

Climate and Social Vulnerability: Analytics of Cause and Responsibility

气候与社会脆弱性 原因与责任

Jesse Ribot

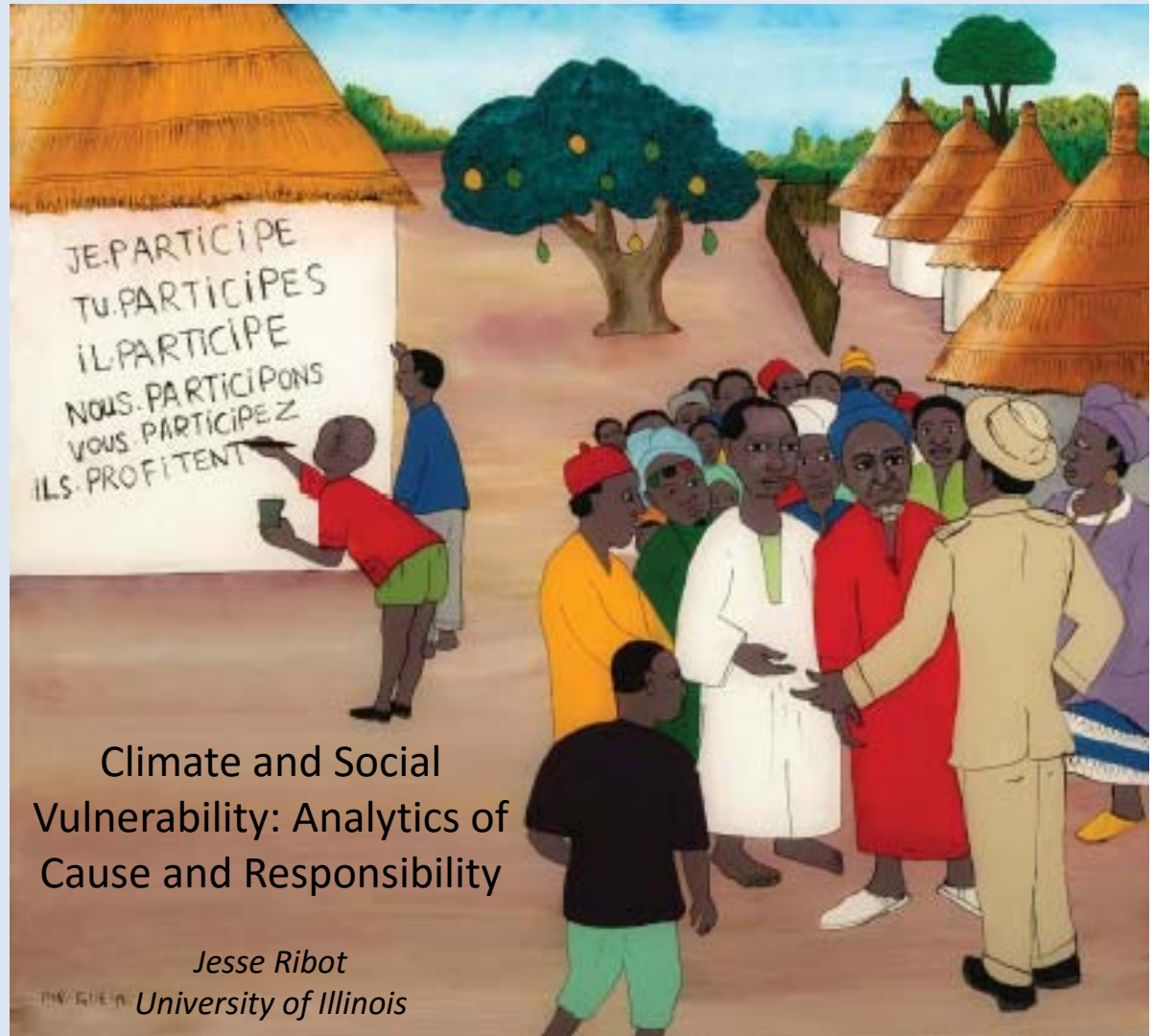
Professor of Geography, University of Illinois

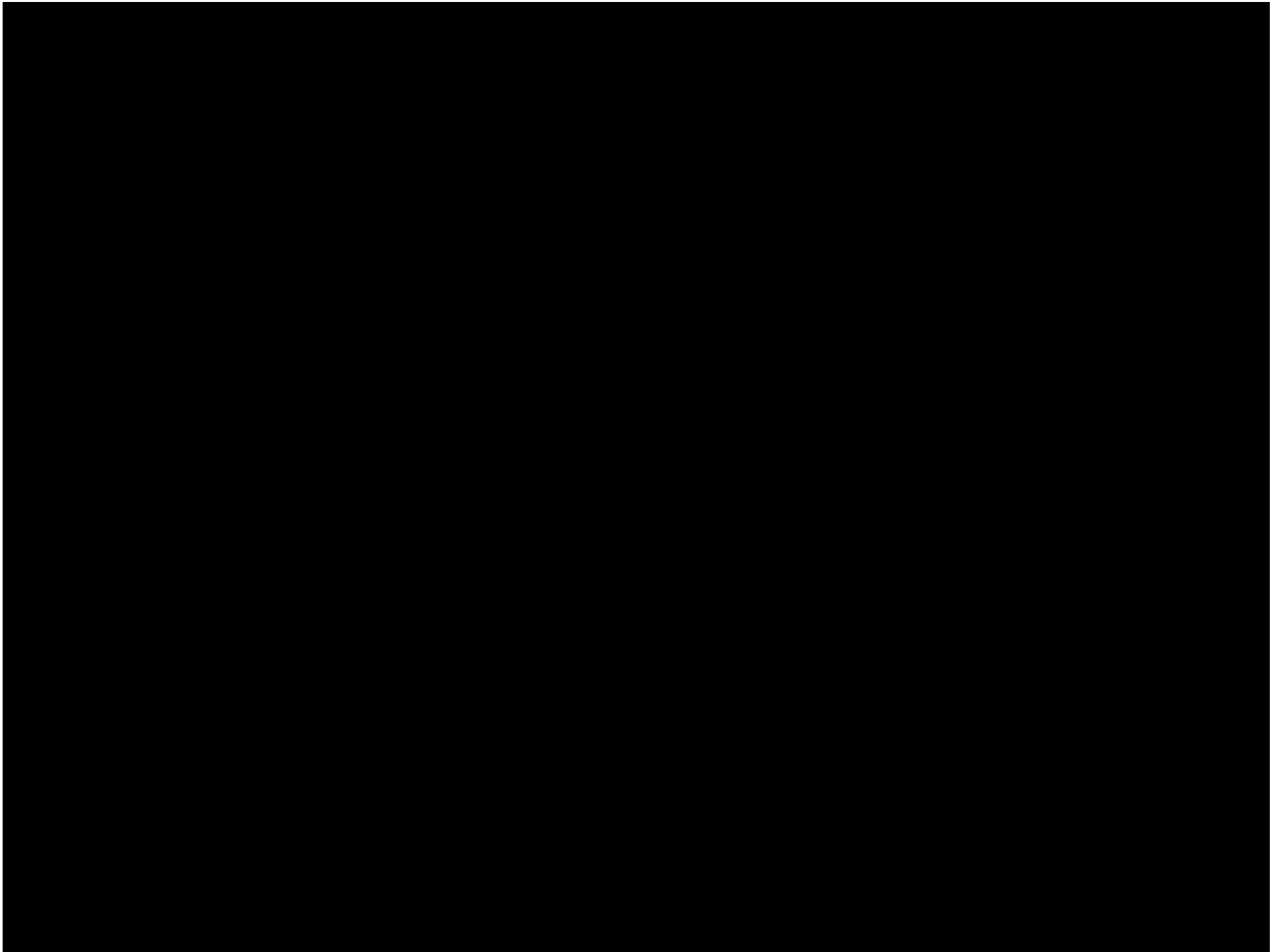
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I participate,
You participate
He participates
She participates
They participate
We participate
They profit

