensing	7
S ₃₁₆	Publication	S ₃₁₆₁	Statistic Documents for General Education	8
		S ₃₁₆₂	Statistic Documents for Professional Education	6
		S ₃₁₆₃	Electronic Books	18
		S ₃₁₆₄	Publications	5
		S ₃₁₆₅	Weekly Newspaper	52

 Table 5. 2nd Version of Education (S₃) - Shirak Marz

Magnitude (Category)		Category (Sub-category)		Indicators' Number
No.	Name	No.	Name	
S ₃₂₁	Public Views	S ₃₂₁₁	Public Council	19
		S ₃₂₁₂	Educational Board	10

Magnitude (Category)		Category (Sub-category)		Indicators' Number
No.	Name	No.	Name	
		S ₃₂₁₃	Public Discussions	48
		S ₃₂₁₄	Electronic Guide	6
S ₃₂₂	Vacancies	S ₃₂₂₁	Regional Vacancies at School	11
		S ₃₂₂₂	Vocational Vacancies	21
		S ₃₂₂₃	Civil Service Positions	3
		S ₃₂₂₄	Results	2
S ₃₂₃	Social Packages	S ₃₂₃₁	List of Educational Institutions	40
		S ₃₂₃₂	Contents of Social Package Services	5
S ₃₂₄	International Cooperation	S ₃₂₄₁	Diaspora	53
		S ₃₂₄₂	International Projects	2
		S ₃₂₄₃	Studies	100
		S ₃₂₄₄	International Documents	44
S ₃₂₅	Announcement / News	S ₃₂₅₁	Announcements	40
		S ₃₂₅₂	News	50
		S ₃₂₅₃	Press	20
S ₃₂₄	Informative Contacts	S ₃₂₆₁	Videos	50
		S ₃₂₆₂	Contacts	5
		S ₃₂₆₃	FAQ	23
		S ₃₂₆₄	Archives	13

4.1.2 Decision Making as Utility Function of Education (S₃) Magnitude

Decision Making as Utility Function of Education (S₃) Magnitude is computed as per Equation 2. The results of DM_i for the 1st and the 2nd versions of Education (S₃) - Shirak Marz are provided in Table 6.

Table 6. 1st and 2nd Versions of Decision Making (DM_i) Computation for Education (S₃)

1 st Version				2 nd Version			
Magnitude (Category)			DM _i	Magnitude (Category)			DM _i
No.	Name	Range		No.	Name	Range	
S ₃₁₁	Legislation	1	60	S ₃₂₁	Public Views	5	20.75
S ₃₁₂	Education	3	21	S ₃₂₂	Vacancies	6	9.25
S ₃₁₃	Science	5	16.67	S ₃₂₃	Social Packages	3	22.5
S ₃₁₄	Inspections	2	23.33	S ₃₂₄	International	1	49.75

					Cooperation		
S ₃₁₅	Licensing	6	7	S ₃₂₅	Announcement / News	4	22
S ₃₁₆	Publication	4	17.8	S ₃₂₆	Informative Contacts	2	22.75

4.2 Economy (E₅) - Aragatsotn Marz

4.2.1 Data Sets Retrievals

The methodology of data sets retrieval for RA Ministry of Economy guides to the following results of the first (1st) and the second (2nd) versions of Economy (E₅) - Aragatsotn Marz in Tables 7 & 8, respectively.

Table 7. 1st Version of Economy (E₅)- Aragatsotn Marz

Magnitude (Category)		Category (Sub-category)		Indicators' Number
No.	Name	No.	Name	
E ₅₁₁	Structure	E ₅₁₁₁	Ministry Structure	34
		E ₅₁₁₂	Main Areas	8
		E ₅₁₁₃	Staff	4
		E ₅₁₁₄	Ministry Organizations	6
E ₅₁₂	Legal Acts	E ₅₁₂₁	Decrees	14
		E ₅₁₂₂	Decisions	100
		E ₅₁₂₃	Orders	80
		E ₅₁₂₄	Categories	10
		E ₅₁₂₅	Records	3
		E ₅₁₂₆	Technical Regulations	41
E ₅₁₃	Projects	E ₅₁₃₁	Projects for Public Discussion	100
		E ₅₁₃₂	Reports	17
		E ₅₁₃₃	Governmental Plans	4
		E ₅₁₃₄	National Programs	8
E ₅₁₄	Policies	E ₅₁₄₁	Quality Infrastructure	6
		E ₅₁₄₂	Economic Development	70
		E ₅₁₄₃	Industrial Development	17
		E ₅₁₄₄	Free Economic Zones	59
		E ₅₁₄₅	Investment	73
		E ₅₁₄₆	Intellectual Property	24
E ₅₁₅	Publication	E ₅₁₅₁	News	100

Magnitude (Category)		Category (Sub-category)		Indicators' Number
No.	Name	No.	Name	
		E ₅₁₅₂	Publication	35
		E ₅₁₅₃	Clarification	13
		E ₅₁₅₄	Official visits	81
		E ₅₁₅₅	Conference / Event	8
		E ₅₁₅₆	Speeches	14
		E ₅₁₅₇	Announcement	20
		E ₅₁₅₈	Classification	25
E ₅₁₆	International Economic Cooperation	E ₅₁₆₁	International Economic Cooperation	9
		E ₅₁₆₂	Armenia - European Union	38
		E ₅₁₆₃	Armenia-EAEU	43
		E ₅₁₆₄	Armenia - WTO	10

 Table 8. 2nd Version of Economy (E₅) - Aragatsotn Marz

Magnitude (Category)		Category (Sub-category)		Indicators' Number
No.	Name	No.	Name	
E ₅₂₁	Tourism	E ₅₂₁₁	Tourism Development Plan	17
		E ₅₂₁₂	International Visits	23
		E ₅₂₁₃	International Cooperation	9
		E ₅₂₁₄	Educational Systems	10
		E ₅₂₁₅	State Projects	7
		E ₅₂₁₆	Documents	6
E ₅₂₂	Information Technology (IT)	E ₅₂₂₁	IT Sphere	35
		E ₅₂₂₂	Technological Development	20
		E ₅₂₂₃	Civil Aviation	31
E ₅₂₃	Market Controls	E ₅₂₃₁	Procurement Process	76
		E ₅₂₃₂	Business Environment Improvement	15
		E ₅₂₃₃	Regulatory Management	19
		E ₅₂₃₄	SME Development	37
		E ₅₂₃₅	Trade and Market Regulation	25
		E ₅₂₃₆	Markets Control	17
		E ₅₂₃₇	Accreditation	42
		E ₅₂₃₈	Export Control	12
		E ₅₂₃₉	Strategic Concepts	82

Magnitude (Category)		Category (Sub-category)		Indicators' Number
No.	Name	No.	Name	
E ₅₂₄	Vacancies	E ₅₂₄₁	Vacancies	100
		E ₅₂₄₂	. Results	95
E ₅₂₅	Inspections	E ₅₂₅₁	Budget Plans	11
		E ₅₂₅₂	Inspection Reports	58
		E ₅₂₅₃	. Internal Audit	12
		E ₅₂₅₄	Inspection Reforms	15
		E ₅₂₅₅	Licensing, Permits	41
		E ₅₂₅₆	Contracts	28
E ₅₂₆	Informative Contacts	E ₅₂₆₁	Links	69
		E ₅₂₆₂	Reception of Citizens	17
		E ₅₂₆₃	. Contacts	7
		E ₅₂₆₄	FAQ	3

4.2.2 Decision Making as Utility Function of Economy (E₅) Magnitude

Decision Making as Utility Function of Economy (E₅) Magnitude is computed as per Equation 2. The results of DM_i for the 1st and the 2nd versions of Economy (E₅) - Aragatsotn Marz are provided in Table 9.