我参与，
你参与，
他参与，
她参与，
他们参与，
我们参与，
他们获利！





The Climate Risk Equation

气候风险公式

Risk \equiv Probability x Consequence

风险 = 概率 * 后果

Vulnerability \equiv A Predisposition Damage

脆弱性 = 易受损伤的特质

Climate Hazard \equiv Weather-related Stressor-Event or Trend

气候危机 = 与天气有关的压力源-气候突变或渐变

Climate Hazard & Vulnerability \rightarrow Damage

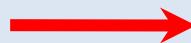
气候危机 & 脆弱性 \rightarrow 伤害

IMPACT ANALYSIS

影响分析

Hazard
d
灾难

CLIMATE
EVENT
or TREND
气候突变或
渐变



Static Structures,
Assets,
Protections,
Capacities,
Sensitivity, &
Exposure.
静态结构, 资产,
保护措施, 能力,
敏感性及受灾程度

Impacts?影响?

Reduced Wellbeing
生存境遇恶化

Dislocation
被迫迁移

Loss of Livelihood
失去生计来源

Hunger 饥饿

Famine 饥荒

Economic Loss
经济损失

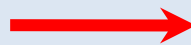
→Hazard Focused – Cause located in hazard 以灾难为研究中心 – 关注灾难的成因

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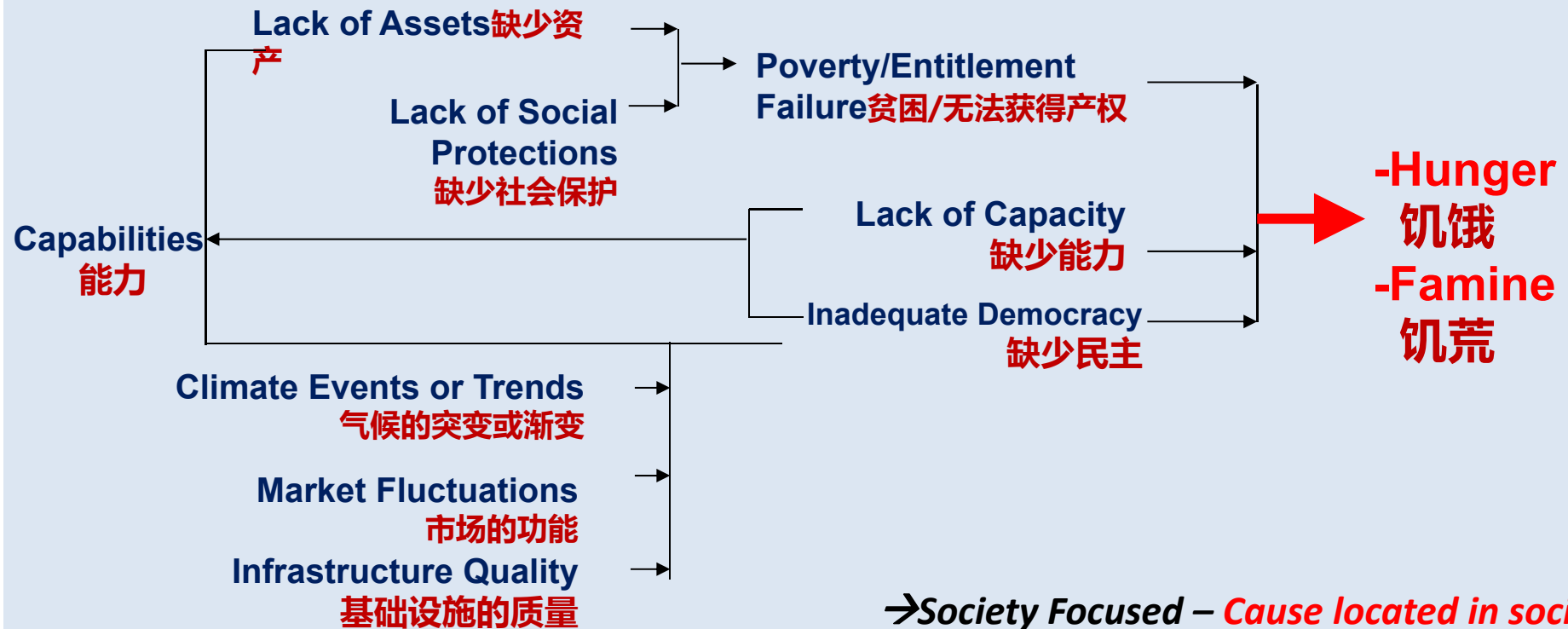
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VULNERABILITY ANALYSIS – a la Sen

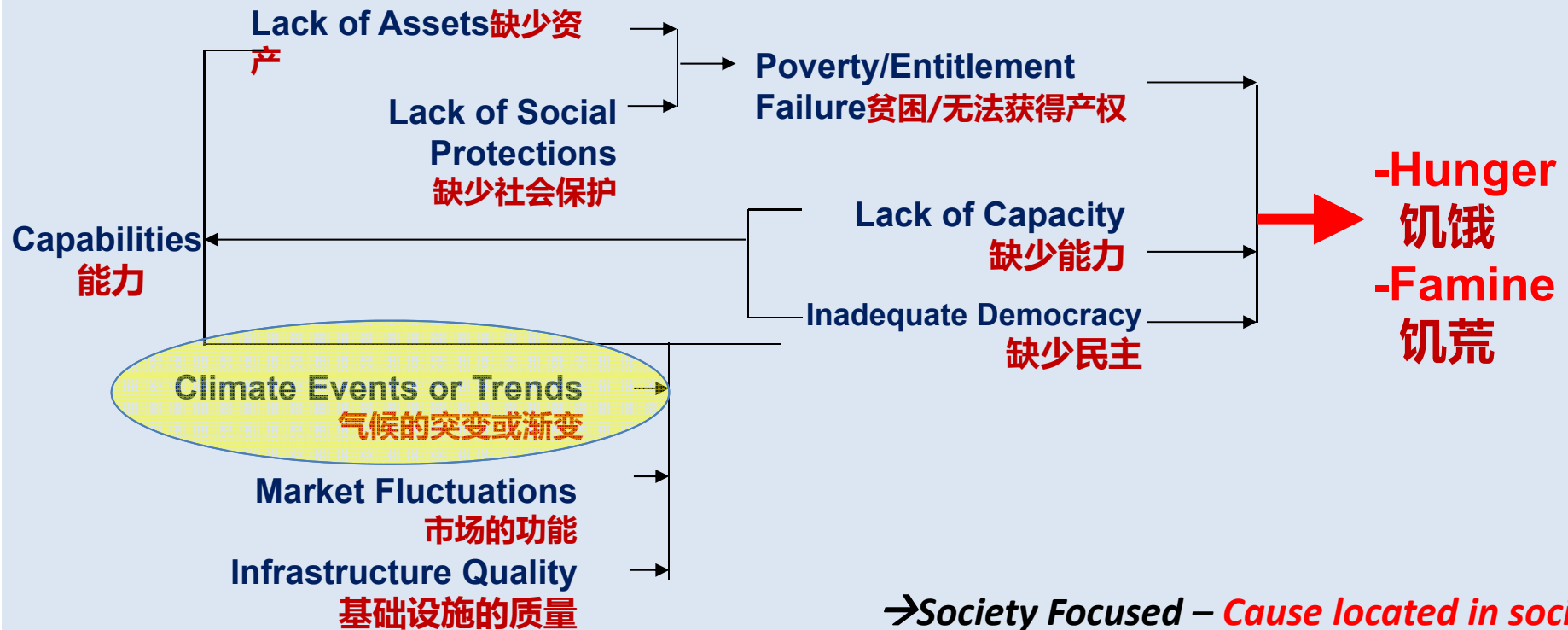
脆弱性分析—按阿马蒂亚·森的方式



→ Society Focused – Cause located in society
以社会为研究中心 – 原因在于社会

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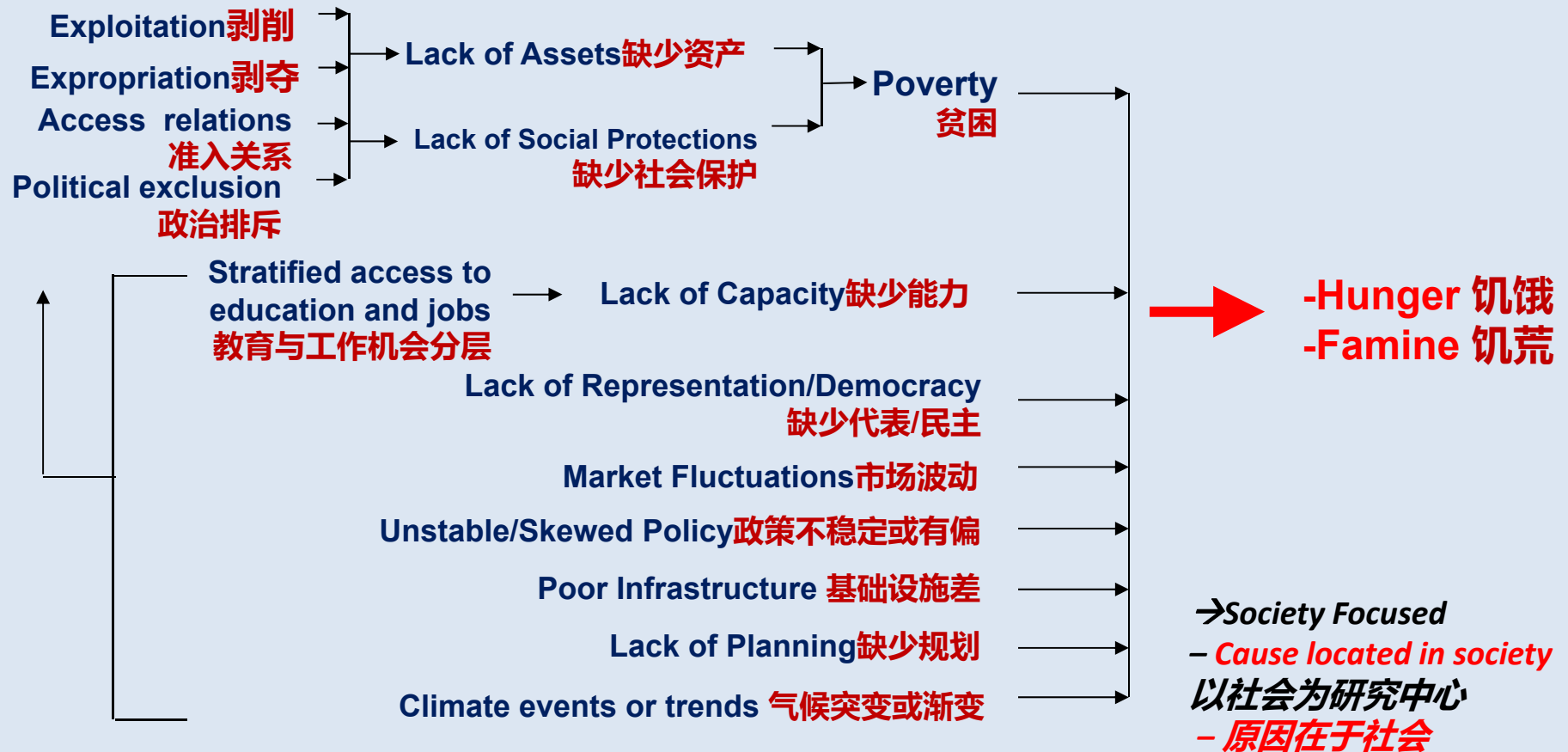
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VULNERABILITY ANALYSIS – P.E. Approach