Table 9. 1st and 2nd Versions of Decision Making (DM_i) Computation for Economy (E₅)

1 st Version				2 nd Version			
Magnitude (Category)			DM _i	Magnitude (Category)			DM _i
No.	Name	Range		No.	Name	Range	
E ₅₁₁	Structure	6	13	E ₅₂₁	Tourism	6	12
E ₅₁₂	Legal Acts	2	41.33	E ₅₂₂	IT	3	28.67
E ₅₁₃	Projects	4	32.25	E ₅₂₃	Market Controls	2	36.11
E ₅₁₄	Policies	1	41.5	E ₅₂₄	Vacancies	1	97.5
E ₅₁₅	Publication	3	37	E ₅₂₅	Inspections	4	27.5
E ₅₁₆	International Economic Cooperation	5	25	E ₅₂₆	Informative Contacts	5	24

4.3 Land (N_1) - Hadrut Marz and Air (N_3) - Martakert Marz

4.3.1 Data Sets Retrievals

The methodology of data sets retrieval for RA Ministry of Nature Protection (MNP) guides to the following results of the first (1st) and the second (2nd) versions of Land (N_1) - Hadrut Marz and Air (N_3) - Martakert Marz in Tables 10 & 11, respectively.

Table 10. 1st Version of Air (N_3) - Martakert Marz

Magnitude (Category)		Category (Sub-category)		Indicators' Number
No.	Name	No.	Name	
N ₃₁₁	Structure	N ₃₁₁₁	Decisions	30
		N ₃₁₁₂	Structure	36
		N ₃₁₁₃	Secretariat	16
N ₃₁₂	Regulation	N ₃₁₂₁	Regulation	48
		N ₃₁₂₂	Minister's Decrees	12
		N ₃₁₂₃	Decisions of National Assembly	14
		N ₃₁₂₄	Decisions of Government	85
		N ₃₁₂₅	Laws	35
		N ₃₁₂₆	Departmental Acts	44
		N ₃₁₂₇	Legal Department	17
		N ₃₁₂₈	Public Relation Department	18
N ₃₁₃	Reports	N ₃₁₃₁	National Reports	18
		N ₃₁₃₂	Reports	7
		N ₃₁₃₃	Statistical Reports	22
N ₃₁₄	Vacancies	N ₃₁₄₁	Vacancies	14
		N ₃₁₄₂	Laws	4
		N ₃₁₄₃	Competition Results	8
N ₃₁₅	Atmosphere	N ₃₁₅₁	Pollution Reports	48
		N ₃₁₅₂	Permissions	33
		N ₃₁₅₃	Atmospheric Precipitations	49
		N ₃₁₅₄	e-Atmosphere	100
N ₃₁₆	Publications	N ₃₁₆₁	News	100
		N ₃₁₆₂	Announcement	100
		N ₃₁₆₃	Library	100
		N ₃₁₆₄	Publications	60
		N ₃₁₆₅	Photo Gallery	7