脆弱性分析 – 政治经济学的解释路径



VULNERABILITY ANALYSIS – P.E. Approach

脆弱性分析 – 政治经济学的解释路径





**Senegal A Case to Think With
How Forestry Policy Maintains Vulnerability**

**塞内加尔：一个供思考的案例
林业政策如何让人无法摆脱脆弱**

Field Work: 田野工作

Ribot: 1986-7, 1994,
2001-3, 2005, 2008,
2014 and 2016

With Papa Faye(帕帕·法耶): 2003-2016

Tambacounda Region of Senegal 塞内加尔坦巴昆达 区

Senegal 塞内加尔



Southern rim of the Sahara
Sudano-Sahelian – open canopy dry forests
400 to 600 mm rainfall – highly variable
撒哈拉苏达诺-萨赫勒地区的南部边缘带 – 干燥的日照森林，
400-600毫米的降水量-差异很大



The Case 案例

- Rich Forests

森林富饶

Why?

何因?

- Poor People

居民穷困

Crises in Tambacounda 坦巴昆达区的危机

- **Famines** – Associated with severe droughts (1800s, 1910s, 60s-80s)
- 饥荒 – 数次严重的旱灾 (19世纪、20世纪前10年 , 20世纪60~80年代)
 - **Losses** during these periods
期间该地区蒙受的损失
 - Selling children into slavery in late 1800s
19世纪晚期 , 卖儿为奴
 - Selling off cattle 10s, 60s-80s
20世纪前10年 , 20世纪60~80年代 , 卖牛
 - Migration to work in peanut basin, cities & Europe '90s onward
20世纪90年代至今 , 到花生种植盆地、城市和欧洲打工

Crises in Tambacounda 坦巴昆达区的危机

- Annual hungry season 年年挨饿
 - Annual hunger episodes in August before Harvest
每年八月收获之前都要挨饿
 - Out migration – loss (including deaths) of young people **
外出打工 – 年轻人走了 (或者死去)
- Peasants here are poor and vulnerable to hunger and dislocation
– indeed, they are in continuous crisis
这里的农民生活贫苦，经常挨饿，被迫迁移 – 他们一直处在不安全的境地

→ Crisis of anxiety – vulnerability as damage itself.

焦虑的危机 – 脆弱性本身就是一种伤害

Rural Economy 农村经济

- Farming 种地
- Laboring in cities 到城里打工
- Selling timber 卖原木
- **Charcoal production** 生产木炭
- Herding 放牧
- Hunting 狩猎
- Selling honey 卖蜂蜜
- Cotton 种植棉花

→ Each Lucrative, None Profitable for Forest Villagers
每样都有利可图，而无一能让林农从中获利。

→ **The Case Study** 案例研究

Question: *WHY don't villagers profit from charcoal?*
研究问题：为什么居民不能从木炭中获利？

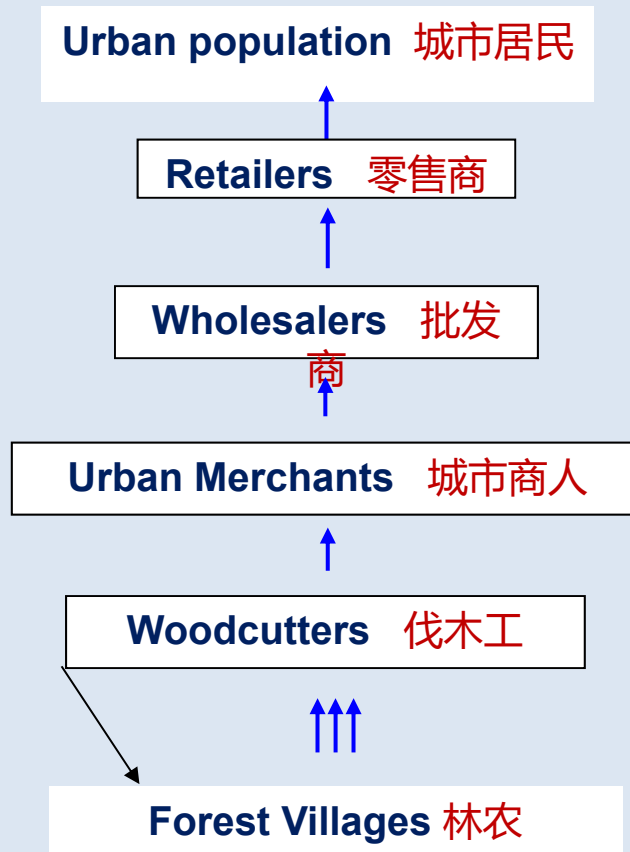
Approach: *Access Analysis along Commodity Chain*
→ Calculating & Explaining Benefit Distribution

研究方法：分析商品链中的准入情况 → 计算并解释利润的分配

Actors in Senegal's Charcoal Market

塞内加尔木炭市场中的行动者

Material
Flow/ Value
原材料/价值的
流动



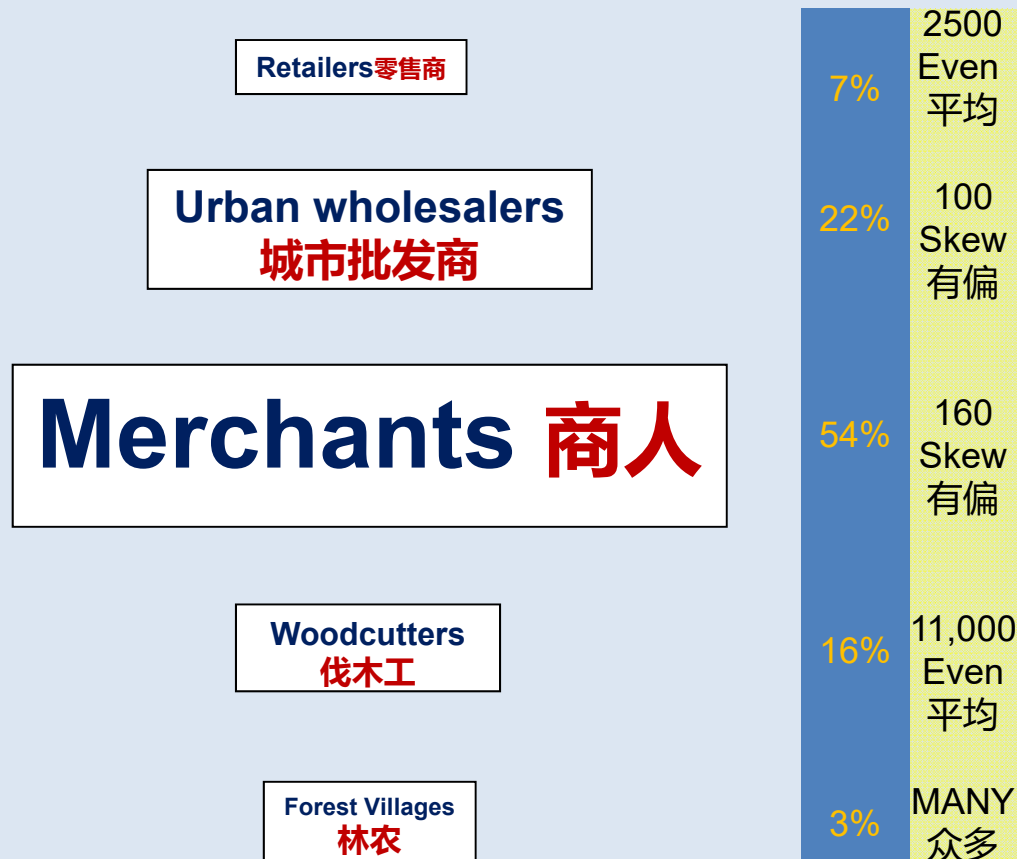
Wood & Charcoal
Flows 木材&木炭的流动

→ Calculating Distribution of Profit:
f(margins, expenses, market
shares)

计算利润的分配
f(利润, 成本, 市场份额)

FONT-SCALED PROFIT DISTRIBUTION in MARKET

市场中利润的大小分配



1986-2014 Data
1986-2014年数据

The Commons
Part of the Pie
利润蛋糕中老百姓的所得

Profit – Woodcutter vs. Merchant

利润 – 伐木工与商人的比较

π 1986-2014 基于时间 π -演算：1986-2014年
Figures Fluctuate 数据有波动

A merchant makes more in a few days than a producer does per year → something is wrong with this picture!
商人几天所得比生产者一年所得都要多！

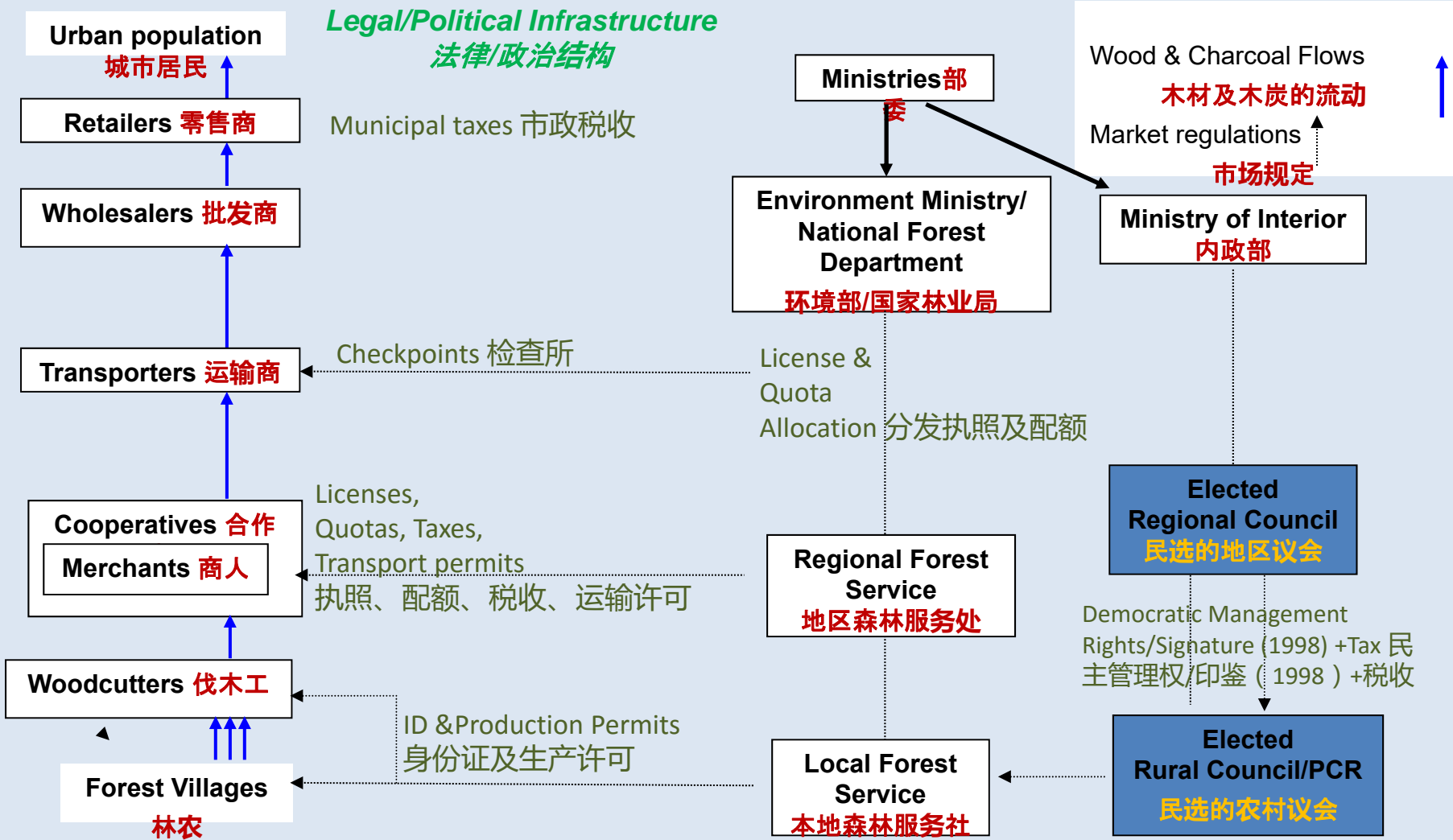
- Woodcutters: \$1000 to \$2500/year 伐木工：一年挣1000-2500美元
- Merchants: \$10,000 to >\$500,000/year 商人：一年挣1万-50万美元