Table 11. 2nd Version of Land (N₁) - Hadrut Marz

Magnitude (Category)		Category (Sub-category)		Indicators' Number
No.	Name	No.	Name	
N ₁₂₁	International Cooperation	N ₁₂₁₁	Department of International Cooperation	14
		N ₁₂₁₂	Agreements	35
N ₁₂₂	Projects	N ₁₂₂₁	Programs	28
		N ₁₂₂₂	Parts Acts' Projects	70
		N ₁₂₂₃	Governmental Acts' Projects	60
		N ₁₂₂₄	Normative Projects	7
		N ₁₂₂₅	Functions	15
		N ₁₂₂₆	Projects List	28
N ₁₂₃	Natural Resources	N ₁₂₃₁	Environmental calendar	20
		N ₁₂₃₂	Licensing Permissions	4
		N ₁₂₃₃	Red Book	25
		N ₁₂₃₄	Specially protected areas	79
N ₁₂₄	Inspectorial Activities	N ₁₂₄₁	Reports of State Environmental Inspectorate	3
		N ₁₂₄₂	Department on Monitoring of Environmental Strategic Program	14
		N ₁₂₄₃	Department of Finances	15
		N ₁₂₄₄	Personnel Management Division	13
		N ₁₂₄₅	Bio-resources Management Agency	7
		N ₁₂₄₆	"Environmental Impact Expertise Center"	36
		N ₁₂₄₇	"Environmental Impact Monitoring Center"	16
		N ₁₂₄₈	Zangezur" Biosphere Complex»»	53
N ₁₂₅	Informative Contacts	N ₁₂₅₁	Contact	7
		N ₁₂₅₂	FAQ	6
		N ₁₂₅₃	Links	61
N ₁₂₆	Nature Protection	N ₁₂₆₁	Division of Environment Protection Policy	16
		N ₁₂₆₂	Department of Land Protection Policy	18
		N ₁₂₆₃	Specially Protected Areas	41
		N ₁₂₆₄	Protected Natural Monuments	100

4.3.2 Decision Making as Utility Function of Land (N₁) and Air (N₃) Magnitude

Decision Making as Utility Function of Land (N₁) and Air (N₃) Magnitude is computed as per Equation 2. The results of DM_i for the 1st and the 2nd versions of Land (N₁) - Hadrut Marz and Air (N₃) - Martakert Marz are provided in Table 12.

Table 12. 1st and 2nd Versions of Decision Making (DM_i) Computation for Air (N₃)-Land (N₁)

1 st Version / Air (N ₃)				2 nd Version / Land (N ₁)			
Magnitude (Category)			DM _i	Magnitude (Category)			DM _i
No.	Name	Range		No.	Name	Range	
N ₃₁₁	Structure	4	27.33	N ₁₂₁	International Cooperation	5	24.5
N ₃₁₂	Regulation	3	34.13	N ₁₂₂	Projects	3	34.67
N ₃₁₃	Reports	5	15.67	N ₁₂₃	Natural Resources	4	32
N ₃₁₄	Vacancies	6	8.67	N ₁₂₄	Inspectorial Activities	6	19.63
N ₃₁₅	Atmosphere	2	57.5	N ₁₂₅	Informative Contacts	1	83
N ₃₁₆	Publications	1	73.4	N ₁₂₆	Nature Protection	2	43.75

4.4 Employment (ACASP)- Yerevan Marz

4.4.1 Data Sets Retrievals

The methodology of data sets retrieval for State Employment Agency (SEA) guides to the following results of the first (1st) and the second (2nd) versions of Employment (F) Marz in Tables 13 & 14, respectively.

 Table 13. 1st Version of Employment (F) - Yerevan Marz

Magnitude (Category)		Category (Sub-category)		Indicators' Number
No.	Name	No.	Name	
F ₁₁	Structure	F ₁₁₁	Working Personnel	10
		F ₁₁₂	Other Personnel	3
F ₁₂	Legislation	F ₁₂₁	Current Laws	6
		F ₁₂₂	Archive Laws	3
F ₁₃	Membership	F ₁₃₁	Membership in WAPES	4
		F ₁₃₂	Arrangements	3
F ₁₄	Publication	F ₁₄₁	Press Publications	4
		F ₁₄₂	Informative Materials	3
F ₁₅	Announcements / News	F ₁₅₁	Announcements	17
		F ₁₅₂	News	26
F ₁₆	Informative Contacts	F ₁₆₁	FAQ	1
		F ₁₆₂	. Links	19
		F ₁₆₃	Videos	12
		F ₁₆₄	Contacts	