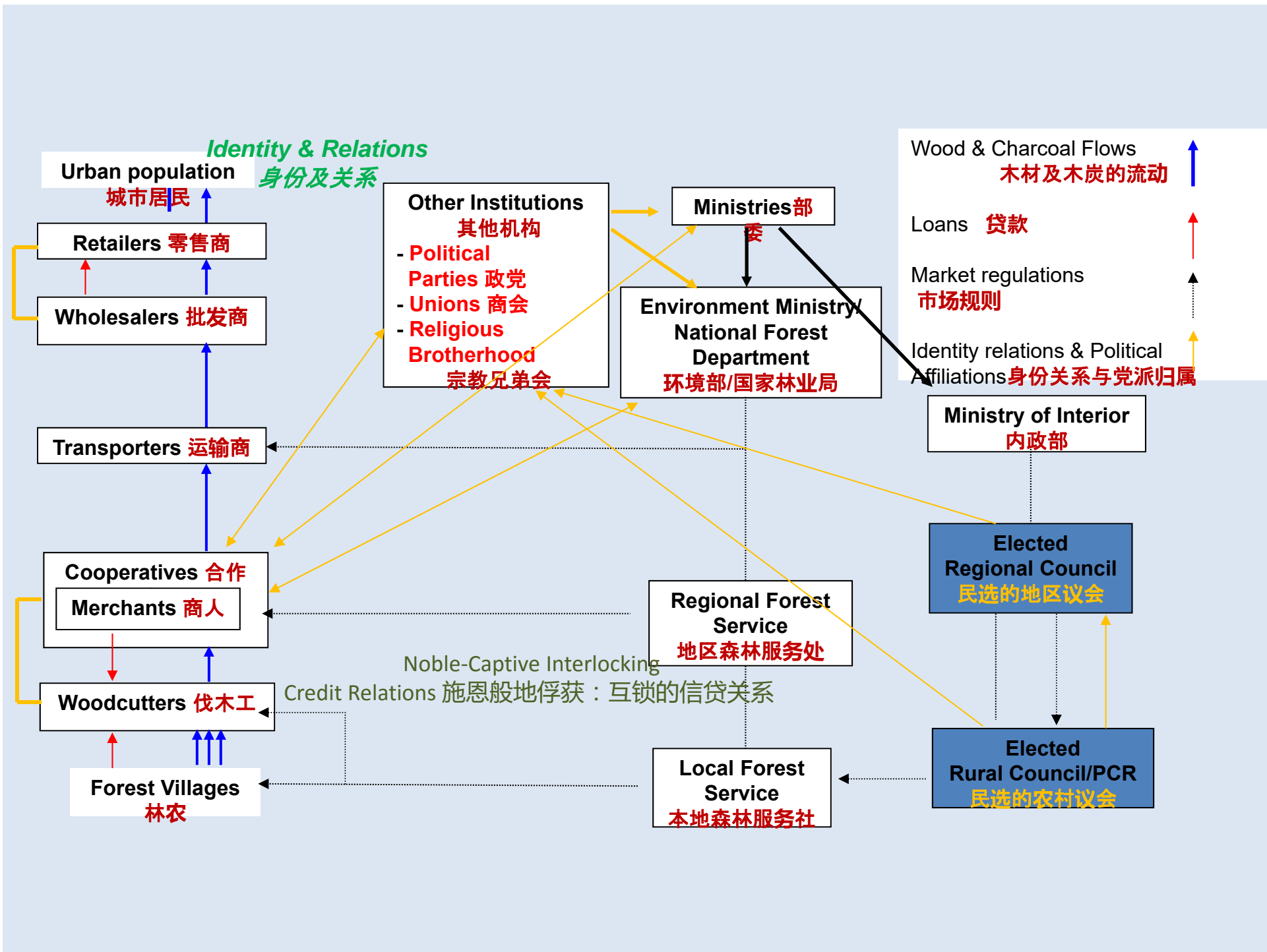
How do we explain this pattern? 我们如何解释这种模式？

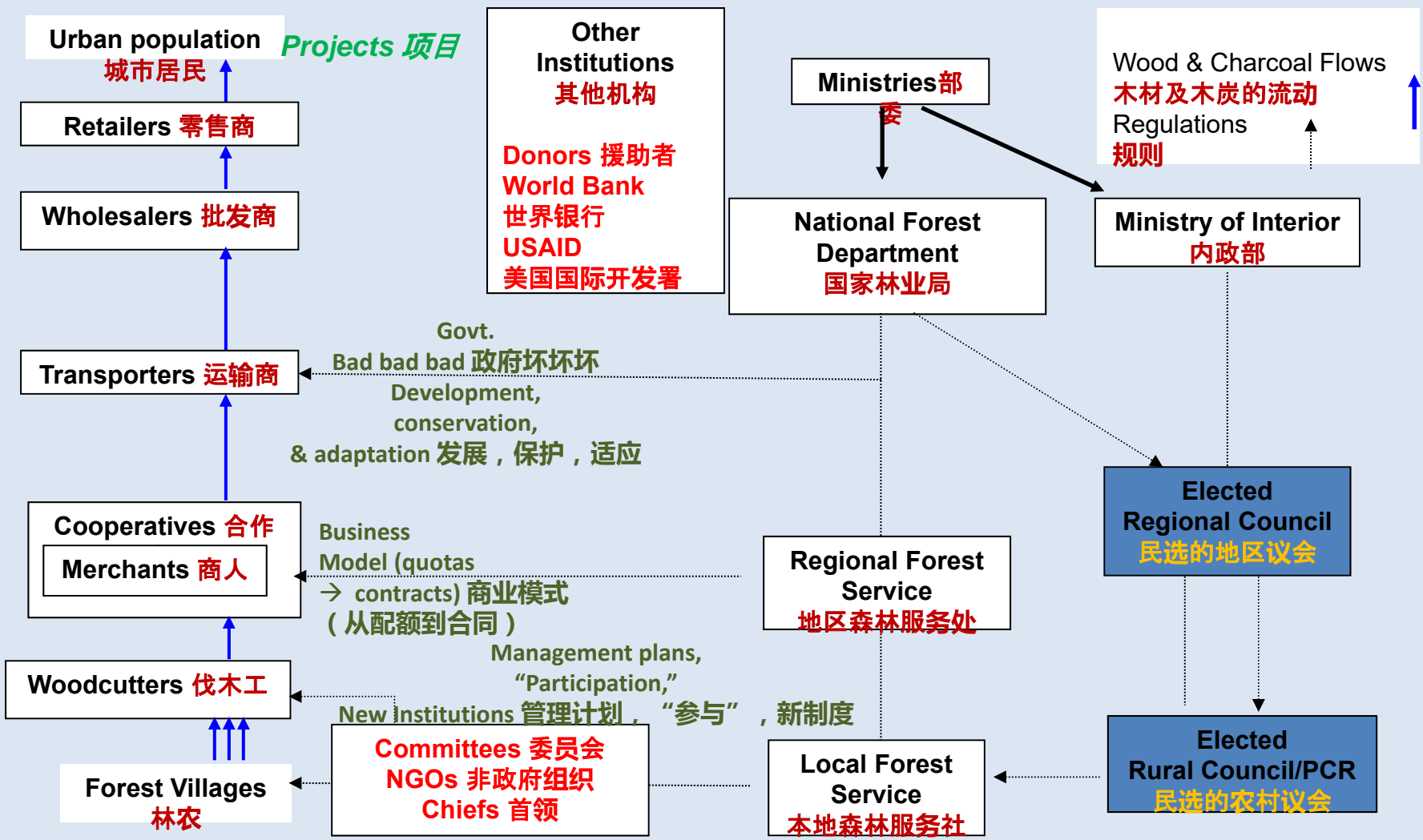
How do we explain that peasants keep nothing and have nothing to invest in their own well being?

我们如何解释农民根本无法保住所得，也没有任何办法让自己过得稍微好一点？

→ Access Analysis 准入分析







Urban population 城市居民

城市居民

Projects 项目

Retailers 零售商

Wholesalers 批发商

Transporters 运输商

Cooperatives 合作

Merchants 商人

Woodcutters 伐木工

Forest Villages 林农

Other Institutions 其他机构

Donors 援助者
World Bank 世界银行
USAID 美国国际开发署

Ministries 部

National Forest Department 国家林业局

Wood & Charcoal Flows 木材及木炭的流动
Regulations 规则

Ministry of Interior 内政部

Govt. Bad bad bad 政府坏坏坏
Development, conservation, & adaptation 发展, 保护, 适应

Business Model (quotas → contracts) 商业模式 (从配额到合同)

Management plans, "Participation," New Institutions 管理计划, "参与", 新制度

Regional Forest Service 地区森林服务处

Local Forest Service 本地森林服务社

Elected Regional Council 民选的地区议会

Elected Rural Council/PCR 民选农村议会

Committees 委员会
NGOs 非政府组织
Chiefs 首领

Three Decades of Observation 三十年的观察

- Many policies to increase village income in forestry:
颁布了多项政策提高林农的收入
 - Participatory Forestry Code of 1993 → corvée
1993年的森林参与管理法案→强制劳役
 - Democratic Decentralization 1996 & Decentralized Forestry Code 1998
1996年的民主分权和1998年的分权式森林法
 - ✓ Signature of the Rural Council President 农村议会主席签字
 - ✓ Management & allocation by Rural Council 由农村议会管理和分配
 - Contracts – to ostensibly replace the quota 2001 (quota elimination)
合同制 – 表面上取代了配额制 (2001年配额制废止)
 - Forestry projects – WB & USAID late 90s to present.
森林项目：20世纪九十年代后期至今，由世行与美国国际开发署推行

Three Decades of Observation **三十年的观察**

Each policy has a micro-politics of recapture:

每项政策在微观层面都会被重新形塑

- Policies never implemented as written – no enforcement – no recourse
政策从未按条文实施 – 无人实施，无从追索
 - Derecognition of elected authorities – committees vs. council
民选的机构成为摆设 – 委员会和基层议会
 - Calls for participation overriding/ delegitimizing representation **对参与的呼吁压制了代表机构，使其失去合法性**
 - Nonsensical ‘technical’ arguments on forest management reduce discretion
对森林管理进行荒谬的“技术”争论，丧失了自由裁量权
 - Imposition of extreme obligations of management – fire breaks; rotations....
强制推行极端的管理规定：防火带；轮伐等
 - Categorization – local producers – aimed at exclusion from markets
划分标准 – 本地生产者 – 旨在将其排斥在市场之外
- Reallocation of Contracts from Villagers to Merchants **合同从林农再次回到商人手中**
- Migrants labor access – favoring urban merchants **外来劳工 – 更喜欢被城市商人雇用**
- A discursive cesspool **话语污名**

Three Decades of Observation **三十年的观察**

- Each local income improvement supported by elected rural councils; each taken back by Forest Service.

每一项民选农村议会支持下的提高本地收入的措施，都被森林服务部门撤回

- Local People Know Causes – but not represented in solutions
- 当地人知道原因，却无力解决

Discourse Reflecting Power and Shaping The Distributions of Resource Access and Profits
话语反映了权力，改变了资源的准入和利润的分配



Look -- here in the rulebook – which you must obey....**看，这是规则手册，你们必须遵守**

Skewed Distributions Not Only in Charcoal 有偏的利润分配并不限于木炭行业

- Hunting – Similar Structure 狩猎-类似的结构
- Timber – Similar Structure 原木-类似的结构
- Cotton – World price increase is not passed on to producers
棉花-国际价格的上涨并未让种植者获利

→ Forest villagers remain at subsistence with no hopes. No profits.