Table 14. 2nd Version of Employment (F) - Yerevan Marz

Magnitude (Category)		Category (Sub-category)		Indicators' Number
No.	Name	No.	Name	
F ₂₁	Jobseekers	F ₂₁₁	Jobseekers	5
		F ₂₁₂	Registration of Jobseekers	9
		F ₂₁₃	Employment Programs	9
		F ₂₁₄	Jobseekers Warranties	12
		F ₂₁₅	Persons Uncompetitive in Labor Market	7
		F ₂₁₆	Guides	20
F ₂₂	Employers	F ₂₂₁	Employers	9
F ₂₃	Programs	F ₂₂₂	Supports-satisfaction demand-labor force	11
		F ₂₃₁	Programs	9
		F ₂₃₂	Job Fairs	12
		F ₂₃₃	Job Club	23
		F ₂₃₄	Previously Implemented Programs	2
F ₂₄	Labor Market	F ₂₄₁	Labor market	11
		F ₂₄₂	State Employment Program Performance	8
		F ₂₄₃	Employment	3
		F ₂₄₄	Unemployment	8
		F ₂₄₅	Employment Main Indices	9
F ₂₅	International cooperation	F ₂₅₁	International Cooperation	1
		F ₂₅₂	Current Programs	10
		F ₂₅₃	Completed Programs	12
F ₂₆	Analyses and Researches	F ₂₅₁	Migration and Development Armenia Country Study	35
		F ₂₅₂	Actual Unemployment Rate in Armenia	11
		F ₂₅₃	RA Labor market research	29
		F ₂₅₄	RA labor market survey	16

4.4.2 Decision Making as Utility Function of Employment (ACASP) Magnitude

Decision Making as Utility Function of Employment (ACASP) Magnitude is computed as per Equation 2. The results of DM_i for the 1st and the 2nd versions of Employment (F) - Yerevan Marz are provided in Table 15.

Table 15. 1st and 2nd Versions of Decision Making (DM_i) Computation for Public Management

1 st Version				2 nd Version			
Magnitude (Category)			DM_i	Magnitude (Category)			DM_i
No.	Name	Range		No.	Name	Range	
F ₁₁	Structure	3	6.5	F ₂₁	Jobseekers	3	10.33
F ₁₂	Legislation	4	4.5	F ₂₂	Employers	4	10
F ₁₃	Membership	6	3.5	F ₂₃	Programs	2	11.5
F ₁₄	Publication	5	3.5	F ₂₄	Labor Market	5	7.8
F ₁₅	Announcements / News	1	21.5	F ₂₅	International Cooperation	6	7.67
F ₁₆	Informative Contacts	2	9.5	F ₂₆	Analyses and Researches	1	22.75

5. Actualization

Results of DM_i are ranged in sequence from most important (1) to less important (6) whereas biodiversity concept definition is considered as species (1) & (4), genes (2) & (5), ecosystems (3) & (6). Actualizations or applications of results in Table 9, 12 & 15 are realized into ordered model in Table 16.

Table 16. Actualization of ACASP Model

1 st Version for Education (S_3) Magnitude						
Biodiversity	Range	Num	Name	Range	Num	Name
Species	1	S ₃₁₁	Legislation	4	S ₃₁₆	Publication
Genes	2	S ₃₁₄	Inspections	5	S ₃₁₃	Science
Ecosystem	3	S ₃₁₂	Education	6	S ₃₁₅	Licensing
2 nd Version for Education (S_3) Magnitude						
Species	1	S ₃₂₄	International Cooperation	4	S ₃₂₅	Announcement / News
Genes	2	S ₃₂₆	Informative Contacts	5	S ₃₂₁	Public Views
Ecosystem	3	S ₃₂₃	Social Packages	6	S ₃₂₂	Vacancies
1 st Version for Economy (E_5) Magnitude						
Species	1	E ₅₁₄	Policies	4	E ₅₁₃	Projects
Genes	2	E ₅₁₂	Legal Acts	5	E ₅₁₆	International Economic Cooperation