林农仍在挣扎求生，没有希望，没有收益

→ Out migration at best – 200 drown off Libya

逃离成了最好的出路 – 而有200人淹死在前往利比亚的途中

Result → Sub-Subsistence Incomes

结果→低于生存线的收入

- Forest villagers have nothing
 - They do not withdraw into subsistence; they are hemmed into it
林农一无所有 – 他们不是主动退回到养家糊口的生产，而是被逼到了这样的境地
- They are hungry for 2 months of the year 一年中有2个月挨饿
- They cannot feed their families 不能养活家人
- They cannot pay for medicines (or transport) 买不起药 (或者坐不起车)
- They cannot send their children to school (\$50/year)
送不起孩子去上学 (一年50美元)
- They cannot sleep at night 晚上不能入眠

Result → Sub-Subsistence Incomes

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Their children migrate out of hopelessness of the local, and hope of another world

– NONE want to stay

他们的孩子离开了令人绝望的生身之地，前往另一个世界寻找希望 – 没人愿意留下

- “We want to help our parents” “我们想帮到父母”
- “We cannot stay here and watch them suffer” “我们不想留下来看他们受苦”
- “Death is better than staying here” → and thousands die.
- “哪怕是死，都比留在这里强” → 数千人确实因此而死

→ When droughts come, they suffer. Not due to Dryness!

These people produce wealth, but do not keep the wealth they produce!

旱灾来了，他们受苦。但不是因为干旱！这些人生产了大量的财富，却无力保住！

Lessons for Adaptation 如何“适应”

Migrants are not ‘climate’ refugees

– they are refugees of a system that excludes them from income.

移民不是“气候”难民 – 而是将他们排斥在收入之外的体制难民

No Senegalese farmer will tell you that they suffer due to the climate.

→ Nature is not their problem.

没有一个塞内加尔的农民会告诉你，他们是因为气候而受苦受难

→ 大自然不是他们苦难的原因

Farmers place responsibility in taxes, permits, licenses, fixed prices, failed representation, market access....

农民将责任归咎于税收，许可证，执照，固定价格，无人代表，进不了市场等。

Lessons for Adaptation 如何“适应”

- These need fixing → *these need ‘adapting’*
- 这些需要纠正 → **这些需要“适应”**
- Capacity is not their problem
- 能力不是问题

Elected local governments have tried to improve benefit retention but have been thwarted by line ministries, merchants & some projects. → **‘adapt’ this!**

民选的地方政府想要让农民得到更多利益，却受掣肘于上级部委、商人和一些项目。

→ **‘适应’它！**

→ These are causes of vulnerability to treat **这些是脆弱性的成因，需要处理**

→ So, why are these causes of vulnerability so hard to represent in the climate risk equation?

那为什么气候风险公式中这些脆弱性的成因难以体现呢？

VULNERABILITY ANALYSIS → 脆弱性分析 → Tambacounda坦巴昆达区



IMPACT ANALYSIS? – Climate Refugees? 影响分析? -- 气候难民?

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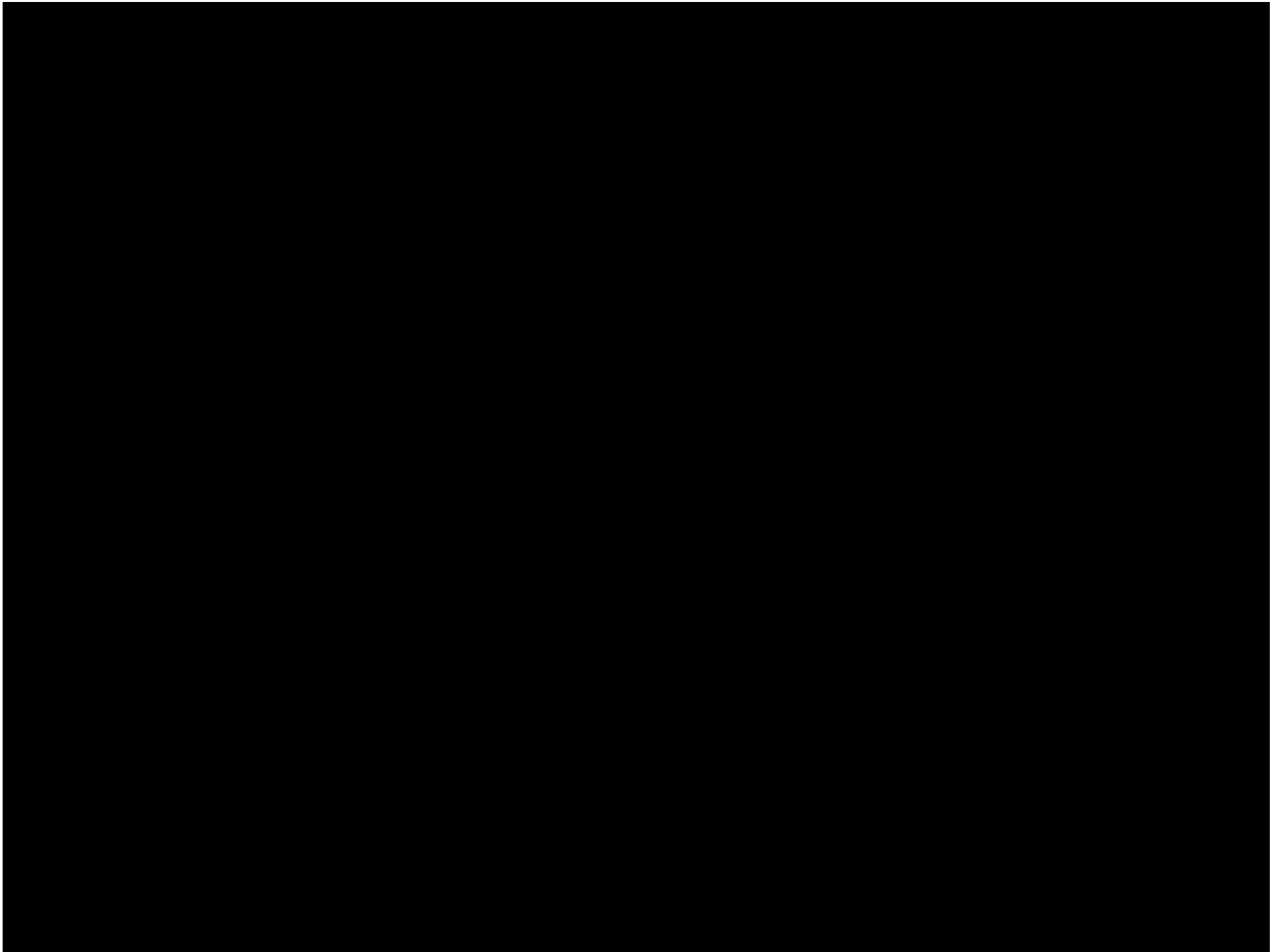
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The End