Ecosystem	3	E ₅₁₅	Publication	6	E ₅₁₁	Structure
2 nd Version for Economy (E ₅) Magnitude						
Species	1	E ₅₂₄	Vacancies	4	E ₅₂₅	Inspections
Genes	2	E ₅₂₃	Market Controls	5	E ₅₂₆	Informative Contacts
Ecosystem	3	E ₅₂₂	IT	6	E ₅₂₁	Tourism
1 st Version for Air (N ₃) Magnitude						
Species	1	N ₃₁₆	Publications	4	N ₃₁₁	Structure
Genes	2	N ₃₁₅	Atmosphere	5	N ₃₁₃	Reports
Ecosystem	3	N ₃₁₂	Regulation	6	N ₃₁₄	Vacancies
2 nd Version for Land (N ₁) Magnitude						
Species	1	N ₁₂₅	Informative Contacts	4	N ₁₂₃	Natural Resources
Genes	2	N ₁₂₆	Nature Protection	5	N ₁₂₁	International Cooperation
Ecosystem	3	N ₁₂₂	Projects	6	N ₁₂₄	Inspectorial Activities
1 st Version for Employment (F) Magnitude						
Species	1	F ₁₅	Announcements / News	4	F ₁₂	Legislation
Genes	2	F ₁₆	Informative Contacts	5	F ₁₄	Publication
Ecosystem	3	F ₁₁	Structure	6	F ₁₃	Membership
2 nd Version for Employment (F) Magnitude						
Species	1	F ₂₆	Analyses and Researches	4	F ₂₂	Employers
Genes	2	F ₂₃	Programs	5	F ₂₄	Labor Market
Ecosystem	3	F ₂₁	Jobseekers	6	F ₂₅	International Cooperation

6. Discussion

Biodiversity concept for public management gives the following interesting orders:

Genes: Society (S) Education (S₃):

Legislative - Inspective - Education

International Cooperation - Informative - Contacts

Species: Economy (E) Economy (E₅)

Policy - Legal Acts - Publication

Vacancies - Market Controls - IT

Ecosystems: Nature (N) Air (N₃) & Land (N₁)

Publications - Atmosphere - Regulation

Informative Contacts - Nature Protection- Projects

Functions: ACASP Employment (F): Announcements - Informative Contacts - Structure

Analyses and Researches - Programs -Jobseekers

7. Conclusion

Public Management is viewed in terms of Employment (F) as organizational concept of ACASP. Petrosyan (2014) demonstrates an attractive relation between three (3) biodiversity stages in Figure 2 derived from Lefevre (2004) paper.

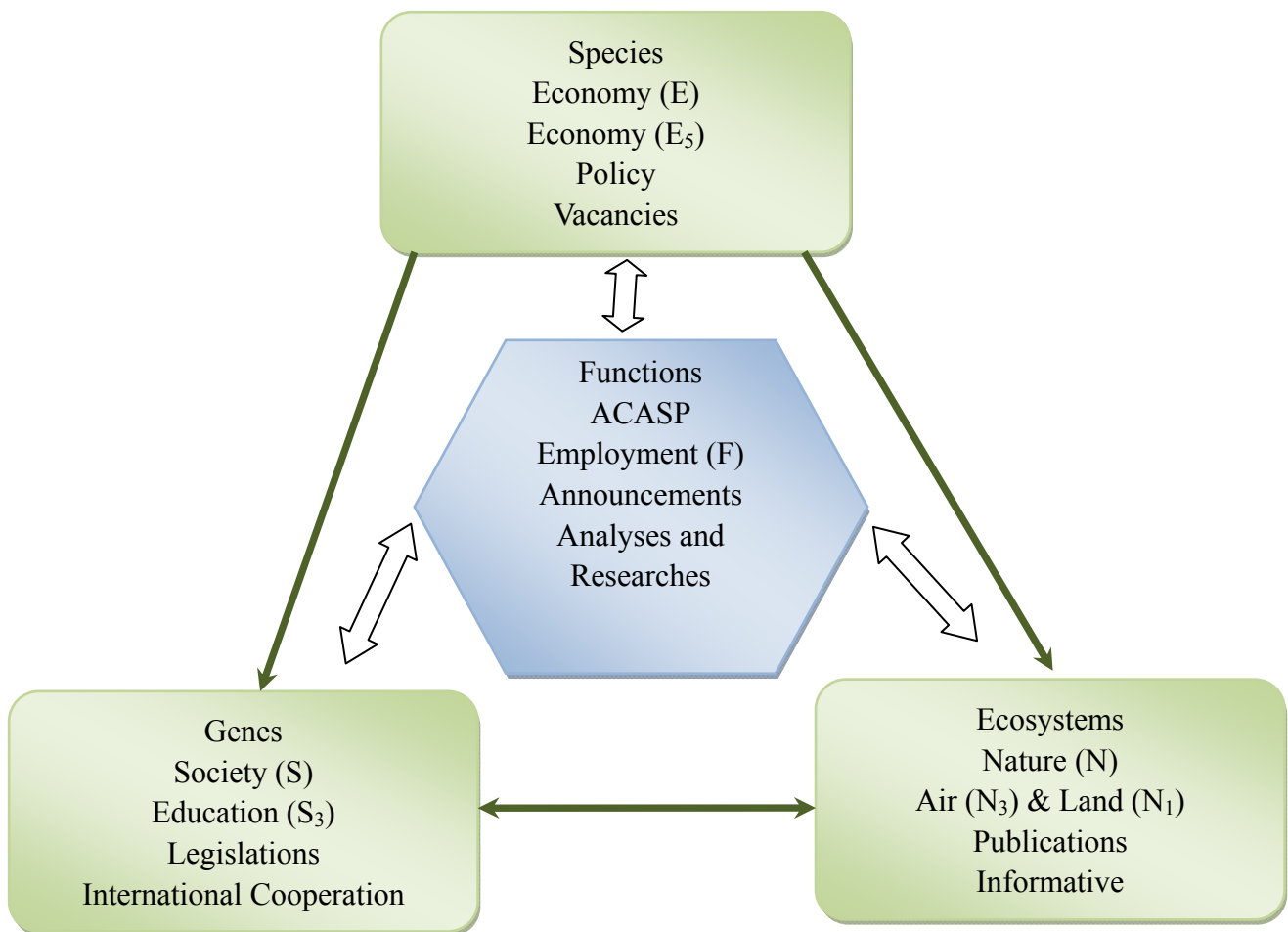


Figure 13. Proposed Public Management of ACASP as per Magnitudes, Categories and Indicators

Petrosyan (2015 a,b,c) further highlights the recommended aforementioned models. As the sequence of the most important chosen category is represented as:

Genes: Society (S) Education (S₃): Legislations - International Cooperation

Species: Economy (E) Economy (E₅): Policy - Vacancies

Ecosystems: Nature (N) Air (N₃) & Land (N₁): Publications - Informative

Functions: ACASP Employment (F): Announcements - Analyses and Researches

Proposed Public Management of ACASP is pictured in Figure 13 as per Magnitudes, Categories and Indicators according to management of organizational chart of Employment (F) in three (3) dimensional ways of Education (S₃), Economy (E₅) and Land (N₁) - Air (N₃) Magnitudes.

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Glossary

ACASP: Armenian Composite Appraising Supportive Progress.

DM: Decision Making.

EAEU: Eurasian Economic Union.

FAQ: Frequently Asked Questions.

IT: Information Technology.

MES: Ministry of Education and Science.

RA: Republic of Armenia.

SD: Sustainable Development.

SEA: State Employment Agency

SM: Synthetic Measure.

WTO: World Trade Organization.

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